

DRAFT

AMERICAN RIVER WATERSHED COMMON FEATURES, AMERICAN RIVER CONTRACT 3A

Supplemental Environmental Impact Report/
Environmental Assessment

United States Army Corps of Engineers
Sacramento District
and
Central Valley Flood Protection Board

April 2022



**US Army Corps
of Engineers®**



Preface

The American River Contract 3A project (Proposed Action) includes the installation of levee erosion protection features along the left bank of the Lower American River in the same location as Interstate 80 and upstream of the City of Sacramento's Sutter's Landing Park in the American River Parkway. Most of the levee improvements included in the Proposed Action were analyzed in the 2016 American River Watershed Common Features General Reevaluation Report (ARCF GRR) Final Environmental Impact Statement/Final Environmental Impact Report (FEIS/FEIR). This document is arranged as a Supplemental EIR (Part 1) and a Supplemental Environmental Assessment (SEA) (Part 2) to supplement the ARCF GRR FEIS/FEIR by addressing the environmental impacts from project modifications and design details developed after the ARCF GRR FEIS/FEIR was prepared, approved, and certified. The Supplemental EIR is being prepared by the Central Valley Flood Protection Board (CVFPB) as the State lead agency under the California Environmental Quality Act (CEQA), and the Supplemental EA is being prepared by the U.S. Army Corps of Engineers (USACE) as the lead agency under the National Environmental Policy Act (NEPA).

As described in more detail below, CEQA and NEPA requirements differ, including which project elements require additional environmental analyses and the definition of baselines used to evaluate impacts. The Supplemental EIR (Part 1) and Supplemental EA (Part 2) for the Proposed Action are combined in this document for clarity and completeness.

In accordance with CEQA requirements, Part 1 of this document (the Supplemental EIR) analyzes the proposed project, which includes the Proposed Action components at a greater level of design detail than was available in the ARCF GRR FEIS/FEIR, to support both CEQA lead and responsible agency decision-making. The impacts of the Proposed Action are compared to existing conditions (as of April 2022) to determine impact significance in this Supplemental EIR.

In accordance with NEPA, Part 2 of this document (the Supplemental EA) analyzed only those elements of the Proposed Action which were not previously analyzed in the ARCF GRR FEIS/FEIR and Supplemental NEPA/CEQA documents already prepared for the American River Contracts 1 and 2 projects. Because these prior documents addressed the installation of staging areas, haul routes, borrow sites, potential disposal/stockpiling areas, and mitigation sites, these elements are already authorized for construction, have been considered for their full environmental impacts, and are considered to be part of the NEPA No Action Alternative. The impacts of the Proposed Action are compared to the No Action Alternative to determine impact significance in the Supplemental EA. For NEPA purposes, the Proposed Action includes changes to the ARCF GRR FEIS/FEIR that were not previously analyzed and authorized: (1) staging areas, (2) haul routes, (3) disposal/stockpile site, (4) and erosion protection footprint different from the Project Area defined in the ARCF GRR FEIS/FEIR.

CVFPB will release the Draft Supplemental EIR for public and agency review in accordance with CEQA requirements. USACE will release the Draft Supplemental EA for public and agency review concurrently with the Draft Supplemental EIR. After the review period closes, CVFPB and USACE will consider the comments received and prepare responses. These comments and responses, along with any modifications, will be incorporated into a Final Supplemental EIR and a Final Supplemental EA with a Finding of No Significant Impact to meet NEPA requirements for the Proposed Action.

Environmental commitments and mitigation measures summarized in the Executive Summary (Table ES-1) apply to the Proposed Action as a whole.

Part 1:
DRAFT

AMERICAN RIVER WATERSHED COMMON FEATURES, AMERICAN RIVER CONTRACT 3A

Supplemental Environmental Impact Report
State Clearinghouse Number 2005072046

Prepared for
Central Valley Flood Protection Board

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EXECUTIVE SUMMARY

ES.1 Summary of the Proposed Action

The Proposed Action includes the installation of erosion protection features along the Lower American River in the project area for the American River Watershed Common Features, Water Resources Development Act of (ARCF) 2016 Project, American River Contract 3A. The American River Watershed Common Features General Reevaluation Report Final Environmental Impact Statement/Environmental Impact Report (ARCF GRR FEIS/FEIR) analyzed the basic erosion protection measures that underlie the Proposed Action in this Supplemental EIR. However, some elements of those measures (specifics of designs, staging areas, construction methods, haul routes, disposal of soil, and mitigation sites) were not analyzed in the ARCF GRR FEIS/FEIR because final designs and specs had not been completed. Through project design and refinement, the U.S. Army Corps of Engineers (USACE) and Central Valley Flood Protection Board (CVFPB), also referred to as the Project Partners in this Supplemental EIR, have now identified specific locations and improvements to address erosion concerns, potential staging areas, haul routes, stockpile sites, and off-site mitigation that constitute this Proposed Action. This Supplemental EIR supplements the ARCF GRR FEIS/FEIR by analyzing the environmental effects of these previously unquantified or unidentified elements of the erosion protection measures planned for the Proposed Action in compliance with the California Environmental Quality Act (CEQA).

ES.2 Summary of Environmental Consequences

Table ES-1 summarizes the results of the resource effects analysis of the Proposed Action on the environment, provided in detail in Sections 3.2 through 3.14 of this Supplemental EIR. The table provides a description of resource baselines and effects and significance conclusions before and after implementation of mitigation, and mitigation measures.

ES.3 Areas of Controversy and Issues to Be Resolved

The ARCF GRR FEIS/FEIR identified several areas of controversy based on the comments received during the public scoping period and during past National Environmental Protection Act (NEPA) and CEQA public processes undertaken by

USACE, the CVFPB, and the Sacramento Area Flood Control Agency (SAFCA). Several of these areas of controversy are applicable to the Proposed Action:

- Construction-related effects on residents and businesses adjacent to the project levees.
- Construction-related impacts on biological resources.
- Vegetation and tree removal.
- Effects on cultural resources and resources significant to Native American tribes.
- Impacts on recreation facilities.
- Impacts on endangered species and their habitat.

TABLE ES-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Resource Topic	Effect	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.2 Visual Resources	Result in Short-Term Impacts on the Visual Character of the American River Parkway During Construction	S	None	SU
	Result in a Loss of Vegetation Due to Removal and Construction of Levee Improvements Resulting in Short-Term Effects on Visual Resources of Mature Vegetation	S	Mitigation Measure VEG-1: Retain, Protect, and Plant Trees On-Site. Mitigation Measure VEG-2: Compensate for Riparian Habitat Removal. Mitigation Measure SRA-1: Implement Measures to Avoid, Minimize, and Compensate for Effects on Shaded Riverine Aquatic Habitat.	LTS
	Result in Long-Term Adverse Impact on Visual Resources to Users Within the American River Parkway	S	Mitigation Measure VEG-1: Retain, Protect, and Plant Trees On-Site. Mitigation Measure VEG-2: Compensate for Riparian Habitat Removal. Mitigation Measure SRA-1: Implement Measures to Avoid, Minimize, and Compensate for Effects on Shaded Riverine Aquatic Habitat.	LTS
	Create a New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area	S	Mitigation Measure VIS-1: Shield Temporary Nighttime Lighting.	LTS
	Result in Changes to the Levee Footprint, In-Channel Geometry or Characteristics, River Hydraulics, and/or Impede or Redirect Flood Flows	LTS	None	LTS
3.3 Hydrology and Water Quality	Violate Any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Groundwater Quality, Result in Substantial Erosion or Siltation on- or off-site, or Conflict with or Obstruct Implementation of a Water Quality Control Plan.	S	Mitigation Measure SRA-1: Implement Measures to Avoid, Minimize, and Compensate for Effects on Shaded Riverine Aquatic Habitat. Mitigation Measure WQ-1: Prepare and Implement a Storm Water Pollution Prevention Plan, Spill Prevention Control and Countermeasures Plan, and Associated Best Management Practices.	LTS

LTS = less than significant; S = significant; SU = significant and unavoidable.

TABLE ES-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Resource Topic	Effect	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.4 Vegetation and Wildlife	Result in Short-Term Adverse Effects on Riparian Habitat and Waters of the United States	S	Mitigation Measure VEG-1: Retain, Protect, and Plant Trees On-Site. Mitigation Measure VEG-2: Compensate for Riparian Habitat Removal. Mitigation Measure BIRD-1: Avoid and Minimize Effects on Nesting Birds. Mitigation Measure SRA-1: Implement Measures to Avoid, Minimize, and Compensate for Effects on Shaded Riverine Aquatic Habitat.	SU
	Result in Long-Term Adverse Effects on Riparian Habitat and Waters of the United States	S	Mitigation Measure VEG-1: Retain, Protect, and Plant Trees On-Site. Mitigation Measure VEG-2: Compensate for Riparian Habitat Removal. Mitigation Measure BIRD-1: Avoid and Minimize Effects on Nesting Birds. Mitigation Measure SRA-1: Implement Measures to Avoid, Minimize, and Compensate for Effects on Shaded Riverine Aquatic Habitat.	LTS
3.5 Fisheries	Adverse Effects on Fisheries Resources	S	Mitigation Measure FISH-1: Observe In-Water Work Windows. Mitigation Measure FISH-2: Analyze Hazardous Materials Spills and Implement Measures to Control Contamination. Mitigation Measure FISH-3: Implement Measures to Avoid and Minimize Effects on Listed Fish Species. Mitigation Measure FISH-4: Implement Measures to Avoid and Minimize Effects on Listed Fish Species. Mitigation Measure SRA-1: Implement Measures to Avoid, Minimize, and Compensate for Effects on Shaded Riverine Aquatic Habitat. Mitigation Measure VEG-1: Retain, Protect, and Plant Trees On-Site. Mitigation Measure VEG-2: Compensate for Riparian Habitat Removal. Mitigation Measure WQ-1: Prepare and Implement a Storm Water Pollution Prevention Plan, Spill Prevention Control and Countermeasures Plan, and Associated Best Management Practices.	LTS

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TABLE ES-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Resource Topic	Effect	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.6 Special Status Species	Adverse Effect on Special Status Species: Valley Elderberry Longhorn Beetle	S	Mitigation Measure VELB-1: Implement Current USFWS Avoidance, Minimization, and Compensation Measures for Valley Elderberry Longhorn Beetle.	LTS
	Adverse Effect on Special Status Species: Western Yellow-Billed Cuckoo	S	Mitigation Measure BIRD-1: Avoid and Minimize Effects on Nesting Birds. Mitigation Measure VEG-1: Retain, Protect, and Plant Trees On-Site. Mitigation Measure VEG-2: Compensate for Riparian Habitat Removal.	LTS
	Adverse Effect on Special Status Species: Swainson's Hawk	S	Mitigation Measure BIRD-1: Avoid and Minimize Effects on Nesting Birds. Mitigation Measure VEG-1: Retain, Protect, and Plant Trees On-Site. Mitigation Measure VEG-2: Compensate for Riparian Habitat Removal.	LTS
	Adverse Effect on Special Status Species: Bank Swallow	S	Mitigation Measure BIRD-1: Avoid and Minimize Effects on Nesting Birds.	LTS
	Adverse Effect on Special Status Species: Burrowing Owl	S	Mitigation Measure BIRD-1: Avoid and Minimize Effects on Nesting Birds.	LTS
	Adverse Effect on Special Status Species: White-Tailed Kite	S	Mitigation Measure BIRD-1: Avoid and Minimize Effects on Nesting Birds. Mitigation Measure VEG-1: Retain, Protect, and Plant Trees On-Site. Mitigation Measure VEG-2: Compensate for Riparian Habitat Removal.	LTS
	Adverse Effect on Special Status Species: Purple Martin	S	Mitigation Measure BIRD-1: Avoid and Minimize Effects on Nesting Birds.	LTS
	Adverse Effect on Special Status Species: Other Breeding and Migratory Birds	S	Mitigation Measure BIRD-1: Avoid and Minimize Effects on Nesting Birds.	LTS
	Adverse Effect on Special Status Species: Western Pond Turtle	S	Mitigation Measure TURTLE-1: Implement Measures to Avoid and Minimize Effects on Western Pond Turtle. Mitigation Measure WQ-1: Prepare and Implement a Storm Water Pollution Prevention Plan, Spill Prevention Control and Countermeasures Plan, and Associated Best Management Practices.	LTS

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TABLE ES-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Resource Topic	Effect	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.6 Special Status Species (cont.)	Adverse Effect on Special Status Species: Pallid Bat	S	Mitigation Measure BATS-1: Implement Measures to Protect Maternity Roosts of Special Status Bats.	LTS
	Adverse Effect on Special Status Species: Western Red Bat	S	Mitigation Measure BATS-1: Implement Measures to Protect Maternity Roosts of Special Status Bats.	LTS
	Adverse Effect on Special Status Species: American Badger	S	Mitigation Measure BADGER-1: Implement Measures to Avoid and Minimize Effects on American Badger.	LTS
	Adverse Effect on Special Status Species: Crotch Bumble Bee	S	Mitigation Measure BEE-1: Implement Measures to Avoid and Minimize Effects on Crotch Bumble Bee. Mitigation Measure VEG-1: Retain, Protect, and Plant Trees On-Site. Mitigation Measure VEG-2: Compensate for Riparian Habitat Removal.	LTS
	Adverse Effect on Special Status Species: Sanford's Arrowhead	S	Mitigation Measure PLANT-1: Implement Measures to Avoid and Minimize Effects on Special Status Plants.	LTS
	Adverse Effect on Special Status Species: Bristly Sedge and Woolly Rose-Mallow	S	Mitigation Measure PLANT-1: Implement Measures to Avoid and Minimize Effects on Special Status Plants.	LTS
	Adverse Effect on Special Status Species: Winter-Run Chinook Salmon	S	Mitigation Measure FISH-1: Observe In-Water Work Windows. Mitigation Measure FISH-2: Analyze Hazardous Materials Spills and Implement Measures to Control Contamination. Mitigation Measure FISH-3: Implement Measures to Avoid and Minimize Effects on Listed Fish Species. Mitigation Measure FISH-4: Implement Measures to Avoid and Minimize Effects on Listed Fish Species. Mitigation Measure SRA-1: Implement Measures to Avoid, Minimize, and Compensate for Effects on Shaded Riverine Aquatic Habitat. Mitigation Measure WQ-1: Prepare and Implement a Storm Water Pollution Prevention Plan, Spill Prevention Control and Countermeasures Plan, and Associated Best Management Practices.	LTS

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TABLE ES-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Resource Topic	Effect	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.6 Special Status Species (cont.)	Adverse Effect on Special Status Species: Spring-Run Chinook Salmon	S	<p>Mitigation Measure FISH-1: Observe In-Water Work Windows.</p> <p>Mitigation Measure FISH-2: Analyze Hazardous Materials Spills and Implement Measures to Control Contamination.</p> <p>Mitigation Measure FISH-3: Implement Measures to Avoid and Minimize Effects on Listed Fish Species.</p> <p>Mitigation Measure FISH-4: Implement Measures to Avoid and Minimize Effects on Listed Fish Species.</p> <p>Mitigation Measure SRA-1: Implement Measures to Avoid, Minimize, and Compensate for Effects on Shaded Riverine Aquatic Habitat.</p> <p>Mitigation Measure WQ-1: Prepare and Implement a Storm Water Pollution Prevention Plan, Spill Prevention Control and Countermeasures Plan, and Associated Best Management Practices.</p>	LTS
	Adverse Effect on Special Status Species: Central Valley Fall/Late Fall-Run Chinook Salmon	S	<p>Mitigation Measure FISH-1: Observe In-Water Work Windows.</p> <p>Mitigation Measure FISH-2: Analyze Hazardous Materials Spills and Implement Measures to Control Contamination.</p> <p>Mitigation Measure FISH-3: Implement Measures to Avoid and Minimize Effects on Listed Fish Species.</p> <p>Mitigation Measure FISH-4: Implement Measures to Avoid and Minimize Effects on Listed Fish Species.</p> <p>Mitigation Measure SRA-1: Implement Measures to Avoid, Minimize, and Compensate for Effects on Shaded Riverine Aquatic Habitat.</p> <p>Mitigation Measure WQ-1: Prepare and Implement a Storm Water Pollution Prevention Plan, Spill Prevention Control and Countermeasures Plan, and Associated Best Management Practices.</p>	LTS

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TABLE ES-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Resource Topic	Effect	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.6 Special Status Species (cont.)	Adverse Effect on Special Status Species: California Central Valley Steelhead	S	Mitigation Measure FISH-1: Observe In-Water Work Windows. Mitigation Measure FISH-2: Analyze Hazardous Materials Spills and Implement Measures to Control Contamination. Mitigation Measure FISH-3: Implement Measures to Avoid and Minimize Effects on Listed Fish Species. Mitigation Measure FISH-4: Implement Measures to Avoid and Minimize Effects on Listed Fish Species. Mitigation Measure SRA-1: Implement Measures to Avoid, Minimize, and Compensate for Effects on Shaded Riverine Aquatic Habitat. Mitigation Measure WQ-1: Prepare and Implement a Storm Water Pollution Prevention Plan, Spill Prevention Control and Countermeasures Plan, and Associated Best Management Practices.	LTS
	Adverse Effect on Special Status Species: Green Sturgeon	LTS	None	LTS
3.7 Cultural Resources	Damage to or Destruction of Unknown or Subsurface Historic-Period Sites, Prehistoric-Period Archaeological Sites, and Native American Identified Tribal Cultural Resources	S	Mitigation Measure CR-1: Resolve Adverse Effects through a Programmatic Agreement and Historic Properties Treatment Plan. Mitigation Measure CR-2: Prepare an Archaeological Discovery Plan and an Archaeological Monitoring Plan. Mitigation Measure CR-3: Conduct Cultural Resources Awareness Training. Mitigation Measure CR-4: Implement Procedures for Discovery of Cultural Material. Mitigation Measure CR-5: Evaluate Any Tribal Cultural Resources Discovered and Implement Avoidance and Minimization Measures to Avoid Significant Adverse Effects.	LTS
	Potential Damage to or Destruction of Previously Undocumented Human Remains	S	Mitigation Measure CR-6: Implement Procedures for Discovery of Human Remains.	LTS
3.8 Transportation and Circulation	Temporary Increase in Traffic Load or Temporary Decrease in Capacity along Designated Roadways in the Project Area	S	None	SU
	Increase Exposure of People to Significant Public Safety Hazards Resulting from Construction Activities on or Near the Public Road System	S	Mitigation Measure TR-1: Prepare and Implement a Traffic Control and Road Maintenance Plan.	LTS

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TABLE ES-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Resource Topic	Effect	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.8 Transportation and Circulation (cont.)	Increase Parking Demand	S	Mitigation Measure TR-1: Prepare and Implement a Traffic Control and Road Maintenance Plan.	LTS
	Increase Hazards Due to a Deterioration of Roadways	S	Mitigation Measure TR-1: Prepare and Implement a Traffic Control and Road Maintenance Plan.	LTS
	Interfere with Emergency Access	S	Mitigation Measure TR-1: Prepare and Implement a Traffic Control and Road Maintenance Plan.	LTS
	Conflict or be Inconsistent with Vehicle-Miles-Traveled Standards	LTS	None	LTS
	Conflict with a Program, Plan, or Ordinance: Decreased Performance or Safety of Alternative Modes of Transportation	S	Mitigation Measure TR-1: Prepare and Implement a Traffic Control and Road Maintenance Plan. Mitigation Measure TR-2: Provide Bicycle and Pedestrian Access.	LTS
3.9 Air Quality	Potential Conflict with Air Quality Plan or Contribute Substantially to Air Quality Violation	S	Mitigation Measure AQ-1: Implement SMAQMD's Basic Construction Emissions Control Practices. Mitigation Measure AQ-2: Implement Enhanced Fugitive Dust Control Practices. Mitigation Measure AQ-3: Develop and Implement a Plan for Enhanced On-Site Exhaust Controls. Mitigation Measure AQ-4: Use Electric Construction Equipment. Mitigation Measure AQ-5: Pay NOx Mitigation Fee to SMAQMD.	LTS
	Potentially Expose Sensitive Receptors to Short-Term Dust Emissions	S	Mitigation Measure AQ-2: Implement Enhanced Fugitive Dust Control Practices.	LTS
	Potentially Expose Sensitive Receptors to Short-Term Emissions of Toxic Air Contaminants	S	Mitigation Measure AQ-1: Implement SMAQMD's Basic Construction Emissions Control Practices. Mitigation Measure AQ-2: Implement Enhanced Fugitive Dust Control Practices. Mitigation Measure AQ-3: Develop and Implement a Plan for Enhanced On-Site Exhaust Controls. Mitigation Measure AQ-4: Use Electric Construction Equipment.	LTS
	Potentially Expose Sensitive Receptors to Major Source of Odor	LTS	None	LTS
	Operational Emissions of Criteria Air Pollutants and Precursors	LTS	None	LTS

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TABLE ES-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Resource Topic	Effect	Significance Before Mitigation	Mitigation Measure	Significance After Mitigation
3.10 Greenhouse Gas Emissions and Energy Consumption	Temporary, Short-term Generation of Greenhouse Gas Emissions or Conflict with an Applicable GHG Emissions Reduction Plan and Effects of Climate Change	S	Mitigation Measure GHG-1: Avoid, Minimize, and Compensate for Greenhouse Gas Emissions Effects.	LTS
	Result in a Potentially Significant Environmental Impact due to Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources, During Project Construction or Operation; and/or Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency	LTS	None	LTS
3.11 Noise	Temporary Increase in Ambient Noise Levels or Exposure of Sensitive Receptors to Excessive Noise or Vibration	S	Mitigation Measure NOISE-1: Implement Noise Reduction Practices. Mitigation Measure NOISE-2: Implement Vibration Control Measures.	LTS
3.12 Recreation	Temporary and Short-term Changes in Recreational Opportunities during Project Construction Activities	S	Mitigation Measure REC-1: Avoid and Minimize Effects on Recreational Use.	SU
3.13 Public Utilities and Service Systems	Result in Solid Waste Generation in the Project Area that Would Exceed Landfill Capacity	LTS	None	LTS
	Adversely Affect Emergency Response Services	S	Mitigation Measure UTIL-1: Avoid and Minimize Service Disruptions and Damage to Utilities and Infrastructure.	LTS
3.14 Hazards and Hazardous Materials	Possible Exposure of People and the Environment to Existing Hazardous Materials, Including Cortese-listed Sites	S	Mitigation Measure HAZ-1: Implement Stormwater Pollution Prevention Plan Best Management Practices and Test Site for Contaminants Prior to Construction.	LTS
	Interfere with Emergency Response Plan or Evacuation Plan	LTS	Mitigation Measure TR-1: Prepare and Implement a Traffic Control and Road Maintenance Plan.	LTS

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Acronyms and Other Abbreviations

Acronym or Abbreviation	Definition
2017 Scoping Plan	<i>California's 2017 Climate Change Scoping Plan</i>
AB	Assembly Bill
ACE	annual chance exceedance
AFV	alternative fuel vehicle
APE	Area of Potential Effects
ARCF	American River Watershed Common Features
ARCF GRR	American River Watershed Common Features General Reevaluation Report
ARCF GRR FEIS/FEIR	May 2016 American River Watershed Common Features General Reevaluation Report Final Environmental Impact Statement/Environmental Impact Report
Arid West Supplement	<i>Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)</i>
Basin Plan	<i>Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin</i>
BMP	best management practice
BO	biological opinion
BPWG	Bank Protection Working Group
Business Plan	Hazardous Material Release Response Plan
BWFS	Basin-Wide Feasibility Study
CAA	Federal Clean Air Act
CAAQS	California ambient air quality standards
CAFE	Corporate Average Fuel Economy
Cal EPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations

Acronym or Abbreviation	Definition
cfs	cubic feet per second
CHHSL	California Human Health Screening Level
City	City of Sacramento
CNDDB	California Natural Diversity Database
CO	carbon monoxide
County	County of Sacramento
CRHR	California Register of Historical Resources
CSUS	California State University, Sacramento
CUPA	Certified Unified Program Agency
CVFPB	Central Valley Flood Protection Board
CVFPP	Central Valley Flood Protection Plan
CWA	Clean Water Act
cy	cubic yards
dBA	A-weighted decibel
DOT	U.S. Department of Transportation
DWR	California Department of Water Resources
EA	Environmental Assessment
EIS/EIR	environmental impact statement/environmental impact report
EO	executive order
EP	Engineering Pamphlet
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act of 1992
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FR	<i>Federal Register</i>
FTA	Federal Transit Administration
GHG	greenhouse gas
GIS	geographic information system
GPS	Global Positioning System
GRR	general reevaluation report
H:V	slope ratio of horizontal to vertical

Acronym or Abbreviation	Definition
HMMAMP	Habitat Mitigation, Monitoring, and Adaptive Management Plan
HPMP	Historic Properties Management Plan
HPTP	Historic Properties Treatment Plan
HRA	health risk assessment
HSC	California Health and Safety Code
I-5	Interstate 5
I-80	Interstate 80
IEPR	Integrated Energy Policy Report
in/sec	inches per second
IWM	instream woody material
LAR	Lower American River
LARTF	Lower American River Task Force
lb/day	pounds per day
L_{eq}	average hourly noise level
LMA	local maintaining agency
L_{max}	maximum noise level
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendant
mm	millimeters
MRZ	Mineral Resource Zone
MSAT Protocol	Mobile Source Air Toxics Protocol
MTCO ₂ e/year	metric tons of carbon dioxide equivalent per year
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act of 1966
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NN	non-native
NO _x	oxides of nitrogen
NO ₂	nitrogen dioxide

Acronym or Abbreviation	Definition
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NTU	nephelometric turbidity unit
NWIC	Northwest Information Center
O&M	operations and maintenance
OHWM	ordinary high-water mark
OSHA	Occupational Safety and Health Administration
PA	<i>Programmatic Agreement Among the U.S. Army Corps of Engineers and the California State Historic Preservation Officer Regarding the American River Common Features Project, Sacramento and Yolo Counties, California</i>
Parkway	American River Parkway
Parkway Plan	American River Parkway Plan
Phase 1 ESA	Phase 1 Environmental Site Assessment
PM _{2.5}	of 2.5 micrometers or less
PM ₁₀	respirable particulate matter with an aerodynamic diameter of 10 micrometers or less
PPV	peak particle velocity
PRC	California Public Resources Code
Project Area	project area for the American River Watershed Common Features, Water Resources Development Act of 2016 Project, American River Contract 3A, Subreach 1
Proposed Action	ARCF 2016 Project, American River Contract 3A
RM	river mile
ROG	reactive organic gases
RPA	Registered Professional Archaeologist
RWQCB	Central Valley Regional Water Quality Control Board
SAFCA	Sacramento Area Flood Control Agency
SAFE Rule	Safer Affordable Fuel-Efficient Vehicles Rule
SAM	Standard Assessment Methodology
SB	Senate Bill
SHPO	State Historic Preservation Officer
SIP	state implementation plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO ₂	sulfur dioxide

Acronym or Abbreviation	Definition
SPCCP	Spill Prevention Control and Countermeasures Plan
SRA	shaded riverine aquatic (habitat)
SRBPP	Sacramento River Bank Protection Project
SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminant
TCR	Tribal Cultural Resource
TRAC	Technical Resource Advisory Committee
UAIC	United Auburn Indian Community
Unified Program	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program
Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
U.S. 50	U.S. Highway 50
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VdB	vibration decibels
VELB	valley elderberry longhorn beetle
VMT	vehicle miles traveled
WCM	Water Control Manual
WRDA	Water Resources Development Act
WRI	weighted relative response index

CHAPTER 1

Introduction

1.1 Proposed Action

1.1.1 Development of the Proposed Action

The Lower American River Task Force (LARTF) is a broad stakeholder group that focuses on flood, environmental, and recreational management issues affecting the lower reach of the American River from Folsom Dam to the Sacramento River. In the mid-1990s, LARTF members called for the formation of the Bank Protection Working Group (BPWG) to help plan, design, and implement bank protection features along the Lower American River (LAR). A primary goal of the BPWG is to support Federal, State, and local efforts to provide the highest level of flood protection for the surrounding community and the conservation of irreplaceable resources along the American River Parkway (Parkway). Together with the U.S. Army Corps of Engineers (USACE), the Central Valley Flood Protection Board (CVFPB), the California Department of Water Resources (DWR), and the Sacramento Area Flood Control Agency (SAFCA), the BPWG successfully helped to design and implement five bank protection sites along the LAR that integrated bank protection and habitat. Construction of these sites, referred to as LAR Sites 1–5, was authorized under the Sacramento River Bank Protection Project.

During that same era, the American River Watershed Common Features (ARCF) and the Folsom Dam Modifications projects, which were a part of the 1996 American River Watershed Project, were authorized by Congress in the 1996 Water Resources Development Act (WRDA), with the goal of providing a higher level of flood protection to the Sacramento area. These projects were intended to improve LAR levees to control seepage and increase stability, enlarge the outlet capacity of Folsom Dam, and raise Folsom Dam to increase the level of flood protection for the City and County of Sacramento. In 2002, LARTF participants cooperated in preparing the Lower American River Corridor Management Plan to provide a framework for integrated management of this reach of the river. This management plan served as a catalyst for updating the 1985 American River Parkway Plan in 2008.

Now, with both the Folsom Dam Joint Federal Project and the levee improvements of the American River Common Features WRDA projects completed, the ability to manage large flood events has been improved along the LAR by allowing more water to be safely released from Folsom Dam/Reservoir earlier in a major storm event. There is more flood storage capacity in Folsom Reservoir to control peak inflows and better manage the

releases, up to 160,000 cubic feet per second (cfs) into the LAR during flood emergencies. However, at the time the above-referenced projects were studied, the extent of erosion impacts was not well understood, and none of these projects implemented bank erosion protection measures to address the increased erosion potential from higher and longer releases from Folsom Dam.

As a result, in 2015, LARTF members called for the re-formation of the BPWG to help advise, plan, design, and implement bank erosion protection features along the LAR. The intent was to better understand how the river channel may respond under an extended 160,000 cfs release from Folsom Dam during an extreme flow event. A flow event of this magnitude could have the potential to induce substantial erosion and affect valuable resources in the Parkway and potentially lead to flooding in surrounding urban areas. Because of the highly technical issues facing the BPWG under this scenario, a multi-disciplinary committee composed of various agency and interested party stakeholders was developed. The committee initially consisted of flood control technical experts and was referred to as the Technical Advisory Committee. The need for additional natural resource expertise was identified and formed as the Resource Advisory Committee (RAC). Together, the Technical Advisory Committee and Resource Advisory Committee form the larger Technical Resource Advisory Committee (TRAC) to help consider both existing condition resource impacts and potential short-term and long-term impacts.

The work of the TRAC and its consultant team has focused on technical issues, including use of a more risk-based approach and consistency with identifying and evaluating erosion sites to be consistent with USACE and State (DWR, CVFPB, and Urban Levee Design Criteria) requirements. The efforts of these working groups have resulted in identifying the Proposed Action in this document.

1.1.2 Summary of the Proposed Action

The American River Watershed Common Features General Reevaluation Report Final Environmental Impact Statement/Environmental Impact Report (ARCF GRR FEIS/FEIR) analyzed the basic erosion protection measures that underlie the Proposed Action in this Supplemental EIR. However, some elements of those measures (specifics of designs, staging areas, construction methods, haul routes, disposal of soil, and mitigation sites) were not analyzed in the ARCF GRR FEIS/FEIR because final designs specifications had not been completed. Through project design and refinement, USACE and CVFPB have now identified specific locations and improvements to address erosion concerns, potential staging areas, haul routes, stockpile sites, and off-site mitigation that constitute the Proposed Action. This EIR supplements the ARCF GRR FEIS/FEIR by analyzing the environmental effects of these previously unquantified or unidentified elements of the erosion protection measures planned for the Proposed Action.

The Proposed Action in this document consists of: (1) the installation of approximately 3,000 linear feet of erosion protection and on-site riparian habitat features along one

levee segment of the LAR (Site 1-1); and (2) associated staging areas, stockpile sites, and haul routes. All activities for the Proposed Action comprise the Project Area.

1.2 Proposed Action Area

The Proposed Action is located in the City of Sacramento and in Sacramento County, California, along the left bank of the American River in the same location as Interstate Business 80 (also known as the Capitol City Freeway) and upstream of the City of Sacramento's Sutter's Landing Park in the American River Parkway.

1.3 Purpose of and Need for Proposed Action

The Proposed Action has been formulated to achieve the purpose, needs, and objectives identified in the ARCF GRR. The Proposed Action needs and objectives define the underlying need for the project to which USACE is responding, in conformance with the requirements of the National Environmental Policy Act (NEPA) (40 Code of Federal Regulations [CFR] 1502.13 and 33 CFR Part 325, Appendix B).

The purpose described in the ARCF GRR is to reduce the overall flood risk within the study area. An unacceptably high risk of flooding from levee failure threatens the public safety of approximately 530,000 people, as well as property and critical infrastructure throughout Sacramento. The purpose of the Proposed Action is to construct multiple erosion control measures within the LAR to allow conveyance of the 200-year (160,000 cfs) flood flow without risk of levee failure.

The Sacramento metropolitan area is one of the most at-risk areas for flooding in the United States and has a high probability of flooding due to its location at the confluence and within the floodplain of two major rivers, the Sacramento and American Rivers. Both of these rivers have large watersheds with very high potential runoff. Past runoff events have overwhelmed the existing flood management system, which was designed and built many years ago, before modern construction methods were employed. High flows in the American River associated with flood flows are eroding critical components of the flood management system. In addition to the high risk of flooding, the consequences of flooding in the study area would be catastrophic in terms of life loss and property damage.

The Proposed Action is needed to reduce the risk of levee failure associated with erosion, particularly during high-flow events on the LAR. Site 1-1 is located along a portion of the LAR where the levee is steep and relatively close to the river channel. During high flows, this is subjected to high velocities that significantly increase the risk of erosion, possibly leading to levee failure. The Proposed Action would strengthen the levee system within LAR Site 1-1 and reduce the risk of levee failure from erosion and the risk of a catastrophic flood event within the Sacramento metropolitan area. The need for on-site habitat mitigation site is to mitigate for the adverse effects of the Proposed Action and the larger ARCF GRR on biological resources.

1.4 Related Documents

The Proposed Action is a component of a larger effort in the Sacramento region. USACE and the CVFPB jointly published the ARCF GRR Draft EIS/EIR in March 2015, in accordance with the requirements of NEPA and the California Environmental Quality Act (CEQA) (State Clearinghouse No. 2005072046). The Draft EIS/EIR analyzed the impacts of the ARCF GRR to reduce the overall flood risk within the delineated study area. The study area includes the City of Sacramento and surrounding areas. A FEIS/FEIR was issued in January 2016, and comments were received between January 22 and February 22, 2016. A revised FEIS/FEIR was issued in May 2016. The Record of Decision for the ARCF GRR was signed by the Assistant Secretary of the Army (Civil Works) on August 29, 2016. The ARCF GRR was authorized by Congress in December 2016. The following is a list of ARCF 2016 Project documentation, or documentation for related actions, which may be relevant to this Supplemental EIR:

- May 1988, Sacramento River Flood Control System Evaluation, Initial Appraisal Report—Sacramento Urban Area, Phase I, USACE Sacramento District.
- December 1991, American River Watershed Investigation California Feasibility Report: Part I—Main Report and Part II—EIS/EIR.
- December 1991, American River Watershed Investigation California Feasibility Report, Volume 2, Appendix G: Section 404 Evaluation.
- March 1996, Supplemental Information Report, American River Watershed Project, California: Part I—Main Report and Part II—Final Supplemental EIS/EIR.
- June 27, 1996, Chief's Report on the Final Supplemental EIS, signed by Acting Chief of Engineers, Major General Pat M. Stevens; and July 1, 1997, Record of Decision on the Final Supplemental EIS, signed by Director of Civil Works, Major General Russell L. Furman.
- November 2008, FEIS for 408 Permission and 404 Permit to Sacramento Area Flood Control Agency for the Natomas Levee Improvement Project, Sacramento, CA, prepared by EDAW/AECOM, Sacramento, California.
- October 2010, FEIS on the Natomas Levee Improvement Project Phase 4b Landside Improvement Project, Sacramento, CA, prepared by AECOM, Sacramento, California.
- September 2015, Final Biological Opinion for the American River Common Features General Reevaluation Report, issued by the U.S. Fish and Wildlife Service, Sacramento, California.
- September 2015, Final Fish and Wildlife Coordination Act for the American River Common Features General Reevaluation Report, issued by the U.S. Fish and Wildlife Service, Sacramento, California.

- December 2015 (revised May 2016), American River Watershed Common Features General Reevaluation Report, FEIS/EIR.
- July 2016, FEIR, North Sacramento Streams, Sacramento River East Levee, Lower American River, and Related Flood Improvements Project, prepared for SAFCA by GEI Consultants.
- August 2016, Record of Decision on ARCF GRR 2015 FEIS/EIR signed by Assistant Secretary of the Army (Civil Works), Jo-Ellen Darcy.
- June 2017, Reinitiation of the ARCF Project, Sacramento County, California.
- February 2019, Final Supplemental EA/Initial Study, ARCF Seepage Stability Berm, Reach D Contract 1.
- May 2019, Reinitiation of the ARCF Project, Sacramento County, California.
- June 2019, Final Supplemental EA/Initial Study, ARCF 2016 Project Beach Stone Lakes Mitigation Site.
- November 2019, Final Supplemental EA/EIR, ARCF 2016, Sacramento River East Levee Contract 1.
- June 2020, Reinitiation, with USFWS, of the ARCF Project, Sacramento County, California.
- September 2020, Reinitiation, with NMFS, of the ARCF Project, Sacramento County, California.
- August 2021, Final Supplemental EIS/EIR, ARCF 2016, Sacramento Weir Widening.
- November 2020, Final Supplemental EA/EIR, ARCF 2016, Sacramento River East Levee Contract 2.
- March 2021, Final Supplemental EA/EIR, ARCF, Water Resources Development Act of 2016, American River Contract 1.
- March 2021, Reinitiation of Formal Consultation on the American River Common Features (ARCF) 2016 Project, Sacramento and Yolo Counties, California Biological Opinion
- May 2021, Endangered Species Act Section 7(a)(2) Biological Opinion, Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the American River Watershed Common Features General Reevaluation Report Reinitiation 2020 Biological Opinion
- June 2021, Final General Conformity Determination for ARCF, Water Resources Development Act of 2016.
- September 2021, Final Supplemental EIS/EIR, ARCF, Water Resources Development Act of 2016, American River Contract 2.

1.5 Authority

As part of the larger American River Watershed Common Features Project, the Proposed Action is authorized by Section 101(a)(1)(A) of the WRDA of 1996, Public Law No. 104-303 Section 101(a)(1), 110 Stat. 3658, 3662–3663 (1996), as amended by Section 366 of the WRDA of 1999, Public Law No. 106-53, Section 366, 113 Stat. 269, 319-320 (1999). Additional authority was provided following the interim general reevaluation study in Section 1322(b) of the WRDA of 2016, Public Law No. 114-322, Section 1322, 130 Stat. 1707, also known as the Water Resources Infrastructure Improvements for Nation Act, and Public Law 115-123 (Bipartisan Budget Act of 2018).

1.6 Purpose of the Supplemental Environmental Impact Statement/Environmental Impact Report

This Supplemental EIR fulfills the following purposes: (1) describes the existing environmental resources in the Project Area; (2) evaluates the environmental effects of the alternatives (see Chapter 2, *Alternatives*) on these resources; and (3) identifies measures to avoid, minimize, or reduce any effects to a less-than-significant level. This Supplemental EIR has been prepared in accordance with CEQA. The CVFPB anticipates that USACE can implement the portion of the authorized ARCF project described in this document as the Proposed Action without additional CEQA analysis beyond this Supplemental EIR.

Section 15162 of the State CEQA Guidelines (California Code of Regulations [CCR], Title 14, Section 15000 et seq.) provides that when an EIR has been certified for a project, a subsequent EIR need not be prepared unless a substantial change in the project, a substantial change in the surrounding circumstances, or new information of substantial importance comes to light which reveals the project would have one or more new or substantially more severe significant environmental effects not discussed in the certified EIR. A lead agency may choose to prepare a supplement to an EIR, rather than a subsequent EIR, when conditions that require preparation of a subsequent EIR are met, and “only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation” (State CEQA Guidelines, 14 CCR Section 15163).

This Supplemental EIR supplements (does not replace) the previously certified ARCF GRR FEIS/FEIR and addresses project modifications, changed circumstances, and new information that could not have been known with the exercise of reasonable diligence at the time the prior document was certified, as required under State CEQA Guidelines (14 CCR Section 15163).

The purpose of this Supplemental EIR is to provide the additional information necessary to make the previous EIR adequate for the project as modified. Accordingly, pursuant to the State CEQA Guidelines (14 CCR Section 15163), the Supplemental EIR need contain only the information necessary to analyze the project modifications, changed

circumstances, and new information that triggered the need for additional environmental review. This Supplemental EIR is intended to:

- address new or substantially more severe significant environmental effects related to any project modifications;
- recommend mitigation measures to avoid any new or substantially more severe significant environmental effects or reduce them to a less-than-significant level;
- update impact analysis and mitigation measures where conditions have changed since the publication of the ARCF GRR FEIS/FEIR;
- provide minor additions and changes to the ARCF GRR FEIS/FEIR warranting a Supplemental EIR for the following reasons:
 - there would be no new potentially significant and unavoidable or significant and unavoidable impacts from the Proposed Action;
 - the few new impacts from the Proposed Action can be mitigated to a less-than-significant level with implementation of measures identified in Chapter 3 of this Supplemental EIR, *Environmental Setting, Impacts, and Mitigation Measures*; and
 - applicable measures in the existing Mitigation Monitoring and Reporting Program continue to apply to the Proposed Action.

The analysis in this Supplemental EIR focuses on project modifications and refinements, and details that were not analyzed in the ARCF GRR FEIS/FEIR, including staging areas, haul routes, stockpile sites, and more detailed cultural resources information, which constitute the Proposed Action for this Supplemental EIR. Each topic section includes a discussion of those issues and impacts that were not considered in the ARCF GRR FEIS/FEIR. This Supplemental EIR has been prepared in accordance with the requirements of CEQA for supplemental environmental documents.

1.7 Decision Needed

As the CEQA lead agency, the CVFPB will review and consider the information presented in this Supplemental EIR, evaluate comments received after dissemination of this Supplemental EIR, respond to those comments, and examine the entire administrative record (including the administrative record for the ARCF GRR FEIS/FEIR), when determining whether to approve the proposed project modifications. The ARCF GRR FEIS/FEIR analyzed many elements of the Proposed Action levee reconstruction work, including bank protection and launchable rock trench features. The CVFPB must decide whether to certify the Supplemental EIR under CEQA.

This Supplemental EIR is also intended to be used by SAFCA, DWR, the Central Valley Regional Water Quality Control Board, (RWQCB) and the California State Lands Commission (SLC) as responsible agencies under CEQA. DWR and SAFCA are non-

federal partners to the project and will provide project funds and oversight. A Water Quality Certification under Section 401 of the Clean Water Act will be required, and RWQCB will consider this Supplemental EIR prior to issuing the certification. A State Lands Commission lease may be required prior to constructing and maintaining the project, in which case SLC will consider this Supplemental EIR prior to issuing the lease.

CHAPTER 2

Alternatives

2.1 Introduction

The ARCF GRR FEIS/FEIR previously analyzed the following alternatives: the No Action/No Project Alternative and two action alternatives. The action alternatives considered were similar except that one alternative included widening of the Sacramento Weir and Bypass (Alternative 2). The ARCF GRR FEIS/FEIR found Alternative 2 to be the preferred alternative. This chapter describes the No Action/No Project alternative and the Proposed Action, which consists of previously unanalyzed improvements and related actions to be undertaken within a section of levee along the left bank¹ of the Lower American River (LAR). The Proposed Action levee section described in this chapter extends from River Mile² (RM) 3.8 to RM 4.2 and includes design and construction details not previously described in the ARCF GRR FEIS/FEIR.

2.2 No Action/No Project Alternative

The CVFPB is required to consider No Project as one of the alternatives for consideration to comply with the requirements of CEQA. The CEQA No Project Alternative assumes that the project analyzed in the ARCF GRR FEIS/FEIR has not been constructed. Therefore, with the No Project Alternative, it is assumed that no additional features would be implemented by the Federal Government or State and local interests to achieve the project purpose, over and above those elements of the authorized ARCF Project and subsequent approved and certified supplemental EIRs. Under the No Project alternative, the CVFPB would not conduct any additional work to address seepage, slope stability, overtopping, or erosion concerns in the Sacramento metropolitan area. The local maintaining agency (LMA) would address vegetation and encroachments over time under the System-Wide Improvement Framework agreement, which would improve the condition of the levee system, but it would be speculative to assume that any additional work would be conducted to address the seepage, slope stability, overtopping, or erosion concerns in the project area.

Therefore, the CEQA No Project Alternative in the ARCF GRR FEIS/FEIR is incorporated by reference in this EIR.

¹ Riverbanks are designated as left (L) or right (R) when facing downstream.

² River miles are measured from the confluence of the American and Sacramento River at 0 and increase going upstream.

2.3 Proposed Action

The ARCF GRR FEIS/FEIR identified areas within the LAR that require improvements to address ongoing erosion to prevent levee failure. There are two erosion protection measures that were proposed and approved for the American River levees in the ARCF GRR FEIS/FEIR: (1) bank protection; and (2) launchable rock³ trenches. Terminology used to describe specific features of the levees is shown on **Figure 2-1**.

The levee reach of the LAR analyzed in the ARCF GRR FEIS/FEIR was subdivided into four subreaches for the purpose of erosion analysis, as shown in **Figure 2-2**. The Proposed Action evaluated in this Supplemental Draft EIR consists of implementing measures within Subreach 1, between LAR RM 3.8 and 4.2 (otherwise referred to in this Draft Supplemental EIR as Site 1-1), to prevent erosion, which, if unaddressed, could potentially undermine the levee foundation causing it to fail. This levee segment was identified by the Technical Resource Advisory Committee (TRAC) and Bank Protection Working Group (BPWG) as having a high risk of failure among the LAR Subreaches during high-flow events due to erosion. The Proposed Action includes the erosion protection measures proposed and approved for the American River levees in the ARCF GRR FEIS/FEIR and includes specific locations and design of the proposed erosion protection improvements, construction staging areas, haul routes, stockpile locations, and other details not previously described or identified in the ARCF GRR FEIS/FEIR. The locations of the elements of the Proposed Action are shown on **Figure 2-3**. The Proposed Action is described below in Sections 2.3.2 to 2.3.6, which provide details of proposed design elements, construction considerations, and schedules for each of the components summarized here.

2.3.1 Design Objectives

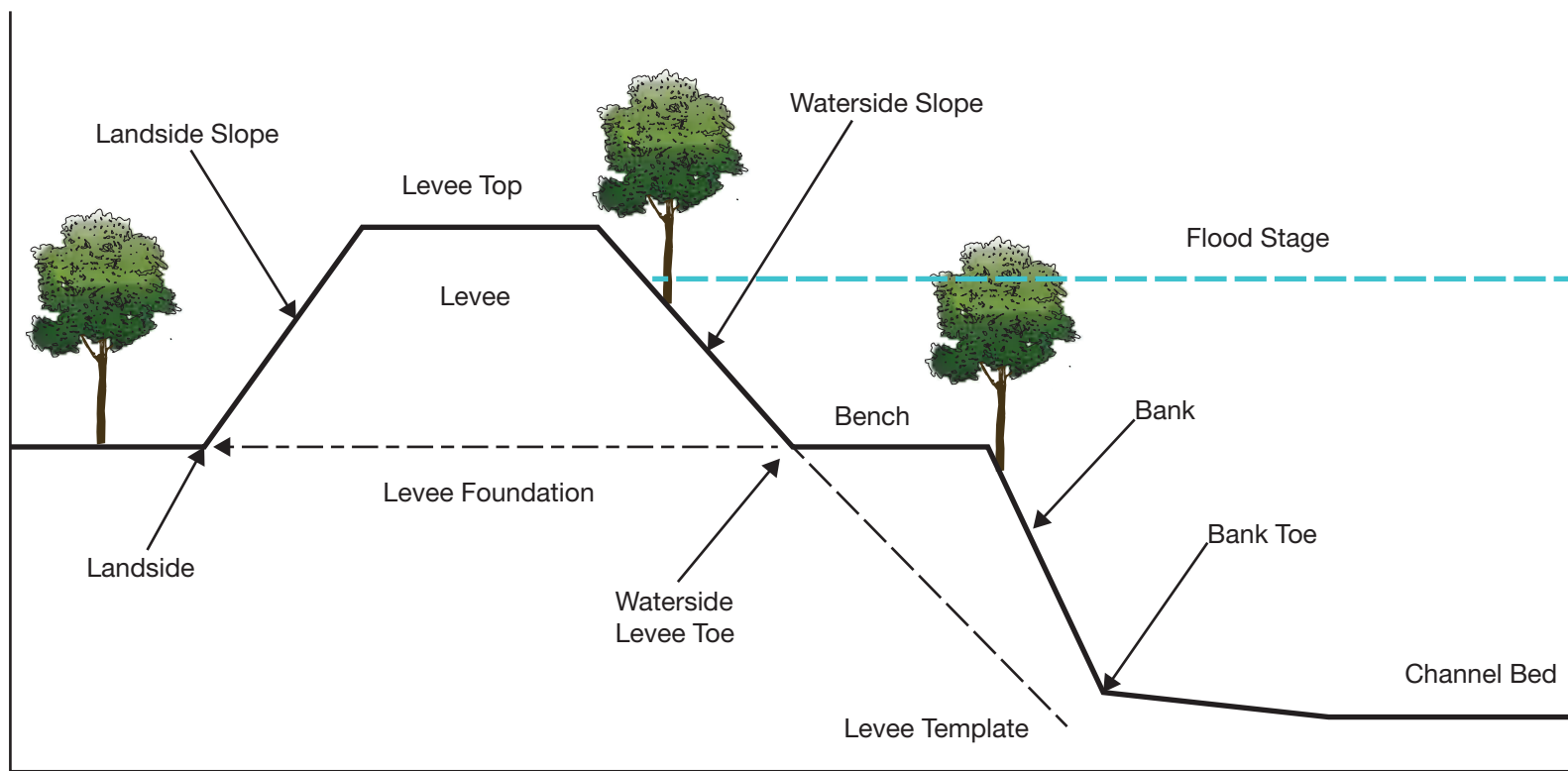
The design objectives included in the ARCF GRR FEIS/FEIR (pages 7 to 13) are incorporated by reference. Additional design objectives for the Proposed Action include:

Hydraulic Capacity: The Proposed Action must avoid or offset hydraulic impacts in order not to increase the risk of levee overtopping.

Environmental Resource Impacts: Although impacts on resources would be avoided where possible, short-term impacts due to construction are considered unavoidable. To compensate for unavoidable impacts on-site, the elements of the Proposed Action have been designed to improve the overall long-term on-site resource conditions, where feasible.

However, off-site mitigation may still be required and could provide substantial opportunities to improve overall ecosystem values along the LAR.

³ Launchable rock is a term used to describe a type of rock revetment design typically used for locations where it is impractical to install revetment to the maximum predicted scour elevation. The launchable rock is placed as a thick blanket at the toe or bed of the river with adequate volume such that when scour occurs below the blanket, the rock will launch into the eroded area and arrest the progression of bank erosion.



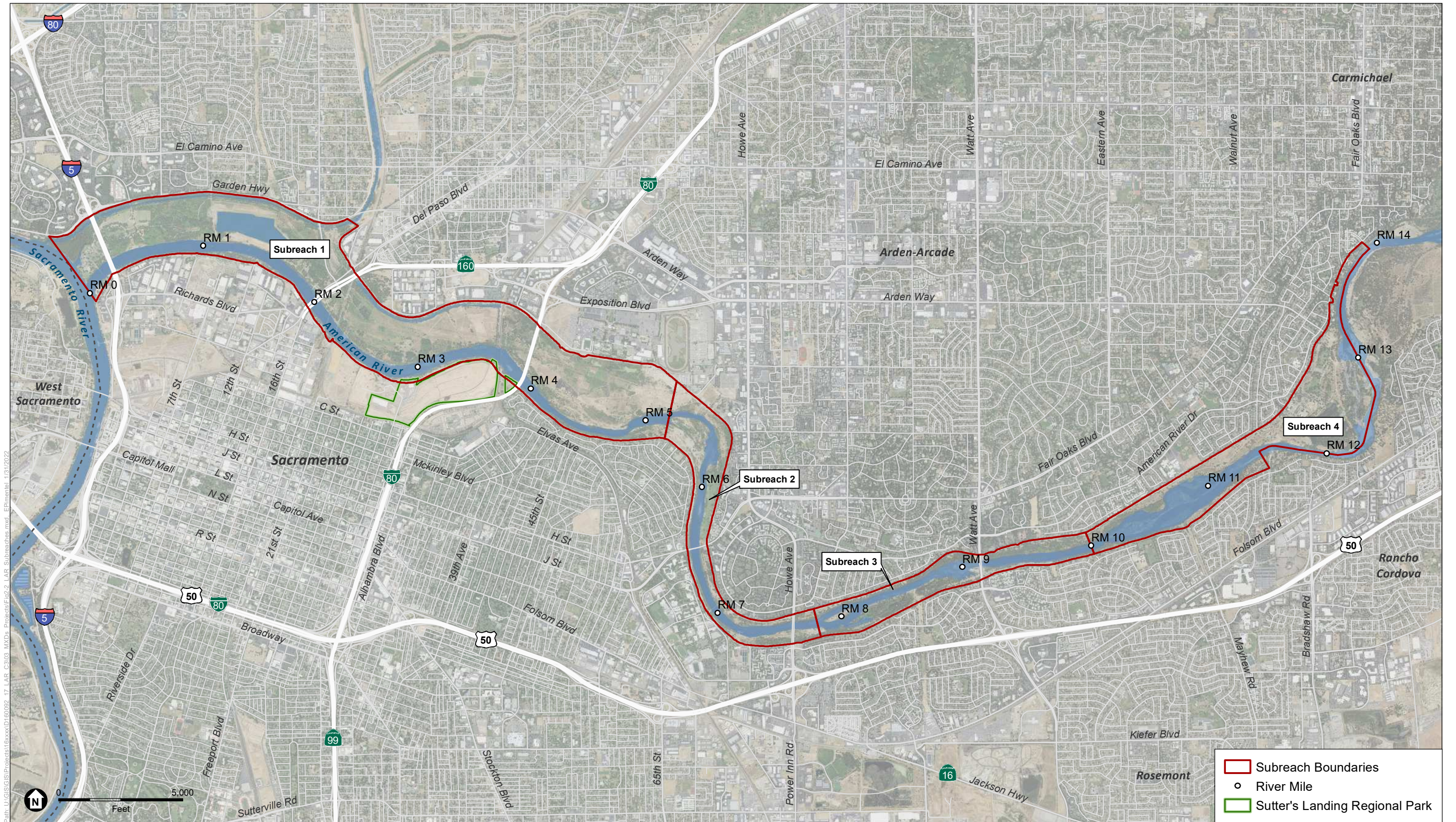
Note: Not to scale, for illustrative purposes only

SOURCE: USACE

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Figure 2-1
Levee Terminology

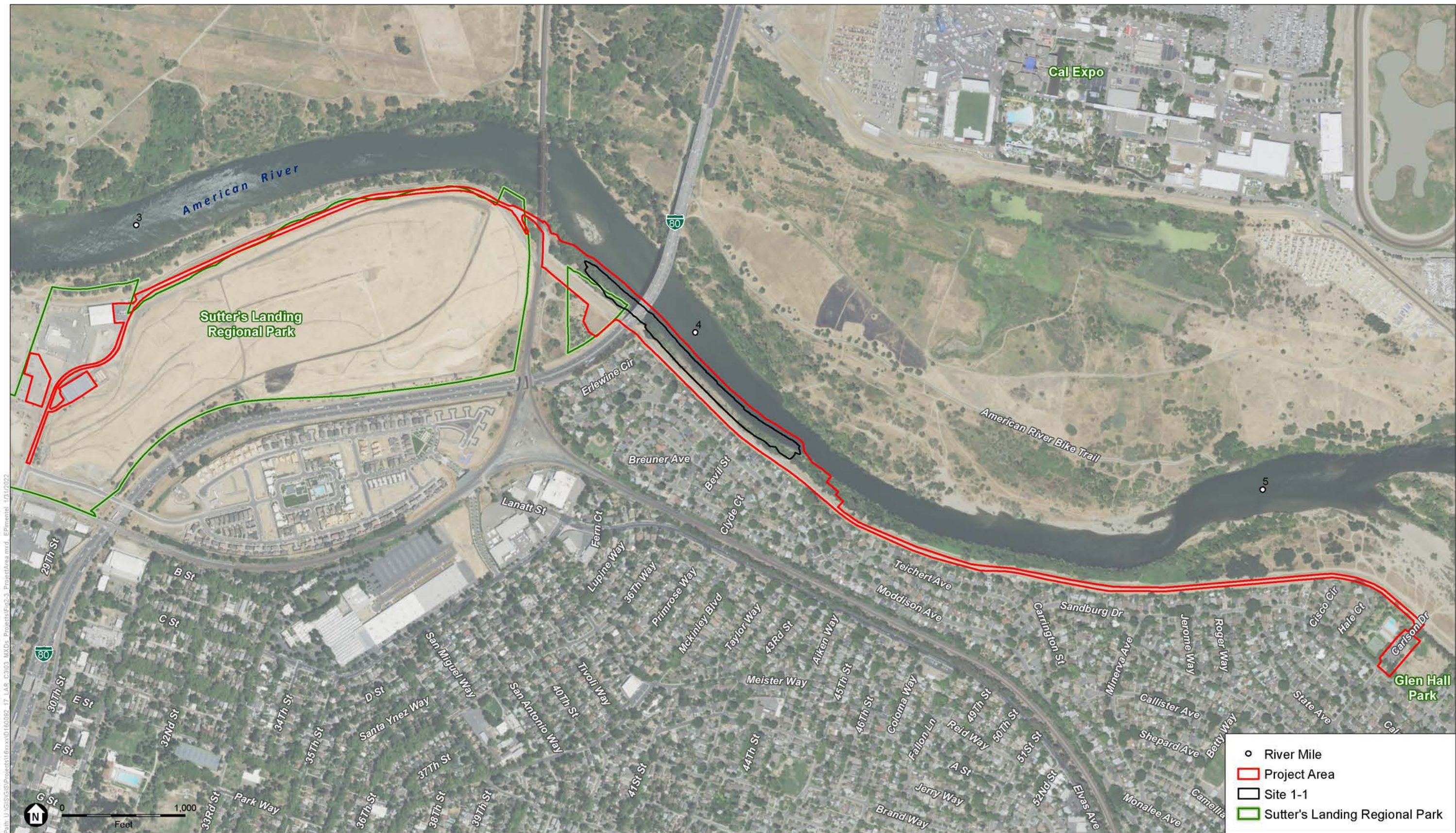
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SOURCE: USDA, 2018; NHC, 2021; ESA, 2022

ARCF 2016 American Rivert Contract 3A

Figure 2-2
Lower American River Subreaches



SOURCE: Esri, 2021; USDA, 2018; ESA, 2022

ARCF 2016 American River Contract 3A

Aesthetics and Recreation: The American River Parkway Plan, consistent with the State and Federal Wild and Scenic Rivers Acts, specifies that erosion control projects should include a revegetation program that screens the project from public view, provides for a naturalistic appearance of the site, and restores affected habitat values.

Infrastructure: Impacts to roadway and major utility infrastructure would be minimized to the extent practicable. Impacts to American River Parkway (interchangeable with Parkway in this Supplemental EIR) infrastructure would also be minimized.

Biological Opinion Requirements: Both the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) issued Biological Opinions (BOs) in 2015 for the ARCF GRR EIS/EIR. Both BOs include Conservation Measures, Reasonable and Prudent Measures, and Terms and Conditions.

The potential effects of the Proposed Action on the species and/or their critical habitat originally covered in the BOs have been re-evaluated based on updated designs to ensure all aspects of the Proposed Action would not jeopardize the continued existence of species or adversely modify critical habitat. The USFWS BO was issued in March 2021 and the NMFS BO was issued in May 2021. Both BOs concluded that the Proposed Action would not jeopardize the continued existence of species or adversely modify critical habitat.

2.3.2 Site 1-1 Erosion Protection Description

Site 1-1 is located on the left bank of the LAR between LAR RM 3.8 and 4.2 (approximately 3,000 linear feet) and is divided into two segments; one segment extends from LAR RM 3.8 to 3.9, downstream of the Interstate 80 Business (I-80 or Capital City Freeway); and one segment that extends from LAR RM 3.9 to 4.2 underneath and upstream of the Capital City Freeway. Site 1-1 is in a section of the LAR where a sand bed substrate and Sacramento River backwater and tidal effects are more prominent in comparison to the upstream areas of the LAR. These conditions have the potential to result in future scour and erosion at the levee toe and embankment. The designs for Site 1-1 include a combination of planting benches with a launchable rock toe, a rock blanket, regrading of the riverbank, and include riverbank and levee embankment revetment protection. These design elements are described in the following sections.

2.3.2.1 Planting Bench with Launchable Rock Toe and Buried Rock

The Proposed Action would construct a launchable rock toe to protect against toe scour. The launchable rock toe is designed to “launch” once erosion of the channel bottom progresses during a flood event to the toe of the rock. This launched layer of riprap is designed so that it would cover the eroded surface of the new channel bottom and inhibit further progression of the eroded slope. Once fully launched a layer of riprap would extend from the channel toe to the maximum depth of scour predicted in the river channel.

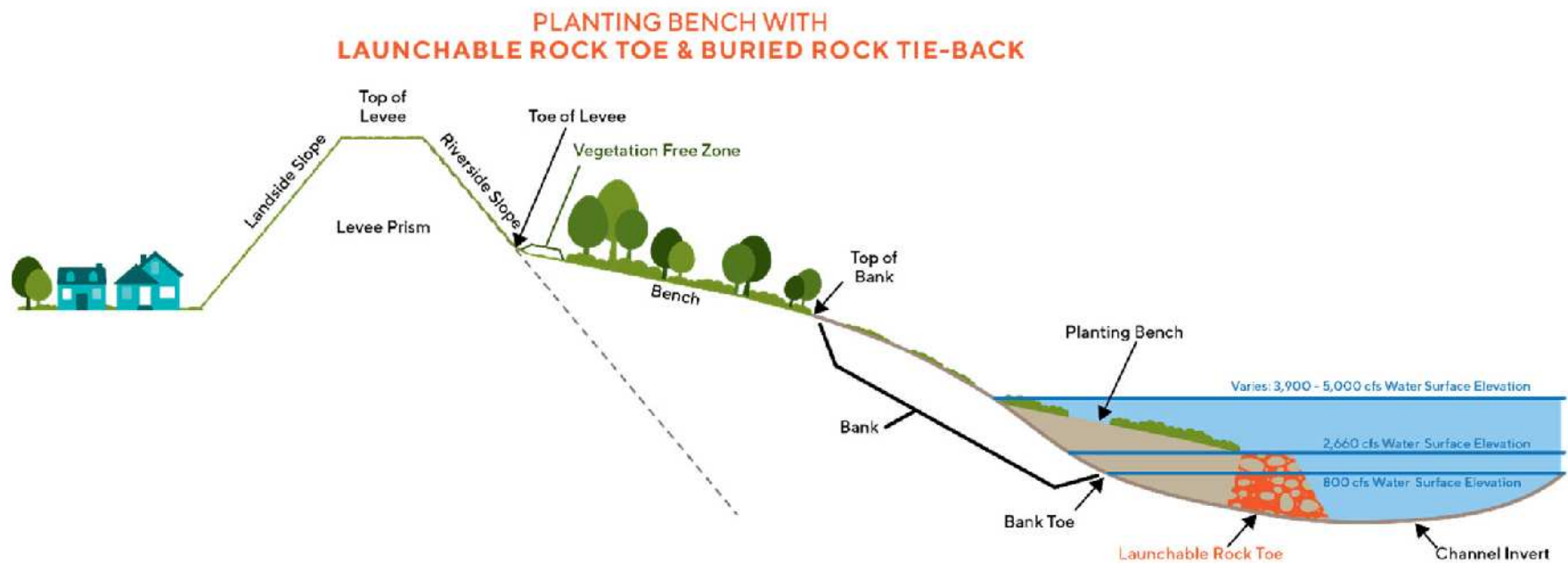
The launchable rock toe would be placed where possible to allow the creation of a plantable soil filled bench to provide aquatic and terrestrial habitat at a variety of flow

conditions. The target width of the planting bench would be 40 feet wide. Where planting benches are included, this feature has a waterside elevation for the top of the launchable rock toe that varies approximately from the 800 cfs water surface elevation (WSE) to the 2,660 cfs WSE (mean summer low and normal flows, respectively). The upper elevations of the planting bench roughly corresponds to the 5,000 cfs WSE. The design elevations were based on site topographic measurements of the approximate vegetation elevation in Site 1-1. The planting bench generally ranges in elevation from 6.3 to 14.5 feet above mean sea level. The top of the landside planting bench would provide more woody vegetation, in particular large canopy trees, closer to the edge of the launchable rock toe and, therefore, provide more shaded riverine aquatic habitat. The design of the levee profile used the modelled 2,660 WSE elevation that ranges from around 7 to 17.5 feet, with the median WSE at 11.5 feet. The low point of the waterside top of the launchable rock toe would be at the median 800 cfs flow elevation. This would create shallow submerged habitat during most of the year, and would place much of the launchable rock toe below water levels most of the year, thereby reducing the amount of visible rock. The portions of the bench between the 800 cfs and 2,660 cfs flows would form aquatic habitat with a soil/sand substrate within these flow rates. The slope of the launchable rock toe would generally be no steeper than 1 vertical to 2 horizontal (1V:2H) with a top width of four feet.

The design of Site 1-1 includes tie-backs that are irregularly spaced at a maximum of approximately 250 feet apart to a minimum of approximately 105 feet apart. The tie-backs would help to limit the erosion extents and subsequent damage to a planting bench during a launching event. See **Figure 2-4** for an illustration of typical planting bench and launchable rock toe and buried rock features.

2.3.2.2 Soil-Filled Levee Embankment and Riverbank Revetment

Levee embankment soil-filled revetment includes a layer of riprap that is filled with soil at a 70 to 30 ratio (70-percent riprap/30-percent soil). This soil to riprap ratio is reflective of successful designs which have been used in the Sacramento area. The riprap is sized to remain stable during the 160,000 cfs and 192,000 cfs design flow events and provide erosion protection to the levee prism. Levee embankment soil filled revetment is required by the design in areas with applied velocities and shear stresses exceeding critical values for the levee surface material (e.g., grass on the levee slope). The top of the revetment is set at the elevation of non-erosive velocity/shear stress for the 160,000 cfs flow event. The slope of the soil filled levee embankment rock varies and is generally not steeper than 2.5H:1V. Post construction, the soil-filled revetment would be covered with one foot of soil and stabilized with native vegetation suited for the elevations at which the revetment occurs and would include woody riparian plantings at the elevations below the ordinary high water mark (OHWM), valley oak dominated forest above the OHWM, and native grasses in the vegetation free zone. The portion of revetment under the I-80 Bridge would be 100-percent rock without soil. See **Figure 2-5** for a typical cross section diagram of the soil-filled levee embankment revetment.



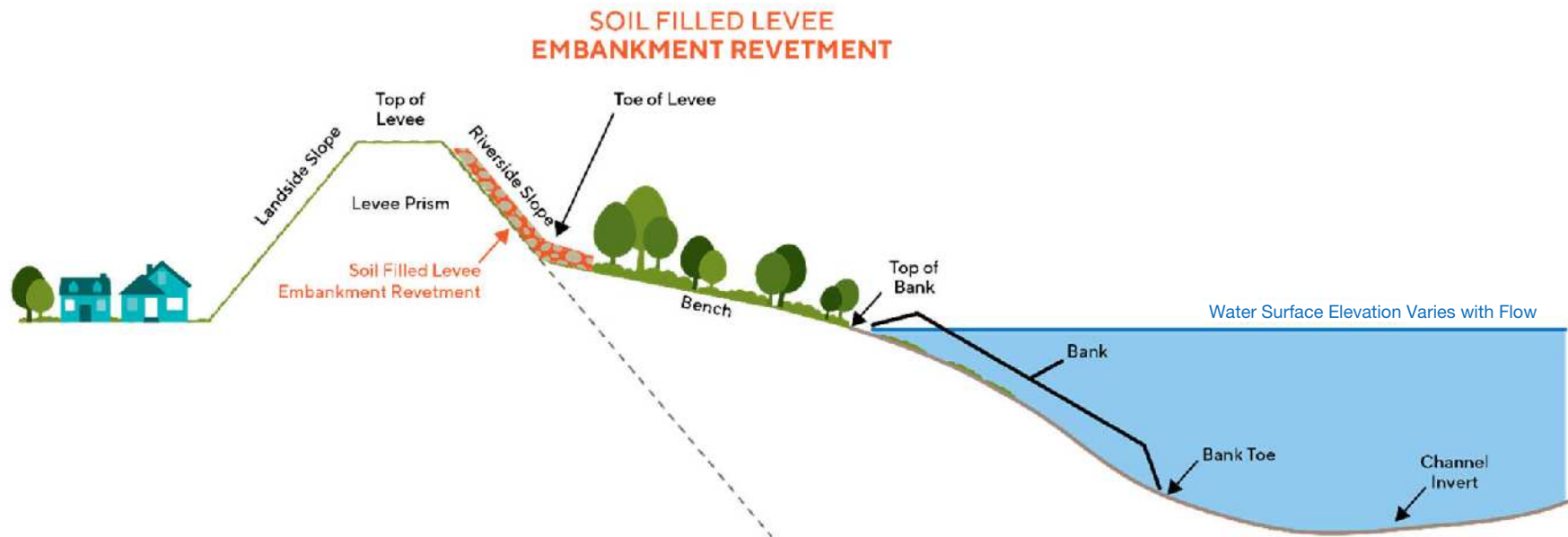
Note: Not to scale, for illustrative purposes only.

SOURCE: USACE

ARCF 2016 American River Contract 3A

Figure 2-4

Typical Cross Section Diagram of Planting Bench and Launchable Rock Toe and Buried Rock



Note: Not to scale, for illustrative purposes only.

SOURCE: USACE

ARCF 2016 American River Contract 3A

Figure 2-5
Typical Cross Section Diagram of Soil-filled Levee Embankment Revetment

2.3.2.3 Site 1-1 Downstream Segment Design

The primary erosion risk along Site 1-1 is an erodible bank susceptible to toe scour. The primary features of the segment include a launchable rock toe, planting bench, embankment cut and levee embankment revetment. See **Figure 2-6** for the location of the work areas at Site 1-1, including staging areas and temporary construction access ramps. See **Figure 2-7** and **Figure 2-8** for typical cross section and plan views, respectively, of the launchable rock toe design and levee bank design at the downstream segment of Site 1-1.

The launchable rock toe is designed as noted in Section 2.3.2.1 with a 4-foot top width, 1V:2H side slopes, a minimum height of 5 feet, and a variable top elevation. The top of the planting bench would tie into the revetment and would act as the toe of the embankment cut. The planting bench would be approximately 40 feet wide. The embankment cut would regrade the existing slope from the toe to a slope of 1V:2.5H. A layer of soil filled rock revetment would be placed on the regraded riverbank slope from the top of the bank down to the launchable rock toe at the median WSE of 11.6 feet above mean sea level. Below this elevation, only clean rock would be placed. The soil filled rock revetment would be composed of a 24-inch thick layer of soil filled rock with 12-inches of soil fill placed along the top of the rock layer to allow for the establishment of vegetation which would occur after construction.

The riverbank revetment would end at LAR RM 3.8 and tie into the existing revetment at a slope of 1V:2.5H. The slope would include soil filled riprap above the normal water surface. The launchable rock toe protection would protect the toe of the bankline from erosion and scour (lowering of the channel bed and existing ground) that could continue to over-steepen the existing grade of the bank and induce failure of the levee. The alignment of the launchable rock toe protection was designed to allow for fill to be placed along a section of over-steepened bank. The launchable rock toe would run continuously along the waterside edge of Site 1-1. Coir fabric erosion control blankets would be installed over the seeded topsoil. In the spring following the rockwork installation the revetment would be planted with native plants. Instream woody material (IWM) would be installed on the landside of the launchable rock toe to provide habitat for juvenile salmonids.

2.3.2.4 Site 1-1 Upstream Segment Design

The primary features in the upstream segment of Site 1-1 include a launchable rock toe, rock blanket, planting bench and riverbank revetment. This section is located from the I-80 Bridge upstream to LAR RM 4.2. The launchable rock toe under the I-80 Bridge is designed with a 4-foot top width, 1V:2H side slopes, a minimum height of 6.7 feet, with a top elevation approximately at the WSE below the 2,660 cfs (mean summer flow). The top of the launchable rock toe is to be used as the toe of the rock blanket. The rock blanket would be constructed with a slope of 1V:11H. The base of the rock blanket would be installed on top of the launchable rock toe and is the extension of the riverbank revetment design as it ties into the launchable rock toe at a slope of 1V:3H. The riverbank revetment would be constructed at grade with a maximum slope of 1V:2.5H. Where the existing bank is steeper than 1V:2.5H, acceptable material fill would be used to build up

the existing bank to the design slope of 1V:2.5H. The riverbank revetment would be composed of a 24-inch layer of riprap that meets Federal Highway Administration (FHWA) Class I requirements. A typical plan and cross-sectional view of these features is shown on **Figure 2-9** and **Figure 2-10** described below in detail.

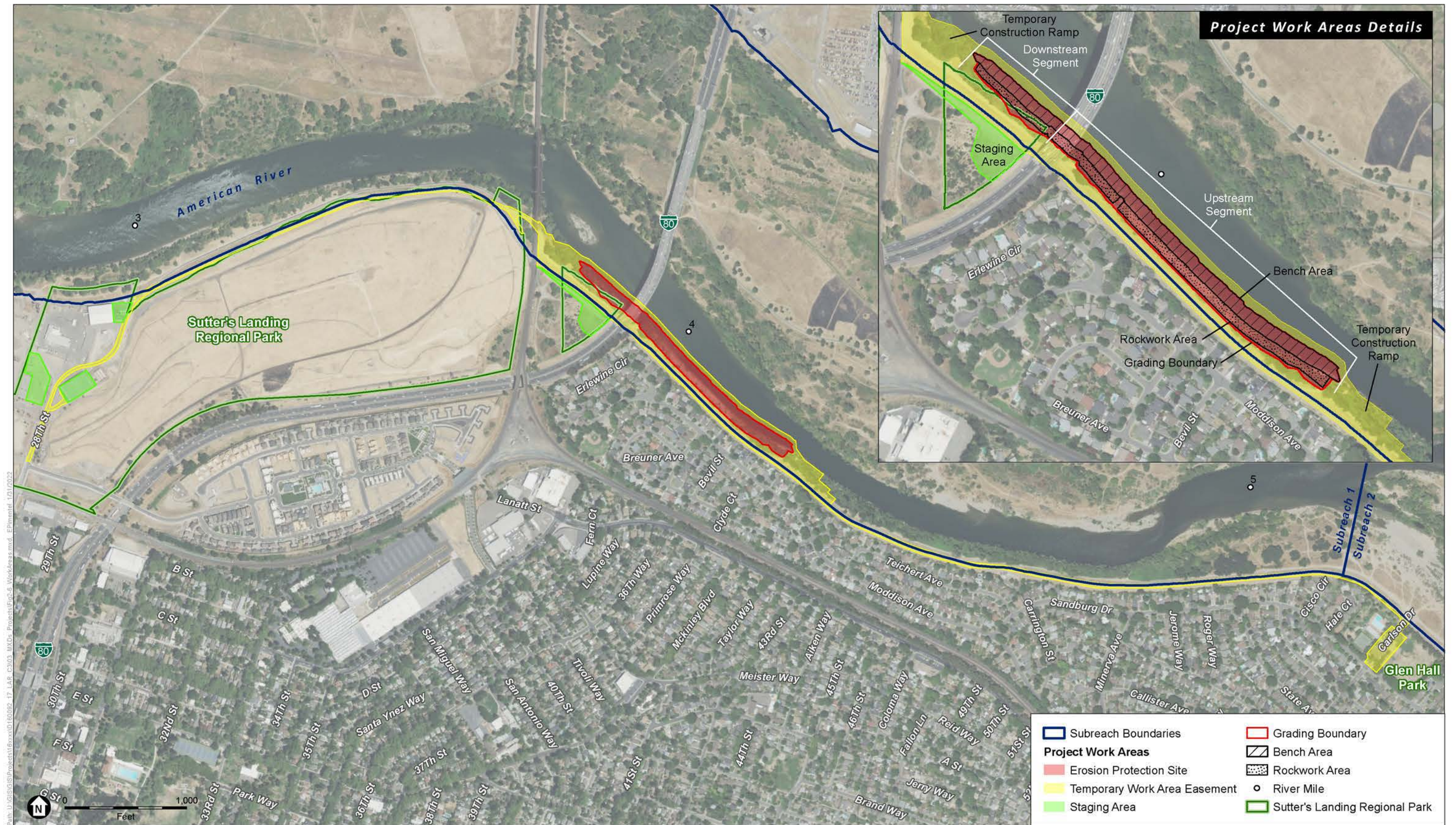
From the upstream edge of the I-80 Bridge, the launchable rock toe is designed with a 4-foot top width, 1V:2H side slopes, riprap meeting FHWA Class I requirements, and a variable top elevation approximately at the WSEs equal to 800 cfs (low summer flow) and 2,660 cfs (mean summer flow). The top of the launchable rock toe in this reach upstream of the I-80 Bridge would be used as the toe of the planting bench, and the variation in the top elevation of the launchable rock toe would create a variable slope in the planting bench. The planting bench is designed to have an average width of 40 feet.

The levee embankment revetment would be constructed at grade, with a maximum slope of 1V:2.5H composed of a 24-inch soil filled rock layer and a 12-inch soil fill layer. The 24-inch layer of soil filled rock placed on the embankment would continue down the bank to the launchable rock toe to an elevation of 11.60 feet above mean sea level, below which clean rock would be installed. Soil fill would be placed above the soil filled rock layer to the design grade elevation and would be planted after construction. Coir fabric erosion control blankets would be installed over the seeded topsoil. IWM would be installed after completion of the seeding and erosion blanket installation above the landside of the launchable rock toe to provide habitat for juvenile salmonids. and A one-foot layer of soil would be installed on the soil filled rock slope to 33 feet above mean sea level. Willow pole cuttings would also be planted in the bench by the rockwork construction contractor after completion of seeding, erosion blanket installation and IWM installation. The willow cuttings would be placed in the area of the bench closest to the water edge, in the gaps between the IWM and along the landside edge of the IWM. In the spring following the rockwork installation the revetment would be planted with native plants.

2.3.2.5 Design Around Stormwater Outfalls

Three utilities exist within Site 1-1: the Elvas Pump Station outfall pipe; the I-80 Bridge runoff pipe; and a City of Sacramento force main outfall and headwall. The Elvas Pump Station outfall pipe is located just downstream of the I-80 Bridge and runs beneath the existing levee prism. The pump station is owned and maintained by Caltrans. An existing pipe network under the I-80 Bridge drains into the Elvas Pump Station that pumps stormwater to the existing rock channel and outfall into the American River.

A 4-foot wide flat bottom ditch would be installed below the Elvas Pump Station outfall. The ditch would be composed of FHWA Class II riprap, with a minimum 3-foot riprap thickness and 9-inch bedding layer. The ditch would have a 10-percent slope extending the ditch to tie in with the rock riverbank revetment. The rock riverbank revetment design would be placed at grade above the I-80 runoff pipe and would tie into existing grade at a slope of 1V:2.5H, wrapping around the existing I-80 outfall design. The revetment design would tie into the existing grade prior to the I-80 outfall structure and runoff pipe to not alter or disrupt service of the outfall.

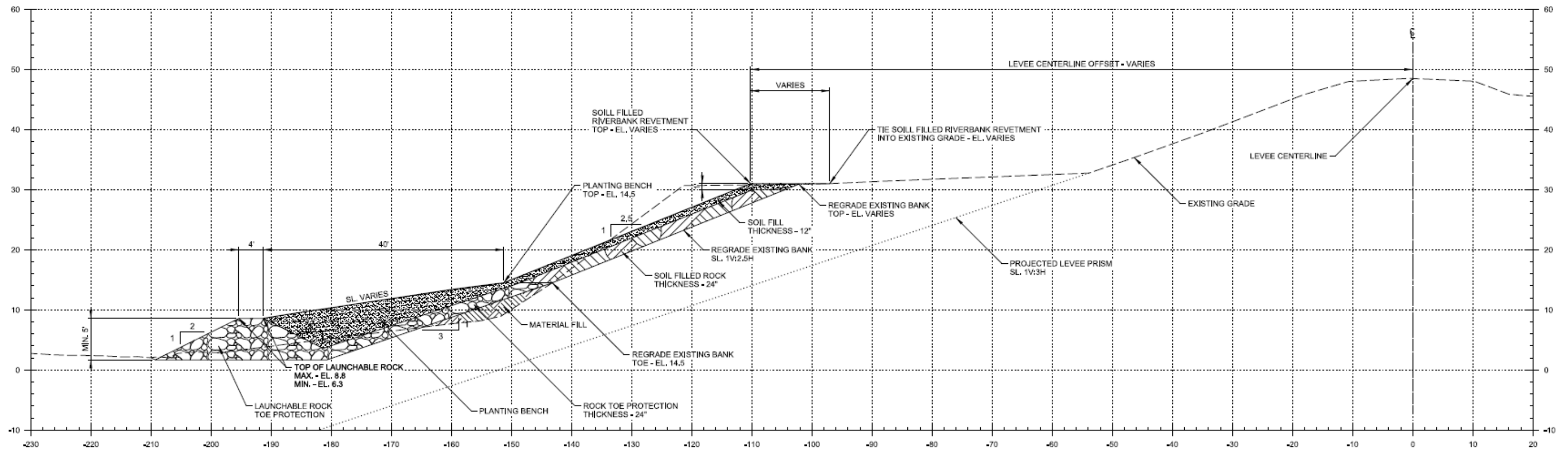


SOURCE: Esri, 2021; USDA, 2018; ESA, 2022

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Figure 2-6
Work Areas

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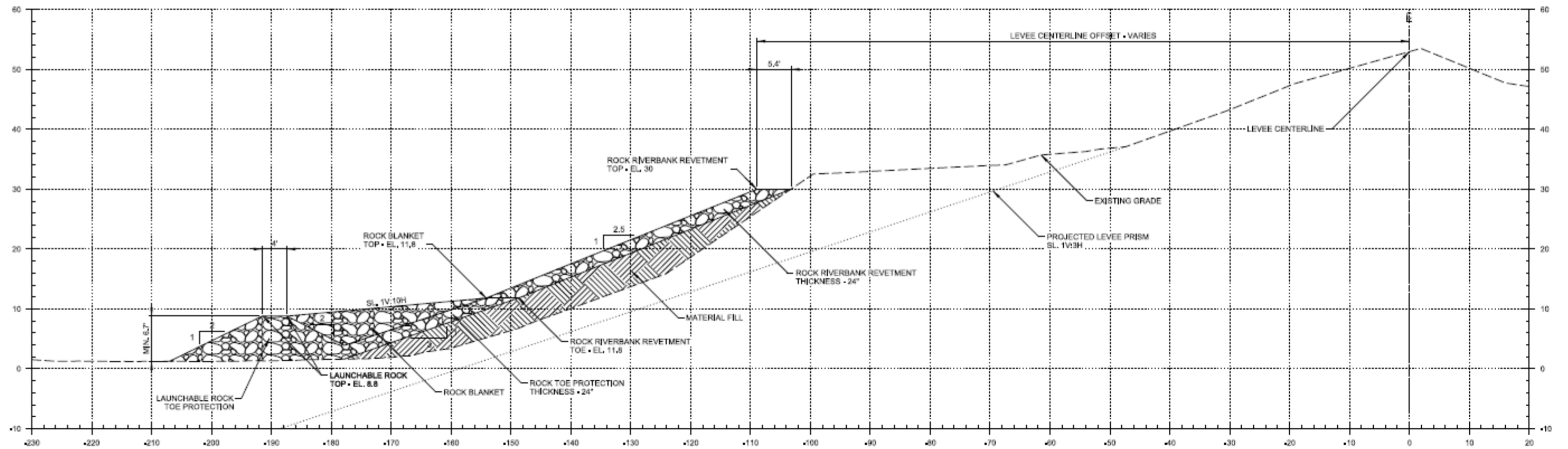


SOURCE: USACE

ARCF 2016 American River Contract 3A

Figure 2-7
Typical Cross Section View of Site 1-1 Downstream Design Components

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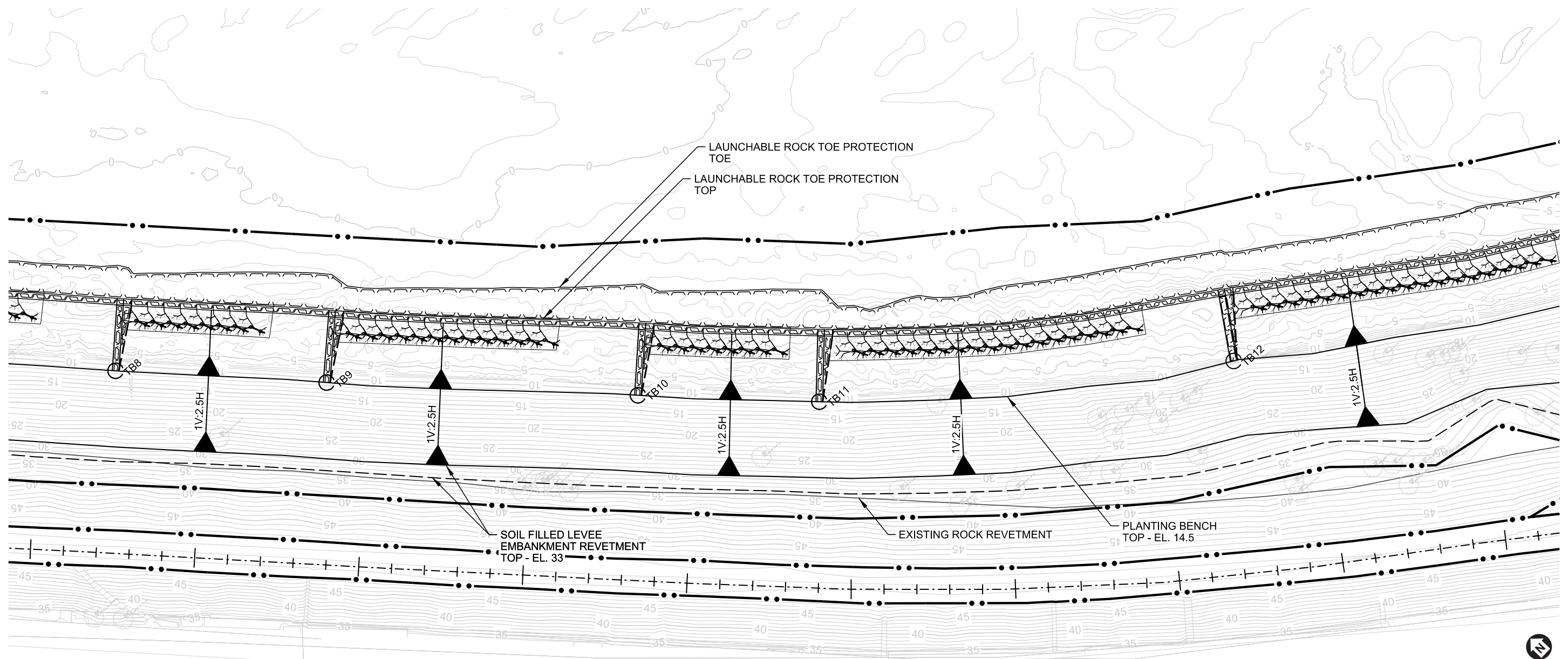


SOURCE: USACE

ARCF 2016 American River Contract 3A

Figure 2-9
Typical Cross Section View of Design Components at Upstream Segment of Site 1-1

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SOURCE: USACE

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The City of Sacramento force main is located approximately 200 feet upstream of the I-80 Bridge. The force main is a 66-inch diameter steel pipe and headwall with a flap gate. The Proposed Action would wrap the levee embankment revetment around the existing force main headwall. A rock apron would also be installed at the force main outfall along with the launchable rock toe protection. The rock apron would be composed of FHWA Class VI riprap, with a minimum 4.5-foot riprap thickness and 1.25-foot bedding layer. The rock apron's initial width would be approximately 11 feet and would taper out to a 35-foot width after a length of 30 feet. The rock apron would tie into the launchable rock toe protection. Due to the outfall velocities, FHWA Class VI riprap would be used for the launchable rock toe at this location.

2.3.2.6 Instream Woody Material

Along the lower bench of Site 1-1, IWM structures consisting of whole trees with rootwads intact would be installed to increase the roughness of the bench and to provide fine-textured woody material along the river margin for juvenile salmonid rearing habitat at an elevation of the low flow period between August and December (approximately between the 2,660 cfs WSE to 800 cfs WSE). The trees used for IWM installation would be orchard trees approximately 20 to 30 feet in height with trunk diameters between 10 and 20 inches. The IWM trees would be arranged in a linear fashion along the bench at the launchable rock toe, encompassing approximately 80 percent of the shoreline between the rock tie backs. This placement is intended to maximize the use of the plantable portions of the bench for planting of native riparian forest vegetation. Additionally, the IWM is designed to reduce hazards to boaters and swimmers by angling the branches in the downstream direction to the greatest extent feasible. This would reduce the chance of swimmers, rafters or boaters being caught on the IWM. The IWM would use metal or wooden anchors buried in the bench soil to hold the structures in place. The anchors would be 3.5-foot square plates with half-inch diameter steel cables extending up to just below the bench surface terminating in cable eyes. From the buried cable eyes, 5/8-inch diameter manila rope would loop over the trunks of the whole trees to secure them. IWM trees are expected to function for a minimum of approximately 3 years while the newly planted vegetation becomes established on the lower bench.

2.3.3 Onsite Mitigation

2.3.3.1 Onsite Mitigation Design

Erosion protection features would require clearing of vegetation for earthwork and placement of revetment resulting in loss of terrestrial and aquatic habitat. The Proposed Action habitat mitigation would be completed through elderberry transplants, onsite plantings and additional offsite compensatory mitigation primarily for habitat impacts on valley elderberry longhorn beetle (VELB), salmonids, and yellow-billed cuckoo. Elderberries removed from the project site would be transplanted elsewhere in the Parkway, to the extent practicable, at designated existing mitigation sites analyzed, approved, and certified under previous Supplemental EIRs completed under the ARCF GRR FEIS/FEIR for Contracts 1 and 2. The transplants would occur at the same time as

the vegetation removal so that the elderberries would not be damaged because of the vegetation removal. In addition to transplanting elderberry shrubs, compensatory mitigation for the loss of habitat for VELB would be required at a 3:1 ratio at the offsite mitigation site(s), which could include existing mitigation bank(s) and/or mitigation sites outside the Parkway.

Mitigation from impacts on salmonid and riparian habitats would be made partially onsite with planting areas at appropriate WSEs and as space allows. Therefore, planting areas would be sized based on site-specific constraints and design performance of erosion protection measures with the goal of maximizing the amount of on-site mitigation within the erosion protection design at Site 1-1. The planting benches were designed to provide a minimum 40 feet width where feasible to provide sufficient width and soil volume to support vegetation growth and create tree canopy to provide shade and habitat values to replace the habitat lost onsite to the construction of the erosion protection measures. Because mitigation ratios are higher than 1:1, it is not possible to mitigate for all impacts of the Proposed Action on site. Impacts that are not mitigated for on site would be mitigated at offsite mitigation sites and/or through conservation bank credits.

At Site 1-1, the embankment behind the launchable rock toe would be protected with soil filled riverbank revetment. The planting bench and riverbank soil filled revetment form a riprap trough filled with soil. Rock tie-backs oriented perpendicular to the river flow are located periodically at a varying spacing along the bench. The rock tie backs would extend from the launchable rock toe to the rip rap placed on the riverbank on the landside of the bench. The rock tiebacks would serve to limit loss of planting bench soil should high flows initiate erosion of the planting bench soil. The rock tie-backs would form the high point of the planting bench. The tie-backs slope down from the landside edge of the planting bench to the high point of the top of the launchable rock toe.

The overall objectives of the planting bench are to provide habitat and minimize visible rock revetment. The waterside top of the launchable rock berm would vary in elevation with a high point coinciding with the location of the rock tiebacks. This is set at approximately the 2,660 cfs WSE, which is the approximate elevation of the vegetation line along the LAR. The 2,660 cfs WSE is the typical flow rate expected at the time of construction. Emergent aquatic plant communities are frequently found in areas where the 2,660 cfs WSE intercepts shallow slopes with soil substrates. The low point of the waterside top of the launchable rock toe is set at approximately the 800 cfs WSE. This would create shallow submerged habitat during many times of the year, and also places much of the launchable rock toe below water most of the year, and reducing the amount of visible rock. The portions of the bench between the 800 and 2,660 cfs WSEs would form aquatic habitat with a soil/sand substrate within those flow rates. Additionally, the installation of IWM (previously described) would provide aquatic habitat to compensate for the loss of salmonid habitat.

The Proposed Action would revegetate the erosion protection measures with native vegetation to replace the vegetation removed by the construction of the Proposed Action.

To promote safety to bike path users, a 15-foot wide area adjacent to the bike trail would be planted only with native grasses and forbs. This would also reduce vegetation control maintenance along the bike path. To minimize restrictions on vegetation management methods along the bike path, elderberries would not be planted within 30 feet of the bike path.

2.3.3.2 Planting Elements

Site Preparation

Revegetation of the bank protection features and other areas disturbed by construction activities would include planting of the areas with native plants using live cuttings, nursery grown container plants and seeding. Live cuttings would be installed at the waterside edge of the bench in a 10-foot wide strip along the riverside edge of the planting bench, where not obstructed by IWM. A row of live cuttings would be installed as close to the IWM as possible. Nursery grown container plants would be planted on the planting bench, riverbank revetment and areas disturbed by construction according to the planting designs. See **Figure 2-11** for typical views of IWM and planting bench design components.

Elderberry Transplanting

Elderberry transplants would be taken from Site 1-1 to any of the previously constructed mitigation sites in the LAR, as designed and approved under the Contract 1 and Contract 2 projects. Elderberry transplants would be clustered in groups from 3 to 12 shrubs along the rows. The transplants and associated vegetation would be arranged with existing plantings would group elderberries in larger masses with associated native vegetation interspersed between the elderberry transplants. Also, larger canopy native vegetation would not be located in the elderberry mitigation sites to allow ample solar access to the elderberry transplants. All transplanted elderberry shrubs within the Parkway would be planted a minimum of 30 feet from all trails and roads to prevent future maintenance conflicts. Canopy tree plantings would be arranged to maintain sufficient solar access for maintaining sufficient elderberry growth. Transplanting of the shrubs would be in compliance with the 2017 USFWS guidelines. A wire mesh cage or similar device would be installed in the hole prior to plant installation to protect against gopher browse. Above ground screens and may be installed to aid growth and deter herbivore browsing. The areas between the planting rows would be seeded with native grasses by broadcast, drill, or hydroseeding.

Proposed Planting Mix

The planting mix for onsite would include a number of native riparian and upland plants species, which may include valley oak (*Quercus lobata*), boxelder (*Acer negundo*), Fremont cottonwood (*Populus fremontii*), riparian shrubs, and grasses, and would be consistent with agency guidelines for VELB mitigation⁴ and the American River

⁴ U.S. Fish and Wildlife Service. 2017. *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)*. Sacramento, CA. Available: https://www.fws.gov/sacramento/documents/VELB_Framework.pdf.

Parkway Plan list of approved plants.⁵ In general, the planting mixes would target species common to the various native riparian forests, woodlands, and savanna found growing in the American River Parkway.

Irrigation

A temporary irrigation system would be installed for establishment and maintenance period of the transplant and associative plant material. Water pumped from the river edge would be applied by drip or spray irrigation. The irrigation system may be partially or entirely removed for seasonal high-water flows. The pump system and fish screen would conform to the anadromous salmonid passage facility design criteria⁴ issued by NMFS in July 2011.⁵ The irrigation system would be required to provide the necessary water quantity and frequency to both elderberry transplants and container plants.

Irrigation would be applied at rates and frequencies to maximize plant growth and health. The goal is to provide ample irrigation to depths below the plants root zone, allowing ample water for growth and promoting deep rooting. Watering frequency would decrease as the plants establish; however, the overall volume of water would remain high to provide sufficient water for growth, deep saturation beyond the root zone to continue to promote deep rooting. This irrigation strategy provides for both rapid plant growth and drought tolerance to rooting to maximal depth within the establishment period.

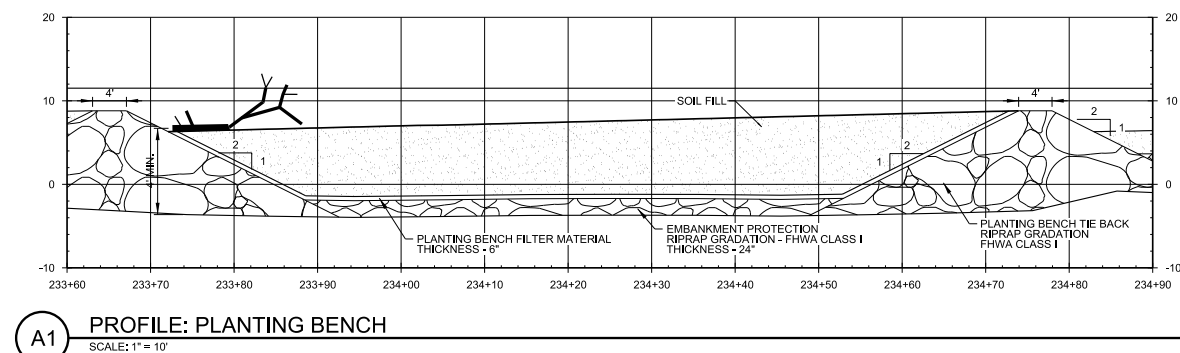
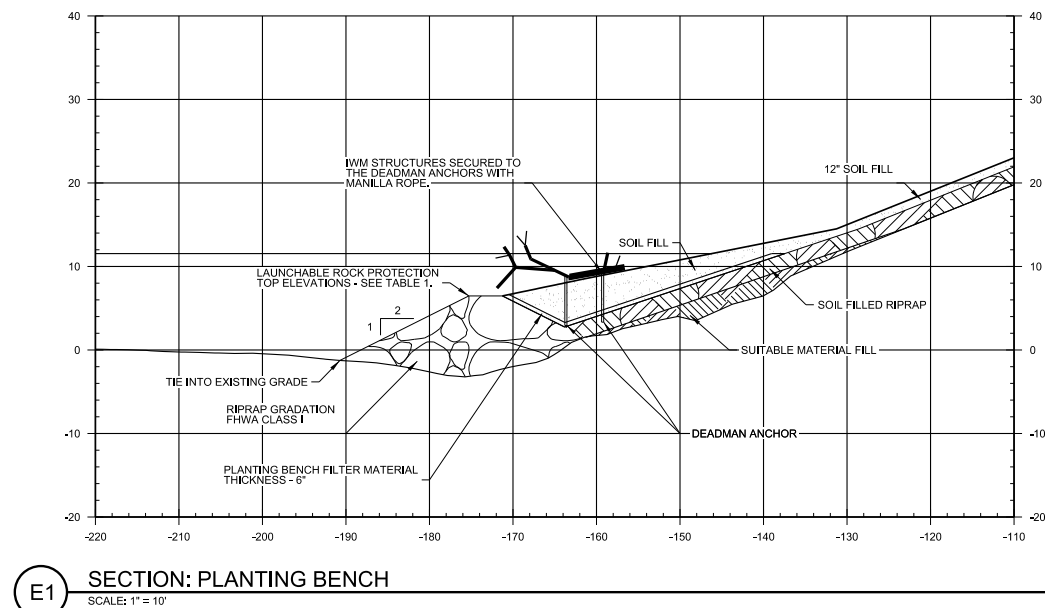
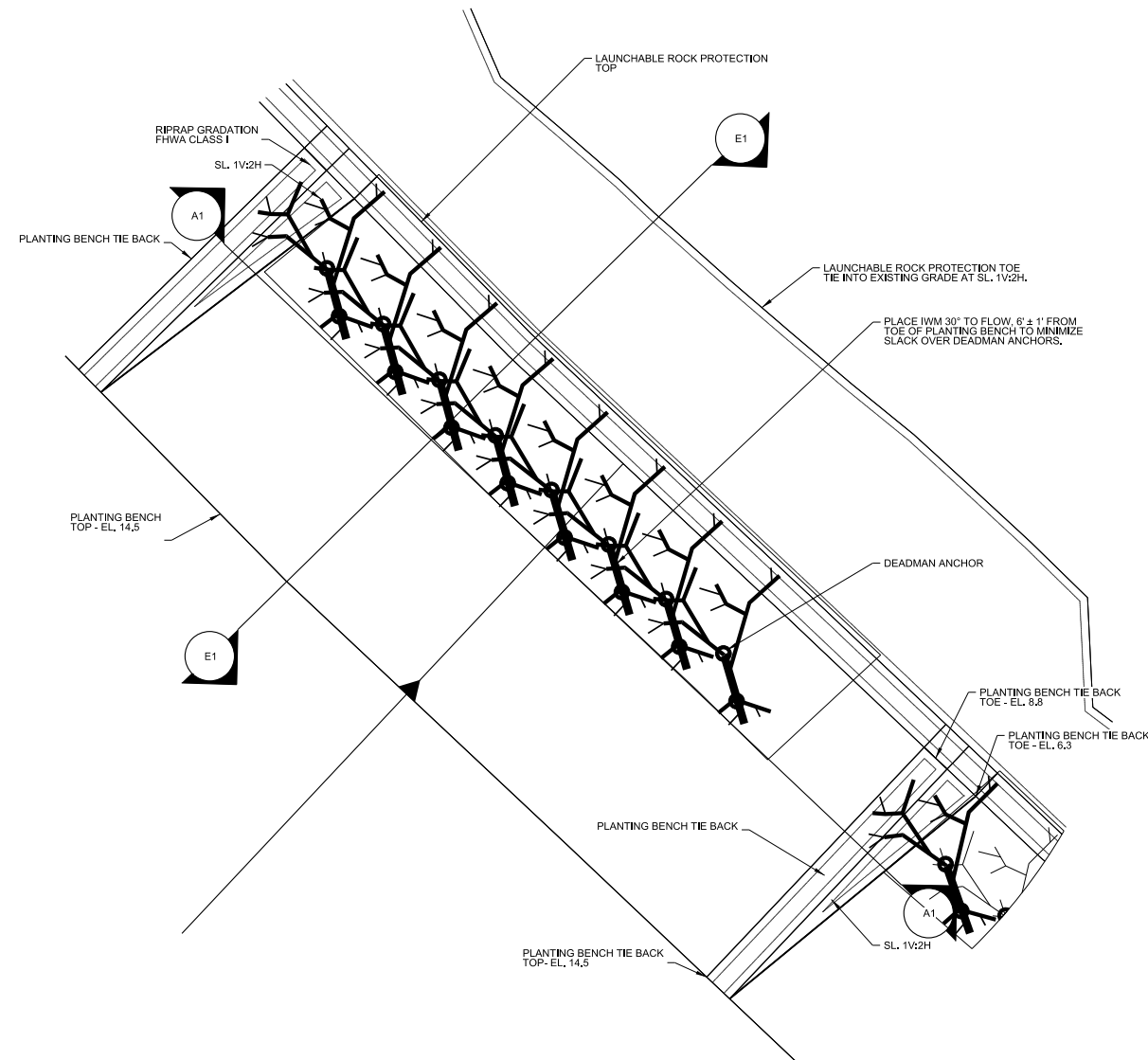
Weed Control

Weed control on erosion control revetments and habitat benches is intended to foster the plantings and any volunteer native vegetation. In general, most volunteer plant growth, with the exception of invasive exotic plants, is beneficial to stabilizing the sites and making them resistant to erosion. Weed control would consist primarily of hand tools, mechanical means (e.g., weed eaters and mowing) on both the soil-filled slope and planting benches timed to foster native grass growth and reduce competition for light from exotic plants with the plantings and any volunteer native vegetation. Spot applications of herbicides registered for use in and near aquatic habitats may be utilized to address particularly invasive exotic species. Additionally, weed control would be necessary to allow continued access to the site for maintenance of browse guards and the irrigation system.

Browse Control

Browse control would be provided by caging individual plants and fencing clusters of plants. Continuous water side beaver fencing that does not provide frequent access points to the river would not be used. At a minimum, access points would be provided every hundred feet. Beaver would be the most problematic source of browse, followed by deer browse. Although smaller animals such as rabbits and voles may browse the onsite mitigation, these species are typically less of a problem to onsite plantings.

⁵ County of Sacramento. 2008. *American River Parkway Plan 2008*. p. 16. Terrestrial Resource Policy 3.2.1 Planning and Community Development Department. Available: https://regionalparks.saccounty.net/Parks/Documents/Parks/ARPP06-021909_sm.pdf.



SOURCE: USACE

ARCF 2016 American River Contract 3A

Figure 2-11
Typical Views of IWM and Planting Bench Design Components

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Maintenance

Maintenance activities would start immediately following completion of the initial planting. The following activities would be performed throughout the year although some would vary according to weather and season: general clean-up maintenance of the sites would occur throughout the year, clean-up maintenance would generally include picking up trash, vandalism repairs, and the removal of used planting accessories (e.g., bamboo stakes, ties, browse guards). For watering maintenance, crews would connect the pump to the irrigation system for each irrigation cycle per the irrigation schedule shown in **Table 2-1**. Crews would weed within the watering basins of the transplants and within an 18-inch radius of each woody and grass associated plant, so nonnative herbaceous growth would not compete for soil moisture per the schedule in Table 2-1. Maintenance crews would mow weeds to below six inches in height during the growing season. Mowing would conform to the schedule in Table 2-1.

TABLE 2-1
THREE-YEAR MAINTENANCE SCHEDULE FOR ONSITE MITIGATION IN THE AMERICAN RIVER PARKWAY

Monitoring Year	Watering Transplants	Watering Associated Plants	Weeding Transplants and Associates	Tractor Mowing	String Trimmer Mowing
Year 1 (March 15- November 15)	Minimum of 50 gallons of water no more than 1 week apart or as required to maximize growth rates	Minimum of 10 gallons per plant twice a week or as required to maximize growth rates	As needed to keep weeds less than 12" in planting basins	80%	20%
Year 2 (March 15- November 15)		Minimum of 30 gallons per plant every week to 10 days or as required to maximize growth rates	As needed to keep weeds less than 12" in planting basins	60%	40%
Year 3		Minimum of 50 gallons per plant every 10 to 14 days or as required to maximize growth rates	As needed to keep weeds less than 12" in planting basins	40%	60%
Firebreaks	Firebreaks are cleared of weeds and graded once per year				

NOTE:

- ¹ Adjustments may be made to species if it appears a particular species was not successful on a site
 Watering: Years 1 & 2, March 15–November 15 and Year 3, April 1–October 31.
 Weeding: Years 1-3: March 1–September 30.
 Mowing: Four times per year.

2.3.4 Other Construction Considerations for Site 1-1

2.3.4.1 Site Preparation and Mobilization

Site preparation would begin with trimming and/or removal of vegetation where construction access and activities would occur. Vegetation would be removed between October 2022 and February 2023, before the nesting season of birds (see *Construction Workers and Schedule* section), as feasible. After these activities, mobilization would include the application of temporary best management practices for the control of off-site

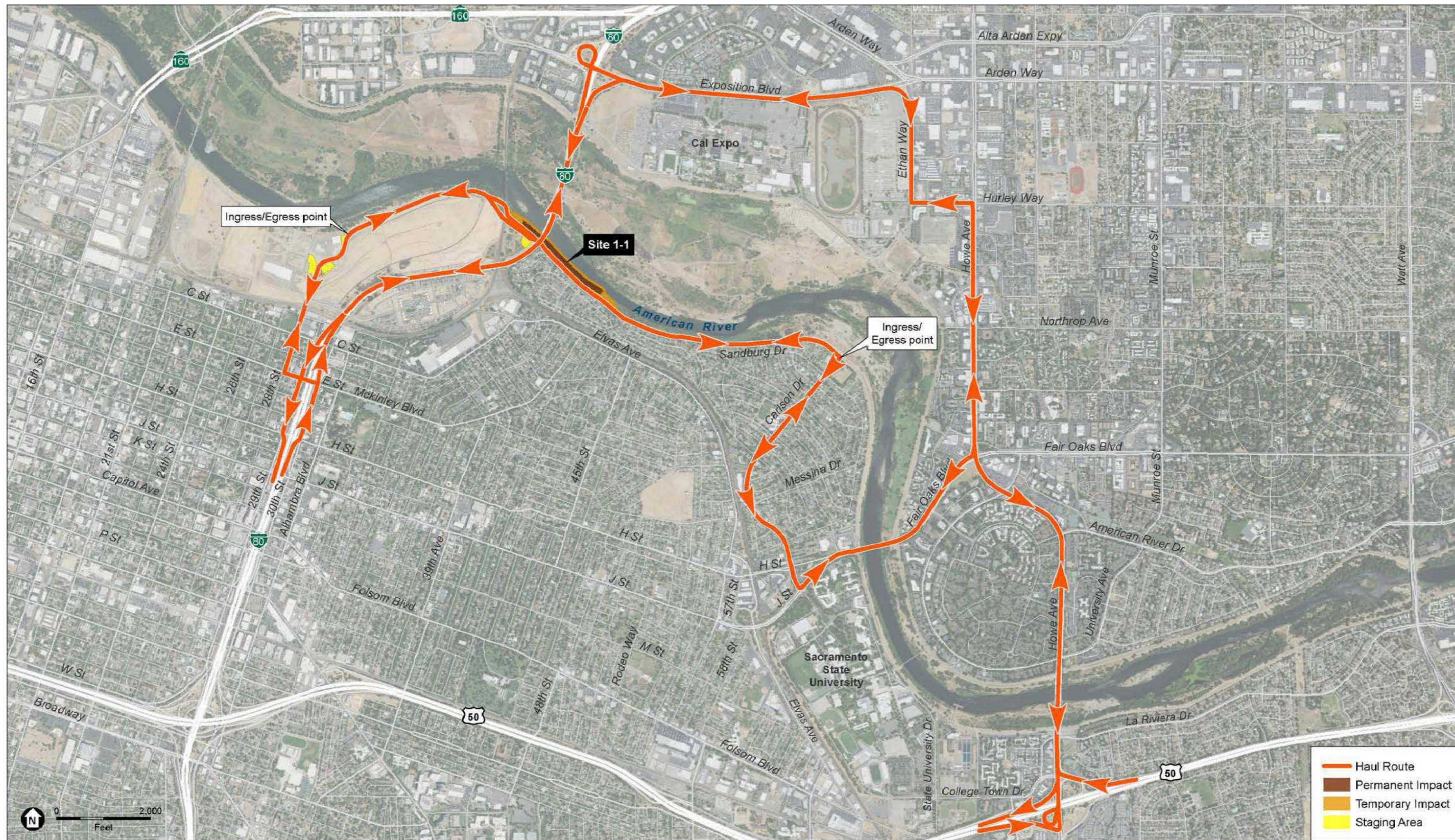
stormwater runoff and sedimentation, building temporary access roads and ramps, preparing staging areas, and installing signage for traffic and alternate transportation routes that would be affected by construction activities (e.g., bicycle routes).

Vegetation clearing could be needed to allow for site access and to accommodate construction activities. Site preparation could also include the removal of submerged instream woody debris and fallen trees within the construction footprint. A turbidity curtain or other minimization measures approved by NMFS and USFWS would be installed prior to any in-water work conducted on the waterside of the levee. The work limits and staging areas would be fenced with orange construction fencing to protect sensitive habitat and to identify disturbance area limits. In addition, 6-foot tall temporary chain-link security fencing would be installed around staging areas and along the access routes within the sites. The Site 1-1 proposed erosion improvements coincide with planned improvements by California Department of Transportation (Caltrans) and the City of Sacramento. Coordination with Caltrans and the City is currently underway to prevent conflicts during site preparation and construction activities.

2.3.4.2 Site Access, Haul Routes, and Staging Areas

Haul routes for riprap, bedding, gravel, soil, and IWM would be from either I-80 or from U.S. Highway 50 (U.S. 50). The neighborhoods along the routes would be notified of haul routes, ingress and egress points, staging areas, detours, lane closures (if any), and closed recreational areas (including bike paths) approximately one week prior to commencement of construction activities. Signage would be installed at all ingress and egress locations to alert the public of construction activities and potential restrictions on access during construction activities. Coordination with the Union Pacific Railroad (UPRR) would occur well before construction starts to ensure railroad safety measures are in place.

As depicted on **Figure 2-12**, haul trucks would travel to the staging areas using the main ingress points at either the Sutter's Landing Regional Park entrance located off of 28th Street or at Glenn Hall Park located off of Carlson Drive. Haul trucks would travel along the top of the levee crossing the paved bicycle path adjacent to the 28th and B Street Skate Park. Bicycle traffic within Sutter's Landing Regional Park would be controlled by a dedicated flagger during construction to prevent collisions from occurring. All other areas along the levee east of Sutter's Landing Regional Park to Glenn Hall Park would be closed to pedestrian and bicycle traffic for safety reasons. All traffic passing over the UPRR at-grade crossing would require a dedicated flagger and other railroad safety measures during construction. Haul trucks would enter either main ingress points and use either the downstream or upstream temporary construction access ramps to deliver their loads on the waterside of the levee along Site 1-1 and then continue along the top of the levee to exit at either Glenn Hall Park or at Sutter's Landing Regional Park. Haul trucks would travel either north or south along Howe Avenue to either I-80 or to U.S. 50. Some smaller pickup trucks or equipment may enter from either Glenn Hall Park or at Sutter's Landing Regional Park to access Site 1-1. In addition, the haul routes shown on Figure 2-12 could



SOURCE: USDA, 2018; USACE, 2021; ESA, 2022

ARCF 2016 American River Contract 3A

Figure 2-12
Site 1-1 Construction Haul Routes

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be used in both directions if traffic or road closures occur for unforeseen reasons (e.g., emergencies, road construction, etc.) during the construction period. There are four staging areas within Sutter's Landing Regional Park (see Figure 2-1); three are within paved or cement parking areas near the dog park and skate park areas and the third is in an area near the Capitol City Freeway on the landside of the levee. This latter staging area has been previously used for other construction projects in the area.

2.3.4.3 Construction Materials and Equipment

Construction materials are shown in **Table 2-2**, below. Excavated soil would be hauled off-site to either an existing stockpile location or to a landfill within 15 miles of the project site. The stockpile would be located on a site or sites that are disturbed or previously cleared and/or used for stockpiling and completely void of any sensitive resources on or adjacent to the site(s). Some on-site excavated soil and soil from the Caltrans I-80 bridge project could be used for project construction pursuant to Clean Water Act Section 401 permit conditions and approval by the Central Valley Regional Water Quality Control Board. Sources of riprap would come from quarries located between approximately 40 to 75 miles away. Planting bench soil would come from off-site soil sources for the erosion protection design. Finally, IWM would come from sources within a 100-mile distance from the Site 1-1. Table 2-2 also lists the number of truck loads and durations of hauling in the construction materials. Construction material hauling would not occur simultaneously for all materials. For example, site preparation including tree and stump removals and excavation would occur first, resulting in the hauling of excavated materials occurring before importation of bedding material. The sequence of importation of materials is as follows: bedding, riprap, soil-filled riprap, planting bench soil, and finally aggregate base. In general, each of the materials would be brought in and used before the next material would be needed. However, there would be some overlap in hauling in of materials in the sequence to maintain progress during the construction season.

TABLE 2-2
CONSTRUCTION MATERIAL VOLUMES AND TRUCK LOADS FOR SITE 1-1

Material	Quantity	Truck Loads and Durations
Excavated Soil	3,500 cubic yards (cy)	360 for 12 days
Riprap	23,400 cy	2,700 for 34 days
Soil-filled Riprap	10,000 cy	1,500 for 14 days
Bedding Material	7,520 cy	750 for 12 days
Planting bench soil	21,000 cy	2,090 for 26 days
Aggregate Base	4,100 cy	455 for 9 days
IWM	160 trees	40 for 20 days

Construction equipment required for the Proposed Action is shown in **Table 2-3**. Haul trucks are expected to be 10 cy in capacity to bring in riprap from quarries and soil from offsite sources. At a minimum, 90 percent of all heavy-duty off-road construction equipment of 50 horsepower or greater would meet EPA Tier 4 standards. No EPA Tier 0 engines would be used. All haul trucks would have 2010 or newer engines.

**TABLE 2-3
CONSTRUCTION EQUIPMENT AND PERSONNEL UTILIZATION**

Type of Equipment	Max. Number Used per Day	Total Operation Days	Number of Workers
Excavator (CAT 345)	2	80	2
Dozer (CAT D-5)	2	60	2
Skid Steer	3	80	3
Roller or grader	1	30	1
Sheepsfoot Roller	2	40	2
Dump Truck	20	60	20
Flatbed Truck	1	20	1
55-ton Crane (RT-555)	1	15	1
Pickup Trucks	5	80	5
Water truck	1	80	1
Total			38

2.3.4.4 Construction Workers and Schedule

All workers would access the site by regional and local roadways. Construction hours would comply with City of Sacramento's noise ordinance and would be Monday through Saturday from 7:00 a.m. to 6:00 p.m. and Sundays from 9:00 a.m. to 6:00 p.m. No work or hauling would take place on holidays without permission given by the City of Sacramento. Construction is anticipated to occur over approximately 1.5 years. Construction is expected to begin with removal of trees and shrubs beginning as early as October 2022.

Mobilization of construction equipment, site preparation, and construction would begin as early as May 2023 and is expected to take approximately 7 months to complete, with the last 6 months of post-construction related work (e.g., plantings, irrigation, stormwater control monitoring) being completed between December 2023 and Summer of 2024.

Table 2-4 provides anticipated activities and durations for major work phases at Site 1-1, and plantings at offsite mitigation sites. However, this schedule may need to be extended if flood flows in spring and summer 2023 limit site access to construction equipment.

**TABLE 2-4
ANTICIPATED PRIMARY CONSTRUCTION PHASES**

Oct 2022– Feb 2023	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec 2023 to Summer 2024
Tree removal and pruning								
	Site preparation and mobilization; Primary Earthwork; Delivery and Export of Haul Materials							
							Install Rock Under Bridge; Planting; Fine Grading	
								Planting; Monitoring/ Maintenance

NOTES:

- 1 Tree removal in January and February may be limited or determined to be infeasible due to high water levels near desired planting bench and toe protection areas.

2.3.4.5 Demobilization and Cleanup

Any staging area and both construction access ramps (portions outside of erosion protection design) would be restored to original pre-existing contour and condition or as agreed to by the property owner. To avoid erosion, staging areas would be hydro-seeded and layered with wood mulch to prevent encroachment of invasive species. Any roads or other access areas damaged by construction would be repaired and restored to prior condition. All trash, excess construction materials, and construction equipment would be removed.

2.3.5 Public Safety

The design of Site 1-1 would remove all vegetation within the 15-foot vegetation free zone from the waterside toe of the levee. No vegetation would be planted in the vegetation free zone as part of the Proposed Action. In the segment of Site 1-1 upstream of the I-80 Bridge, the bench would narrow and disappears immediately upstream of the bridge. The levee slopes down from the levee crown road at a continuous slope of approximately 1V:3H to the river. The vegetation free zone in this area is defined by the elevation of the landside toe of the levee extended through the levee to the waterside with an additional 15 feet added horizontally. No levee inspection road exists in this segment; only the levee crown road. In this segment, existing trees within the vegetation free zone and within the project construction limits would be removed to provide access and operations and maintenance (O&M) of the levee.

In the segment of Site 1-1 downstream of the I-80 bridge, a sufficiently wide bench would provide the required 15-foot vegetation free zone along the waterside of the levee toe. At the landside toe of the levee a paved bike and pedestrian trail would also provide access

to emergency and maintenance vehicles as well as serve as the levee inspection road. The top of the levee road would also be maintained after construction to provide continued access for operations and maintenance. Placed rock supporting the planting benches would be at slopes of 1V:2H or flatter reducing the potential for pedestrians to become trapped and reduce fall hazards. The design of the IWM and the natural vegetation at the bank toe would be located on the planting bench spaced apart as described previously. This design would prevent recreationists from getting caught on the IWM and would allow shore access between IWM, as described previously. The IWM would be at a depth and velocity where recreational users of the river can wade out and around the IWM at typical recreational flows in the river.

2.3.6 Operations and Maintenance

Once construction is complete and the performance standards have been met and habitat has successfully established, the non-Federal sponsors (the CVFPB and SAFCA) would be responsible for the O&M of Site 1-1 and all land used for staging areas would return to original ownership. However, the responsibility for the O&M for the levee and revetment features would be turned over to the LMA (American River Flood Control District (ARFCD)) and the on- and off-site mitigation features would specifically fall to SAFCA for long-term O&M. Regular O&M activities by the LMA would consist of inspections, weed abatement, removal of encroachments and high-hazard vegetation to ensure levee integrity, replacement and re-working of displaced or launched revetment following large flood events, and adequate levee access along the levee toe road. The levee maintenance roads would be used, as they are currently used, to access the length of the levee during these activities and during high-flow events for flood-fighting purposes. O&M activities would not require heavier or noisier equipment than under current conditions. O&M inspections would consist of a patrol vehicle traveling along the levee and small machinery for weed abatement such as mowers and weed whackers/trimmers. These activities would only occur periodically, as under existing conditions. O&M activities would not introduce new land uses into the area.

CHAPTER 3

Affected Environment and Environmental Consequences

3.1 Introduction

3.1.1 Approach to the Analysis

Each resource topic presented in this chapter includes a summary of the regulatory setting, environmental setting, methodology, and the basis of significance conclusions for environmental effects. Supplemental information on existing environmental and regulatory settings is presented when needed to provide the context for the impact analysis and/or update the information, as relevant. The basis for determining the significance of impacts is presented, based on the criteria used in the ARCF GRR FEIS/FEIR analysis. After publication of the ARCF GRR FEIS/FEIR, changes were made to Appendix G of the CEQA Guidelines that reflected changes to the CEQA statute and related court decisions. To the extent that the topics or questions in the revised Appendix G are not reflected in the ARCF GRR FEIS/FEIR significance criteria, these topics and questions have been taken into consideration in the impact analysis.

For impacts associated with implementation of the Proposed Action, mitigation measures included in the ARCF GRR FEIS/FEIR and previously adopted are incorporated into the Proposed Action to reduce the level of significance of the impact. Where an impact of the Proposed Action is determined to require additional mitigation beyond the ARCF GRR FEIS/FEIR mitigation measures, new or modified ARCF GRR FEIS/FEIR mitigation measures are recommended.

3.1.2 Resource Topics Not Discussed in Detail

Some resource topics were eliminated from further analysis in this Supplemental EIR, because effects of the Proposed Action are negligible, or the project refinements described in the Proposed Action would not create additional impacts on these resources beyond the scope of those evaluated in the ARCF GRR FEIS/FEIR. These resource topics are land use, mineral resources, geology, wildfire, and socioeconomics, populations, and environmental justice.

3.2 Visual Resources

3.2.1 Environmental Setting

3.2.1.1 Regulatory Setting

Chapter 5 of the ARCF GRR FEIS/FEIR described the status of compliance with the Wild and Scenic Rivers Act in detail, which applies to the aesthetic value of the American River, including visual resources.

3.2.1.2 Existing Conditions

The ARCF GRR FEIS/FEIR Section 3.15 (pages 293 through 297) describes the regional and local setting in the vicinity of the Project Area for the Proposed Action.

In general, the visual environment along the American River includes urban development on the landside of the levee, including homes and landscaped backyards, and the natural riparian and river features on the waterside of the levee. The existing levees block views of the American River from most adjacent landside areas. Views of the Parkway from the second story of homes directly adjacent to the levee are possible in some areas. People using the top of the levee for recreational activities see primarily riparian forest and open space lands throughout the Parkway on the waterside.

Site 1-1 is located on the left bank of the LAR and the Project Area generally extends from Sutter's Landing Regional Park on the west to Glenn Hall Park on the east. Site 1-1 is divided into two segments: one segment is downstream of the I-80 overcrossing of the American River, and one segment extends underneath and upstream of the overcrossing (see Figures 2-3 and 2-6 in Chapter 2, *Alternatives*).

The downstream segment of Site 1-1 extends through and along the northern edge of Sutter's Landing Regional Park. Comprising mostly of unimproved land, Sutter's Landing Regional Park includes several improvements and features that stand in visual relief to the largely unadorned natural landscape, including basketball and bocce ball courts with shade canopy seating areas, landscaping, shade structures, walkways, unshaded and shaded parking lots, a dog park, and a large corrugated metal building that houses the Sutter's Landing Skate Park. From ground level, along the gravel levee trail that traverses the northern extent of the expanse of Sutter's Landing Regional Park, direct views of the American River and its vegetated northern bank are intermittently obscured by trees and other vegetation, and transportation structures (i.e., railroad trestle and Capitol City Freeway Bridge).

The upstream segment of Site 1-1 and associated haul route, from the Capital City Freeway Bridge overcrossing to Glenn Hall Park, extends along the levee segment that traverses the northern portion of the River Park neighborhood. Direct views of the American River and its vegetated northern bank are visible to users of the levee trail and are largely obscured by the levee, trees, and other vegetation from within the neighborhood. The approximately

7-acre Glenn Hall Park includes a large playfield flanked by mature trees, tennis courts, a swimming pool, and shaded and unshaded areas with tables and barbeques.

Portions of haul routes for construction of the Proposed Action include urbanized areas, passing through the neighborhoods of River Park, Arden Arcade, Sierra Oaks, Campus Commons, and Arden Town. The views within the residential areas are considered to be of high visual quality and are primarily traveled by local residents, commuters, students, and recreationists (see Figure 2-12, Haul Routes, in Chapter 2, *Alternatives*).

3.2.2 Methodology and Basis of Significance

3.2.2.1 Methodology

The analysis of the Proposed Action's potential impacts on visual resources in this section generally uses the same methodology described in Section 3.15.2 (page 305) of the ARCF GRR FEIS/FEIR. The analysis is based on a review of scenic vistas and landscapes that could be affected by project-related activities. Changes in form, size, colors, project dominance, view blockage, and duration of impacts are considered in the analysis. Other elements such as natural screening by vegetation or landforms, placement of project components in relation to existing structures, and likely viewer groups are also considered.

3.2.2.2 Basis of Significance

This analysis uses the same basis of significance described in Section 3.15.2 (page 305) of the ARCF GRR FEIS/FEIR, as restated below.

The Proposed Action would result in a significant effect related to visual resources if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Since publication of the ARCF GRR FEIS/FEIR, changes to Appendix G of the State CEQA Guidelines were adopted that consider the direct, indirect, or cumulative effects of degrading the visual character of a site. As a result, this analysis also takes into consideration the following additional or modified significance criterion:

- Substantially degrade the existing visual character or quality of public views of the site and its surroundings. Public views are those that are experienced from publicly accessible vantage points.

3.2.3 Impact Analysis

3.2.3.1 No Action/No Project Alternative

Under the No Action/No Project Alternative, the Proposed Action would not be implemented, and the Sacramento metropolitan area would experience no change in the existing level of risk of flooding due to levee failure because of seepage, slope stability, overtopping, or other erosion concerns.

Under these conditions, a flood event could cause portions of the levees to fail, triggering widespread flooding and related damage. If a catastrophic flood were to occur, vegetation and heavy erosion of soil along the American River Parkway would be lost. Flood fight activities would occur during a high flow emergency response resulting in emergency response with heavy-duty construction equipment in more areas than the Proposed Action. Flood fighting would result in the placement of large volumes of rock along the riverbanks to stop erosion and prevent further levee failure. The placement of rock would prevent or impede future growth of trees and vegetation on the levee slopes. All these effects on visual resources would be considered significant. However, the timing, duration, and magnitude of a flood event are speculative and unpredictable, and therefore a precise significance determination cannot be made.

3.2.3.2 Proposed Action

The ARCF GRR FEIS/FEIR Section 3.15 (pages 293 through 313) analyzed the impacts on visual resources for approximately 11 miles along the American River Parkway, including the Project Area. The analysis of impacts on visual resources from improvements included in the Proposed Action would be the same as identified in the ARCF GRR FEIS/FEIR for the following:

1. Construction activities would result in short-term significant and unavoidable impacts on the visual character of the American River Parkway.
2. Loss of vegetation due to removal and construction of levee improvements would result in significant and unavoidable short-term effects on visual resources of the mature vegetation, but a less-than-significant long-term impact with mitigation once new vegetation has been established.
3. Areas along the levee that could erode would expose launchable rock which would result in a long-term adverse impact on visual resources to users within the American River Parkway (i.e., at the levee portion with the launchable rock trench).

As described in Chapter 2, *Alternatives*, the Proposed Action would include construction of erosion protection improvements, use of construction staging areas and stockpile locations, and hauling of materials via trucks along haul routes. The primary features of the erosion protection improvements include a launchable rock toe, planting bench, and soil-filled levee embankment revetment. The overall objectives of the planting bench are to provide on-site habitat mitigation and to minimize visible rock revetment.

Erosion protection features would require clearing of trees and vegetation for earthwork and placement of revetment. The Proposed Action would revegetate the erosion protection measures with native vegetation to replace the vegetation removed by the construction of the Proposed Action. The planting mix would include a number of native riparian and upland plants species, which may include valley oak, riparian shrubs, and grasses consistent with American River Parkway Plan list of approved plants. The revegetation measures would reduce the intensity the Proposed Action's effects to visual resources by restoring a natural vegetated setting.

Construction activities would occur on the water side of the levee in the American River Parkway and mostly out of view from the neighboring urbanized land uses (see Figure 2-6, in Chapter 2, *Alternatives*). Some of the staging and work areas would be within view of users of Sutter's Landing Regional Park, Glenn Hall Park, recreationists along the levee trail, and residents in the adjacent portions of the River Park neighborhood; however, this would not comprise a permanent adverse visual impact. Construction at Site 1-1 would also result in short-term temporary impacts to views of the banks of the river while newly planted vegetation and trees mature.

Portions of haul routes for construction of the Proposed Action would include urbanized areas where residents, commuters, and workers along the residential roadways would experience views of construction and worker vehicles associated with the Proposed Action. The views within the residential areas are of high visual quality and are primarily traveled by local residents, commuters, students, and recreationists. However, views of construction and worker vehicles associated with the Proposed Action would be limited to the construction period and would not result in a long-term substantial adverse visual impact.

During construction of the Proposed Action, staging areas would have lighting to ensure the security of construction equipment and stored materials, creating new sources of nighttime light that would be visible by neighboring residences and vehicles passing near the staging areas. Some of this lighting could potentially illuminate adjacent residences. This would result in a short-term temporary significant impact. However, Mitigation Measure VIS-1 would reduce the impact of nighttime light to a less-than-significant level (see below).

ARCF GRR FEIS/FEIR Mitigation Measures

The following summarizes ARCF GRR FEIS/FEIR mitigation measures (pages 311 to 312) that are incorporated into the Proposed Action:

- Trees would be planted within the planting bench where there is sufficient space (Mitigation Measures VEG-1 and SRA-1).
- Additional trees would be planted at other areas in the Parkway according to the Parkway Plan in the site to mitigate for the removal of the trees (Mitigation Measures VEG-2 and SRA-1).

Summary

The ARCF GRR FEIS/FEIR concluded that short-term impacts on visual resources associated with construction within the LAR would be significant and unavoidable. However, the ARCF GRR FEIS/FEIR determined that mitigation measures would reduce potential permanent impacts on visual resources to a less-than-significant level because once vegetation has fully developed, the visual quality of the Project Area would be similar to existing conditions. Construction of the Proposed Action would result in no new or more severe short-term visual impacts than those addressed in the ARCF GRR FEIS/FEIR and, therefore, those construction-related short-term visual impacts are already adequately addressed in the ARCF GRR FEIS/FEIR.

However, the ARCF GRR FEIS/FEIR did not consider the use of nighttime lighting for staging areas, and, therefore, there would be a short-term temporary significant impact. Implementation of the following new mitigation measure would reduce impacts from the use of nighttime light under the Proposed Action to a less-than-significant level.

Additional Mitigation Measure for the Proposed Action

Implementation of additional Mitigation Measure VIS-1 would reduce impacts of new sources of nighttime lighting installed for security at the staging areas to a less-than-significant level.

Mitigation Measure VIS-1: Shield Temporary Nighttime Lighting. The Project Partners shall require its construction contractors to ensure that all temporary lighting used for security of the staging areas is shielded or directed to avoid or minimize any direct illumination onto light-sensitive receptors located outside of the Project Area.

3.3 Hydrology and Water Quality

3.3.1 Environmental Setting

3.3.1.1 Regulatory Setting

Sections 3.4 and 3.5 of the ARCF GRR FEIS/FEIR (pages 81 and 96, respectively) identified Federal or State environmental laws and regulations that apply to regulating hydrology and water quality. Chapter 5 of the ARCF GRR FEIS/FEIR summarized the environmental laws and regulations that apply to the ARCF Project and described the status of compliance with those laws and regulations.

3.3.1.2 Existing Conditions

Section 3.4 (pages 81 through 95) and Section 3.5 (pages 95 through 108) of the ARCF GRR FEIS/FEIR describe the regional and local setting in the vicinity of the Project Area. The following provides additional information specific to the Project Area not previously described.

The Project Area is in the Sacramento Hydrologic Basin Planning Area and Lower American Hydrologic Subarea, as designated by the Central Valley Regional Water Quality Control Board (RWQCB). Water quality standards for this basin are contained in the *Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin* (Basin Plan) per Section 303 of the Clean Water Act. The Lower American River is listed as impaired for mercury, polychlorinated biphenyls (PCBs), toxicity, bifenthrin (a pesticide), pyrethroids (pesticides) and indicator bacteria.⁶ The California Department of Water Resources (DWR) defines the Project Area as within the South American Subbasin (5-021.65).⁷ This basin is designated as a High Priority basin under DWR's Sustainable Groundwater Management Act⁸ for the purposes of meeting the groundwater sustainability goals of the State.

3.3.2 Methodology and Basis of Significance

3.3.2.1 Methodology

This analysis generally uses the same methodology described in Section 3.4 (page 90) and Section 3.5 (page 101) of the ARCF GRR FEIS/FEIR. The analysis evaluates the potential flood-related impacts of the Proposed Action on water surface elevation levels (WSELs) and erosion processes (e.g., scour and lateral bank erosion) in the Lower American River (LAR). The analysis also evaluates the potential water quality impacts that could result from project construction activities and operations based on the construction practices and materials that would be used, the location and duration of the activities, regulatory requirements related to water quality, and the potential for degradation of water quality or beneficial uses of Project Area waterways.

The analysis of the ARCF GRR FEIS/FEIR was supplemented with an analysis by United States Army Corps of Engineers (USACE) on the effect of construction of Site 1-1 on WSELs at 160,000 and 192,000 cubic feet per second (cfs) as presented in the *Design Documentation Report Supplemental Work Package Appendix B: Hydraulics and Hydrology, American River Common Features Erosion Protection Contract 3A Engineering and Design Phase* (Report). These flows represent the primary design metric and extreme loading scenario, respectively, for erosion control measures (described in more detail below). *Final Supplemental Environmental Impact Statement/Environmental Impact Report*. The design for Site 1-1 includes a combination of a launchable rock toe, planting benches, and riverbank and levee embankment revetment protection. The USACE provided an updated hydrology and hydraulics analysis of these proposed bank protection designs at Site 1-1 that is considered in this document.⁹ The Report includes a

- ⁶ State Water Resources Control Board. 2021. *Recommended 2020-2022 Integrated Report Appendix A: Recommended 2020-2022 3030(d) List of Impaired Waters*. https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html. Accessed December 21, 2021.
- ⁷ California Natural Resources Agency. 2018. *5-021.65 Sacramento Valley – South American Basin Boundary Description*. <https://data.cnra.ca.gov/dataset/bbd5>. Accessed December 21, 2021.
- ⁸ California Department of Water Resources. 2021. Sustainable Groundwater Management Act, SGMA Basin Prioritization Dashboard. Available: <https://gis.water.ca.gov/app/bp-dashboard/final/>. Accessed December 21, 2021.
- ⁹ USACE, 2021. *Design Documentation Report Supplemental Work Package Appendix B: Hydraulics and Hydrology*. November 18, 2021.

description of the project features, pertinent technical and design data, design criteria, assumptions, methods, and modeling results used for the project design.

Water Surface Elevation Level Modeling

Hydraulic impacts of the design at Site 1-1 were evaluated by comparing model runs of existing and Proposed Action conditions in calibrated one-dimensional (1D) and two-dimensional (2D) hydraulic models referred to as the MVP 1D and MVP 2D models, respectively. The MVP 1D and MVP 2D models extend from the confluence of the Sacramento and American Rivers upstream to the top of the leveed reach in the LAR (about 13 miles). The USACE Central Valley Hydrology Study (CVHS) defines the hydrology of the LAR system and includes the boundary conditions used to assess the hydraulic impacts of the project features.¹⁰ The boundary conditions used in the MVP 1D and MVP 2D models represent annual exceedance probability (AEP) events of storms centered on the American River at the Fair Oaks United States Geological Survey (USGS) gage.

Both 65% design models were calibrated to existing conditions prior to modeling various project design alternatives presented in the Proposed Action. Note that the MVP 2D model provides more spatially descriptive results than the MVP 1D model and thus was the preferred model to inform the geometric layout of the Proposed Action design, WSELs for habitat features (for discharges < 18,500 cfs), and extract flow patterns, velocities, and shear stress.¹¹ Existing conditions include the following projects:

- ARCF GRR Sacramento Weir Widening (65% designs)
- ARCF GRR American River Contract 1 (100% designs)
- ARCF GRR American River Contract 1 and American River Contract 2 habitat mitigation sites
- ARCF GRR American River Contract 2 Site 2-2 (65% designs)
- ARCF GRR American River Contract 2 Site 2-3 (65% designs)
- Caltrans Capitol City Freeway bridge expansion (20% designs for substructure station-elevation data)
- DWR 2019 Bathymetric Data Version 1
- 2017 Light Detection and Ranging (LiDAR) data

Modeled effects to WSELs were made assuming construction of the 65% design for Site 1-1 over the existing conditions for the design flow rates of 115,000, 160,000, and 192,000 cfs. The design flow of 160,000 cfs is based on the design flow from Folsom

¹⁰ USACE and David Ford Consulting Engineers, 2015. *Central Valley Hydrology Study*. November 29, 2015.

¹¹ USACE, 2021. *Design Documentation Report Supplemental Work Package Appendix B: Hydraulics and Hydrology*. November 18, 2021.

Dam in the latest update to the Water Control Manual (WCM). This design flow accounts for the new auxiliary spillway completed under the Joint Federal Project (JFP). The 192,000 cfs flow event represents the approximate maximum capacity of the LAR at the incipient overtopping of the levees used to inform risk assessments needed to meet USACE Engineering Construction Bulletin 2019-15. All designs and analyses were completed in accordance with USACE Engineering Manuals and Reports.¹²

Scour and Erosion Modeling

The MVP 1D and MVP 2D models were also used to estimate scour and lateral bank erosion as a result of the Proposed Action. Scour within a riverine system generally refers to the process of channel bed erosion, resulting in a local drop of the bed elevation. For flood risk management projects, identifying the potential for scour is a critical evaluation because features close to scour areas may fail or cease to function as intended. For example, scour within close vicinity of a levee may cause the levee to not achieve the design factor of safety and lead to a slope failure during a flood event. Similar to scour, lateral bank erosion, may occur when velocities and shear stresses exceed the critical values for both the surface material present on the riverbank as well as the underlying soils. Similarly, the quantifying lateral bank erosion is important to ensure that flood risk management features, such as levees, are not compromised.

Scour was estimated using hydraulic parameters from the MVP 1D model. Scour depths were calculated at seven cross sections for the 115,000, 160,000, and 192,000 cfs design flows utilizing the existing conditions features included in the 65% design package (see above). The results were validated for three cross sections using the MVP 2D model for the 160,000 cfs flow rate.

Lateral bank erosion was estimated using the Bank Stability and Toe Erosion Model (BSTEM) developed by the United States Department of Agriculture (USDA). The BSTEM model couples geotechnical slope stability calculations and hydraulic model data with erosion estimates from the excess shear equation to determine lateral erosion extents. The primary inputs to the BSTEM model include the following:

- Cross section station and elevation information for the ground surface of the riverbank
- Soil types and layer elevations (up to 5 soil layers)
- Specific soil parameters including friction angle, cohesion, saturated unit weight, soil critical shear, and soil erodibility coefficient
- Stage and energy grade slope hydrograph data, and
- Bank roughness (effective Manning's n which accounts for roughness associated with the forces acting on the soil surface).¹³

¹² USACE, 2021. *Design Documentation Report Supplemental Work Package Appendix B: Hydraulics and Hydrology*. November 18, 2021.

¹³ USACE, 2021. *Design Documentation Report Supplemental Work Package Appendix B: Hydraulics and Hydrology*. November 18, 2021.

Lateral bank erosion was evaluated against the flood risk management criteria established by the USACE.¹⁴ Briefly, these criteria assume riverbanks are devoid of vegetation and thus provide a conservative estimate of lateral bank erosion. Project features, including the riprap, were parameterized accordingly. That is, areas where 65% designs included riprap used critical shear stress and erodibility coefficient values from the parameter calculator within the BSTEM model.¹⁵

3.3.2.2 Basis of Significance

This analysis uses the same basis of significance described in Section 3.4 (page 92) and Section 3.5 (page 102) of the ARCF GRR FEIS/FEIR, as restated below.

The Proposed Action would result in a significant effect related to hydrology and water quality if it would:

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river in a manner that would result in:
 - (1) Substantial erosion or siltation on- or off-site, or
 - (2) Substantial increase in the rate or amount of surface runoff in a manner that would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Place housing within a 100-year flood hazard area;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury, or death involving flooding;
- Violate water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with ground water recharge;
- Substantially degrade water quality; or
- Alter regional or local flows resulting in substantial increases in erosion or sedimentation.

¹⁴ USACE, 2021. *Engineering and Resources Design Guidelines, American and Sacramento Rivers Erosion Improvements, American River Common Features 2016*. Sacramento, CA: Version 4. March 2, 2021.

¹⁵ USACE, 2021. *Design Documentation Report Supplemental Work Package Appendix B: Hydraulics and Hydrology*. November 18, 2021.

Since publication of the ARCF GRR FEIS/FEIR, changes to Appendix G of the State CEQA Guidelines were adopted that include the following additional or modified significance criteria:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - Result in substantial erosion or siltation on- or off-site;
 - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
 - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - Impede or redirect flood flows.
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Given that the Proposed Action would implement measures to prevent erosion, the impact analysis presented below in Section 3.3.3, *Impact Analysis*, first discusses potential impacts of the Proposed Action to hydrology, followed by potential impacts to water quality.

Effects Not Evaluated Further

As described in the ARCF GRR FEIS/FEIR, groundwater is not likely to be encountered during excavation or trenching, based on the 2013 Groundwater Update for the California Water Plan which states that groundwater could be as deep as 90 feet below ground surface, which is well-below proposed construction activities. Further, any water that would be encountered during construction activities would likely be directly connected to water in the American River and not directly to the underlying groundwater basin. Because groundwater is not likely to be encountered and would not be used as a source of water supply, the Proposed Action would not cause a substantial decrease in groundwater supplies or conflict with or obstruct implementation of the sustainable groundwater management plan. Furthermore, the Proposed Action would not create any new

impervious surfaces that would interfere with groundwater recharge, or impede sustainable groundwater management, or increase runoff over existing conditions. Additionally, the Project Area is inland and not mapped in an area where tsunami or seiche are likely to occur,¹⁶ therefore no further evaluation is necessary.

3.3.3 Impact Analysis

3.3.3.1 No Action/No Project Alternative

Under the No Action/No Project Alternative, the Proposed Action would not be implemented, and the Sacramento metropolitan area would experience no change in the existing level of risk of flooding due to levee failure because of seepage, slope stability, overtopping, or other erosion concerns.

Under these conditions, a flood event could cause portions of the levees to fail, triggering widespread flooding and related damage. If a catastrophic flood were to occur, emergency flood fighting and clean-up efforts would be undertaken to control further erosion and loss of the levee system. Timing and duration of control would correlate with other emergency flood fighting needs, but it is foreseeable that the release of sediment, vegetation, debris from urban dwellings and structure, and hazards and hazardous materials would contribute to exceeding applicable environmental thresholds for hydrology and water quality in the American River and further downstream in the Sacramento River. Depending on the magnitude of a flood, flood fighting could last for weeks or even months. Moreover, due to the unpredictable nature of emergency responses, the application of best management practices (BMPs) to control all erosion and movement of other substances and debris into the American River and other waterways would be infeasible. All of these effects on hydrology and water quality would be considered significant; however, the timing, duration, and magnitude of a flood event is unpredictable, and therefore precise significance determination cannot be made.

3.3.3.2 Proposed Action

Sections 3.4 and 3.5 (pages 81 through 108) of the ARCF GRR FEIS/FEIR analyzed the impacts on Hydrology and Water Quality along 11 miles of the American River, including the areas in and around Site 1-1. The following sections present additional analyses and details not discussed in the ARCF GRR FEIS/FEIR to identify potential hydrology and water quality impacts of the Proposed Action design and any temporary impacts associated with construction including staging areas, haul routes, and stockpile locations.

Hydrology

The objective of the design of Site 1-1 is to reduce the risk of a levee failure due to erosion as well as maintain hydraulic capacity. The American River levee system was originally intended to convey a discharge of the 100-year event at 115,000 cfs as directed

¹⁶ California Geological Survey Department of Conservation, 2021. <https://www.conservation.ca.gov/cgs/tsunami/maps>. Accessed December 21, 2021.

in the Folsom Dam and Lake WCM. After flooding in 1986, an emergency objective release provision of 160,000 cfs (or 200-year event) was added to the WCM. The ARCF Project was modified by the Water Resources Development Act of 1999 to include additional necessary features for the American River so that it could safely convey an emergency release of 160,000 cfs. The ARCF GRR identified further improvements to the system to safely convey 160,000 cfs including addressing erosion concerns.

The ARCF American River Levee Raising Top of Levee Profile Design Documentation Report¹⁷ completed as part of the WRDA 1999 authorization developed a new design top-of-levee elevation for the 160,000 cfs design flow. The new top of levee provided between 2 and 4 feet of freeboard above the expected 160,000 cfs water surface elevation (i.e., the elevation of water in the river channel relative to the top of levee design). The 160,000 cfs water surface elevation is generally 3 to 4 feet above the 115,000 cfs water surface elevation. Sections of levee that did not meet the new top of levee profile were raised to the new design top of levee profile. Existing sections of levee that met or exceeded the new profile were not adjusted.

The recent addition of the auxiliary spillway structure to Folsom Dam and further updates to the WCM have affected the annual chance exceedance (ACE) of flow events on the LAR. Recent hydrological modeling completed as part of the USACE CVHS has provided updated storm hydrographs for storm events of varying ACE values. **Table 3-1** summarizes the peak flow on the LAR for various ACE flow events. The objective release flow of 115,000 cfs during a 100-year event will occur during the 4-percent ACE through the 1-percent ACE hydrologic events, while the 0.5-percent ACE is slightly above the 115,000 cfs release at 117,000 cfs. The 160,000 cfs emergency release has an ACE of about 0.3-percent.

Existing (also the No Action/No Project condition) and Proposed Action conditions were simulated for the 115,000, 160,000, and 192,000 cfs flow events (see Subsection 3.3.2.1, *Methodology*).

TABLE 3-1
SUMMARY OF ANNUAL CHANCE OF EXCEEDANCE FLOWS AT NIMBUS DAM

Annual Chance of Exceedance	Peak Flow (cfs)
50%	20,500
10%	99,000
4%	115,000
2%	115,000
1%	115,000
0.5%	117,000
0.3%	160,000

¹⁷ USACE. *American River Project Common Features American River Levee Raising Sacramento County, California. Top of Levee Profile Design Documentation Report*. May 2007.

Water Surface Elevation Level Modeling Results

The MVP 1D and MVP 2D models were used to assess stage impacts resulting from the Proposed Action and the potential for overtopping the levee system. Stage impacts were computed by subtracting the Proposed Action WSEL from the existing conditions, as described previously in Subsection 3.3.2.1, *Methodology*. Reported positive stage impacts are indicative of increased WSELs due to the Proposed Action; negative stage impacts are indicative of decreased WSELs due to the Proposed Action. The stage impact threshold where WSELs would impact the levee system was determined to be approximately 0.2 feet.

Comparison of existing and Proposed Action conditions show that construction of the erosion protection improvements at Site 1-1 would result in stage impacts of 0.03, 0.04, and 0.05 feet for the 115,000, 160,000, and 192,000 cfs events, respectively. The location of incipient (or the beginning of) overtopping for both the north and south levee systems was shown to be located well upstream of Site 1-1 (between the Howe and Watt Avenue bridges), further reducing the concern that the Proposed Action would lead to stage impacts. Therefore, the impacts of the Proposed Action on WSELs and the potential for alteration in the existing drainage patterns of the LAR, resulting in increased erosion, siltation or surface runoff, would be less-than-significant.

Scour and Erosion Modeling Results

The MVP 1D and MVP 2D models were also used to evaluate scour and lateral bank erosion resulting from the Proposed Action and the potential for damages within close vicinity of the levee resulting in safety issues. The scour analysis resulted in estimates of total scour depth, defined as a combination of four individual scour components (described in more detail in the Report), at Site 1-1 and the I-80 bridge.¹⁸ As stated previously, at Site 1-1 the launchable rock toe at on the upper berm of the riverbank was designed to protect the adjacent levees from failure should scour occur. For purposes of this impact analysis, the threshold of significance for scour was defined as whether the rock toe launched.

Lateral bank erosion on the LAR has been minimal since the end of mining within the river vicinity, however historic peak flows have been much lower than the project design events of 160,000 and 192,000 cfs. The closest event occurred in 1986 with a peak flow of 134,000 cfs and caused erosion into the levee prism that did not result in levee failure.¹⁹ For purposes of this impact analysis, the threshold of significance was defined as whether an event would result in erosion into the levee prism.

Scour modeling results are presented in **Table 3-2** at Site 1-1 and the I-80 Bridge for the 115,000, 160,000 and 192,000 cfs events. Model results at these design flows show that scour is not expected to occur and the rock toe is not expected to launch. Lateral bank

¹⁸ USACE, 2021. *Design Documentation Report Supplemental Work Package Appendix B: Hydraulics and Hydrology*. November 18, 2021.

¹⁹ USACE, 2021. *Design Documentation Report Supplemental Work Package Appendix B: Hydraulics and Hydrology*. November 18, 2021.

erosion modeling results indicate that for both the 160,000 and 192,000 cfs design events, erosion does not reach the levee prism and the revetment meets the design velocity threshold for stability. The Proposed Action design cross section would not exceed the erosion initiation threshold, and erosion modeling results show no lateral migration of the levee bank. Thus, the impacts of the Proposed Action on erosion and siltation, supported by the scour and lateral bank erosion modeling results, would be less-than-significant.

**TABLE 3-2
SCOUR MODELING RESULTS**

Site or Bridge Location	115,000 cfs Total Scour Depth Range, ft	160,000 cfs Total Scour Depth Range, ft	192,000 cfs Total Scour Depth Range, ft
1-1	10-12	12-13	13-14
I-80 Bridge	17	20	21

SOURCE: Table 10 presented in USACE, 2021. *Design Documentation Report Supplemental Work Package Appendix B: Hydraulics and Hydrology*. November 18, 2021.

Summary

Modeling results of WSELs, scour and lateral bank erosion for the Proposed Action were used as hydrologic impact indicators. These indicators were used to determine whether the Proposed Action would: substantially alter the existing drainage pattern of the site or area, including through the alteration of the course or a stream or a river or through the addition of impervious surfaces in a manner that would result in substantial erosion or siltation on-or off-site; substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems; or provide substantial additional sources of polluted runoff. Results of the modeling of the Proposed Action on hydrology determined that impacts would be less-than-significant.

Water Quality

Construction of the Proposed Action would include ground disturbance activities that could expose soils to increased rates of erosion during storm events that could increase the rate of sedimentation in receiving waters. Construction of the Proposed Action would also involve vegetation clearing needed to allow for site access and to accommodate construction activities, as well as post-construction revegetation of the erosion protection measures with native vegetation to replace the vegetation removed by the construction of the Proposed Action. Sediment input into the river and turbidity caused by sediment-laden runoff or placement of rock in the river could cause a turbidity plume in the water that would affect aquatic organisms, including benthic organisms and fish. Use and storage of equipment could result in the accidental spills of fuel, oil, and other construction equipment related materials that could also be carried in stormwater runoff to receiving waters. As a result, there is the potential for construction activities to adversely affect receiving water quality.

A turbidity curtain and/or other turbidity minimization measures would be installed prior to any in-water work conducted on the waterside of the levee. The work limits and staging areas would be fenced (orange construction fencing) to protect sensitive habitat, and to identify disturbance area limits. Coir or rice straw wattles or other sedimentation reducing measures would be installed where feasible downstream from any ground disturbing activities that have the potential to cause sediment runoff into the river.

Most of the construction activities would occur during dry summer months and when flows are lowest in the American River, likely July to October. Construction activities with ground-disturbances greater than one acre requires construction contractors to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) and comply with the conditions of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The construction contractor(s) would be required to obtain a NPDES Construction General Permit from the Central Valley RWQCB detailing construction activities, work areas, storage areas, work schedule, potential for run-on, run-off, and spill prevention measure to be implemented during construction activities.

The SWPPP would describe the construction activities to be conducted, and BMPs that would be implemented to contain spills and prevent discharges of stormwater into waterways, including frequency of inspections and monitoring activities that would be required. BMPs could include but are not limited to straw wattles, geotextile and coir mats, tire wash stations at ingress/egress points to prevent tracking soil off-site onto roadways and entering the municipal stormwater collection system, and sand filter bags at stormwater collection inverts. Potential turbidity effects from landside construction (e.g., vehicle, staging, placement of construction equipment) would be limited to stormwater runoff carrying loose soil from staging areas and construction vehicle access areas. Implementation of the SWPPP would reduce the effect sediment and construction related materials entering the stormwater system to a less-than-significant level. Following construction of the Proposed Action, BMPs would continue to be monitored and repaired/replenished while vegetation matures enough to stabilize surface soil in the Project Area.

In addition, as described in Chapter 2, *Alternatives*, construction of the habitat mitigation would involve revegetation of the erosion protection measures with native vegetation to replace the vegetation removed by the construction of the Proposed Action. For example, live cuttings would be installed at the waterside edge of the bench in a 10-foot wide strip along the riverside edge of the planting bench. Imported soils for the soil-filled slope and planting benches would require laboratory testing in accordance with Clean Water Act Section 401 permit requirements prior to placement to screen for materials that could adversely affect water quality.

As described above, the construction activities associated with the Proposed Action would not violate water quality standards or waste discharge requirements or otherwise

substantially degrade surface water quality or conflict with or obstruct implementation of a water quality control plan. Coordination with the Central Valley RWQCB would occur prior to construction through the Clean Water Act Section 401 water quality certification process to ensure that any appropriate measures would be implemented to protect water quality. Further, any use of on-site excavated soil and soil from the Caltrans I-80 bridge project for project construction would be required to meet Clean Water Act Section 401 permit conditions and approval by the Central Valley RWQCB. Protection measures may include total suspended solids (TSS) or settleable solids tests to ensure the turbidity curtain is meeting water quality requirements or other applicable requirements that will be included in permits. Furthermore, through compliance with the NPDES Construction General Permit conditions would minimize stormwater runoff from affecting water quality. To ensure that stormwater runoff meets the standards of the Central Valley RWQCB Basin Plan for the American River, implementation of the proposed avoidance and minimization measures presented below would reduce impacts from construction of the Proposed Action to a less-than-significant level.

ARCF GRR FEIS/FEIR Mitigation Measures

Minor modifications of the ARCF GRR FEIS/FEIR mitigation measures (pages 106 to 108) are incorporated into the Proposed Action, as follows:

- Because the duration and timing of the low-flow period is variable from year to year, the low-flow period was generalized in the ARCF GRR/FEIS/FEIR. Because earthwork needs to start before the in-water work window in the NMFS BO (July 1–October 31, with an extension under low-flow conditions to November 15), the following mitigation measures include a specific in-water work window range of dates different from the ARCF GRR FEIS/FEIR.
- Turbidity monitoring measures were clarified to be compliant with the most recent Basin Plan turbidity objectives.

USACE and the CVFPB would implement the following revised ARCF GRR FEIS/FEIR mitigation measures to reduce temporary, short-term construction effects on water quality in the Project Area:

Mitigation Measure WQ-1: Prepare and Implement a Storm Water Pollution Prevention Plan, Spill Prevention Control and Countermeasures Plan, and Associated Best Management Practices. As part of a turbidity monitoring program, the USACE contractor(s) would monitor turbidity in the adjacent water bodies, where applicable criteria apply, to determine whether turbidity is being affected by construction and to ensure that construction does not result in a rise in turbidity levels above ambient conditions, in accordance with the Central Valley RWQCB Basin Plan turbidity objectives. The monitoring program would be coordinated with the Central Valley RWQCB prior to construction and would be implemented by the construction contractor. The contractor would be required to use BMPs, as described below, to prevent runoff from all construction areas. Environmental commitments included in the project to reduce the potential for

impacts on water quality include preparation of the SWPPP, and Spill Prevention Control and Countermeasures Plan (SPCCP).

The following measures would be implemented as part of the SWPPP, as required by the State Water Resources Control Board for any construction activities that disturb more than 1 acre, to limit erosion potential.

- Conduct earthwork during low-flow periods (e.g., approximately May 1 through November 30).
- To the extent possible, stage construction equipment and materials on the landside of the subject levee reaches in areas that have already been disturbed.
- Minimize ground and vegetation disturbance during project construction by establishing designated equipment staging areas, ingress and egress corridors, spoils disposal and soil stockpile areas, and equipment exclusion zones prior to the commencement of any grading operations.
- Install sediment barriers (e.g., silt fences, fiber rolls, and straw bales) around the base of soil stockpiles to intercept runoff and sediment during storm events. If necessary, cover stockpiles with geotextile fabric to provide further protection against wind and water erosion.
- Install sediment barriers on graded or otherwise disturbed slopes as needed to prevent sediment from leaving the project site and entering nearby surface waters.
- Install plant materials to stabilize cut and fill slopes and other disturbed areas once construction is complete. Plant materials could include an erosion control seed mixture or shrub and tree container stock. Temporary structural BMPs, such as sediment barriers, erosion control blankets, mulch, and mulch tackifier, could be installed as needed to stabilize disturbed areas until vegetation becomes established.
- During working hours, the construction activity would not cause the turbidity in the adjacent water body down current from the construction sites to exceed the Basin Plan turbidity objectives. Specifically, where natural turbidity is between 0 and 5 nephelometric turbidity units (NTUs), increases would not exceed 1 NTU; where natural turbidity is between 5 and 50 NTUs, increases would not exceed 20 percent; where natural turbidity is between 50 and 100 NTUs, increases would not exceed 10 NTUs; and where natural turbidity is greater than 100 NTUs, increases would not exceed 10 percent.²⁰ In determining compliance with these limits, appropriate averaging periods could be applied, provided that beneficial uses would be fully protected.
- An SPCCP is intended to prevent any discharge of oil into navigable water or adjoining shorelines. The contractor would develop and implement an SPCCP

²⁰ California Regional Water Quality Control Board, Central Valley Region. *Water Quality Control Plan (Basin Plan)*, Fifth Edition, Revised May 2018. Available: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf.

to minimize the potential for adverse effects from spills of hazardous, toxic, or petroleum substances during construction and operation activities. The SPCCP would be completed before any construction activities begin.

- Implementation of this measure would comply with State and Federal water quality regulations. The SPCCP would describe spill sources and spill pathways in addition to the actions that would be taken in the event of a spill (e.g., an oil spill from engine refueling would be immediately cleaned up with oil absorbents). The SPCCP would outline descriptions of containment facilities and practices such as double-walled tanks, containment berms, emergency shut-offs, drip pans, fueling procedures, and spill response kits. It would also describe how and when employees are trained in proper handling procedure and spill prevention and response procedures. Release of contaminants into adjacent water bodies could result in significant effects.

Adherence to the environmental commitments and the implementation of the measures described in this section if spills were to occur would reduce or minimize this impact to a less-than-significant level.

Summary

Construction activities were evaluated to determine whether the Proposed Action would violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality, or conflict with or obstruct implementation of a water quality control plan. Implementation of the mitigation measures in the ARCF GRR FEIS/FEIR, with the modifications described above, would reduce the impact of the Proposed Action on water quality to a less-than-significant level.

3.4 Vegetation and Wildlife

3.4.1 Environmental Setting

3.4.1.1 Regulatory Setting

Chapter 5 of the ARCF GRR FEIS/FEIR summarizes the environmental laws and regulations that apply to the ARCF Project and describes the status of compliance with those laws and regulations. Regulations related to special-status species have changed and are discussed in Section 3.6, *Special Status Species*. There has been no change to the applicable regulations related to Vegetation and Wildlife. Additional detail on the American River Parkway Plan is provided here.

The 2008 American River Parkway Plan is the City and County of Sacramento's management plan for the LAR and was adopted by the City and County of Sacramento, and by the State Legislature through the Urban American River Parkway Preservation Act, Public Resources Code Section 5840. It is a policy document that provides guidance for land use decisions affecting the American River Parkway, specifically for its preservation, use, development, and administration. The Plan's purpose is to ensure preservation of the naturalistic environment while providing limited development to

facilitate human enjoyment of the Parkway. The Parkway Plan also acts as the management plan for the Federal and State Wild and Scenic Rivers Acts.

3.4.1.2 Existing Conditions

Section 3.6 (pages 109–116) of the ARCF GRR FEIS/FEIR describes the regional and local setting in the vicinity of Subreaches 1 through 4. Site 1-1 is located in Subreach 1. The following provides additional information specific to the Project Area for vegetation and wildlife for the site.

Field data for vegetation, aquatic resources, and wildlife was collected for the entire Site 1-1 (see **Appendices A, B and C**) and describes existing conditions for vegetation, aquatic resources, and wildlife.

Habitat Types

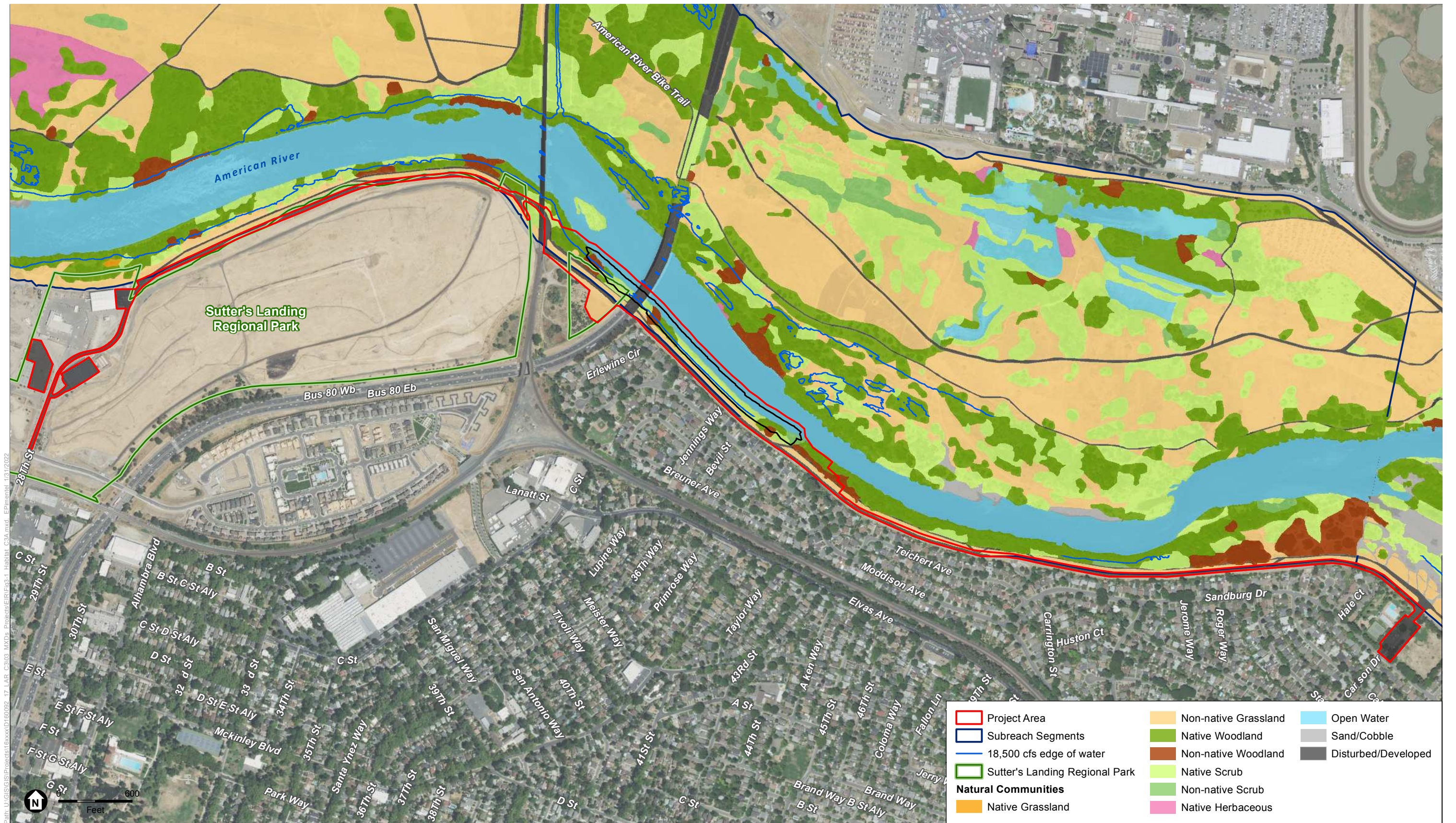
The following natural communities (i.e., habitat types) occur in Subreach 1: riverine (open water), annual grassland, mixed oak woodland, non-native woodland, riparian scrub, and riparian woodland (**Figure 3-1**). Of these natural communities those that are considered Waters of the U.S. (riverine, riparian scrub, and riparian woodland) and those that are considered riparian habitat by USFWS or other agencies (riparian scrub and riparian woodland, as well as mixed-oak woodland, and non-native woodland, *if* they occur between the levees) are considered sensitive natural communities. The distribution of the natural communities and the common vegetation and wildlife species observed in each are described below.

Annual Grassland

Common grass species observed in this community include wild oat (*Avena barbata*), bromes (*Bromus diandrus*, *B. hordeaceus*), foxtail barley (*Hordeum murinum*), rye grass (*Festuca perennis*), Bermuda grass (*Cynodon dactylon*), and Johnson grass (*Sorghum halepense*). Pockets of native grasses, such as beardless wild rye (*Elymus triticoides*), also occur sporadically throughout the grasslands in the survey area.

An assemblage of native and non-native forbs also occurs in these grasslands. Among the many common non-native forbs observed are spring vetch (*Vicia sativa ssp. sativa*), cranes bill (*Geranium dissectum*), Italian thistle (*Carduus pycnocephalus*), yellow star thistle (*Centaurea solstitialis*), prickly lettuce (*Lactuca serriola*), poison hemlock (*Conium maculatum*), wild radish (*Raphanus sativus*), bull thistle (*Cirsium vulgare*), rose clover (*Trifolium hirtum*), and white sweet clover (*Melilotus indicus*). Some common native forbs observed include Canada horseweed (*Erigeron canadensis*), fringed willowherb (*Epilobium ciliatum*), ragweed (*Ambrosia psilostachya*), and turkey-mullein (*Croton setiger*).

Annual grassland provides little cover for most wildlife, yet numerous species forage and several species breed in this habitat type. Grasslands attract bumblebees and other insects that rely on flowering grassland species. They also attract reptiles and amphibians, such as western fence lizard (*Sceloporus occidentalis*), common garter snake (*Thamnophis*



SOURCE: NHC, 2021; USACE, 2021; ESA, 2022

American River Common Features Contract 3A

Figure 3-1
Natural Communities of the Lower American River
Contract 3A Project Site 1-1

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sirtalis), and gopher snake (*Pituophis melanoleucus*); and birds, including California quail (*Callipepla californica*), western bluebird (*Sialia mexicana*), lesser goldfinch (*Carduelis psaltria*), and barn swallow (*Hirundo rustica*).

Common small mammals expected to occur in grasslands include western harvest mouse (*Reithrodontomys megalotis*), deer mouse (*Mus musculus*), California vole (*Microtus californicus*), black-tailed jackrabbit (*Lepus californicus*), black-tailed deer (*Odocoileus hemionus*), coyote (*Canis latrans*), and Botta's pocket gopher (*Thomomys bottae*). Small rodents, reptiles, and invertebrates attract raptors (birds of prey) including red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Accipiter striatus*), and American kestrel (*Falco sparverius*), and special-status birds such as white-tailed kite (*Elanus leucurus*), burrowing owl (*Athene cunicularia*), and Swainson's hawk (*Buteo swainsoni*).

Non-native grasslands are important foraging grounds for aerial and ground-foraging insect eaters such as *Myotis* bat species and pallid bats (*Antrozous pallidus*).

Mixed Oak Woodland

Mixed oak woodlands that occur in relatively higher elevation portions of the Project Area are dominated by coast live oak (*Quercus agrifolia*), valley oak (*Q. lobata*), and interior live oak (*Q. wislizeni*) (Figure 3-1). Northern California black walnut (*Juglans hindsii*) and California bay (*Umbellularia californica*) are less frequent contributors to the tree canopy.

The oak woodlands support a variety of understory plant species and vegetative structures. When no shrub layer is present, annual grassland is the dominant understory and includes the common species described above for this community. When oak woodlands support understory shrubs, common native shrubs observed include California rose (*Rosa californica*), California blackberry (*Rubus ursinus*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), and coyote brush (*Baccharis pilularis* ssp. *consanguinea*). Himalayan blackberry (*Rubus armeniacus*), a non-native shrub occurs in the understory of oak woodlands.

Animals present in oak woodland habitat include those that rely heavily on acorns, such as the acorn disseminators California scrub jay (*Aphelocoma californica*), acorn woodpecker (*Melanerpes formicivorus*), and western gray squirrel (*Sciurus griseus*). Wild turkey (*Meleagris gallopavo*), California quail, and black-tailed deer use acorns as a major food source. Deer also use the foliage of several hardwoods.

Oak titmouse (*Baeolophus inornatus*), dark-eyed junco (*Junco hyemalis*), ash-throated flycatcher (*Myiarchus tuberculifer*), northern flicker (*Colaptes auratus*), lesser goldfinch, and great horned owl (*Bubo virginianus*) nest in woodland habitat. Cavity nesters include western bluebird and ash-throated flycatcher. Special-status birds such as Cooper's hawk (*Accipiter cooperii*) and sharp-shinned hawk (*A. striatus*) are known to nest in these woodlands. The pallid bat, also a special-status species, may inhabit these woodlands as well.

Amphibians and reptiles can be found on the woodland floor where moisture is retained under fallen wood and in tree crevices. Among these species are California toad (*Anaxyrus boreas halophilus*) and Sierran treefrog. Reptiles include western fence lizard, southern alligator lizard (*Elgaria multicarinata* ssp. *multicarinata*), ringneck snake (*Diadophis punctatus*), gopher snake, western rattlesnake (*Crotalus viridis helleri*), and California king snake (*Lampropeltis zonata*).

Wetlands and Other Waters

In October 2021, Environmental Science Associates biologists conducted an aquatic resources delineation for Site 1-1. Site 1-1 supports a total of 8.20 acres of potential waters of the United States: 4.68 acres of perennial riverine (i.e., American River), 2.33 acres of seasonally flooded forested wetlands that are comprised of a riparian woodland overstory and a riparian scrub understory, and 1.19 acres of scrub-shrub wetland (Appendix B). The term “forested wetlands” is used interchangeably in this Draft Supplemental EIR with the term “seasonally-flooded riparian habitat.”

Riparian Scrub (Scrub-shrub)

Riparian scrub habitat consists of shrub-dominated areas that are subject to hydrologic influence from the American River. These areas are dominated by sandbar willow (*Salix exigua*), arroyo willow (*S. lasiolepis*), common button bush (*Cephalanthus occidentalis*), California rose, California blackberry, California wild grape, blue elderberry, and Himalayan blackberry.

Areas that experience higher velocity flows typically do not support herbaceous species, and cobbles tend to be the dominant ground cover. Areas that experience slower flows support a variety of herbaceous species including mugwort (*Artemisia douglasiana*), marsh brittlegrass (*Setaria parviflora*), Santa Barbara sedge (*Carex barbarae*), and beardless wildrye (*Elymus triticoides*).

Riparian scrub supports large numbers of insects and attracts passerine birds, including several species of flycatchers, warblers, and hummingbirds. In addition, several Federally listed species rely on riparian corridors, including valley elderberry longhorn beetle and western yellow-billed cuckoo (*Coccyzus americanus*).

Riparian Woodland

Riparian woodlands in the survey area are tree-dominated areas that are subject to frequent hydrologic influence from the LAR. In Site 1-1 riparian woodlands occur above and below the ordinary high water mark (OHWM). Riparian woodland below the OHWM is considered jurisdictional by the USACE. These areas are dominated by Fremont cottonwood (*Populus fremontii*), Goodding’s willow (*Salix gooddingii*), box elder (*Acer negundo*), and California and non-native sycamore (*Platanus racemosa*; *Platanus* sp.). Oregon ash (*Fraxinus latifolia*), valley and live oak, and black locust as less frequent contributors to the tree canopy. Riparian woodlands support a variety of shrubs and herbs similar to those described above for the riparian scrub community.

Many wildlife species depend on riparian woodlands for water, food, and cover. Several raptor species—red-shouldered hawk, Cooper’s hawk, great horned owl, and the State-listed Swainson’s hawk—build their nests in the crowns of cottonwood, valley oak, and other large trees that grow on the landside and waterside of the levees. Natural cavities and woodpecker holes provide nesting sites for cavity-nesting species, including wood duck (*Aix sponsa*), American kestrel, tree swallow (*Tachycineta bicolor*), western bluebird, and western screech owl (*Megascops kennicottii*).

Riverine

Riverine habitat consists of inundated areas, including the American River. Areas in Site 1-1 did not support much submerged aquatic vegetation, but water fern (*Azolla fillicoloides*) was observed. Many bird species use open waters for resting, hunting, and escape cover. Common species include gulls, waterfowl, and osprey (*Pandion haliaetus*). Shorelines provide hunting grounds for wading birds such as herons and egrets, and for kingfisher, waterfowl, and shorebirds. Flycatchers, swallows, and other insectivorous birds catch their prey over water. Mammal species that occur in this habitat type include river otter (*Lontra canadensis*) and beaver (*Castor canadensis*). Instream woody structure along the shoreline of riverine habitat provides perching habitat for bird species such as black phoebe (*Sayornis nigricans*) and resting or basking habitat for other species (e.g., western pond turtle [*Actinemys marmorata*] and river otter).

Non-native Woodland

Non-native woodland includes single-species tree stands of either that typically consist of black locust (*Robinia pseudoacacia*) but can include tree of heaven (*Ailanthus altissima*), American elm (*Ulmus americana*), and blue gum (*Eucalyptus globulus*).

Bird species that may use this habitat types include scrub jay, Northern mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), California quail, and western bluebird. Common mammals include black-tailed deer, raccoon (*Procyon lotor*), and opossum (*Didelphis virginiana*). Gopher snake and western fence lizard also occur in this habitat type.

Non-native and Invasive Plant Species

Non-native plant species occur in all plant communities, but most commonly in and adjacent to annual grasslands. Areas dominated by non-native vegetation are generally associated with recent human disturbance and include dredged mine tailings, maintained levee slopes, landscaped areas, and areas subject to frequent flood inundation or scour. Non-native weeds dominate some areas, especially along the side slopes of the levees. To a lesser degree, non-native plants are also found in other plant communities such as riparian and oak woodland. Non-native plants that adversely affect native species and natural communities (e.g., through competition for resources) are designated invasive plant species.

The California Invasive Plant Council maintains an inventory that categorizes non-native invasive plants that are determined to be a threat to the state’s wildlands. The

categorization is based on an assessment of the ecological impacts of each plant based on the best available knowledge of invasive plant experts. **Table 3-3** lists each non-native plant species encountered during general biological resources reconnaissance surveys and its rating in the California Invasive Plant Council inventory. A complete list of plant species observed within Site 1-1 will be obtained during rare plant surveys scheduled for the following spring and summer.

**TABLE 3-3
INVASIVE PLANT SPECIES IN SITE 1-1**

Common Name	Scientific Name	Cal-IPC Rating
Bermuda grass	<i>Cynodon dactylon</i>	Moderate
Black locust	<i>Robinia pseudoacacia</i>	Limited
Cranes bill	<i>Geranium dissectum</i>	Limited
Foxtail barley	<i>Hordeum murinum</i>	Moderate
Himalayan blackberry	<i>Rubus armeniacus</i>	High
Italian thistle	<i>Carduus pycnocephalus</i>	Moderate
Ripgut brome	<i>Bromus diandrus</i>	Moderate
Rose clover	<i>Trifolium hirtum</i>	Limited
Soft brome	<i>Bromus hordeaceus</i>	Limited
Spanish broom	<i>Spartium junceum</i>	High
Tree of heaven	<i>Ailanthus altissima</i>	Moderate
Wild oat	<i>Avena barbata</i>	Moderate
Wild radish	<i>Raphanus sativus</i>	Limited
Yellow star thistle	<i>Centaurea solstitialis</i>	High

NOTES:

Cal-IPC = California Invasive Plant Council

^a *High* = species have severe ecological impacts on the physical processes of plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate = species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, although establishment is generally dependent on ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited = species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Watch = species have been assessed as posing a high risk of becoming invasive in the future.

3.4.2 Methodology and Basis of Significance

3.4.2.1 Methodology

This analysis uses the same methodology described in Section 3.6.2 (pages 116–117) of the ARCF GRR FEIS/FEIR. However, the second significance threshold was expanded to include “State-protected wetlands,” to reflect an update made to Appendix G of the State CEQA Guidelines for 2019. Impacts on vegetation and wildlife resources were

evaluated based on data collected from biological resources surveys, and other resources such as aerial imagery and the Parkway Plan. The goals and objectives of the Parkway Plan were also considered in the impact analysis, to assess whether constructing the alternatives would be in conflict with those goals and objectives. Impacts on vegetation and wildlife were evaluated based on construction activities and on habitat changes expected to occur after construction of the project.

3.4.2.2 Basis of Significance

The Proposed Action would result in a significant effect related to vegetation and wildlife if it would result in any of the following:

- Substantial loss, degradation, or fragmentation of any natural communities or wildlife habitat.
- Substantial effects on a sensitive natural community, including State- or Federally-protected wetlands and other waters of the United States, as defined by Section 404 of the Clean Water Act.
- Substantial reduction in the quality or quantity of important habitat, or access to such habitat for wildlife species.
- Substantial conflict with the American River Parkway Plan or the Sacramento County Tree Preservation Ordinance.
- Substantial adverse effects on native woodland habitats in the American River Parkway, resulting in the loss of vegetation and wildlife.

3.4.3 Impact Analysis

3.4.3.1 No Action/No Project Alternative

Under the No Action/No Project Alternative, the Proposed Action would not be implemented, and the Sacramento metropolitan area would experience no change in the present level of risk of flooding due to levee failure because of seepage, slope stability, overtopping, or other erosion concerns.

Section 3.6.3 (pages 117–118) of the ARCF GRR FEIS/FEIR analyzed impacts to vegetation and wildlife under the No Action/No Project Alternative. The ARCF GRR FEIS/FEIR stated that it would be speculative to consider that additional work would be conducted to address seepage, slope stability, overtopping, and erosion issues. If a flood event were to occur, the Sacramento area would remain at risk of a possible levee failure.

The ARCF GRR FEIS/FEIR determined that given the lack of specific erosion protection measures, levees along the American River would continue to erode, resulting in the loss of bankside vegetation. It is foreseeable that this condition would require recurring repairs at high levee risk areas within the river corridor as a result of incremental or episodic flooding damage. Furthermore, flood fighting activities that would occur during a high-

flow emergency response could involve the rapid placement of large rock along the levee slope, which would adversely affect future vegetation growth along the American River levees. The ARCF GRR FEIS/FEIR determined that as levees and berms along the American River erode, riparian habitat and native wood habitats would be lost. In addition, polluted flood flows could disrupt or contaminate Federal and State-protected wetlands, including seasonally flooded forested wetlands. Trees that could be lost but are protected by local tree ordinances would likely trigger major post-flood recovery revegetation. The No Action Alternative could also be inconsistent with the Parkway Plan, which calls for bank scour and erosion to be “proactively managed” to protect public infrastructure, habitat, and recreational resources. In addition, should flood fighting activities be insufficient to prevent levee failure, a large area of vegetation and terrestrial wildlife habitat could be inundated, leading to a substantial reduction in the quality and quantity of habitats for wildlife species. The effects of catastrophic levee failure and associated repairs on vegetation and wildlife would be significant. However, the timing, duration, and magnitude of a flood event, and whether a flood would require nominal or major repairs, is unpredictable, and therefore a precise significance determination cannot be made.

3.4.3.2 Proposed Action

Anticipated Effects on Vegetation

Section 3.6.4 (pages 121–123) of the ARCF GRR FEIS/FEIR analyzed impacts on vegetation and wildlife along the entire leveed stretch of the American River. The ARCF GRR FEIS/FEIR assessed effects on nesting birds, other terrestrial wildlife, and sensitive habitat types, including wetlands, and considered conflicts with local plans and policies including the Parkway Plan. The ARCF GRR FEIS/FEIR further evaluated the specific effects of launchable rock trenches and bank protection, including the loss of riparian habitat that would occur during their installation. Riparian habitat as defined by the USFWS for this Project includes native and non-native woody vegetation (woodland and scrub habitat) between the levees above and below the OHWM. In areas where the riparian habitat occurs below the OHWM and meets the three wetland parameters (hydrology, hydric soils, and hydrophytic vegetation), riparian habitat has been classified as forested wetlands (Appendix B). The ARCF GRR FEIS/FEIR estimated that up to 65 acres of riparian habitat would be removed throughout the lower American River, including reaches not within the scope of the current Proposed Action, if Alternative 2 of the ARCF GRR FEIS/FEIR were fully constructed. The impacts to riparian habitat discussed in the section below were anticipated as part of the 65 acres in the ARCF GRR FEIS/FEIR. However, because there are multiple phases of this project, Project Partners and the USFWS have agreed upon creating an impact log that tracks the running total of impacts resulting from implementation of the ARCF. If the 65 acres is exceeded, additional analysis and consultation will be required. In addition, the ARCF GRR FEIS/FEIR determined that construction work would also occur on grassland habitats within the Parkway.

The analysis in the ARCF GRR FEIS/FEIR determined that constructing new bank protection features would involve removing grasses, shrubby vegetation, riparian woodland, and instream woody material, resulting in the loss of 80,825 linear feet of

shaded riverine aquatic (SRA) habitat, a key component of salmonid habitat. Large trees would be protected in place during construction, to the extent possible. In addition, the analysis determined that although the impacts of bank protection work would be partially self-mitigated with the installation of a waterside planting bench, and removal of instream woody material would be avoided to the extent possible, some of the degradation of natural communities, effects on sensitive natural communities, and reduced quality and quantity of wildlife habitat would remain because of the lag time between the time trees would be planted and the time they would mature to a point that they could provide the same functional values as the vegetation removed during construction. Although the design of the Proposed Action would allow for retaining some large riparian trees, others would be removed, reducing the shade and organic input to the adjacent aquatic habitat. Similarly, most existing instream woody material would be removed. The on-site replacement habitat would be designed to provide both terrestrial riparian habitat values as well as adjacent aquatic habitat (SRA habitat) values. Instream woody material in the form of trees and logs, held in place with ropes, are included in the design. However, shade and aquatic vegetation would require a substantial period of time to develop in order to provide the same values as are present under existing conditions. The ARCF GRR FEIS/FEIR determined that the short-term impact on both riparian and SRA habitats would be significant and unavoidable, but that long-term impacts would be mitigated by on-site and off-site riparian and SRA habitat creation.

Under the Proposed Action, impacts from construction activities to install exposed and buried rock structures, and a planting bench at Site 1-1 would include the loss of 1.25 acres of riparian woodland and 2.67 acres of riparian scrub in the footprint of the Project Area (**Table 3-4**). Riparian habitat would also be damaged and removed within construction access areas and haul routes, resulting in removal of 2.08 acre of riparian woodland and 1.11 acre of riparian scrub habitat.

The impacts of the Proposed Action on natural communities, including sensitive natural communities, and wildlife habitat would be significant. Implementation of Mitigation Measures VEG-1, VEG-2, VELB-1, and SRA-1 set forth in the FEIS/FEIR and augmented herein to meet site-specific conditions would reduce this impact to a less-than-significant level, because of a combination of avoidance, minimization, and compensation by creation of on-site and off-site riparian habitat.

Anticipated Effects on Wildlife

As described in Section 3.6, *Special Status Species*, riparian vegetation along the lower American River provides habitat for the valley elderberry longhorn beetle (VELB). The riparian corridor is also considered to be suitable stop-over habitat for the western yellow-billed cuckoo. To mitigate the impacts on habitat for these species, the Project Partners would create replacement riparian habitat at ratios for VELB and western yellow-billed cuckoo of 3:1 (acres replaced to acres affected) and 2:1, respectively. A total of 3.92 acres of riparian habitat would be affected at Site 1-1 erosion protection areas and up to an additional 3.18 acres in the construction access areas and haul routes. Some of the riparian habitat in access areas may be avoided, if feasible. To mitigate these impacts to

TABLE 3-4
EXISTING AND RESTORED HABITAT AREAS IN SITE 1-1

Habitat Area	Habitat Type	Total Habitat Impacted ^{3,4}	Total Habitat Created ³	Erosion Protection Area Above OHWM Habitat Impacted (acres)	Erosion Protection Area Above OHWM Habitat Created ¹ (acres)	Erosion Protection Area Below OHWM Habitat Impacted (acres) ²	Erosion Protection Area Below OHWM Habitat Created ¹ (acres)	Access Areas Above OHWM Habitat Impacted (acres)	Access Areas Above OHWM Habitat Created (acres)	Access Areas Below OHWM Habitat Impacted (acres)	Access Areas Below OHWM Habitat Created (acres)
Riparian Woodland	Native woodland	2.34	2.57	0.19	0.13	0.60	2.16	0.77	0.02	0.78	0.26
	Non-native woodland	0.99	0.00	0.15	0.00	0.31	0.00	0.48	0.00	0.05	0.00
<i>Subtotal</i>		3.33	2.57	0.34	0.13	0.91	2.16	1.25	0.02	0.83	0.26
Riparian scrub	Native scrub	3.53	1.64	1.00	0.30	1.50	1.21	0.74	0.04	0.29	0.09
	Non-native scrub	0.24	0	0.02	0.00	0.15	0.00	0.01	0.00	0.06	0.00
<i>Subtotal</i>		3.77	1.64	1.02	0.30	1.65	1.21	0.75	0.04	0.36	0.09
Herbaceous	Native grassland	0.00	6.63	0.00	0.67	0.00	0.00	0.00	5.95	0.00	0.01
	Non-native grassland	4.92	0.00	0.09	0.00	0.00	0.00	4.90	0.00	0.00	0.00
<i>Subtotal</i>		4.92	6.63	0.09	0.67	0.00	0.00	4.90	5.95	0.00	0.01
Other	Unvegetated	14.11	0.00	0.06	0.00	0.18	0.00	13.78	0.00	0.09	0.00
	Open water	4.49	0.00	0.00	0.00	2.31	0.00	0.00	0.00	2.18	0.00
<i>Subtotal</i>		18.60	0.00	0.06	0.00	2.49	0.00	13.78	0.00	2.27	0.00
Site 1-1 Total		30.62	10.84	1.44	1.10	5.05	3.37	20.68	6.01	3.46	0.36

NOTE:

¹ On-site created habitat acreage estimates are based on 65% project designs.

² Impacts to riparian habitat below the OHWM includes forested wetlands and mitigation is included in the riparian mitigation numbers.

³ Totals in the text may vary slightly from the table due to rounding

⁴ Caltrans will be conducting a project within the same footprint and is currently scheduled to proceed prior to the start of the Proposed Action. Total impacts presented here include impacts to the area Caltrans would conduct construction. If Caltrans proceeds on schedule, approximately 0.51 acre of riparian impacts would be subtracted from the total impacts presented here.

Site 1-1, the Project Partners would create a total of 16.98 acres of riparian habitat, which would include 4.21 acres of on-site riparian habitat in the Project Area. In addition, 12.77 acres of off-site riparian habitat would be created at off-site locations including, but not limited to Glenn Hall, Rio Americano East and West, Rossmoor East and West, and at Arden Pond (see Section 3.6, *Special Status Species*). Further, the Proposed Action would affect 4.92 acres of non-native grassland in the Project Area. Non-native grassland would be replaced on-site with 6.63 acres of native grassland, which represents a much higher habitat value than non-native grassland. This area would be restored after construction by seeding native grassland plant species in this area.

After construction, the Proposed Action would also provide improved habitat for juvenile salmonids and species that typically occur at the water's edge, such as western pond turtle and river otter, by providing instream woody material. Surveys along the summer/fall (flows of 2,660 cfs) and winter/spring (flows of 3,900 cfs) shorelines at Site 1-1 recorded 12 percent and 11 percent instream woody structure, respectively (Appendix C). Designs for Site 1-1 include instream cover of approximately 50 percent at the shorelines.

As described in Section 3.6.4 of the ARCF GRR FEIS/FEIR, USACE analyzed effects on nearshore aquatic habitat (i.e., SRA habitat) using the Standard Assessment Methodology (SAM) model developed by a multi-agency team including USACE, DWR, USFWS, and NMFS. More information on the methods used for the SAM analysis and the results of the analysis are included in Section 3.6, *Special Status Species*. The results show that plantings in the bench would be expected to provide similar or better habitat values for salmonid species over time compared to the existing condition. However, a temporal impact on SRA habitat would occur, which Project Partners would mitigate by restoring SRA habitat at mitigation sites in the American River Parkway (beyond those identified in Section 2.3.3 *Mitigation Sites*) that would be selected and designed in coordination with NMFS and USFWS. This off-site SRA habitat creation would be developed as part of the consultation under the Federal Endangered Species Act. There would be short-term unavoidable impacts on riparian habitat, but the long-term effects on vegetation and wildlife would be mitigated to a less-than-significant level by providing higher long-term habitat values on-site and off-site. Off-site actions include restoring habitat at mitigation sites in the American River Parkway that would be selected and designed in coordination with NMFS and USFWS and restoration actions at elderberry transplant sites. Additional discussion can be found in Section 3.6, *Special Status Species* (Chapter 2, *Project Description*) of the *American River Watershed Common Features, Water Resources Development Act of 2016, American River Contract 1 Supplemental Environmental Assessment/Supplemental Environmental Impact Report* and *Special Status Species* (Chapter 2, *Project Description*) of the *American River Watershed Common Features, Water Resources Development Act of 2016, American River Contract 2 Supplemental Environmental Impact Statement/Supplemental Environmental Impact Report*.

Riparian habitat present within Subreach 1 is considered a sensitive natural community. A total of 4.21 acres would be created within Site 1-1 and 12.77 acres would be created off-site (for a description of the Glenn Hall Park mitigation site and the two Rio

Americano mitigation sites, the two Rossmoor mitigation sites and Arden Pond mitigation site see Chapter 2, *Project Description of the American River Watershed Common Features, Water Resources Development Act of 2016, American River Contract 1 Supplemental Environmental Assessment/Supplemental Environmental Impact Report* and the *Project Description of the American River Watershed Common Features, Water Resources Development Act of 2016, American River Contract 2 Supplemental Environmental Impact Statement/Supplemental Environmental Impact Report* to address impacts on VELB and western yellow-billed cuckoo habitat at a 3:1 and 2:1 ratio, respectively. The Proposed Action would result in a net increase in riparian woodland (including forested wetland) acreage within and near the Project Area. State and Federally-protected wetlands and other jurisdictional waters are also considered to be protected sensitive natural communities and have been included in the impacts and mitigation described above in this paragraph. Based on the design of the Proposed Action, riparian habitat (including forested wetland) impacted below the OHWM (3.38 acres, see Table 3-4) would be replaced at a ratio of 2:1 for a total of 6.72²¹ acres of riparian habitat to be located below the OHWM. Additional off-site riparian habitat would be created at mitigation sites in the American River Parkway that would be selected and designed in coordination with NMFS and USFWS as part of the consultation under the Endangered Species Act and that would be located below the OHWM (see SRA-1 for additional discussion). No additional mitigation for impacts on jurisdictional waters is proposed. Given the above considerations, the impact of the project on sensitive natural communities, including riparian habitat and wetlands and other waters under State and Federal jurisdiction, would be less than significant with mitigation.

Construction activities for the Proposed Action could interfere with local movement of native resident or migratory wildlife species. Grading and other ground-disturbing activities could temporarily disrupt the movement of reptiles and amphibians, such as the western pond turtle. It is anticipated that reptiles and amphibians would continue to move to and through nearby unaffected aquatic or upland habitat away from active construction activities during construction. Effects of the project on access of these species to their habitat would be temporary and these species would be expected to return to areas affected by construction once such work is completed. Additionally, similar areas of riparian and grassland habitat in reaches along the Lower American River unaffected by the Proposed Action could be utilized by these species. Equipment and personnel movement and vegetation removal during construction could interfere with the movement of other terrestrial wildlife species such as small mammals or birds; however, these activities are not expected to result in substantial effects on the movement of these species because they are mobile and can move away from construction activities to unaffected areas.

Noise from construction of the Proposed Action could temporarily alter the foraging patterns of resident wildlife species but is not anticipated to substantially interfere with

²¹ A total of 3.77 acres of riparian habitat is impacted below the OHWM; however, 0.39 acres is elderberry shrub canopy, which is mitigated at the higher 3:1 ratio. Thus, only 3.36 acres will be mitigated at the 2:1 ratio.

foraging because these species could move to nearby unaffected habitat. The impacts from construction on nesting birds specifically, including the effects of removal of riparian trees, are discussed in Section 3.6, *Special Status Species*. Although construction work for the Proposed Action could temporarily alter the movement patterns of native resident or migratory wildlife species, it is not anticipated to significantly interfere with the movement of these terrestrial species, which could move to nearby unaffected habitat. Furthermore, construction would be temporary, limiting the potential for long-term impacts on the migration and movement of terrestrial wildlife. Once mitigation plantings become established, Site 1-1 would provide riparian habitat that is expected to be of higher quality than existing habitat, because habitat features that benefit native species would be included in the design, and the site would be managed for the establishment and persistence of native trees, shrubs and herbaceous plants. Over the long-term, the Proposed Action would not substantially reduce the quality or quantity of important habitat, or access to such habitat for wildlife species, although temporary loss of habitat would occur, which would be mitigated by off-site mitigation and/or purchase mitigation credits. Therefore, the impact of the Proposed Action on the quantity and quality of wildlife habitat and access by wildlife to habitat would be less than significant with mitigation (see mitigation discussion, below).

The American River Parkway Plan provides a guide for land use decisions affecting the Parkway, and the plan specifically addresses the preservation, use, development, and administration of the Parkway. With the on-site replacement of riparian habitat, the Proposed Action would ensure that there would be no net impacts on lands designated by the Parkway Plan as Protected Areas or Nature Study Areas. Although an initial loss of riparian habitat within the Parkway would occur, eventually the Parkway would experience a net increase in the extent of riparian habitat, or credits would be purchased at a NMFS-approved mitigation bank. This increase in riparian vegetation is consistent with Terrestrial Resource Policy 3.2 of the Parkway Plan, which calls for the protection, enhancement, and expansion of the Parkway's native willow, cottonwood, and valley oak-dominated riparian and upland woodlands that provide important SRA, seasonal floodplain, and riparian habitats. Consequently, the impact of the Proposed Action on local conservation plans, such as the Parkway Plan, would be less than significant.

The Project Area provides woody material, such as fallen logs, tree limbs, and branches that are lying on the floodplain surface. This instream woody material (native wood habitat) is particularly important when located on the winter/spring and summer/fall waterline, where it provides cover and foraging substrate for juvenile salmonids. This wood habitat also provides cover and perching habitat for terrestrial species. For example, various mammals (e.g., river otter) or reptiles (e.g., western pond turtle) use this wood as resting or basking habitat, and birds (e.g., black phoebe) use the wood as perches. Wood (e.g., harvested orchard trees) would be installed on the floodplain as part of the Proposed Action. Although that project element is specifically designed to replace the wood present along the average winter/spring and summer/fall waterline as salmonid habitat, placing the wood would also mitigate the removal of wood habitat for terrestrial

species, and the impact of the Proposed Action on woody debris habitat for terrestrial species would be less than significant.

ARCF GRR FEIS/FEIR Mitigation Measures

The following summarizes ARCF GRR FEIS/FEIR mitigation measures (pages 128 to 129) that are incorporated into the Proposed Action (with specific mitigation site information added):

Mitigation Measure VEG-1: Retain, Protect, and Plant Trees On-Site. Project designs would be refined to reduce impacts on vegetation and wildlife to the extent practicable. Refinements implemented to reduce the loss of riparian habitat would include reducing the impact footprint, constructing bank protection rather than launchable rock trench whenever feasible, and designing planting benches.

Where practicable, trees would be retained in locations where the bank protection and planting bench are constructed. Trees would be protected in place along the natural channel during the placement of rock. Additional plantings would be installed on the newly constructed bench to provide habitat for fish and avian species. The planting bench would be used where practicable to minimize impacts on fish and wildlife species. The on-site habitat would be created in accordance with the ARCF GRR Habitat Mitigation, Monitoring, and Adaptive Management Plan (HMMAMP), which includes conceptual mitigation proposals, performance standards, and adaptive management tasks.

Mitigation Measure VEG-2: Compensate for Riparian Habitat Removal. To compensate for the removal of riparian habitat (including forested wetlands), replacement habitat would be created at a ratio of 2:1 to account for the temporal loss of habitat while newly created habitat is growing. Species selected to compensate for the riparian corridor removal would be consistent with the approved list of trees, shrubs, and herbaceous plants native to the Parkway. The riparian replacement habitat would create habitat connectivity and wildlife migratory corridors that would provide for the habitat needs of important native wildlife species without compromising the integrity of the flood control facilities, the Parkway's flood conveyance capacity, and the Parkway management goals in the Parkway Plan. Some of the replacement riparian habitat would be planted on the planting benches. Additionally, to comply with the Parkway Plan, lands within the Parkway would be evaluated for compensation opportunities. The exact location of the compensation lands in the Parkway would be coordinated with the Sacramento County Department of Regional Parks during the design phase of the project and would comply with the Parkway Plan's objectives and goals. It is assumed that sufficient lands are available within the Parkway. The replacement habitat would be created in accordance with the ARCF GRR HMMAMP, which includes conceptual mitigation proposals, performance standards, and adaptive management tasks.

Within the Project Area, Project Partners have designated Erosion Protection and Work Area construction zones. In Work Area zones, some or all the vegetation would be removed for site access, haul routes, and staging areas. Then, upon

completion of the project, work zones would be seeded with native grassland species. Erosion Protection construction zones would require that most riparian vegetation be removed, but riparian vegetation would be planted at a planting bench and within the site on buried revetment or among the revetment. To compensate for the temporal loss of riparian vegetation and SRA habitat, creation of off-site habitat would also occur at sites that would be protected in perpetuity. These sites would include a mitigation site in the American River Parkway that would be selected and designed in coordination with NMFS and USFWS as part of the consultation under the Endangered Species Act. In addition, riparian habitat would be planted at previously-designated and approved elderberry shrub mitigation areas (the Glenn Hall Park mitigation site and the two Rio Americano mitigation sites described in Chapter 2, *Project Description of the American River Watershed Common Features, Water Resources Development Act of 2016, American River Contract 1 Supplemental Environmental Assessment/ Supplemental Environmental Impact Report*) and the two Rossmoor mitigation sites and Arden Pond mitigation site described in Chapter 2, *Project Description of the American River Watershed Common Features, Water Resources Development Act of 2016, American River Contract 2 Supplemental Environmental Impact Statement/Supplemental Environmental Impact Report*.

Mitigation Measure BIRD-1: Avoid and Minimize Effects on Nesting Birds.

This mitigation measure is described in Section 3.6, *Special Status Species*.

Summary

The ARCF GRR FEIS/FEIR concluded that mitigation measures would reduce potential long-term impacts on vegetation and wildlife resources to a less-than-significant level because once vegetation has fully developed, the habitat quality of the Project Area would be similar or better than under existing conditions. The ARCF GRR FEIS/FEIR also concluded that short-term impacts on vegetation and wildlife resources associated with construction within the American River Parkway would be significant and unavoidable. Construction of the Proposed Action would not result in short-term impacts on vegetation and wildlife resources that would be new or more severe than those addressed in the ARCF GRR FEIS/FEIR and, therefore, those construction-related short-term impacts on vegetation and wildlife are already adequately addressed in the ARCF GRR FEIS/FEIR.

Under the Proposed Action, the mitigation for loss of riparian habitat would be satisfied as part of compensatory mitigation for the loss of suitable habitat for VELB and western yellow-billed cuckoo. For more details on the compensatory mitigation requirements for the VELB and western yellow-billed cuckoo, see Section 3.6, *Special Status Species*.

In summary, to address the impacts on the 7.10 acres of riparian habitat (including forested wetland below OHWM) and VELB habitat that would be affected by the Proposed Action at Site 1-1, replacement riparian habitat would be created, including 4.21 acres on-site and 12.77 acres off-site. Implementing this compensatory mitigation would reduce long-term impacts on any natural community or wildlife habitat within the

Project Area to a less-than-significant level by creating on-site and off-site riparian habitat. Short-term impacts on vegetation and wildlife habitat would remain significant and unavoidable because it would take several years (e.g., 10 to 15 years) for riparian habitat to become fully mature and provide the same values as existing riparian habitat.

Because impacts on migratory and movement conditions for terrestrial wildlife would be minor or temporary in duration and mitigated by on-site replacement, off-site mitigation, the impacts on the quality or quantity of important habitat, or access to such habitat for wildlife species, would be less than significant with on-site and off-site mitigation, and no additional mitigation measures are necessary.

With implementation of the riparian habitat mitigation that addresses impacts on VELB and western yellow-billed cuckoo, the potential for conflicts with the Parkway Plan would be less than significant because a net long-term increase in the extent of riparian habitat within the Parkway would occur.

Because the project would involve anchoring of new large instream woody material to replace the wood present along the shoreline that would be removed during construction activities, the impact of the Proposed Action on native wood habitat with the Parkway would be less than significant.

Implementation of the above mitigation measures from the ARCF GRR FEIS/FEIR with added specificity regarding mitigation sites would reduce the impact of the Proposed Action on vegetation and wildlife to a less-than-significant level in the long-term. Short-term impacts on vegetation and wildlife habitat would remain significant and unavoidable.

3.5 Fisheries

3.5.1 Environmental Setting

3.5.1.1 Regulatory Setting

Section 3.7 (page 132) of the ARCF GRR FEIS/FEIR identified Federal or State environmental laws and regulations that apply to fisheries resources. Chapter 5 of the ARCF GRR FEIS/FEIR summarized the environmental laws and regulations that apply to the ARCF Project and described the status of compliance with those laws and regulations. There has been no change to the applicable listed regulations related to fisheries. The American River Parkway Plan discusses management of fish habitat and is described in Section 3.4.1.1 of this Draft Supplemental EIR.

3.5.1.2 Existing Conditions

Section 3.7 (pages 131–135) of the ARCF GRR FEIS/FEIR describes the regional and local setting in the vicinity of the Project Area for the Proposed Action. The following provides additional information specific to the Project Area:

Native and non-native fish species that can be found in the Lower American River are listed on page 133 of the ARCF GRR FEIS/FEIR.

The ARCF GRR FEIS/FEIR identified the important attributes of fish habitat present in the Lower American River as aquatic vegetation and shaded riverine aquatic (SRA) habitat. The ARCF GRR FEIS/FEIR defined aquatic vegetation as floating, submerged, and emergent vegetation that serves as hiding cover and an invertebrate food production base for nearly all aquatic species. The ARCF GRR FEIS/FEIR defined SRA habitat as overhanging canopy cover.

In 2019 and 2020, Environmental Science Associates biologists conducted aquatic vegetation and shoreline habitat surveys in the Project Area.²² In the Project Area, aquatic vegetation was present along 15 percent of the total summer/fall seasonal shoreline and 33 percent of the total winter/spring shoreline. Approximately 3,344 linear feet of shoreline habitat was present along the summer/fall seasonal shoreline in the Project Area of Site 1-1 (**Appendix C**).

3.5.2 Methodology and Basis of Significance

3.5.2.1 Methodology

This analysis generally uses the same methodology as described in Section 3.7.2 (page 136) of the ARCF GRR FEIS/FEIR. This involves analyzing how the expected changes to aquatic vegetation and SRA habitat may affect populations of native fish species and how construction activities may affect native fish. Effects on special-status fish species are addressed in Section 3.6 and impacts on natural communities (including riparian vegetation) are addressed in Section 3.4.

3.5.2.2 Basis of Significance

This analysis uses the same basis of significance as described in Section 3.7.2 (page 136) of the ARCF GRR FEIS/FEIR, as restated below.

The Proposed Action would result in a significant effect related to fisheries if it would:

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Substantially conflict with the American River Parkway Plan;
- Substantially reduce the habitat of a fish population; or
- Cause a fish population to drop below self-sustaining levels.

²² Environmental Science Associates. 2020. American River Common Features 2016 Project American River Erosion Protection: American River Contract 3 Detailed Resource Assessment Report Prepared for Sacramento Area Flood Control Agency. Sacramento, CA. October 2020.

3.5.3 Impact Analysis

3.5.3.1 No Action/No Project Alternative

Under the No Action/No Project Alternative, the Proposed Action would not be implemented, and the risk of flooding within the Sacramento metropolitan area due to levee failure caused by seepage, slope stability, overtopping, or other erosion concerns would remain unchanged from its present level.

The ARCF GRR FEIS/FEIR concluded that the effects of flood fighting on fish in the event of a levee failure could be significant. If flood fighting were to occur to stop erosion and prevent levee failure, placing large rock along the levee slope would prevent or impede the future growth of trees and vegetation on the levee slopes, which would substantially reduce fish habitat. Emergency cleanup and earth-moving activities could also result in an increase in sediment and turbidity that would adversely affect migration, spawning, or rearing habitat. Given the nature of emergency cleanup activities, implementing best management practices and measures to reduce effects on fish may not be feasible, and populations may drop below self-sustaining levels.

In addition, high flows in the American River would cause levees and berms to erode. As the banks of the river erode, important SRA habitat would be lost. Flood fight activities to save levee structures would likely occur during a high-flow emergency response. All of these effects on fisheries would likely be significant, although no precise significance determination is possible.

3.5.3.2 Proposed Action

In 2015, NMFS issued a Biological Opinion (BO) for the ARCF GRR consultation for levee improvements and bank protection along the Sacramento River, levee improvements along Arcade, Magpie, and Dry/Robla Creeks, widening the Sacramento Bypass and Weir, and bank protection along the lower American River. The NMFS BO evaluated impacts to Sacramento River winter-run and Central Valley spring-run Chinook salmon, California Central Valley steelhead, and green sturgeon, as well as their critical habitat. The BO evaluated potential impacts based on rough estimates and preliminary designs for the proposed project. Consultation with NMFS was reinitiated for the ARCF GRR considering new site-specific details for the Proposed Action and a new BO was issued in May 2021.²³ The following impact analysis reflects the impacts of the Proposed Action.

Of the 3,344 linear feet within the construction footprint for Site 1-1, an estimated 8.41 acres of SRA and benthic habitats would be affected by construction activities. This estimate was calculated using the slope area approach. The slope area calculation

²³ National Marine Fisheries Service. 2021. Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the American River Common Features General Reevaluation Report Reinitiation. May 12, 2021.

involves measuring the levee slope below the waterline (in this case the OHWM/ 18,500 cfs line) and the natural benthic substrate out to the limit of effect.

As part of the permit conditions of the NMFS 2021 BO, Project Partners will develop and implement a compensatory mitigation accounting plan to ensure the tracking of compensatory measures associated with the implementation of the Proposed Action. The accounting plan will verify that tracking of impacts as site designs are developed to ensure incidental take is not exceeded and identify when triggers for reinitiation have been met.

Rock placement during bank protection activities would likely disturb native, resident fish by increasing noise, water turbulence, and turbidity, causing them to move away from the area of rock placement and put them at a slightly increased risk of predation.

Construction of bank protection would disturb soils and lead to increased turbidity in the nearshore aquatic habitat. The increase in suspended solids and turbidity would generally be short term. Sedimentation and turbidity increases may affect fish physiology, behavior, and habitat.

Direct effects on resident native fish species habitat would be limited because existing conditions would not be worsened by project construction, which would include creating planting benches to provide shade and instream woody material elements of SRA habitat. A temporary loss of SRA habitat would occur, but over the long term, the erosion protection sites would support higher quality SRA habitat than under existing conditions (Appendix C). Temporary reductions in SRA habitat would be compensated for by creation of riparian habitat along the LAR within the American River Parkway (see Section 3.6, *Special Status Species*). Because the LAR is expected to recover in the long term and provide improved habitat for fish species, the project would not conflict with the river's outstandingly remarkable value of fisheries designation under the Federal Wild and Scenic Rivers Act, and would not be in conflict with the American River Parkway Plan (see Section 3.4, *Vegetation and Wildlife*).

At Site 1-1, the Proposed Action would construct a launchable rock toe, running continuously along the water-side edge of Site 1-1, designed to deploy once erosion has removed the bank material beneath it. The launchable rock toe along the entire alignment of Site 1-1 would be constructed outside of the natural river channel, with no significant direct construction effects on native fish species. Although the toe would be constructed primarily of large diameter riprap, a surface bedding layer of cobbles and gravels would be added to reduce fisheries impacts. At extreme flood flows, when the rock would launch, the mobilized large rock could physically hurt fish in the channel; however, it is assumed that if no rock were to be launched the levee would overtop or breach, causing fish to be transported out of the floodway where they would most likely die. A planting bench would be constructed, along with IWM, which would improve foraging and refuge requirements for fisheries. The design of Site 1-1 includes tie-backs that are irregularly spaced to limit the erosion extents and potential subsequent damage to a planting bench during an unlikely launching event.

Implementation of the mitigation measures identified below would reduce the impact of construction of the erosion protection measures on fisheries resources to a less-than-significant level.

ARCF GRR FEIS/FEIR Mitigation Measures

Mitigation Measures FISH-1 and FISH-2 contained in the ARCF GRR FEIS/FEIR (pages 143–144) are summarized below and incorporated into the Proposed Action. Mitigation Measure FISH-4 in Section 3.6, *Special Status Species*, below, is new and designed to address additional impacts of the Proposed Action as required by the NMFS 2021 BO:

- Based on input from NMFS, the in-water work window was changed from the period of August 1 to November 30 as previously allowed in the 2015 NMFS BO, to the period of July 1 to October 31, because this was determined to be appropriate for the salmonids occurring in the American River.

Mitigation Measure FISH-1: Observe In-Water Work Windows. In-water construction would be restricted to the general estimated work window of July 1 through October 31. The exception being that in-water work necessary for dewatering activities would begin June 1. During preconstruction engineering and design, the work window may be adjusted on a site-specific basis, considering periods of low fish abundance, and in-water construction outside the principal spawning and migration season. Typical construction season generally corresponds to the dry season, but construction may occur outside the limits of the dry season, only as allowed by applicable permit conditions.

Mitigation Measure FISH-2: Analyze Hazardous Materials Spills and Implement Measures to Control Contamination. Because of the deleterious effects on native resident fish of numerous chemicals used in construction, if a hazardous materials spill does occur, a detailed analysis would be performed immediately by a registered environmental assessor or professional engineer to identify the likely cause and extent of contamination. This analysis would conform to American Society for Testing and Materials Standards and would include recommendations for reducing or eliminating the source or mechanisms of contamination. Based on this analysis, USACE and their contractors, in coordination with CVFPB, would select and implement measures to control contamination, with a performance standard that surface water quality and groundwater quality must be returned to baseline conditions.

Additionally, the previously adopted mitigation measures that address riparian habitat removal in the ARCF GRR FEIR/FEIS Vegetation and Wildlife Section (Section 3.6) and summarized in Section 3.4 of this document (Mitigation Measures VEG-1 and VEG-2) would reduce impacts on fisheries resources. BMPs associated with construction related impacts such as dust, runoff, turbidity, and spills that are summarized in Section 3.3, *Hydrology and Water Quality* of this Supplemental EIR (Mitigation Measure WQ-1) and are consistent with the Water Quality and Groundwater Resources Section of the ARCF GRR FEIR/FEIS Section (Section 3.5) that would also reduce impacts on fisheries

resources. Lastly, mitigation measures that address impacts on listed fish species from the ARCF GRR FEIR/FEIS Special Status Species Section (Section 3.8; Mitigation Measures FISH-3 and SRA-1) and new Mitigation Measure FISH 4, which includes new measures outlined in the 2021 NMFS BO, are summarized in Section 3.6 of this document and would also reduce impacts on fisheries resources.²⁴

Summary

Implementation of the previously adopted mitigation measures in the ARCF GRR FEIS/FEIR, as modified with the Proposed Action site-specific measures as described in the mitigation measures above would reduce the impact of the Proposed Action on fisheries resources to a less-than-significant level.

3.6 Special Status Species

3.6.1 Environmental Setting

3.6.1.1 Regulatory Setting

Section 3.6 (pages 144 and 145) of the ARCF GRR FEIS/FEIR presents Federal and State laws governing special-status species. Chapter 5 of the ARCF GRR FEIS/FEIR summarized the environmental laws and regulations and described the status of overall ARCF GRR project compliance with those laws and regulations. While most of these laws and regulations are unchanged, one of the applicable laws and regulations related to special-status species have changed, as summarized below. The American River Parkway Plan which addresses management of special-status species habitats is described in Section 3.4.1.1, above.

Changes to the Federal Endangered Species Act are discussed below.

The Federal Government has adopted several rules regarding implementation of the Federal Endangered Species Act²⁵; however, these changes do not substantially change the application of NEPA to the Proposed Action.

Other relevant laws and regulations that have remained unchanged are:

- National Environmental Policy Act of 1969, as amended (42 USC 4321 et seq.)
- Wild and Scenic Rivers Act (16 USC 1217 et seq.)
- California Endangered Species Act
- California Environmental Quality Act, as amended

²⁴ National Marine Fisheries Service. 2021. Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the American River Common Features General Reevaluation Report Reinitiation. May 12, 2021.

²⁵ U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration. 2019. Endangered and Threatened Wildlife and Plants; Regulations for Interagency Cooperation. 84 Federal Register 44976, August 27, 2019.

3.6.1.2 Existing Conditions

Section 3.8 (pages 144–195) of the ARCF GRR FEIS/FEIR describes the regional and local setting in the vicinity of the Project Area for the Proposed Action. The following provides additional information specific to the Project Area. For the purposes of this section, the Project Area includes Subreach 1, Site 1-1.

Updated lists of regionally-occurring special-status species were compiled from a nine-quadrangle search of the California Natural Diversity Database (CNDDDB);²⁶ a nine-quadrangle search of the California Native Plant Society (CNPS) database;²⁷ a search of the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation endangered species database;²⁸ and literature regarding the biological resources of the region. The search encompassed the following 7.5-minute U.S. Geological Survey topographic quadrangles:

Taylor Monument	Rio Linda	Citrus Heights
Sacramento West	Sacramento East	Carmichael
Clarksburg	Florin	Elk Grove

Species on the list were assessed on the basis of habitat requirements and distribution relative to the location of and vegetation communities occurring in and around the Project Area. **Tables 3-5** and **3-6** provide comprehensive lists of the special-status species considered in this analysis.

The “Potential to Occur” categories are defined as follows:

- **None:** The Project Area does not provide habitat and occurs outside of the known extant geographic and/or elevation range for the species.
- **Unlikely:** The Project Area provides only limited and low-quality habitat for a particular species and the known range for a particular species may be outside of the Project Area.
- **Likely:** The Project Area and/or immediate vicinity provides suitable habitat for a particular species.
- **Present:** The species (or evidence of its presence) was observed during biological resources surveys conducted within the Project Area (see below).

²⁶ California Department of Fish and Wildlife. 2021. California Natural Diversity Database (CNDDDB) search for the U.S. Geological Survey 7.5-minute Sacramento East topographic quadrangle and surrounding eight quadrangles. RareFind 5.0. Version 5.2.14. Biogeographic Data Branch. Information accessed November 11, 2021.

²⁷ California Native Plant Society. 2021. Special-status Plants documented on the U.S. Geological Survey 7.5-minute Sacramento East topographic quadrangle and surrounding eight quadrangles. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Rare Plant Program. Available: www.rareplants.cnps.org. Accessed December 12, 2021.

²⁸ U.S. Fish and Wildlife Service. 2021. List of Threatened and Endangered Species that may occur in you Proposed Project Location or may be Affected by your Proposed Project. Consultation Code: 08ESMF00-2022-SLI-0370; Event Code: 08ESMF00-2022-E-01127. Species list generated November 15, 2021.

TABLE 3-5
REGIONALLY OCCURRING SPECIAL-STATUS ANIMAL SPECIES CONSIDERED IN THE PROJECT AREA

List Type	Animal Type	Common Name Scientific Name	Fed Status	State Status	Habitat	Potential to Occur
Listed Species	Invertebrates	vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	NL	Vernal pools, swales, and ephemeral freshwater habitat. Most commonly found in small (< 0.05 acre), clear to tea-colored vernal pools with mud, grass, or basalt bottoms in unplowed grasslands.	None. Vernal pool landscapes and hydrology not present.
		monarch butterfly <i>Danaus plexippus</i>	FC	NL	Occurs in woodland areas in wind protected groves with a nearby nectar and water source. Relies on milkweed, on which they lay their eggs, and is the sole host plant for larva.	None. Occurs along the coastal range from Mendocino down to Baja. Closest known occurrence is 40 miles to the west near Fairfield.
		valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT	NL	Mature elderberry shrubs with stems one inches in diameter or greater at ground level.	Present. Elderberry plants are present in the Project Area. Exit holes observed.
		vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE	NL	Typically occurs in large, deep vernal pools, but also uses smaller pools within larger vernal pool complexes.	None. Vernal pool landscapes and hydrology not present.
	Amphibians	California tiger salamander <i>Ambystoma californiense</i>	FT	CT	Grassland, oak savannah, and edges of mixed woodland and lower elevation coniferous forest. Spends much time underground in mammal burrows. Breeds in temporary ponds such as vernal pools but may also breed in slower parts of streams with few predators.	Unlikely. Grassland habitat is present, but vernal pool landscapes are not present.
		California red-legged frog <i>Rana draytonii</i>	FT	CSC	Inhabits ponds, quiet pools of streams, marshes, and riparian areas with dense, shrubby, or emergent vegetation. Likely extirpated from the Central Valley since the 1960s.	None. The Project Area occurs outside of the known extant geographic range for this species.
	Reptiles	giant garter snake <i>Thamnophis gigas</i>	FT	CT	Permanent or semi-permanent water and dense emergent vegetation; freshwater marshes, streams, and canals.	Unlikely. The American River lacks suitable habitat.
	Birds	tricolored blackbird <i>Agelaius tricolor</i>	NL	CT	Breeds near freshwater in dense emergent vegetation or dense brush.	Unlikely. Marginal nesting habitat in the willow riparian area. Closest known occurrence is greater than 5 miles away.

TABLE 3-5 (CONTINUED)
REGIONALLY OCCURRING SPECIAL-STATUS ANIMAL SPECIES CONSIDERED IN THE PROJECT AREA

List Type	Animal Type	Common Name Scientific Name	Fed Status	State Status	Habitat	Potential to Occur
Listed Species (cont.)	Birds (cont.)	golden eagle <i>Aquila chrysaetos</i>	NL	FP	Uncommon permanent resident and migrant throughout California, except in the central portion of the Central Valley. Inhabits rolling foothills, mountainous areas, sage-juniper flats, and deserts.	None. The Project Area does not provide habitat and occurs outside of the known extant geographic range.
		Swainson's hawk <i>Buteo swainsoni</i>	NL	CT	Often nests near riparian systems, but also uses lone trees in agricultural fields or pastures and roadside trees when available and adjacent to suitable foraging habitat.	Likely. Riparian provides suitable nesting habitat. Known to occur within 0.5 miles of the Project Area.
		western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FT	CE	In California, western cuckoos are largely restricted to river valleys in the north-central (e.g., Sacramento River) and southwestern (e.g., Kern River) regions. Western cuckoos prefer to nest in willow (<i>Salix</i> spp.), cottonwood (<i>Populus</i> spp.), and mesquite (<i>Prosopis</i> spp.), but they will also use orchards.	Likely. Vocalization documented in 2020 approximately four miles upstream on a densely forested island in the American River. Submarginal nesting habitat occurs in the Project Area, but it may be used by transient birds.
		bank swallow (nesting) <i>Riparia riparia</i>	NL	CT	Colonial nester along coastal areas and rivers in Northern and Central California. Nesting restricted to vertical banks or bluffs with friable soils suitable for burrowing. Vegetation is varied; nesting sites are selected mostly based on the suitability of the nesting bank.	Likely. Previously observed approximately 0.5 miles downstream of the Project Area. No bank nesting habitat observed within the Project Area, but may use the Project Area for foraging.
		least Bell's vireo <i>Vireo bellii pusillus</i>	FE	CE	Summer resident in low riparian habitats in Southern California. Previously known to occur throughout the Central Valley. Typically nest in willow or scrub habitat adjacent to waterways.	Unlikely. Marginal nesting habitat in the willow riparian area. Only known occurrence, since the early 1900s, in northern California is greater than 10 miles to the west.
	Fishes	Delta smelt <i>Hypomesus transpacificus</i>	FT	CE	Euryhaline (tolerant of a wide salinity range) species that is confined to the San Francisco Estuary, principally in the Delta and Suisun Bay	None. The Project Area occurs outside of the known extant geographic range for this species.
		Sacramento River winter-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FE	CE	Cold, freshwater streams with suitable gravel for spawning; rears in seasonally inundated floodplains, rivers, and tributaries, and in the Delta.	Likely. Juveniles hatched in the Sacramento River may enter the Lower American River for non-natal refugia and rearing after emigrating from their natal Sacramento River.

TABLE 3-5 (CONTINUED)
REGIONALLY OCCURRING SPECIAL-STATUS ANIMAL SPECIES CONSIDERED IN THE PROJECT AREA

List Type	Animal Type	Common Name Scientific Name	Fed Status	State Status	Habitat	Potential to Occur
Listed Species (cont.)	Fishes (cont.)	Central Valley spring-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FT	CT	Cold, freshwater streams with suitable gravel for spawning; rears in seasonally inundated floodplains, rivers, and tributaries, and in the Delta.	Likely. Juveniles hatched in tributaries of the Sacramento River may use the Lower American River for non-natal rearing and refugia after emigrating from their natal rivers and streams.
		California Central Valley steelhead <i>Oncorhynchus mykiss</i>	FT	NL	Cold, freshwater streams with suitable gravel for spawning; rears in seasonally inundated floodplains, rivers, and tributaries, and in the Delta.	Present. Adults spawn in Lower American River gravel and juveniles rear in and emigrate through the Lower American River.
		North American green sturgeon <i>Acipenser medirostris</i>	FT	NL	Cold, freshwater streams with suitable gravel for spawning; rears in seasonally inundated floodplains, rivers, and tributaries, and in the Delta.	Unlikely. No evidence of occurrence in the Lower American River exists, but Federal critical habitat is designated in the LAR from its confluence with the Sacramento River upstream to the State Route 160 bridge.
		longfin smelt <i>Spirinchus thaleichthys</i>	FC	CT	Requires cold, pure freshwater to pure seawater, spawns in freshwater.	None. The Project Area occurs outside of the known extant geographic range for this species.
Non-listed Special-Status Species	Invertebrates	Crotch bumble bee <i>Bombus crotchii</i>	NL	NL	Open grasslands and scrub habitat in California with available underground nesting habitat in fossorial animal burrows.	Likely. Annual grassland and scrub habitats are available and several commonly visited flower species may occur in the survey area. The closest sighting was 12 miles to the east, just east of Mather Air Force Base, in 2020.
		western bumble bee <i>Bombus occidentalis occidentalis</i>	NL	NL	Nests, forages, and overwinters in meadows and grasslands with abundant flowers and available underground nesting habitat in fossorial animal burrows. Range is throughout California, but more common in the Sierra Nevada and Coast Ranges.	Unlikely. Grassland habitat is available, but the western bumble bee is uncommon in the Central Valley.
	Amphibians	western spadefoot <i>Spea hammondi</i>	NL	CSC	Grasslands within lowland washes, floodplains, alluvial fans, and playas. Breeds almost exclusively in vernal pools or similar seasonal wetlands.	Unlikely. Grassland habitat is present, but vernal pool landscapes are not present.

TABLE 3-5 (CONTINUED)
REGIONALLY OCCURRING SPECIAL-STATUS ANIMAL SPECIES CONSIDERED IN THE PROJECT AREA

List Type	Animal Type	Common Name Scientific Name	Fed Status	State Status	Habitat	Potential to Occur
Non-listed Special-Status Species (cont.)	Reptiles	western pond turtle <i>Actinemys marmorata</i>	NL	CSC	Variety of aquatic habitats, both permanent and intermittent, with suitable aerial and aquatic basking sites. Needs upland habitats for nesting, overwintering, and aestivating.	Likely. Observed upstream of the Project Area during 2018 surveys.
	Birds/ MBTA-Protected Birds and California Fish and Game Code Subsections 3503 and 3503.5	burrowing owl <i>Athene cunicularia</i>	NL	CSC	Nests and roosts in burrows, usually of ground squirrels, in grasslands and ruderal habitats.	Likely. Potential nesting habitat along the levees where several ground squirrel burrows were observed. Most recent CNDDDB occurrence is from 2016 approximately 9 miles to the south. Several older occurrences within 5 miles of the Project Area, but most areas have since been developed.
		purple martin <i>Progne subis</i>	NL	CSC	Nests mostly in old woodpecker cavities; also nests in human-made structures. Nest is often located in tall, isolated trees/snags.	Likely. Potential nesting habitat in the Project Area. Known to occur on bridge and overpass structures within 1 mile of the Project Area.
		Cooper's hawk <i>Accipiter cooperii</i>	NL	WL	A common migrant and winter resident. Nests and forages in a wide variety of forest and woodland habitats.	Likely. Known to occur within 1.5 miles of the Project Area.
		great egret (rookery site) <i>Ardea alba</i>	NL	NL	Colonial nester in large trees. Rookery sites located near marshes, tide flats, irrigated pastures, and margins of rivers and lakes.	Likely. Potential nesting habitat in the survey area. There is a documented egret rookery approximately 0.5 miles downstream and another approximately 6 miles upstream of the survey areas on the American River.
		great blue heron (rookery site) <i>Ardea herodias</i>	NL	NL	Variety of habitats near sources of water. Nests commonly high in the tops of secluded large snags or live trees.	Likely. Potential nesting habitat in the survey area. There is a documented heron rookery approximately 0.5 miles downstream and another approximately 6 miles upstream of the survey areas on the American River.
		Ferruginous hawk <i>Buteo regalis</i>	NL	WL	Inhabits natural grasslands mostly in the northwest including Canada, eastern Oregon, Nevada, northern Arizona, New Mexico, and Texas.	Unlikely. Grassland provides habitat, but the Project Area occurs outside of the known extant geographic range for nesting.

TABLE 3-5 (CONTINUED)
REGIONALLY OCCURRING SPECIAL-STATUS ANIMAL SPECIES CONSIDERED IN THE PROJECT AREA

List Type	Animal Type	Common Name Scientific Name	Fed Status	State Status	Habitat	Potential to Occur
Non-listed Special-Status Species (cont.)	Birds/ MBTA-Protected Birds and California Fish and Game Code Subsections 3503 and 3503.5 (cont.)	white-tailed kite (nesting) <i>Elanus leucurus</i>	NL	FP	Savanna, open woodland, marshes, partially cleared lands and cultivated fields, mostly in lowland habitats. Nests in trees, often near marshes.	Likely. CNDDDB records within 0.5 miles of the survey areas documented as recently as 2009.
		merlin <i>Falco columbarius</i>	NL	WL	Breeds in patchy shrub/grassland from northward tree limit in Alaska, Canada, and Eurasia southward to southern Alaska, Oregon, Idaho, South Dakota, northern Great Lakes region, New York, Maine, Nova Scotia, British Isles, and central Russia.	Unlikely. Grassland provides habitat, but the Project Area occurs outside of the known extant geographic range for nesting.
		song sparrow – "Modesto" population <i>Melospiza melodia</i> (year round)	NL	CSC	Nests and forages primarily in emergent marsh, riparian scrub, and early successional riparian forest habitats in the north-central portion of the Central Valley; infrequently in mature riparian forest and sparsely vegetated ditches and levees. Forages primarily on exposed ground or in leaf litter.	Unlikely. Marginal habitat in the Project Area and only one historical record from the early 1900s within 10 miles. Most recent occurrence is from 2011 approximately 10 miles to the west.
		double-crested cormorant <i>Phalacrocorax auritus</i>	NL	WL	Colonial nester on costal cliffs, offshore islands, and along lake margins in tall trees.	Unlikely. Marginal habitat in the Project Area. Central Valley observations from 2005 include Folsom Lake and Black Crown Lake.
	Mammals	pallid bat <i>Antrozous pallidus</i>	NL	CSC	Arid deserts and grasslands of low elevations in California; often near rocky outcrops and water. Usually roosts in rock crevices or buildings, less often in caves, tree hollows, mines, etc. Prefers narrow crevices in caves as hibernation sites.	Likely. This species may roost in buildings and bridges in the Project Area; however, roosting is not reported by the CNDDDB within 5 miles of the Project Area or within the nine-quadrangle area that includes the Project Area.
		western red bat <i>Lasiurus blossevillii</i>	NL	CSC	Associated with riparian habitat. Roosts primarily in the foliage of trees or shrubs, but may also occasionally use caves. Day roosts commonly in edge habitats.	Likely. This species may roost in mixed oak woodland habitat in the Project Area; however, roosting is not reported by the CNDDDB within 5 miles of the Project Area or within the nine-quadrangle area that includes the Project Area.

TABLE 3-5 (CONTINUED)
REGIONALLY OCCURRING SPECIAL-STATUS ANIMAL SPECIES CONSIDERED IN THE PROJECT AREA

List Type	Animal Type	Common Name Scientific Name	Fed Status	State Status	Habitat	Potential to Occur
Non-listed Special-Status Species (cont.)	Mammals (cont.)	American badger <i>Taxidea taxus</i>	NL	CSC	Requires sufficient food, friable soils to excavate dens and pursue prey, and relatively open, uncultivated ground.	Likely. The potential exists for this species to use the Parkway. Although no signs of presence were observed, there were small fossorial mammal burrows and ground squirrel activity. There are two known occurrences within 5 miles; however, the most recent sighting was from 1991.
	Fishes	Sacramento perch <i>Archoplites interruptus</i>	NL	CSC	Currently found mostly in warm, turbid, moderately alkaline reservoirs or farm ponds, generally where other centrarchids are absent.	None. The Project Area does not provide habitat.
		Sacramento Splittail <i>Pogonichthys macrolepidotus</i>	NL	CSC	Spawning takes place among submerged and flooded vegetation in sloughs and the lower reaches of rivers.	None. The Project Area occurs outside of the known extant geographic range for this species.
		Central Valley fall-/late fall-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	NL	CSC	Cold, freshwater streams with suitable gravel for spawning; rears in seasonally inundated floodplains, rivers, and tributaries, and in the Delta.	Present. Adults spawn in Lower American River gravel and juveniles rear in and emigrate through the Lower American River.
		hardhead <i>Mylopharodon conocephalus</i>	NL	CSC	Low to mid-elevation streams with clear, deep pools and runs with slow velocities.	Present. Known to occur in the Lower American River.
		western river lamprey <i>Lampetra ayresi</i>	NL	CSC	Cold, freshwater streams with suitable gravel for spawning and sandy to silty backwaters or stream edges for larval rearing.	Present. Adults spawn in Lower American River gravel and larvae rear in the Lower American River.

NOTES:

CDFW = California Department of Fish and Wildlife; CNDDB = California Natural Diversity Database; Delta = Sacramento–San Joaquin Delta; Parkway = American River Parkway

FEDERAL

FC = Federal candidate for listing; FE = Federally listed as endangered; FT = Federally listed as threatened; MBTA = Migratory Bird Treaty Act; NL = no listing

STATE

CSC = California species of special concern; CE = State listed as endangered; CP = State proposed for listing; CT = State listed as threatened; FP = California fully protected species; WL = watch list; NL = no listing

SOURCES:

California Department of Fish and Wildlife. 2021. California Natural Diversity Database (CNDDB) search for the U.S. Geological Survey 7.5-minute Sacramento East topographic quadrangle and surrounding eight quadrangles. RareFind 5.0. Version 5.2.14. Biogeographic Data Branch. Information accessed January 12, 2021.

TABLE 3-5 (CONTINUED)
REGIONALLY OCCURRING SPECIAL-STATUS ANIMAL SPECIES CONSIDERED IN THE PROJECT AREA

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- Melcer, Ron Jr., Senior Environmental Scientist–Supervisor, Delta Stewardship Council, email communication with Gerrit Platenkamp, Project Manager, Environmental Science Associates, July 28, 2019.
- Shuford, W. D., and T. Gardali (eds.). 2008. *California Bird Species of Special Concern. Studies of Western Birds 1*. Camarillo and Sacramento, CA: Western Field Ornithologists and California Department of Fish and Game.
- U.S. Fish and Wildlife Service. 2015. Memorandum to U.S. Army Corps of Engineers, Sacramento District: *Formal Consultation on the American River Common Features (AFRC) Project, Sacramento County, California*, September 2015.
- . 2021. List of Threatened and Endangered Species that may occur in you Proposed Project Location or may be Affected by your Proposed Project. Consultation Code: 08ESMF00-2021-SLI-0720; Event Code: 08ESMF00-2021-E-02098. Species list generated January 14, 2021.
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- Zeiner, D. C., W. F. Laudenslayer Jr., and K. E. Mayer (comp. eds.). 1988. *California's Wildlife. Volume I: Amphibians and Reptiles*. California Statewide Wildlife Habitat Relationships System. Sacramento: California Department of Fish and Game.
- . 1990a. *California's Wildlife. Volume II: Birds*. Sacramento: California Department of Fish and Game.
- . 1990b. *California's Wildlife. Volume III: Mammals*. Sacramento: California Department of Fish and Game.
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TABLE 3-6
REGIONALLY OCCURRING SPECIAL-STATUS PLANTS CONSIDERED IN THE PROJECT AREA

Listing Status	Common Name Scientific Name	Fed Status	State Status	CRPR or Other Status	Habitat	Potential to Occur
Listed Species	Boggs Lake hedge- hyssop <i>Gratiola heterosepala</i>	NL	CE	1B.2	Clay soils; margins of marshes and swamps; vernal pools. 10-2,375 meters. Evident and Identifiable from April–August.	Unlikely. Suitable habitat not present. Botanical surveys will be conducted in spring and summer 2022 to confirm absence.
	Mason's lilaeopsis <i>Lilaeopsis masonii</i>	NL	CR	1B.1	Freshwater or brackish marshes and swamps; riparian scrub. 0–10 meters. Evident and Identifiable from June–September.	Unlikely. No occurrences this far upriver. Botanical surveys will be conducted in spring and summer 2022 to confirm absence.
	slender Orcutt grass <i>Orcuttia tenuis</i>	FT	CE	1B.1	Vernal pools, often gravelly. 35 – 1,760 meters. Evident and Identifiable from May – September (October).	None. Suitable habitat not present.
	Sacramento Orcutt grass <i>Orcuttia viscida</i>	FE	CE	1B.1	Vernal pools. 30 – 100 meters. Evident and Identifiable from April – July (September).	None. Suitable habitat not present.
Non-listed Species	Ferris' milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	NL	NL	1B.1	Vernally mesic meadows and seeps; sub-alkaline grasslands. 1–60 meters. Evident and Identifiable from April–May.	None. Suitable alkaline substrate not present in the Project Area.
	valley brodiaea <i>Brodiaea rosea</i> ssp. <i>vallicola</i>	NL	NL	4.2	Silty, sandy and gravelly loam soils; valley and foothill grasslands along swales; vernal pools. 10-335 meters. Grows in grasslands on old alluvial terraces that have developed a perched water table, in vernal pool landscapes. Evident and Identifiable from April–May (June).	None. Vernal pool landscapes and hydrology not present.
	bristly sedge <i>Carex comosa</i>	NL	--	2B.1	Coastal prairie; margins of marshes and swamps; valley and foothill grassland. 0–625 meters. Evident and Identifiable from May–September.	Unlikely. Submarginal habitat occurs in the Project Area. Botanical surveys will be conducted in spring and summer 2022 to confirm absence.
	pappose tarplant <i>Centromadia parryi</i> ssp. <i>parryi</i>	NL	NL	1B.2	Often on alkaline soils; chaparral; coastal prairie; meadows and seeps; coastal salt marshes and swaps; vernal mesic valley and foothill grassland. 0–420 meters. Evident and Identifiable from May–November.	None. Suitable alkaline substrate not present in the Project Area.
	Parry's rough tarplant <i>Centromadia parryi</i> ssp. <i>rudis</i>	NL	NL	4.2	Valley and foothill grassland on alkaline, vernal mesic soils; seeps; sometimes roadsides; vernal pools. 0–100 meters. Evident and Identifiable from May–October.	None. Suitable alkaline substrate not present in the Project Area.

TABLE 3-6 (CONTINUED)
REGIONALLY OCCURRING SPECIAL-STATUS PLANTS CONSIDERED IN THE PROJECT AREA

Listing Status	Common Name Scientific Name	Fed Status	State Status	CRPR or Other Status	Habitat	Potential to Occur
Non-listed Species (cont.)	Peruvian dodder <i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	NL	NL	2B.2	Freshwater marshes and swamps. 15–280 meters. Evident and Identifiable from July–October.	Unlikely. Suitable habitat present, but last seen in 1948 in Merced County. Observations in Sacramento County have not yet been verified. Botanical surveys will be conducted in spring and summer 2022 to confirm absence.
	dwarf downingia <i>Downingia pusilla</i>	NL	NL	2B.2	Mesic valley and foothill grassland; vernal pools; roadside ditches. 1–445 meters. Evident and Identifiable from March–May.	None. Suitable habitat not present.
	stinkbells <i>Fritillaria agrestis</i>	NL	NL	4.2	Clay or sometimes serpentine soils; chaparral; cismontane woodland; pinyon and juniper woodland; valley foothill grassland. 10–1,555 meters. Evident and Identifiable from March–June.	None. Suitable habitat on suitable soil is not present.
	hogwallow starfish <i>Hesperivax caulescens</i>	NL	NL	4.2	Valley and foothill grassland on mesic, clay soils; vernal pools. 0–505 meters. Evident and Identifiable from March–June.	None. Suitable habitat on suitable soil is not present.
	woolly rose-mallow <i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>	NL	NL	1B.2	Often in riprap on sides of levees; freshwater marshes and swamps. 0–120 meters. Evident and Identifiable from June–September.	Unlikely. Submarginal habitat occurs in the Project Area. Botanical surveys will be conducted in spring and summer 2022 to confirm absence.
	Northern California black walnut <i>Juglans hindsii</i>	NL	NL	1B.1	Deciduous tree found in riparian forests and riparian woodlands up to 460 meters. Widely naturalized as a result of agricultural use as a rootstock for English walnuts. Considered native and special status in stands at three sites in California only. Evident and Identifiable from April–May.	Unlikely. None of the special status native stands are near the Project Area.
	Ahart's dwarf rush <i>Juncus leiocarpus</i> var. <i>ahartii</i>	NL	NL	1B.2	Vernal pools; mesic valley and foothill grassland. 30–229 meters. Evident and Identifiable from March–May.	None. Project Area outside elevation range.
	legenere <i>Legenere limosa</i>	NL	NL	1B.1	Vernal pools. 1–880 meters. Evident and Identifiable from April–June.	None. Suitable habitat not present.
	Heckard's pepper-grass <i>Lepidium latipes</i> var. <i>heckardii</i>	NL	NL	1B.2	Alkaline flats within valley and foothill grassland. 2–200 meters. Evident and Identifiable from March–May.	None. Suitable soils not present.

TABLE 3-6 (CONTINUED)
REGIONALLY OCCURRING SPECIAL-STATUS PLANTS CONSIDERED IN THE PROJECT AREA

Listing Status	Common Name Scientific Name	Fed Status	State Status	CRPR or Other Status	Habitat	Potential to Occur
Non-listed Species (cont.)	Sanford's arrowhead <i>Sagittaria sanfordii</i>	NL	NL	1B.2	Assorted shallow freshwater marshes and swamps. 0–650 meters. Evident and Identifiable from May–October (November).	Unlikely. Marginal habitat present. Botanical surveys will be conducted in spring and summer 2022 to confirm absence.
	Suisun Marsh aster <i>Symphyotrichum lentum</i>	NL	NL	1B.2	Brackish and freshwater marshes and swamps. 0–3 meters. Evident and Identifiable from (April) May–November.	Unlikely. Marginal habitat present. Botanical surveys will be conducted in spring and summer 2022 to confirm absence.
	saline clover <i>Trifolium hydrophilum</i>	NL	NL	1B.2	Marshes and swamps; mesic, alkaline valley and foothill grassland; vernal pools. 0–300 meters. Evident and Identifiable from April–June.	None. Suitable soils not present.

NOTES:

CRPR = California Rare Plant Rank

Status Codes:

FEDERAL

FE = listed as endangered under the Federal Endangered Species Act; FT = listed as threatened under the Federal Endangered Species Act; NL = no listing

STATE

SE = listed as endangered under the California Endangered Species Act; ST = listed as threatened under the California Endangered Species Act; NL = no listing

CALIFORNIA RARE PLANT RANK (CRPR)

Rank 1A = Plants presumed extirpated in California and either rare or extinct elsewhere; Rank 1B = Plants rare, threatened, or endangered in California and elsewhere; Rank 2A = Plants presumed extirpated in California, but more common elsewhere; Rank 2B = Plants rare, threatened, or endangered in California, but more common elsewhere.

An extension reflecting the level of threat to each species is appended to each rarity category as follows:

- .1—Seriously endangered in California
- .2—Fairly endangered in California
- .3—Not very endangered in California

SOURCES:

California Department of Fish and Wildlife. 2021. California Natural Diversity Database (CNDDB). RareFind 5.0. Version 5.2.14. Biogeographic Data Branch.

California Native Plant Society. 2021. Special-status Plants documented on the U.S. Geological Survey 7.5-minute Sacramento East topographic quadrangle and surrounding eight quadrangles.

Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Rare Plant Program. Available: www.rareplants.cnps.org. Accessed January 12, 2021.Preston, R. E. 2013. A Revision of *Brodiaea coronaria* (Asparagaceae: Brodiaeoidae): Morphometric Analysis and Recognition of New and Emended Taxa. *Systematic Botany* 38(4):1012–1028, DOI: 10.1600/036364413X674913.

U.S. Fish and Wildlife Service. 2021. List of Threatened and Endangered Species that may occur in you Proposed Project Location or may be Affected by your Proposed Project. Consultation Code: 08ESMF00-2021-SLI-0720; Event Code: 08ESMF00-2021-E-02098. Species list generated January 14, 2021.

Species unlikely to occur within the Project Area are not discussed further. The analysis below considers those special-status species that have been categorized as likely to occur or are present in the Project Area.

Federally Listed and State-Listed Wildlife Species

Valley Elderberry Longhorn Beetle

Section 3.8.1 (page 149) of the ARCF GRR FEIS/FEIR describes the ecology of valley elderberry longhorn beetle (VELB) in the Project Area. Updated occurrence information is presented below.

There are documented occurrences of VELB in Site 1-1 from 1984, when adult beetles were captured. Additional beetles were observed in 2013 and fresh exit holes were documented in 2006²⁹ and in 2018³⁰ upstream of the survey area on the lower American River in Subreach 2. In 2019 and 2020, surveys were completed to update and document the current elderberry and VELB populations within Site 1-1.³¹

Surveys were conducted in accordance with the USFWS 2017 *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle*.³² This guidance document superseded the 1999 *Conservation Guidelines for Valley Elderberry Longhorn Beetle*.³³ Global Positioning System (GPS) point locations and data with sub-meter accuracy were taken for elderberry shrubs with stems measuring 1 inch or greater in diameter at ground level. Visual estimates of shrub height and maximum diameter (canopy) were recorded. All shrubs within the Project limits were located in riparian habitat. To ensure consistency with the previous methodology as used in the ARCF 2015 Biological Assessment, a geographic information system (GIS) was used to group elderberry stems into clusters if the stems were within 16 feet of each other (as described in the survey protocol developed by Talley and others for the original 2011 surveys). Each elderberry cluster is considered equivalent to a “shrub.”

In addition to mitigating direct impacts on elderberry shrubs, the 2017 Framework focuses on maintaining the connectivity of riparian habitats. Not only do riparian habitats provide habitat used by VELB for mating, foraging, and dispersal, but studies have

²⁹ California Department of Fish and Wildlife. 2019. California Natural Diversity Database (CNDDDB) search for the U.S. Geological Survey 7.5-minute Sacramento East topographic quadrangle, and surrounding eight quadrangles. Information accessed January 12, 2021

³⁰ Environmental Science Associates. 2018. Lower American River Subreach 2 Draft Final Resource Assessment. November 2018.

³¹ Environmental Science Associates. 2020. American River Common Features 2016 Project American River Erosion Protection: American River Contract 3 Detailed Resource Assessment Report Prepared for Sacramento Area Flood Control Agency. Sacramento, CA. October 2020.

³² U.S. Fish and Wildlife Service. 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). Sacramento, California. 28 pp.

³³ U.S. Fish and Wildlife Service. 1999. *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. Sacramento, California. 15 pp.

shown that healthy riparian habitats increase elderberry recruitment and health. The USFWS 2017 Framework states (pages 7–8):

Because the elderberry is the sole host plant of the VELB, any activities that adversely impact the elderberry shrub may also adversely impact the VELB. Adverse impacts to elderberry shrubs can occur either at a habitat scale or at an individual shrub scale. Activities that reduce the suitability of an area for elderberry plants or elderberry recruitment and increase fragmentation may have adverse impacts to mating, foraging, and dispersal of VELB. The patchy nature of VELB habitat and habitat use makes the species particularly susceptible to adverse impacts from habitat fragmentation.

Occupied clusters of elderberry stems in the Parkway are approximately 25 to 50 meters (82 to 164 feet) apart.³⁴ Therefore, the area within 25 meters of the shrubs is considered a zone of riparian habitat where elderberry plants could be recruited to provide habitat that could be easily reached by VELB, if they were to occupy existing elderberry plants. Thus, surveys also determined the presence of suitable habitat for identified elderberry shrubs.

To determine elderberry shrub habitat, collected data was evaluated and assessed based on Talley et al. 2006; Talley et al. 2007;³⁵ Holyoak et al. 2008;³⁶ and Vaghti et al. 2009.³⁷ Elevation of floodplain, associated overstory species, and vegetation canopy structure were considered in determining the affected elderberry shrub habitat³⁸. Analysis of elderberry shrub elevation data showed that elderberry shrubs rarely occur within frequently inundated areas. In a study upstream in Subreach 2, only 2 out of 599 shrubs (0.3 percent) for which elevation data was available in the Project Area occurred below the elevation of the 2-year flood (i.e., 18,500 cfs- or the OHWM), which is at about 26 feet in elevation on the National Geodetic Vertical Datum (NGVD). In Site 1-1, there is one area on the downstream end where a handful of elderberry shrubs occur below the 2-year flood elevation. Elderberry shrubs are more likely found at 12 feet above the summer low flow (at 17.4 feet or 2,660 cfs),³⁹ which, on average, is at about 30 feet NGVD in the Project Area. Analysis of the plant communities that elderberry shrubs are associated with found that elderberry shrubs are most commonly found in elderberry

³⁴ Talley, T. S., D. Wright, and M. Holyoak. 2006. *Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus) 5-Year Review: Summary and Evaluation*. Prepared for U. S. Fish and Wildlife Service, Sacramento Office, Sacramento, California.

³⁵ Talley, T. S., E. Fleishman, M. Holyoak, D. D. Murphy, and A. Ballard. 2007. Rethinking a rare-species conservation strategy in an urban landscape: The case of the valley elderberry longhorn beetle. *Biological Conservation* 135:21–32.

³⁶ Holyoak, M., and M. Koch-Munz. 2008. The effects of site conditions and mitigation practices on success of establishing the Valley elderberry longhorn beetle and its host plant, blue elderberry. *Environmental Management* 42:444–457.

³⁷ Vaghti, M. G., M. Holyoak, A. Williams, T. S. Talley, and A. K. Fremier. 2009. Understanding the Ecology of Blue Elderberry to Inform Landscape Restoration in Semiarid River Corridors. *Environmental Management* 43:28–37.

³⁸ Elderberry shrubs above and below the OHWM will be transplanted as feasible and mitigated for at a 3:1 ratio. Riparian habitat within 82 feet of an elderberry shrub that occurs above the OHWM is considered associated elderberry habitat and will also be mitigated at a 3:1. Riparian habitat below the OHWM is not suitable elderberry shrub habitat and is not considered associated habitat; thus, it will be compensated at a 2:1 ratio.

³⁹ Vaghti, M. G., M. Holyoak, A. Williams, T. S. Talley, and A. K. Fremier. 2009. Understanding the Ecology of Blue Elderberry to Inform Landscape Restoration in Semiarid River Corridors. *Environmental Management* 43:237

savanna, and black walnut– or black locust–dominated communities, but can be found in virtually all woodland and scrub communities above the OHWM. Woodland or scrub communities occurring above the OHWM and within 82 feet of an elderberry shrub canopy were considered suitable habitat for VELB. Non-native grasslands, open water, paved surfaces, and barren land were not considered habitat for VELB. **Figure 3-2** shows elderberry shrubs and habitat for the VELB within the Project Area.

Western Yellow-Billed Cuckoo

Western yellow-billed cuckoo is Federally-listed as threatened and State-listed as endangered. Section 3.8.1 (page 151) of the ARCF GRR FEIS/FEIR describes the ecology of this species in the Project Area. In May 2017 the USFWS received a petition to delist the Western distinct population segment (DPS) of the yellow-billed cuckoo. Based on the USFWS review of the petition it was determined in June of 2018 that substantial scientific or commercially available data indicating the delisting was provided and that further review of the potential delisting was warranted. However, in September of 2020, it was determined that delisting was not warranted. The Western DPS yellow-billed cuckoo is currently under 5-year review. For the most recent assessment of the species range-wide status please refer to the October 3, 2014, *Determination of Threatened Status for the Western Distinct Population Segment of the Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*)* (79 FR 59991). On April 21, 2021, the USFWS issued a final rule designating critical habitat for the western yellow-billed cuckoo (86 FR 20798). The Project Area is outside the designated critical habitat.

Until very recently, the CNDDDB's last documented occurrence of western yellow-billed cuckoo in the vicinity of the Project Area is from the late 1800s. However, on July 27, 2019, a cuckoo vocalization was documented approximately 4 miles upstream on a heavily forested island in the American River.⁴⁰ A single vocalization was heard but no additional information was gathered. Based on habitat quality, this may have been a transient bird moving through from breeding sites along the Sacramento River.

The Project Area provides marginal remnant riparian habitat that may be used for foraging or dispersal (Figure 3-2). However, the riparian habitat in the Project Area does not meet the typical size requirements (25 contiguous acres or more) for home ranges of nesting western yellow-billed cuckoos.⁴¹

Swainson's Hawk

Swainson's hawk is State-listed as threatened. Section 3.8.1 (pages 151–152) of the ARCF GRR FEIS/FEIR describes the ecology of this species in the Project Area. Updated occurrence information is presented below.

⁴⁰ Ron Melcer Jr., Senior Environmental Scientist–Supervisor, Delta Stewardship Council, email communication with Gerrit Platenkamp, Project Manager, ESA, July 28, 2019.

⁴¹ U.S. Fish and Wildlife Service. 2001. Endangered and Threatened Wildlife and Plants; 12-Month Finding for a Petition to List the Yellow-Billed Cuckoo (*Coccyzus americanus*) in the Western Continental United States. *Federal Register* 66:38611–38626, July 25, 2001.

Two CNDDDB occurrences of Swainson's hawk were recorded in the Site 1-1 survey area in 2010 and 2012. In 2017, a nest with two nestlings near Northgate Boulevard was identified approximately 2 miles downstream of Site 1-1 in the Parkway and another nest was identified in 2007 at Camp Pollock.⁴² In addition, a nest has been regularly documented just upstream of Howe Avenue,⁴³ and a potential nesting pair was observed in May 2019 by a DWR survey team just downstream of Watt Avenue, approximately 1.4 miles east of the Project Area.⁴⁴

The large trees in the riparian corridor within the Project Area and adjacent parks provide suitable nesting sites and annual grasslands and nearby parks provide suitable foraging habitat.

Bank Swallow

Bank swallow is State-listed as threatened. It is a neotropical migrant that arrives in California in May and breeds before returning to South America in late July or August. Bank swallows inhabit primarily riparian and lowland habitats with vertical banks, bluffs, and cliffs where they dig holes for nesting in sandy or fine-textured soil.⁴⁵ The species' range in California is estimated to have been reduced by 50 percent since 1900.⁴⁶ Bank swallow was formerly more common as a breeder in California. Now, only approximately 110–120 colonies remain in the state. Approximately 75 percent of the current breeding population in California occurs along the banks of the Sacramento and Feather Rivers in the northern Central Valley.⁴⁷

Historically, a population of nesting bank swallows, was documented in the Site 1-1 survey area. The most recent record from CNDDDB for this location was from 1986, but CNDDDB noted that the site has since been ripped and habitat no longer exists. The closest recent (2017) CNDDDB record is from the vicinity of Knights Landing, which is approximately 15 miles from the survey area. Although nesting habitat in the survey area is limited, as the banks are mostly covered in dense vegetation, there is high-quality foraging habitat that bank swallows may use.⁴⁸

⁴² California Department of Fish and Wildlife. 2021. California Natural Diversity Database (CNDDDB) search for the U.S. Geological Survey 7.5-minute Sacramento East topographic quadrangle and surrounding eight quadrangles. RareFind 5.0. Version 5.2.14. Biogeographic Data Branch. Information accessed January 12, 2021.

⁴³ K. C. Sorgen, Senior Natural Resources Specialist, Sacramento Area Flood Control Agency. Comments on an administrative draft of Wildlife Habitat Survey Report for American River Common Features 2016 Project American River Contract 1, September 10, 2019.

⁴⁴ Lori Price, Environmental Scientist, Flood Projects Office, California Department of Water Resources. Comments on an administrative draft of Wildlife Habitat Survey Report for American River Common Features 2016 Project American River Contract 1, August 30, 2019.

⁴⁵ California Department of Fish and Game. 1999. California Wildlife Habitat Relationships System California Interagency Wildlife Task Group: Bank Swallow.

⁴⁶ California Department of Fish and Game. 1999. California Wildlife Habitat Relationships System California Interagency Wildlife Task Group: Bank Swallow.

⁴⁷ California Department of Fish and Game. 1999. California Wildlife Habitat Relationships System California Interagency Wildlife Task Group: Bank Swallow.

⁴⁸ California Department of Fish and Wildlife. 2021. California Natural Diversity Database (CNDDDB) search for the U.S. Geological Survey 7.5-minute Sacramento East topographic quadrangle and surrounding eight quadrangles. RareFind 5.0. Version 5.2.14. Biogeographic Data Branch. Information accessed January 12, 2021.

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Sacramento River Winter-Run Chinook Salmon

Sacramento River winter-run Chinook salmon is Federal and State-listed as endangered. Section 3.8.1 (pages 154–157) of the ARCF GRR FEIS/FEIR describes the ecology and occurrence of this species in the ARCF GRR Project Area.

Central Valley Spring-Run Chinook Salmon

Central Valley spring-run Chinook salmon is Federal and State-listed as threatened. Section 3.8.1 (pages 156–158) of the ARCF GRR FEIS/FEIR describes the ecology and occurrence of this species in the ARCF GRR Project Area.

California Central Valley Steelhead

California Central Valley steelhead is Federal-listed as threatened. Section 3.8.1 (pages 156, 157, and 159–160) of the ARCF GRR FEIS/FEIR describes the ecology and occurrence of this species in the ARCF GRR Project Area.

North American Green Sturgeon

North American green sturgeon is Federal-listed as threatened. Section 3.8.1 (pages 156, 157, and 161–162) of the ARCF GRR FEIS/FEIR describes the ecology and occurrence of this species in the ARCF GRR Project Area.

Non-listed Special-Status Wildlife Species**Crotch Bumble Bee**

The crotch bumble bee was petitioned to be added to the State endangered species list and was listed as a candidate species by CDFW in June 2019. However, the Sacramento Superior Court overturned the ruling in November 2020, stating that the California Endangered Species Act does not protect terrestrial invertebrates. This ruling is currently under appeal. Thus, the crotch bumble bee was included in this report, because it may meet the criteria for listing if higher courts determine that invertebrates may qualify for such listing and was considered a special status species in conformance with Section 15380(d) of the CEQA Guidelines.

It inhabits open grassland and scrub habitats throughout California. Crotch bumble bees primarily nest underground in mammal burrows, but are occasionally observed in old logs and cavities in trees, among other aboveground locations. They are generalist foragers, with short tongues, and thus prefer foraging on open flowers with short corollas. They overwinter in soft disturbed soil or under leaf litter.⁴⁹

This species was historically common throughout the Central Valley, but now is mostly absent. The closest occurrence documented in the CNDDDB, last recorded in 2020, was just east of Mather Air Force Base approximately 12 miles east of the Project area. Documented occurrences are limited in the Central Valley, but that may partially be due

⁴⁹ California Department of Fish and Wildlife. 2019. Evaluation of the Petition from the Xerxes Society, Defenders of Wildlife, and the Center for Food Safety to List Four Species of Bumble Bees as Endangered under the California Endangered Species Act. Sacramento, CA. April 4, 2019. Available: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=166804&inline>. Accessed December 12, 2019.

to under reporting. Two other sighting were documented within 20 miles of the Project Area in 2020: one just west of Davis and one in the Consumnes River Preserve. Suitable foraging habitat occurs in the survey area in annual grassland and scrub habitats. The potential for nesting and overwintering within the levees is unknown, due to potential frequent flooding and the limited data available documenting the bee's habits, but sufficient rodent burrows do occur.

Western Pond Turtle

Western pond turtle is a California species of special concern. This moderate-sized aquatic turtle is commonly found in ponds, lakes, marshes, rivers, streams, and irrigation ditches with rocky or muddy substrates. It basks in sandy areas that may or may not be bordered by aquatic vegetation. Aquatic sites are often within woodlands, grasslands, and open forests between sea level and 6,000 feet. Western pond turtle nests are created in upland areas with friable soils, often up to 0.25 miles from an aquatic site.^{50, 51}

Western pond turtles are discontinuously distributed throughout California west of the Cascade-Sierran crest.⁵² There are documented CNDDDB occurrences for this species. This species was observed in 2021 upstream of the Project Area near the Campus Commons Golf Course, on the right bank of the river, basking on a log in the water.⁵³ Pond turtles are expected to use upland and aquatic habitat in the Project Area throughout the year.

Burrowing Owl

Burrowing owl is a California species of special concern. Section 3.8.1 (pages 152–153) of the ARCF GRR FEIS/FEIR describes the ecology of this species in the Project Area. Recent occurrence information is presented below.

The closest CNDDDB occurrence of burrowing owl was in 1974 and is just east of Site 2-1, in Subreach 2, on the university campus and approximately two miles east of the survey area, but has since been developed. More recent occurrences have been documented on levees along the Natomas Drainage Canal (2007) and along an irrigation canal near Elk Horn Boulevard (2012) within 5 miles of the Project Area. The non-riparian areas of the levee and bike path along the Project corridor in the staging and access areas of the Project Area consist of disturbed grasslands with small-mammal burrows and ground squirrel activity. This area provides nesting habitat for burrowing owl. During reconnaissance-level surveys, no burrowing owls nor signs of occupied burrows were found.

⁵⁰ Jennings, M. R., and M. P. Hayes. 1994. *Amphibian and Reptile Species of Special Concern in California*. Final report submitted to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, CA.

⁵¹ Zeiner, D. C., W. F. Laudenslayer Jr., and K. E. Mayer (comp. eds.). 1988. *California's Wildlife. Volume I: Amphibians and Reptiles*. California Statewide Wildlife Habitat Relationships System. Sacramento: California Department of Fish and Game.

⁵² Jennings, M. R., and M. P. Hayes. 1994. *Amphibian and Reptile Species of Special Concern in California*. Final report submitted to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, CA.

⁵³ Environmental Science Associates. 2021. Wildlife Habitat Survey Report: American River Common Features Project American River Contracts 3A and 4A. Prepared for Sacramento Area Flood Control Agency. December 2021.

Purple Martin

Purple martin is a California species of special concern. Section 3.8.1 (page 153) of the ARCF GRR FEIS/FEIR describes the ecology and occurrence of the purple martin, a California species of special concern, and its potential to nest within the Project Area.

White-Tailed Kite

White-tailed kite is a State fully protected species. Section 3.8.1 (page 153) of the ARCF GRR FEIS/FEIR describes the ecology and occurrence of this species in the Project Area.

Birds Protected by the Migratory Bird Treaty Act and California Fish and Game Code Subsections 3503 and 3503.5

The Federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFG) protect raptors, most native migratory birds, and breeding birds that could be present in the Project Area. The Parkway corridor provides high-quality foraging and nesting opportunities for a variety of resident and migratory birds. Common species that may nest in the Parkway's mature trees include western scrub jay, acorn woodpecker, downy woodpecker, northern flicker, black phoebe, American robin, western bluebird, ash-throated flycatcher, red-tailed hawk, red-shouldered hawk, and great horned owl. Remnant swallow nests were observed under the Highway 160 Bridge. A full list of species observed in the Project Area is provided in Appendix B. Additional information for Cooper's hawk, great egret, and great blue heron is provided below.

Cooper's Hawk

Cooper's hawk is a CDFW watch list species. Cooper's hawk is a resident of wooded areas throughout California, with breeding described throughout the Coast Ranges and Sierra Nevada foothills. The species' peak nesting season is May through July, although nesting may occur any time from March to August.⁵⁴

A Cooper's hawk nest was recorded by the CNDDDB within 0.5 mile south of the Project Area in 2007 and 2008.⁵⁵ Woodland habitat in and near the Project Area provides potential nesting opportunities for this species.

Great Egret

Great egret is a species protected under the MBTA. This species is a common yearlong resident throughout California, except for high mountains and deserts. They nest in colonies in large trees usually near water. Nests are often sheltered from prevailing winds and may be as high as 100 feet off the ground. Great egrets feed and rest in wetlands, and along the margins of estuaries, lakes, riverine features, mudflats, salt ponds, and irrigated agricultural lands. There is a documented egret rookery approximately 0.5 miles

⁵⁴ Zeiner, D. C., W. F. Laudenslayer, Jr., K. E. Mayer, and M. White (eds.). 1990. *California's Wildlife. Volume II: Birds*. Sacramento: California Department of Fish and Game.

⁵⁵ California Department of Fish and Wildlife. 2021. California Natural Diversity Database (CNDDDB) search for the U.S. Geological Survey 7.5-minute Sacramento East topographic quadrangle and surrounding eight quadrangles. RareFind 5.0. Version 5.2.14. Biogeographic Data Branch. Information accessed November 11, 2021.

downstream and another approximately 6 miles upstream of the survey areas on the American River.

Great Blue Heron

Great blue heron is a species protected under the MBTA. This species is commonly found all year throughout most of California in shallow estuaries and emergent wetlands. They are less commonly found along riverine and rocky marine shorelines, croplands, pastures, and mountains. They usually nest in colonies on the tops of secluded large snags or live trees, usually among the tallest available. There is a documented heron rookery approximately 0.5 miles downstream and another approximately 6 miles upstream upstream of the survey areas on the American River.

Pallid Bat

Pallid bat, a California species of special concern, occurs throughout California except in parts of the high Sierra and the northwestern corner of the state.⁵⁶ The pallid bat inhabits a variety of habitats, such as grasslands, shrublands, woodlands, and forests; however, it is most abundant in open, dry habitats with rocky areas for roosting. Pallid bats roost alone, in small groups, or gregariously.⁵⁷ Roosts include caves, crevices in rocky outcrops and cliffs, mines, trees, and various manmade structures (e.g., bridges, barns, porches); they generally have unobstructed entrances/exits that are high above the ground, warm, and inaccessible to terrestrial predators. Year-to-year and night-to-night roost reuse is common; however, bats may switch day roosts on a daily and seasonal basis.⁵⁸

The pallid bat is the most widely described special-status bat species in central California. No occurrences are reported within 5 miles of the Project Area, or in the nine-quadrangle area that includes the Project Area. No bats were observed during reconnaissance-level surveys; however, they could utilize the railroad or Interstate 80 bridge for a day roost.

Western Red Bat

The western red bat is a California species of special concern. This is a riparian obligate species (i.e., a species dependent on riparian habitat) that is ubiquitous throughout California except in the northern Great Basin region. Western red bats roost individually in dense clumps of tree foliage in riparian areas, orchards, and suburban areas. Individuals have been observed foraging around street lamps and floodlights in suburban areas.⁵⁹

Based on its tendency to roost within tree foliage, this species may be intermittently present in the riparian and woodland habitat in the Project Area. However, roosting

⁵⁶ Zeiner, D. C., W. F. Laudenslayer, Jr., K. E. Mayer, and M. White (eds.). 1990. *California's Wildlife. Volume III: Mammals*. Sacramento: California Department of Fish and Game.

⁵⁷ Western Bat Working Group. 2005. Western Bat Working Group Species Accounts for all Bats. Available: http://www.wbwg.org/speciesinfo/species_accounts/allbats.pdf.

⁵⁸ Western Bat Working Group. 2005. Western Bat Working Group Species Accounts for all Bats. Available: http://www.wbwg.org/speciesinfo/species_accounts/allbats.pdf.

⁵⁹ Western Bat Working Group. 2005. Western Bat Working Group Species Accounts for all Bats. Available: http://www.wbwg.org/speciesinfo/species_accounts/allbats.pdf.

occurrences are not reported by the CNDDDB within 5 miles of the Project Area or in the nine-quadrangle area that includes the Project Area.

American Badger

The American badger is a California species of special concern. This species prefers open grasslands and riparian habitat in the valley areas, although it is present throughout multiple habitat types in California. This species inhabits areas with friable soils to excavate dens and pursue prey, and relatively open, uncultivated ground. In California, badgers range throughout the state, except for the humid coastal forests of northwestern California in Del Norte County and northwestern Humboldt County.⁶⁰

Reconnaissance-level wildlife surveys of the Project Area in fall 2021 did not detect any badger excavations or other signs of presence. This species was previously observed in the vicinity of the Project Area, but the observation is almost 30 years old. Nonetheless, suitable habitat is present in the Project Area in annual grasslands.

Central Valley Fall-/Late Fall–Run Chinook Salmon

Section 3.8.1 (pages 156, 157, and 158–159) of the ARCF GRR FEIS/FEIR describes the ecology and occurrence of this species in the Project Area.

Hardhead

Hardhead is a California fish species of special concern found at low to mid-elevations in relatively undisturbed habitats of larger streams with clear, cool water. This species prefers pools and runs with deep, clear water, slow velocities, and sand-gravel-boulder substrates. The range for hardhead extends from the Pit River in the north to the Kern River in the south. The species is common in the Lower American River.⁶¹

Western River Lamprey

Western river lamprey is a California species of special concern. This species prefers clean, gravelly riffles in permanent streams for adult spawning while larvae need sandy to silty backwaters or stream edges. Their range extends from just north of Juneau, Alaska, south to tributaries of the San Joaquin River. They have been observed in the Lower American River.⁶²

Listed Special-Status Plant Species

No listed special-status plants have the potential to occur within the Project Area.

⁶⁰ Williams, D. F. 1986. *Mammalian Species of Special Concern in California*. Wildlife Management Division Administrative Report 86-1. Sacramento: California Department of Fish and Game. June 1986.

⁶¹ Moyle, P.B., R. M. Quiñones, J. V. Katz and J. Weaver. 2015. *Fish Species of Special Concern in California*. Third Edition. Sacramento: California Department of Fish and Wildlife. Available: <https://www.wildlife.ca.gov/Conservation/SSC/Fishes>. Accessed January 10, 2021.

⁶² Moyle, P.B., R. M. Quiñones, J. V. Katz and J. Weaver. 2015. *Fish Species of Special Concern in California*. Third Edition. Sacramento: California Department of Fish and Wildlife. Available: <https://www.wildlife.ca.gov/Conservation/SSC/Fishes>. Accessed January 10, 2021.

Non-Listed Special-Status Plant Species

Sanford's Arrowhead

Section 3.8.1 (page 162) of the ARCF GRR FEIS/FEIR describes the ecology and of this species in the Project Area. Updated occurrence information is presented below.

Sanford's arrowhead was not observed within Site 1-1 during general biological surveys, conducted by Environmental Science Associates in fall 2021 and is not likely to occur due to lack of suitable habitat. However, there are known occurrences upstream, thus focused botanical surveys will be conducted prior to the start of construction to confirm its absence.

Bristly Sedge

Bristly sedge is a California Rare Plant Rank (CRPR) 2B plant.⁶³ This species is found in coastal prairie, margins of marshes and swamps, and valley and foothill grassland from 0 to 625 meters. It is identifiable from May to September. This species was not observed within Site 1-1 during general surveys conducted in 2021. Additional botanical surveys will be conducted prior to the start of construction to confirm its absence.

Woolly Rose-Mallow

Woolly rose-mallow is a CRPR 1B plant. This species is often found in riprap on sides of levees in freshwater marshes and swamps and is identifiable from June to September. This species was not observed within Site 1-1 during general surveys conducted in 2021. Additional botanical surveys are scheduled for spring/summer 2022, to confirm its absence.

Critical Habitat for Listed Species

USFWS defines the term "critical habitat" in the Federal Endangered Species Act as a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat has been designated for the following regionally occurring species: western yellow-billed cuckoo, California red-legged frog, California tiger salamander, conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, Sacramento Orcutt grass, slender Orcutt grass, and VELB. The Project Area does not occur within designated critical habitat for any of these species.

The Project Area is within designated critical habitat for Central Valley spring-run Chinook salmon and California Central Valley steelhead.

The National Marine Fisheries Service (NMFS) defines the term "essential fish habitat" in the Magnuson-Stevens Fishery Conservation and Management Act as waters and substrate of the United States necessary for fish spawning, breeding, or growth to maturity. The Project Area is within essential fish habitat for Chinook salmon.

⁶³ The CNPS Rare Plant Ranking system ranges from presumed extinct species, California Rare Plant Rank (CRPR) 1A, to limited distribution species now on a watch list CRPR 4.

3.6.2 Methodology and Basis of Significance

3.6.2.1 Methodology

This analysis generally uses the same methodology described in Section 3.8.2 (pages 162–163) of the ARCF GRR FEIS/FEIR. Impacts on special-status species in the Project Area were evaluated based on data collected from biological resources surveys conducted in 2019, 2020, and 2021 at Site 1-1 and from other resources such as the following:

- Aerial imagery.
- A list of special-status wildlife species with potential to occur in or in the vicinity of the Project Area that was compiled from a nine-quadrangle search of the CNDDDB.⁶⁴
- A USFWS species list for the Project Area generated using the online Information for Planning and Consultation (IPaC) database.⁶⁵
- A list of special-status plant species with potential to occur in or in the vicinity of the Project Area that was compiled from a nine-quadrangle search of the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Plants of California.⁶⁶
- Literature regarding the biological resources of the region.
- Coordination with USFWS and NMFS.
- The Standard Assessment Methodology (SAM) model for fish species.

For this analysis, the Project alternatives were determined to have a significant impact on special-status species if Project activities would have a substantial adverse effect, either directly or through habitat modification, on any species identified as candidate, sensitive, or special-status in local or regional plans or policies, or regulations, or by CDFW, USFWS, or NMFS. Species that are not currently listed under the State or Federal Endangered Species Acts as rare, threatened, or endangered, but that can be shown to meet the criteria for such listing, were also considered special-status species (CEQA Guidelines Section 15380[d]). The impact analysis also considered the goals and objectives of the American River Parkway Plan and how Project construction would affect those goals and objectives. Impacts on special-status species were evaluated based on anticipated construction activities and changes to habitat types after construction of the Project.

⁶⁴ California Department of Fish and Wildlife. 2021. California Natural Diversity Database (CNDDDB) search for the U.S. Geological Survey 7.5-minute Sacramento East topographic quadrangle and surrounding eight quadrangles. RareFind 5.0. Version 5.2.14. Biogeographic Data Branch. Information accessed November 11, 2021.

⁶⁵ U.S. Fish and Wildlife Service. 2021. List of Threatened and Endangered Species that may occur in you Proposed Project Location or may be Affected by your Proposed Project. Consultation Code: 08ESMF00-2021-SLI-0720; Event Code: 08ESMF00-2021-E-02098. Species list generated November 15, 2021.

⁶⁶ California Native Plant Society. 2021. Special-status Plants documented on the U.S. Geological Survey 7.5-minute Sacramento East topographic quadrangle and surrounding eight quadrangles. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Rare Plant Program. Available: www.rareplants.cnps.org. Accessed December 12, 2021.

The SAM analysis used measurements of SRA habitat features in both existing (without-project) and designed (with-project) conditions. Shoreline surveys conducted in 2019 and 2020 provided the without-project data and the 65-percent design plans provided the with-project data. The SAM analysis for individual fish species followed the approach used in the 2015 NMFS Biological Opinion (BO) for the ARCF 2016 Project and revised in the 2021 NMFS BO.

As described in the original NMFS BO⁶⁷ and 2021 NMFS BO,⁶⁸ SAM results are weighted relative response index (WRI) values that represent the difference between modeled fish responses to existing (without-project) conditions and designed (with-project) conditions. Negative WRI values indicate that existing conditions are better for fish and positive WRI values indicate that designed (proposed future) conditions are better for fish. While the quantified WRI values are provided in Appendix C, these numbers are used on a qualitative basis to determine the extent of impacts, and not a quantitative basis to assign value or absolute extent of impacts. Instead, impacts and mitigation have been assessed by determining the slope-area of the project footprint. The slope-area involves measuring surface area of the levee slope below the OHWM (18,500 cfs) and the natural benthic substrate out to the limit of rock placement. See Appendix C for details on updated SAM analysis methods and results.

3.6.2.2 Basis of Significance

This analysis uses the same basis of significance described in Section 3.8.2 (page 163) of the ARCF GRR FEIS/FEIR, as restated below.

The Proposed Action would result in a significant effect related to special-status species if it would result in:

- Substantial direct or indirect reduction in growth, survival, or reproductive success of species listed or proposed for listing as threatened or endangered under the Federal or California Endangered Species Act;
- Substantial direct mortality, long-term habitat loss, or lowered reproductive success of Federally or State-listed threatened or endangered animal or plant species or candidates for Federal listing;
- Direct or indirect reduction in the growth, survival, or reproductive success of substantial populations of Federal species of concern, State-listed endangered or threatened species, plant species listed by the California Native Plant Society, or species of special concern or regionally important commercial or game species; or
- An adverse effect on a species' designated critical habitat.

⁶⁷ National Marine Fisheries Service. 2015. Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the American River Common Features General Reevaluation Report. pp. 25–26.

⁶⁸ National Marine Fisheries Service. 2021. Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the American River Common Features General Reevaluation Report Reinitiation. pp. 40–41.

Effects Not Evaluated Further

Section 3.6.2, *Environmental Setting*, above discusses all special-status wildlife, fish, and plant species evaluated in this analysis and summarizes the potential for each of these species to be present in the Project Area. The wildlife, fish, and plant species listed in Tables 3-5 and 3-6 that are not expected to occur, or have low potential to occur (because the Project Area does not provide suitable habitat for the species, or because the Project Area is generally outside the species' range) are not analyzed further in this Supplemental EIR.

3.6.3 Impact Analysis

3.6.3.1 No Action/No Project Alternative

Under the No Action/No Project Alternative, the Proposed Action would not be implemented, and the Sacramento metropolitan area would experience no change in the present level of risk of flooding due to levee failure because of seepage, slope stability, overtopping, or other erosion concerns. This analysis finds the same effects as are described in Section 3.8.3 (page 163) of the ARCF GRR FEIS/FEIR, which are summarized below.

Under the No Action Alternative, no construction-related impacts would occur. If a levee failure were to occur, however, special-status species would experience substantial adverse effects as a result of flooding. The potential for loss of lives and property would require emergency action. The required emergency procedures could have significant effects on special-status species, such as sedimentation and turbidity from emergency repair efforts, a need to suspend best management practices (BMPs), permanent loss of SRA habitat as a result of rock placement, long-term loss of habitat for non-aquatic species, lack of reproductive success, and mortality. All these effects on special-status species would be significant; however, the timing, duration, and magnitude of a flood event is unpredictable, making a precise significance determination impossible.

3.6.3.2 Proposed Action

The following impact analysis is drawn from Section 3.8.4 (pages 164–180) of the ARCF GRR FEIS/FEIR, as revised to reflect Site 1-1 and the impacts of the Proposed Action.

Valley Elderberry Longhorn Beetle

Construction would directly affect 3.24 acres of VELB habitat at Site 1-1. These areas include the shrub and the riparian habitat within 25 meters (82 feet), which is considered VELB habitat. The impact of this loss of Federally listed species habitat would be significant. The impact would be reduced to a less-than-significant level with implementation of Mitigation Measure VELB-1, which would include creating 9.72 acres of off-site VELB habitat. The affected shrubs would be transplanted to the approved elderberry shrub mitigation sites: Rio Americano West, Rio Americano East and the Rossmoor East Mitigation Sites or other elderberry shrub mitigation sites in the LAR as described in Chapter 2, of the *Project Description of the American River Watershed*

Common Features, Water Resources Development Act of 2016, American River Contract 1 Supplemental Environmental Assessment/Supplemental Environmental Impact Report and Chapter 2 of the Project Description of the American River Watershed Common Features, Water Resources Development Act of 2016, American River Contract 2 Supplemental Environmental Impact Statement/Supplemental Environmental Impact Report.

Operation and maintenance (O&M) by the American River Flood Control District of the mitigation sites planned as part of the Proposed Action could require the trimming of elderberry shrubs as described in Section 3.8.4 (page 165) of the ARCF GRR FEIS/FEIR. As part of long-term O&M, up to 0.5 acre of elderberry shrubs would be trimmed by the American River Flood Control District, and up to 25 acres over the life of the ARCF GRR project (ARCF GRR FEIS/FEIR, Table 20). Trimming consists of cutting overhanging branches along the levee slopes on both the landside and waterside. Some shrubs may be located adjacent to the levee with branches hanging over the levee maintenance road. Up to a third of a shrub would be trimmed in a single season. Trimming would occur between November 1 and March 15. This loss of VELB habitat would be significant.

To offset this impact, Project Partners would implement Mitigation Measure VELB-1. Specifically, the mitigation for O&M impacts would be offset by development of off-site mitigation sites that would be designed in accordance with the 2017 Framework. In addition, each year the American River Flood Control District would document the amount of VELB habitat that they have trimmed and report that number to USACE to ensure compliance with the USFWS Biological Opinion. If the local maintaining agency has a need to exceed the amount of VELB habitat which needs to be trimmed or affected due to routine maintenance, then they would request that USACE reinstate consultation on this biological opinion for those actions. With the implementation of the mitigation discussed above, O&M activities would result in less-than-significant impacts on VELB.

Western Yellow-Billed Cuckoo

As described in the Proposed Action effects discussion in Section 3.8.4 (page 167) of the ARCF GRR FEIS/FEIR, the Project Area is unlikely to support nesting western yellow-billed cuckoos because the riparian corridor is narrow, patchy, and frequented by park visitors. Construction of Site 1-1 would result in the loss of 7.10 acres of riparian habitat (Table 3-4). This loss of habitat would be a significant impact. With implementation of Mitigation Measures VELB-1, VEG-1, VEG-2, and BIRD-1, the impact would be reduced to a less-than-significant level.

Swainson's Hawk

As described in Section 3.8.4 (page 168) of the ARCF GRR FEIS/FEIR, the Project Area possesses suitable roosting and nesting habitat for Swainson's hawk. Project construction could affect the riparian habitat used by this species for roosting and nesting. Although the removal of riparian trees would be mitigated through compensatory plantings, there would be a temporal loss of habitat until the newly planted trees could become

established and mature. Long-term effects on Swainson's hawk nesting habitat could result from the loss of riparian habitat in the Project Area as follows: 3.92 acres at Site 1-1 for erosion protection efforts, and 3.18 acres at Site 1-1 of riparian woodland habitat within the access areas, haul routes, and staging areas. This would be a significant impact on Swainson's hawk nesting habitat.

Before the start of construction, pre-construction surveys would be conducted following the Swainson's Hawk Technical Advisory Committee Guidance.⁶⁹ Should surveys indicate that nesting Swainson's hawk are present, the potential would exist for short-term, temporary impacts during construction from dust, noise, and vibration.

The compensatory mitigation proposed to address impacts to western yellow-billed cuckoo would also compensate for the loss of Swainson's hawk nesting habitat within riparian habitat. Both species use riparian trees for nesting, and mitigation plantings to address Project-related impacts on western yellow-billed cuckoo would additionally benefit Swainson's hawk. Potential nesting habitat would be temporarily reduced because there would be a lag time between when trees would be removed or trimmed during Project construction and when the replacement trees would be mature enough to support raptor nesting. There would be a net increase in the extent and quality of riparian habitat that would be present once the mitigation plantings become established. With implementation of the mitigation measures identified for impacts on riparian habitat (VEG-1 and VEG-2) and nesting birds (BIRD-1), the impact on Swainson's hawk from construction-related activities would be reduced to a less-than-significant level.

O&M activities after construction would be consistent with existing O&M practices, so any impacts associated with O&M would also be similar to existing conditions. O&M would involve activities such as mowing, herbicide application, and rodent control. Rodent control would be limited to preventing rodents from burrowing and undermining the levee; therefore, rodent control actions are not expected to appreciably reduce the prey base for Swainson's hawk. Mowing in the Project Area may also increase the visibility of prey, thereby enhancing foraging efficiency for Swainson's hawk. Application of herbicides would be limited and is not expected to appreciably affect habitat conditions for Swainson's hawk (i.e., no loss of nesting trees or loss of grassland foraging habitat). O&M would involve limited vegetation trimming and management to facilitate visual inspections of the levee. This vegetation trimming is expected to focus largely on shrubs and small, short trees whose presence may be concealing levee erosion issues. Therefore, vegetation management during O&M activities is not anticipated to affect large trees that represent suitable nesting habitat for Swainson's hawk. Because these activities would be short term, and the resulting impacts would be temporary, impacts of O&M would be less than significant.

⁶⁹ Swainson's Hawk Technical Advisory Committee. 2000. *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley*. May 31, 2000.

Bank Swallow

Bank swallows historically nested along the Lower American River, as recently as 1986, and continue to forage in the area, but are not known to nest in the Project Area due to the dense vegetation and riprap cover on the banks in Site 1-1. If present in the vicinity of the Project Area, nesting bank swallow colonies could be directly affected if the proposed erosion protection measures were implemented during the species' nesting season (April 1 through August 31). Thus, measures to reduce erosion risk could indirectly affect bank swallows by removing suitable or potentially suitable foraging habitat and making the banks unsuitable for future use by bank swallows. This impact on bank swallow would be significant. With implementation of Mitigation Measure BIRD-1, including pre-construction surveys, training of construction crews, and avoidance buffers if nesting birds are located, the impact on bank swallow from construction activities would be reduced to a less-than-significant level.

O&M activities after construction would be consistent with existing O&M practices, so any impacts also would likely be consistent with existing conditions. In addition, these activities would be short term, and the resulting impacts would be temporary and less than significant.

Crotch Bumble Bee

Bumble bees have three basic habitat requirements: suitable nesting sites for the colonies, availability of nectar and pollen from flowers, and suitable overwintering sites for queens. The Crotch bumble bee nests primarily underground in abandoned rodent burrows. They are generalist foragers. Very little is known about the overwintering sites of Crotch bumble bees, but overwintering habitat for bumble bees in general is often in soft, disturbed soil or under leaf litter or similar debris. Direct impacts of project construction could include mortality of individuals or nests as a result of activities such as vegetation removal and materials staging, or from construction equipment traffic. Vegetation removal could also result in a reduction of foraging habitat. With implementation of Mitigation Measure BEE-1 identified below for Crotch bumble bee, and Mitigation Measures VEG-1 and VEG-2 the impact of construction on this species would be reduced to a less-than-significant level.

O&M activities after construction would likely be consistent with existing O&M practices (except as described in Mitigation Measure BEE-1's statement regarding rodent abatement), so any impacts also would likely be consistent with existing conditions. In addition, these activities would be intermittent, and the resulting impacts would be temporary and less than significant with mitigation.

Burrowing Owl

During their nesting period (February 1 through August 15), burrowing owls could use small-mammal burrows in grassland areas that are present in and adjacent to the levees along the American River. If present, ground disturbance (excavation and backfilling) could result in direct mortality or injury of burrowing owls within burrows and similar

nesting features. Such features could be disturbed or destroyed during construction in staging areas. This would be a significant impact. However, because there is only habitat for burrowing owls in staging areas and transplant areas there is flexibility to avoid active burrows. Thus, implementation of pre-construction surveys to identify active burrows and placement of avoidance buffers to avoid active burrows, as described in Mitigation Measure BIRD-1, would reduce potential impacts from construction on burrowing owl to a less-than-significant level.

O&M activities after construction would be consistent with existing O&M practices, so any impacts also would likely be consistent with existing conditions. Ongoing rodent control could limit the availability of small-mammal burrows often used by burrowing owl. However, because rodent control would be limited to areas where such burrows could threaten the integrity of the levee system, such actions are not expected to substantially reduce the availability of suitable burrows for burrowing owl along the American River. Mowing tall vegetation also improves foraging habitat conditions and accessibility to burrows. Therefore, because O&M activities would be short term and the resulting impacts would be temporary, impacts of O&M would be less than significant.

White-Tailed Kite

The Project Area contains numerous large riparian trees that provide suitable nesting conditions for white-tailed kite. Noise from heavy construction machinery could prompt nest abandonment and subsequent failure of nests in and near construction activity areas. Vegetation removal could also result in direct take of active white-tailed kite nests. This would be a significant impact. Implementation of Mitigation Measures VEG-1 and VEG-2 would reduce the impact on riparian nesting habitat to a less-than-significant level. Implementation of Mitigation Measure BIRD-1 would reduce the impact on nesting white-tailed kites to a less-than-significant level.

O&M activities after construction would be consistent with existing O&M practices, so any impacts also would likely be consistent with existing conditions. Vegetation management during O&M activities is not anticipated to affect large trees, limiting the potential for such activities to affect nesting habitat for white-tailed kite. Therefore, because O&M activities would be short term and the resulting impacts would be temporary, impacts of O&M would be less than significant.

Purple Martin

Purple martins inhabit riparian forest and woodland areas and nest in tree cavities or crevices of cliffs. This species is also known to use infrastructure such as bridge and overpasses (e.g., weep holes) or other manmade structures (e.g., lamp posts, traffic lights, birdhouses) for nesting. By removing riparian woodland, the Project could continue to fragment suitable habitat for this species. Noise from heavy construction machinery could prompt nest abandonment and subsequent failure of nests in and near construction activity areas. Vegetation removal could also result in direct take of purple martins if any are nesting in the trees targeted for removal. This impact would be significant. With implementation of Mitigation Measure BIRD-1 and restoration of riparian habitat in the

Parkway, the impact of construction on purple martin would be reduced to a less-than-significant level.

O&M activities after construction would be consistent with existing O&M practices, so any impacts also would likely be consistent with existing conditions. The application of herbicides could also indirectly affect purple martins by wilting or killing vegetation that contributes to the production of their prey (i.e., insects). Vegetation management during O&M activities would not likely affect nesting habitat for purple martin because it would not target the large trees (more specifically, large trees with cavities) used by this species. Mowing noise may temporarily disturb purple martins, but the activity would be only sporadic and short term.

Other Breeding and Migratory Birds

Many non-listed bird species that are otherwise protected by the MBTA and the CFGC are expected to be present in the Project Area. These include Cooper's hawk, great blue heron, great egret, and other common passerine, raptor, and wading bird species. General disturbance, including exposure to noise, vibration, and dust, could adversely affect nesting birds by altering their nesting behaviors (e.g., prompting adults to abandon eggs or chicks in nests). Construction activities would occur during a period that overlaps with the nesting season for numerous bird species that are present in the Project Area. Construction work, including removal of riparian trees, during the nesting season could result in the destruction of nests and eggs and mortality of nestlings. This would be a significant impact. With implementation of Mitigation Measure BIRD-1, the impact of construction on non-listed birds protected by the Migratory Bird Treaty Act or the California Fish and Game Code would be reduced to a less-than-significant level.

O&M activities after construction are expected to be consistent with existing O&M practices, so any impacts also would likely be consistent with existing conditions. Vegetation management for O&M activities is not anticipated to affect large trees, limiting the potential for such activities to affect nesting birds. Therefore, because O&M activities would be short term and the resulting impacts would be temporary, impacts of O&M would be less than significant.

Western Pond Turtle

Western pond turtle inhabits rivers, pond, wetlands, and irrigation ditches for aquatic habitat and sandy or grassland areas for upland habitat. This species nests in upland areas within one-quarter mile of aquatic habitat. Construction equipment accessing areas occupied by western pond turtle could strike turtles that are nesting, basking, or traversing upland habitat, resulting in mortality of these animals. Western pond turtles may also be crushed or entombed when construction equipment causes burrows to collapse. In addition, fuel, oil, other petroleum products, and other chemicals used during maintenance activities could be accidentally introduced into waterways. In sufficient concentrations, these contaminants would be toxic to western pond turtles and their prey species. This would be a significant impact. With implementation of Mitigation Measures

TURTLE-1 and WQ-1, the impact of construction on western pond turtle would be reduced to a less-than-significant level.

O&M activities, including vegetation management along the levees, could involve mowing and trimming of small trees and shrubs using hand tools or machinery. Such activities could incidentally collapse burrows or crush nests on the ground, potentially affecting western pond turtle individuals or their habitat. Pond turtles could be killed or injured by mower blades when they are above ground (e.g., during periods of cooler temperatures, such as early mornings) and unable to leave areas being maintained because of their relative lack of mobility. Mowing equipment could crush or expose a buried western pond turtle nest, potentially resulting in nest failure. This would be a significant impact. With implementation of Mitigation Measures TURTLE-1 and WQ-1, the impact of O&M on western pond turtle would be reduced to a less-than-significant level.

Pallid Bat

Construction activities could disturb riparian forest, which provides potential roosting habitat for pallid bat. Potential roosting habitat for pallid bat is also present underneath the railroad bridge and Interstate 80 Bridge. The period of construction activities would overlap the bat maternity season (generally May 1 to August 31). Tree removal in riparian habitat could adversely affect breeding and non-breeding pallid bats by causing the loss of established roosts and potential roosting habitat. Project construction work around vehicle bridge crossing the American River could also disturb pallid bat if they were occupying any of the bridges. General construction-related disturbance, including exposure to noise, vibration, and dust, could adversely affect breeding and non-breeding bats. This would be a significant impact. With implementation of Mitigation Measure BATS-1, the impact of construction on this species would be reduced to a less-than-significant level.

O&M activities, specifically trimming or removal of woody vegetation along the levees, could indirectly and directly affect colonies of roosting pallid bats by resulting in the loss or modification of habitat. However, such management of woody vegetation is largely expected to avoid the mature riparian trees where bats are most likely to be present, minimizing the potential for O&M activities to affect roosting pallid bats. The O&M activities associated with application of herbicides could indirectly affect pallid bats by wilting or killing vegetation that contributes to the production of their prey (i.e., insects). However, the application of herbicides would be highly localized and would focus on helping to eradicate unwanted weedy plants in the Project Area. Thus, the application of herbicides as part of O&M for the Proposed Action is not anticipated to appreciably affect the supply of prey for pallid bat. The impact of O&M on pallid bat would be less than significant.

Western Red Bat

Western red bats may establish day roosts in the foliage of large cottonwood, oak, and willow trees in the Project Area, and maternal roosts may occur in large well-developed stands of riparian habitat. Tree removal in riparian habitat could affect western red bats if

they are present. General construction-related disturbance, including exposure to noise, vibration, and dust, could adversely affect breeding and non-breeding bats. This would be a significant impact. With implementation of Mitigation Measure BATS-1 and restoration of riparian habitat in the Parkway the impact of construction on this species would be reduced to a less-than-significant level.

O&M activities, specifically trimming or removal of woody vegetation along the levees, could indirectly and directly affect colonies of roosting bats by resulting in the loss or modification of habitat. However, such management of woody vegetation is largely expected to avoid the mature riparian trees where bats are most likely to be present, minimizing the potential for O&M activities to affect roosting bats. Other potential effects of O&M under the Proposed Action on western bat are the same as those described previously for pallid bat.

American Badger

American badger inhabits grasslands and riparian habitats. Potential impacts on American badger include mortality, injury, displacement, and harassment, along with permanent and temporary loss of habitat. During construction under the Proposed Action, badgers would be at risk of direct impacts such as vehicle strikes, along with impacts from loss of habitat, increased risks of predation loss, and disruption of behavioral patterns. Heavy machinery operating in the Project Area could compact the soil, making the ground less suitable for digging for badgers and their primary prey species. This would be a significant impact. Implementation of Mitigation Measure BADGER-1 would reduce this impact to a less-than-significant level.

O&M activities are expected to have only minor effects on habitat conditions for American badger. No widespread soil compaction is anticipated, and rodent control would result in only limited ground disturbance. Mowing work along the levees may displace badgers, but this effect would only be temporary because the activity would be temporary. Overall, the effect of O&M on American badger would be less than significant.

Sanford's Arrowhead

Sanford's arrowhead is an aquatic emergent herbaceous plant that grows in a variety of shallow freshwater habitats. This species is known to occur in various locations throughout the LAR, but Site 1-1 provides low quality habitat for this species and it was not observed during general surveys. Protocol level surveys are scheduled for spring/summer 2022. If it is found to occur, Sanford's arrowhead plants could be crushed by construction equipment or trampled by construction personnel, resulting in damage to or mortality of the plants. Ground disturbance for the Proposed Action's bank improvement actions would increase the potential for Sanford's arrowhead plants to be unintentionally buried or removed. This would be a significant impact. Implementation of Mitigation Measure PLANT-1 would reduce this impact to a less-than-significant level, because as part of the final construction design, Project Partners would adjust construction access routes and the footprint of erosion protection activities to ensure the avoidance of known Sanford's arrowhead plants.

O&M activities after construction would involve activities such as mowing, herbicide application, and rodent control. Rodent control and mowing activities would increase the potential for Sanford's arrowhead to be unintentionally trampled, crushed, or ripped up by maintenance workers and equipment. O&M would involve limited vegetation trimming and management to facilitate visual inspections of the levee; this activity would have the same potential for Sanford's arrowhead to accidentally be damaged or killed as under current O&M activities. Overspray from herbicide applications may result in even accidental mortality of non-target plants, including Sanford arrowhead. However, the application of herbicides would be highly localized, and herbicides would not be sprayed near the known Sanford's arrowhead population within the Project Area. Thus, the application of herbicides as part of O&M for the Proposed Action is not anticipated to affect Sanford's arrowhead. The impact of O&M on Sanford's arrowhead would be less than significant.

Bristly Sedge and Woolly Rose-Mallow

Bristly sedge and woolly rose-mallow could occur along the water's edge within Site 1-1. Ground disturbance for the Proposed Action's bank improvement actions would increase the potential for these plants to be unintentionally buried or removed if present. Construction associated with Site 1-1 could result in removal of individuals if present in these areas. This would be a significant impact. Implementation of Mitigation Measure PLANT-1 would reduce this impact to a less-than-significant level, because as part of the final construction design, Project Partners would adjust construction access routes and the footprint of erosion protection activities to ensure the avoidance of these species, if determined to occur within these footprints.

Winter-Run Chinook Salmon

Construction impacts on winter-run Chinook salmon were based on the Proposed Action effects described in Section 3.8.4 (pages 170–173) of the ARCF GRR FEIS/FEIR and long-term impacts were based on SAM analysis as described above in Section 3.6.1.2 Existing Conditions. See **Appendix C** for details on updated SAM analysis methods and results.

Winter-run Chinook salmon do not spawn in the Project Area,⁷⁰ therefore, Project construction activities are not likely to affect winter-run Chinook salmon spawning or spawning habitat. Construction would avoid the primary migration period (December through July) and would be restricted to the channel edge, and the avoidance and minimization measures described below would be implemented. Therefore, no construction-related effects on winter-run Chinook salmon spawning or spawning habitat would occur.

Implementation of the erosion protection measures would result in adverse effects on juvenile and smolt winter-run Chinook salmon, their critical habitat, and essential fish

⁷⁰ Moyle, Peter B. *Inland Fishes of California - Revised and Expanded*. 1st ed. University of California Press, 2002. <https://www.ucpress.edu/book/9780520227545/inland-fishes-of-california>.

habitat. Construction activities that increase noise, turbidity, and suspended sediment may disrupt feeding or temporarily displace fish from their preferred habitat. Physical damage to or harassment of listed fish species would be low during the construction months. Adults would not sustain any physical damage because of construction as their size, preference for deep water,⁷¹ and more crepuscular migratory behavior⁷² would enable them to avoid most temporary, nearshore disturbance that occurs during typical daylight construction hours. Overall, the impact of construction activities on winter-run Chinook salmon would be significant. With implementation of Mitigation Measures WQ-1, FISH-1, FISH-2, and FISH-3 (below), this impact would be reduced to a less-than-significant level. Restricting in-water activities to a work window of July 1 through October 31 and implementing the avoidance and minimization measures described below would minimize, but not avoid, potential construction-related effects on juveniles and smolts.

Instream construction activities may cause mortality and reduced abundance of benthic aquatic macroinvertebrates within the erosion footprint, due to the placement of rock over the existing streambed. These effects to aquatic macroinvertebrates are expected to be long-term as permanent bank armoring alters the natural streambed.⁷³ The amount of food available for adult and juvenile salmonids in the Action Area is therefore expected to be permanently decreased in the areas where submerged riprap is being placed.

Over the lifetime of the project, winter-run Chinook salmon juvenile habitat is expected to show a long-term positive response to the Proposed Action based on the American River SAM analysis when both instream woody material (IWM) and planted benches are incorporated into with-project conditions.

Although winter and spring values of the WRI increase immediately above baseline conditions after construction for juvenile rearing of Chinook salmon, the values for summer and fall WRI remain below baseline conditions for up to 15 years before they increase above baseline conditions, due to the time it takes after planting for vegetation to develop at Site 1-1. For juvenile migration the predicted recovery to baseline conditions is immediate in spring and winter, with recovery in fall taking 8 years. Therefore, although long-term habitat conditions at Site 1-1 for juvenile Chinook salmon are predicted to be substantially better than under baseline conditions, there would be a temporary adverse impact of the Proposed Action on juvenile Chinook salmon (including winter-run Chinook salmon) habitat. This impact would be significant.

Protection measures would generally provide long-term increases in bank shading at Project sites. Short-term impacts on SRA habitat would be reduced to a less-than-significant level with implementation of Mitigation Measures SRA-1, which would provide for the creation of off-site SRA habitat.

⁷¹ Raleigh, R. F., Miller, W. J., & Nelson, P. C. (1986). Habitat suitability index models and instream flow suitability curves: chinook salmon. National Ecology Center.

⁷² Keefer, M. L., Caudill, C. C., Peery, C. A., & Moser, M. L. (2013). Context-dependent diel behavior of upstream-migrating anadromous fishes. *Environmental biology of fishes*, 96(6), 691-700.

⁷³ U.S. Fish and Wildlife Service. 2004. Impacts of Riprapping to Aquatic Organisms and River Functioning, Lower Sacramento River, California. Sacramento, California. June 2004.

Spring-Run Chinook Salmon

Construction impacts of the Proposed Action on spring-run Chinook salmon have not changed from those described in Section 3.8.4 (page 173) of the ARCF GRR FEIS/FEIR. Long-term impacts were informed using SAM analysis like the methodology used for winter-run Chinook salmon. See Appendix C for details on updated SAM analysis methods and results.

Adult spring-run Chinook salmon migrate up the Sacramento River from March through September, although most individuals have entered tributary streams by mid-June and would not be affected by construction activities. Similar to winter-run Chinook salmon, spring-run Chinook salmon typically spend up to 1-year rearing in freshwater before migrating to sea. Therefore, the potential for construction-related effects would be like those described above for winter-run Chinook salmon. Construction related impacts would have a significant impact on spring-run Chinook salmon. With implementation of Mitigation Measures WQ-1, FISH-1, FISH-2, and FISH-3 this impact would be reduced to a less-than-significant level, as was described for winter-run Chinook salmon.

The Proposed Action would have a long-term beneficial effect on spring-run Chinook salmon habitat, but adverse impacts from vegetation removal on SRA habitat for juvenile salmon are expected to last for up to 15 years after construction, similar to what was described for winter-run Chinook salmon (see Appendix C). This would be a significant impact. Implementation of Mitigation Measure SRA-1, which would create off-site compensatory SRA habitat in the American River Parkway, would reduce this impact to a less-than-significant level.

Central Valley Fall/Late Fall–Run Chinook Salmon

Construction impacts on fall/late fall–run Chinook salmon have not changed from the Proposed Action effects described in Section 3.8.4 (pages 173–174) of the ARCF GRR FEIS/FEIR. Long-term impacts were informed using SAM analysis similar to the methodology used for other salmonids above. See Appendix C for details on updated SAM analysis methods and results.

Fall/late fall–run Chinook salmon migrate into the Sacramento River and its tributaries from June through December; therefore, construction activities would coincide with most of the migration period. Construction activities that increase noise, turbidity, and suspended sediment may disrupt adult passage through the Project Area and may displace these fish by affecting their preferred habitat and spawning habitat. The Project could represent a long-term loss of a small amount of potential spawning habitat because repairs would require covering bottom substrates with revetment. However, the extent of spawning area that might be affected would be very small. In general, channel areas immediately adjacent to erosion protection sites do not support spawning riffles. Long-term changes on nearshore habitat are expected to have adverse effects on habitat that is important to all life stages of fall/late fall–run Chinook salmon. These impacts on fall/late fall-run Chinook salmon would be significant. With implementation of Mitigation

Measures WQ-1, FISH-1, FISH-2, and FISH-3, this impact would be reduced to a less-than-significant level, as was described for winter-run Chinook salmon.

The Proposed Action would have a long-term beneficial effect on fall/late fall-run Chinook salmon habitat, but temporary adverse impacts from vegetation removal on SRA habitat for juvenile salmon could persist up to 17 years after construction, similar to the effects described for winter-run Chinook salmon (see Appendix C). This would be a significant impact. Implementation of Mitigation Measure SRA-1, which would create off-site compensatory SRA habitat in the American River Parkway, would reduce this effect to a less-than-significant level.

California Central Valley Steelhead

Construction impacts on steelhead have not changed from the Proposed Action effects described in Section 3.8.4 (pages 174–175) of the ARCF GRR FEIS/FEIR. Long-term impacts were informed using SAM analysis similar to the methodology used for other salmonids above. See Appendix C for details on updated SAM analysis methods and results.

In the Sacramento River, adult steelhead migrate upstream during most months of the year, beginning in July, peaking in September, and continuing through February or March. Adults use the river channel in the Project Area as a migration pathway to upstream spawning habitat. They may also use deep pools with instream cover as resting and holding habitat. Juveniles and smolts are most likely to be present in the Project Area during their downstream migration to the ocean, which may begin as early as December and peaks from January to May. For purposes of this analysis, rearing juvenile steelhead are assumed to use nearshore and off-channel habitat in the Project Area. The potential for construction-related effects on steelhead juveniles and smolts and their habitat would therefore be similar to that described above for winter-run Chinook salmon. The potential for construction-related effects on steelhead would be like that described above for adult winter-run Chinook salmon. These impacts on steelhead would be significant. With implementation of Mitigation Measures WQ-1, FISH-1, FISH-2, and FISH-3 this impact would be reduced to a less-than-significant level.

Over the lifetime of the Project, California Central Valley steelhead juvenile habitat is expected to show a long-term positive response to the Proposed Action, based on the SAM analysis when both instream woody material (IWM) and planted benches are incorporated into with-project conditions (Appendix C). Juvenile steelhead migration showed a deficit in WRI values for Summer which lasts 7 years (Appendix C).

Although winter and spring values of the WRI increase immediately above baseline after construction for juvenile rearing of steelhead, the values for summer and fall remain below baseline for up to 12 years before they increase above baseline conditions, due to the time it takes after planting for vegetation to develop at Site 1-1. Therefore, although long-term habitat conditions at Site 1-1 for juvenile steelhead are predicted to be

substantially better than baseline conditions, the Proposed Action would cause a temporary adverse impact on juvenile steelhead habitat. This impact is considered significant.

Short-term impacts on SRA habitat would be reduced to a less-than-significant level with implementation of Mitigation Measures SRA-1, which would provide for the creation of off-site SRA habitat.

Potential spawning habitat is present in the American River in the ARCF GRR Project Area. Steelhead spawn in late winter and late spring, outside of the July 1 through October 31 work window. Therefore, Project construction is unlikely to affect steelhead spawning or steelhead spawning habitat.

Green Sturgeon

Green sturgeon critical habitat begins downstream of the Project Area, below the State Route 160 bridge, but no occurrences have been documented in the American River. Thus, green sturgeon are unlikely to be present during construction activities and no direct effects on sturgeon from construction are anticipated. Any downstream indirect effects are also unlikely because critical habitat ends approximately 2 miles downstream of the Project Area.

ARCF GRR FEIS/FEIR Mitigation Measures

The ARCF GRR FEIS/FEIR mitigation measures (pages 180-195) listed below are incorporated into the Proposed Action and revised or added to as described in the bullets below. These reflect the revised Project Area and current agency guidance. Implementing these mitigation measures would reduce impacts on special-status species to a less-than-significant level. Modifications of the ARCF GRR FEIS/FEIR mitigation measures are as follows.

- Mitigation for impacts on VELB was updated from the 1999. *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*⁷⁴ to reflect the new 2017 *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* USFWS guidelines for impacts to VELB.⁷⁵
- Nesting seasons and buffer distances for nesting birds were added.
- A rodent abatement buffer of 100 feet around nesting burrowing owls was added.
- Mitigation for PLANT-1 was updated to include botanical surveys in areas where previous surveys were not conducted.
- The in-water work window to avoid impacts on listed fish species was changed from the period of August 1 to November 30 to the period of July 1 to October 31.

⁷⁴ U.S. Fish and Wildlife Service. 1999. *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. Sacramento, California. 15 pp.

⁷⁵ U.S. Fish and Wildlife Service. 2017. *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)*. U.S. Fish and Wildlife Service; Sacramento, California. 28 pp.

- Additional Mitigation Measures are added for BATS-1, BADGER-1, and BEE-1.

Mitigation Measure VELB-1: Implement Current USFWS Avoidance, Minimization, and Compensation Measures for Valley Elderberry Longhorn Beetle. Project Partners would implement the following measures in accordance with the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle*,⁷⁶ to reduce effects on valley elderberry longhorn beetle:

Avoidance and Minimization Measures

To reduce direct and indirect impacts on shrubs that would not be transplanted and that occur within 50 meters (165 feet) of the Project, the following measures would be implemented:

Fencing. All areas to be avoided during construction activities would be fenced and/or flagged as close to construction limits as feasible.

Avoidance area. Activities that may damage or kill an elderberry shrub (e.g., trenching, paving) may need an avoidance area of at least 6 meters (20 feet) from the dripline, depending on the type of activity.

Worker education. A qualified biologist would provide training for all contractors, work crews, and any on-site personnel on the status of the VELB, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for non-compliance.

Construction monitoring. A qualified biologist would monitor the initial groundbreaking activities, vegetation removal, installation of protective fencing, and would be present during all transplanting and trimming activities. Weekly site visits would also be conducted to ensure all mitigation measures are being implemented and maintained. Additional monitoring may be required per the USFWS BO.

Timing. As much as feasible, all activities that could occur within 50 meters (165 feet) of an elderberry shrub would be conducted outside of the flight season of the VELB (March–July).

Trimming. Trimming may remove or destroy VELB eggs and/or larvae and may reduce the health and vigor of the elderberry shrub. To avoid and minimize adverse effects on VELB when trimming, trimming would occur between November and February and would avoid the removal of any branches or stems that are 1 inch or larger in diameter unless they were approved and compensated for by following the USFWS requirements.

⁷⁶ U.S. Fish and Wildlife Service. 2017. *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)*. Sacramento, California. 28 pp.

Chemical Usage. Herbicides would not be used within the dripline of the shrub. Insecticides would not be used within 30 meters (98 feet) of an elderberry shrub. All chemicals would be applied using a backpack sprayer or similar direct application method.

Mowing. Mechanical weed removal within the dripline of the shrub would be limited to the season when adults are not active (August–February) and would avoid damaging the elderberry shrub.

Erosion Control and Revegetation. Erosion control would be implemented, and the affected area would be revegetated with appropriate native plants.

Dust Control. Dust would be controlled by reducing speed limits to 10 miles per hour, regularly watering roads, and wetting down soil before removal and during placement.

Transplanting

Affected elderberry shrubs with one or more stems measuring 1.0 inch or greater in diameter at ground level that could feasibly be transplanted in accordance with the 2017 Framework must be transplanted to a mitigation site as approved by USFWS. Elderberry compensation would be planted in the Parkway, but outside of the Project Area (off-site) because of construction timing. Project Partners would find areas in the Lower American River Parkway to either expand existing compensation areas or provide connectivity between areas of conserved VELB habitat. Sites within the Lower American River Parkway would be coordinated with the Sacramento County Department of Regional Parks and USFWS during the design phase of the Project. Sites would be designed and developed in accordance with the criteria listed below before any effects on VELB habitat.

For impacts on VELB habitat at Site 1-1 (3.24 acres), the Project Partners would mitigate at a 3:1 ratio and create a total of 9.72 acres of VELB and riparian habitat off-site. The elderberry shrubs that would be affected would be transplanted to the Rio Americano East and West Mitigation Sites, and the Rossmoor East Site. These sites would be used for the transplantation and compensation for impacts on elderberry shrubs as described in the *Compensatory Mitigation* section below. The mitigation site acreage represents the acreage of woody vegetation planted for mitigation and does not include existing native woody vegetation within the mitigation sites boundaries, nor native grass plantings that form a 15-foot wide buffer around most of the perimeter of the woody plantings.

- **Monitor.** A qualified biologist would be on-site for the duration of transplanting activities to assure compliance with avoidance and minimization measures and other conservation measures (as listed above).
- **Exit Holes.** Exit-hole surveys would be completed immediately before transplanting. The number of exit holes found, the GPS location of the plant to

be relocated, and the GPS location where the plant is transplanted would be reported to USFWS and to the CNDDDB.

- **Timing.** Elderberry shrubs would be transplanted when the shrubs are dormant (November through the first 2 weeks in February) and after they have lost their leaves. Transplanting during the non-growing season would reduce shock to the shrub and increase transplantation success.
- **Transplanting Procedure.** Transplanting would follow the most current version of the ANSI A300 (Part 6) guidelines for transplanting shrubs (<http://www.tcia.org/>).
- **Trimming Procedure.** Trimming would occur between November and February and should minimize the removal of branches or stems that exceed 1 inch in diameter.

Compensatory Mitigation

A Compensatory Mitigation Proposal would be prepared detailing the management of on-site and off-site lands. This plan would meet the standards for long-term management and protection of the site as outlined in USFWS's 2017 *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* and the Habitat Mitigation, Monitoring, and Adaptive Management Plan for the ARCF GRR (December 2015). The Compensatory Mitigation Proposal would be prepared and submitted by USACE to USFWS for approval. It would include habitat goals that would be suitable for the western yellow-billed cuckoo and VELB, and would benefit Swainson's hawk, with specific information regarding site selection and development, a planting plan that includes appropriate buffers, success standards, monitoring specifications, and a reporting schedule with data as outlined in Section 6.1 and Appendix C of the 2017 Framework.

Site Selection and Development. Site selection would use a landscape-level approach that would benefit not only the VELB and western yellow-billed cuckoo, but all other species that rely on riparian habitat in the Parkway. Mitigation sites would focus on restoring riparian areas adjacent to the American River that would provide connectivity for VELB populations as described in the 2017 Framework.

Planting Plan. A planting plan would be prepared that would consider site specifics that would influence the success of the elderberry shrub and associated plantings and create a healthy riparian system. The plan would establish a diverse natural community with a complex vegetation structure that would support species present in the Project Area that rely on riparian habitat. The plan would be designed to achieve the following goals described in the 2017 Framework:

- (1) Maximize the number of stems between 2 centimeters (0.8 inches) and 12 centimeters (4.7 inches).

- (2) Minimize competition for sunlight and water. Native associates should be planted at a ratio of one native associate for every three elderberry plants.
- (3) Achieve an average elderberry stem density of 240 stems per acre.

Buffers. An appropriate buffer would be established between mitigation lands and adjacent lands in accordance with the 2017 Framework.

Success Standards. Performance standards including survival rates, stem densities, and recruitment as outlined below and detailed in the 2017 Framework would be established and met to meet compensatory mitigation goals:

- (1) A minimum of 60 percent of the initial elderberry and native associate plantings must survive over the first 5 years after the site is established. As much as feasible, shrubs should be well distributed throughout the site; however, in some instances, underlying geologic or hydrologic issues might preclude elderberry establishment over some portion of the site. If significant die-back occurs within the first 3 years, replanting may be used to meet the 60 percent survival criterion. However, replanting efforts should be concentrated in areas containing surviving elderberry plants. In some instances, overplanting may be used to offset the selection of a less suitable site.
- (2) After 5 years, the site must show signs of recruitment. A successful site should have evidence of new growth on existing plantings as well as natural recruitment of elderberry shrubs. New growth is characterized as stems less than 3 centimeters (1.2 inches) in diameter. If no signs of recruitment are observed, the agency or applicant should discuss possible remedies with USFWS.
- (3) The Performance Standards outlined in Appendix C of the 2017 Framework, Table 2 for VELB mitigation would be complied with for monitoring years 2 through 7. If performance standards are not met, additional years would be required to meet the performance standards and monitoring years would start over.

Monitoring. The population of VELB, the general condition of the mitigation site, and the condition of the elderberry and associated native plantings in the mitigation site should be monitored at appropriate intervals. In any survey year, a minimum of two site visits between February 14 and June 30 of each year must be conducted by a USFWS-approved biologist. As indicated in the 2017 Framework, surveys must include:

- (1) A search for VELB exit holes in elderberry stems, noting the precise locations and estimated ages of the exit holes. The location of shrubs with exit holes should be mapped with a GPS. Because adult VELB are rarely encountered, targeted surveys for adults are not required. However, surveyors should record all adult VELB seen. Record photographs should be taken for all observations of adult VELB and their location mapped with a GPS. All exit-hole or adult VELB observations should be reported to the CNDDDB.

- (2) An evaluation of the success standards outlined above.
- (3) An evaluation of the adequacy of the site protection (fencing, signage, etc.) and weed control efforts on the mitigation site. Dense weeds and grasses such as Bermuda grass (*Cynodon dactylon*) are known to depress elderberry recruitment and their presence should be controlled to the greatest extent practicable.
- (4) An assessment of any real or potential threats to VELB and its host plant, such as erosion, fire, excessive grazing, off-road vehicle use, vandalism, and excessive weed growth.
- (5) A minimum of 10 permanent photographic monitoring locations, established to document conditions present at the mitigation site. Photographs should be included in each report.

Reports. In accordance with the 2017 Framework, yearly survey reports would be submitted to USFWS within 6 months of the final survey each year for monitoring years 2–7 (2017 Framework, Appendix C).

Mitigation Measure BIRD-1: Avoid and Minimize Effects on Nesting Birds. To avoid and minimize effects on nesting birds, The Project Partners would implement the following measures:

- Before ground disturbance, all construction personnel would participate in a USFWS-approved worker environmental awareness program. A qualified biologist would inform all construction personnel about the life history of Swainson’s hawk, western yellow-billed cuckoo, western burrowing owl, bank swallow, and other relevant species, as well as the importance of nest sites and foraging habitat.
- Where feasible, construction and maintenance activities that have the potential to affect special-status nesting birds and common nesting birds would occur at times of the year when adverse effects on those species would be avoided. If activities are conducted outside the nesting seasons specified in **Table 3-7**, no additional measures are required to mitigate adverse effects on nesting birds.
- A breeding season survey for nesting birds would be conducted by a qualified biologist for all trees and shrubs to be removed or disturbed that are located within 500 feet of construction activities, including grading. Swainson’s hawk surveys would be completed during at least two of the following survey periods: January 1 to March 20, March 20 to April 5, April 5 to April 20, and June 10 to July 30. An area with a radius of 0.5 mile from construction activities would be surveyed for Swainson’s hawk nests. No fewer than three surveys would be completed in at least two survey periods, and at least one of these surveys would occur immediately before project initiation.⁷⁷ Western burrowing owl surveys would follow suggested guidelines set forth in

⁷⁷ Swainson’s Hawk Technical Advisory Committee. 2000. *Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley*. May 31, 2000.

CDFW's *Staff Report on Burrowing Owl Mitigation*⁷⁸ such as conducting three or more daytime survey visits at least 3 weeks apart during the peak of breeding season from April 15 to July 15. Other migratory bird nest surveys could be conducted concurrent with Swainson's hawk surveys, with at least one survey to be conducted no more than 48 hours from the initiation of project activities to confirm the absence of nesting. If the biologist determines that the area surveyed does not contain any active nests, construction activities, including removal or pruning of trees and shrubs, could commence without any further mitigation. If at any time during the nesting season construction stops for a period of 2 weeks or longer, pre-construction surveys would be conducted before construction resumes.

TABLE 3-7
NESTING SEASON FOR SPECIAL-STATUS AND COMMON NESTING BIRDS

Species	Nesting Season
White-tailed kite	February 1 to September 30
Bald eagle	January 1 to August 31
Northern harrier	March 1 to August 31
Swainson's hawk	March 1 to September 15
Western yellow-billed cuckoo	June 1 to August 15
Burrowing owl	Year-round: February 1 to August 31 (nesting); September 1 to January 31 (wintering)
Bank swallow	April 1 to August 31
Purple martin	February 1 to August 31
Common nesting birds (raptors, passerines, herons, and egrets)	February 1 to August 31

- If nesting birds have been identified within or adjacent to the construction footprint, The Project Partners would establish avoidance buffers as indicated in **Table 3-8**. Reduced buffers may be implemented if recommended by the monitoring biologist and approved by CDFW. Buffers would be marked in the field by a qualified biologist using temporary fencing, high-visibility flagging, or other means that are equally effective in clearly delineating the buffers. Specific buffer distances for burrowing owl, which vary depending on time of year and level of disturbance, are presented in **Table 3-9** in accordance with CDFW's *Staff Report on Burrowing Owl Mitigation*.⁷⁹ Reduced buffers for burrowing owl may be implemented if recommended by the monitoring biologist, due to the nature of the activity, and if approved by CDFW. For example, typical burrow avoidance distances during active construction are 160 feet during the non-breeding season, and 250-feet during the breeding season. Any needed burrowing owl exclusion and burrow closure would occur

⁷⁸ California Department of Fish and Game. 2012. *Staff Report on Burrowing Owl Mitigation*. March 7, 2012.

⁷⁹ California Department of Fish and Game. 2012. *Staff Report on Burrowing Owl Mitigation*. March 7, 2012.

during the non-breeding season only following the methodology in the CDFW *Staff Report*.

**TABLE 3-8
REQUIRED BUFFER DISTANCES FOR NESTING BIRDS***

Resource	Buffer Distance
White-tailed kite	0.5 mile
Bald eagle	0.5 mile
Swainson's hawk	0.25 mile (urban); 0.5 mile (rural or during use of heavy equipment)
Western yellow-billed cuckoo	500 feet
Bank swallow	300 feet
Burrowing Owl	160 feet (non-breeding season) and 250-feet (breeding season)
Common nesting birds	100 feet (passerines); 300 feet (raptors); 200 feet (heron or egret rookeries)

NOTE: If maintaining these buffers is not feasible they can be reduced in coordination with CDFW and/or USFWS.

**TABLE 3-9
RECOMMENDED RESTRICTED ACTIVITY DATES AND SETBACK DISTANCES BY LEVEL OF
DISTURBANCE FOR BURROWING OWLS**

Time of Year	Distance of Disturbance (feet) from Occupied Burrows Low Disturbance	Distance of Disturbance (feet) from Occupied Burrows Medium Disturbance	Distance of Disturbance (feet) from Occupied Burrows High Disturbance
April 1 to August 15	600	1,500	1,500
August 16 to October 15	600	600	1,500
October 16 to March 31	150	300	1,500

NOTES:

Low = Presence of maintenance staff on foot or in vehicles conducting work with light equipment (maintenance trucks, all-terrain vehicles).

Medium = Heavy equipment use with moderate noise levels (approximately 50–75 A-weighted decibels [dBA]).

High = Heavy equipment with high noise levels (more than 75 dBA).

SOURCE: California Department of Fish and Game. 2012. *Staff Report on Burrowing Owl Mitigation*. March 7, 2012.

- Tree and shrub removal and work in other areas scheduled for vegetation clearing, grading, or other construction activities would not be conducted during the nesting season (generally February 15 through September 30, depending on the species and environmental conditions for any given year) where feasible.
- During rodent abatement efforts, no fumigation, use of treated bait, or other means of poisoning nuisance animals would occur within 100 feet of areas

where burrowing owls are known to occur (e.g., burrows with observed nesting owls).

Mitigation Measure TURTLE-1: Implement Measures to Avoid and Minimize Effects on Western Pond Turtle. The Project Partners would implement the following measures to avoid and minimize effects on western pond turtle:

- A qualified biologist would conduct a pre-construction survey within 7 days before the start of Project activities. If no western pond turtles are observed, the Project Partners would document that information for the file, and no additional measures would be required, except as described below for dewatering activities.
- Should any western pond turtles be detected on land during the pre-construction survey, the qualified biologist would identify the location using GPS coordinates. With prior CDFW approval, a qualified biologist may relocate any western pond turtles found on land or in aquatic habitat within the construction footprint to suitable aquatic habitat at least 200 feet away from the construction footprint.
- If western pond turtles are observed on land within the construction footprint during Project activities, The Project Partners would stop work within approximately 200 feet of the turtle, and a qualified biologist would be notified immediately. If possible, the turtle would be allowed to leave on its own and the qualified biologist would remain in the area until the biologist deems his or her presence no longer necessary to ensure that the turtle is not harmed. Alternatively, with prior CDFW approval, the qualified biologist may capture and relocate the turtle unharmed to suitable habitat at least 200 feet outside the construction footprint. If a western pond turtle nest is unintentionally uncovered during Project activities, work would stop in the vicinity of the nest and USACE and/or CVFPB would contact CDFW to determine the appropriate next steps.

Mitigation Measure PLANT-1: Implement Measures to Avoid and Minimize Effects on Special-Status Plants. To avoid and minimize effects on these known and potentially occurring plants, the Project Partners would implement the following measures:

- Prior to construction, botanical inventories shall be conducted during the identifiable periods for Sanford's arrowhead (blooms May-October), bristly-sedge (blooms May-September), and woolly rose-mallow (blooms June-September) within Site 1-1.
- Sanford's arrowhead, bristly-sedge, and woolly rose-mallow plants identified during rare-plant surveys would be marked or fenced off as an avoided area during construction if they occur outside of the construction footprint. A qualified biologist would establish a buffer of at least 25 feet around the

plants. If a buffer of 25 feet is not possible, the next maximum possible distance would be fenced off as a buffer.

- If Sanford's arrowhead, bristly-sedge, or woolly-rose mallow are located within the construction footprint and cannot be avoided during construction, the botanist shall establish distribution of the individuals in the population. A detailed relocation and mitigation/conservation plan that includes long-term strategies for the conservation of the species should be developed in coordination with CDFW upon confirming the presence of this species in the Project Area.
- If operations and maintenance activities are to occur near plants, a qualified biologist would mark their location with pin flags. The qualified biologist would instruct all personnel conducting the O&M activities regarding the location, appearance, and extent of these plants and the importance of avoiding impacts on this species.
- Herbicides would not be used within 3 meters (10 feet) of a known Sanford's arrowhead plant and a potentially occurring Sanford's arrowhead, bristly-sedge, or woolly rose-mallow plant. All chemicals would be applied using a backpack sprayer or similar direct application method.

Mitigation Measure FISH-3: Implement Measures to Avoid and Minimize Effects on Listed Fish Species. To avoid and minimize effects on listed fish species, the following measures would be implemented: In-water construction activities (e.g., placement of rock revetment) would be limited to the work window of July 1 through October 31. If the Project Partners need to work outside of this window, it would consult with USFWS and NMFS.

- Erosion control measures (BMPs) would be implemented, including a Storm Water Pollution Prevention Plan and Water Pollution Control Plan, to minimize the entry of soil or sediment into the American River. BMPs would be installed, monitored for effectiveness, and maintained throughout construction operations to minimize effects on Federally listed fish and their designated critical habitat. Maintenance would include daily inspections of all heavy equipment for leaks.
- The Project Partners would participate in an existing Interagency Working Group or work with other agencies to participate in a new Bank Protection Working Group to coordinate stakeholder input into future flood risk reduction actions associated with the ARCF 2016 Project, American River Contract 3A.
- The Project Partners would coordinate with NMFS during pre-construction engineering and design as future flood risk reduction actions are designed to ensure that conservation measures are incorporated to the extent practicable and feasible and projects are designed to maximize ecological benefits.

- The Project Partners would include a Riparian Corridor Improvement Plan as part of the Project, with the overall goal of maximizing the ecological function and value of the existing levee system in the Sacramento metropolitan area.
- The Project Partners would implement an ARCF GRR Habitat Mitigation Monitoring and Adaptive Management Plan (HMMAMP) with an overall goal of ensuring that the conservation measures achieve a high level of ecological function and value. In addition, per the NMFS 2021 BO, a site specific long term management plan (LTMP) and an overarching habitat management plan (HMP) that outlines O&M requirements will be prepared as a complimentary supplemental document to the HMMAMP (See FISH-4 below for additional details). The HMMAMP would include:
 - Specific goals and objectives and a clear strategy for maintaining all project conservation elements for the life of the Project.
 - Measures to be monitored by the Project Partners for 10 years after construction. The Project Partners would update its O&M manual to ensure that the HMMAMP is adopted by the local sponsor to ensure that the goals and objectives of the conservation measures are met for the life of the Project.
 - Specific goals and objectives and a clear strategy for achieving full compensation for all Project-related impacts on listed fish species.
- The Project Partners would continue to coordinate with NMFS during all phases of construction, implementation, and monitoring by hosting annual meetings and issuing annual reports throughout the construction period as described in the HMMAMP.
- The Project Partners would seek to avoid and minimize adverse construction effects on listed species and their critical habitat to the extent feasible and would implement on-site and off-site compensation actions as necessary.
- For identified designated critical habitat, where feasible all efforts will be made to compensate for impacts as close as possible to the place of occurrence. The SAM has been used throughout the Sacramento River basin and Delta flood control system to inform impacts to designated critical habitat, SRA, and instream components. Estimates of suitable habitat will be verified in the field by the Project Partners prior to initiating proposed actions to determine the extent of suitable habitat present NMFS. The Project Partners would develop and implement a compensatory mitigation accounting plan to ensure the tracking of compensatory measures associated with implementation of the Proposed Action. The Project Partners would continue to coordinate with NMFS after construction during the monitoring periods for habitat establishment via written monitoring reports, electronically, and through site visits as requested. The Project Partners would minimize the removal of existing riparian vegetation and IWM to the maximum extent practicable.

Where appropriate, removed IWM would be anchored back into place, or if not feasible, new IWM would be anchored in place.

- The Project Partners would ensure that the planting of native vegetation would occur as described in the HMMAMP. All plantings must be provided with the appropriate amount of water to ensure successful establishment.
- The Project Partners would provide a copy of the BO, or similar documentation, to the prime contractor, making the prime contractor responsible for implementing all requirements and obligations included in the documents and for educating and informing all other contractors involved in the Project as to the requirements of the BO.
- A NMFS-approved Worker Environmental Awareness Training Program for construction personnel would be conducted by the NMFS-approved biologist for all construction workers before the start of construction activities. Written documentation of the training would be submitted to NMFS within 30 days of the completion of training.
- The Project Partners would consider installing IWM of at least 40 percent shoreline coverage at all seasonal water surface elevations in coordination with the Interagency Working Group or the Bank Protection Working Group. The purpose is to maximize the refugia and rearing habitats for juvenile fish.
- The Project Partners would consider varying the elevation of planting benches and IWM to accommodate a wide variety of water years and ensure there is ample shoreline habitat in different flow scenarios.
- The Project Partners would monitor turbidity during in-water work activities to ensure levels stay below the allowable thresholds (turbidity measured 1,000 feet downstream of the extent of the site is not to exceed double the upstream of site turbidity measurement).
- Screen any water pump intakes, as specified by the 2011 NMFS screening specifications.⁸⁰ Water pumps would maintain an approach velocity of 0.2 feet per second or less. Screen openings would be for a perforated plate: circular or square openings shall not exceed 3/32 inch (2.38 millimeters [mm]), measured on a side, and slotted or rectangular screen face openings must not exceed 1.75 mm (approximately 1/16 inch) in the narrow direction. Screen material shall provide a minimum of 27 percent open area.

Mitigation Measure FISH-4: Implement Measures to Avoid and Minimize Effects on Listed Fish Species. In 2015, NMFS issued a Biological Opinion (BO) for the ARCF GRR consultation for levee improvements and bank protection, including bank protection along the lower American River. In 2020, the *NMFS Biological Assessment for the American River Common Features*

⁸⁰ National Marine Fisheries Service. 2011. Anadromous Salmonid Passage Facility Design. NMFS, Northwest Region, Portland, OR. Available: https://www.dfw.state.or.us/fish/passag/docs/fish_passage_design_criteria.pdf.

WRDA 2016 Project (2020 NMFS BA) was prepared to reinitiate consultation with NMFS to provide new information related to site-specific details for the Proposed Action and in 2021 a new BO was issued.⁸¹ The 2021 NMFS BO evaluated impacts to Sacramento River winter-run and Central Valley spring-run Chinook salmon, California Central Valley steelhead, and green sturgeon, as well as their critical habitat. The BO evaluated potential impacts based on rough estimates and preliminary designs for the proposed Project. To avoid and minimize effects on listed fish species, the following measures from the 2021 NMFS BO would be implemented:

- The Project Partners would provide NMFS with a site-specific project description prior to advertising for construction contracts of any sites. The project description would include a design at or beyond the 65% level, anticipated impacts, and proposed mitigation ratios for the site. NMFS would provide written approval that the site is consistent with this opinion prior to construction, NMFS would respond within 14 days of receiving site-specific documents.
- The Project Partners would provide to NMFS (at the address below) a vegetation monitoring report at years 1, 2, 3, 5, and 8 post-construction no later than December 31st of each reporting cycle. This report would provide information as to the success of the revegetation program and whether the conservation goals are being met at each site. If goals are not being met, then the report would indicate what actions are being implemented to meet those goals.
- The Project Partners would submit a report to NMFS of any incidental take that occurs as part of the Project. This report would be submitted no later than December 31 of each reporting cycle.
- The Project Partners would ensure that the NMFS Central Valley Office is involved with the discussions, development, and tracking of the SAM model development.
- The Project Partners would provide NMFS a detailed O&M plan for all aspects of the proposed action, to ensure all sites are properly managed and the Design Deviation allowing vegetation to remain is followed. This plan would be incorporated into the O&M manual.
- The Project Partners would provide NMFS a LTMP outlining the maintenance of all on-site and off-site mitigation. The plan would include performance goals, monitoring plans, replanting plans, and an adaptive management plan for how mitigation will be addressed if the mitigation site fails.

⁸¹ National Marine Fisheries Service. 2021. Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the American River Common Features General Reevaluation Report Reinitiation. May 12, 2021.

Mitigation Measure SRA-1: Implement Measures to Avoid, Minimize, and Compensate for Effects on Shaded Riverine Aquatic Habitat. The Project Partners would implement the following avoidance, minimization, and compensation measures:

- For identified designated critical habitat of listed fish species, where feasible, all efforts would be made to compensate for impacts where they have occurred, or elsewhere in the American River Parkway. Impacts on designated critical habitat, SRA habitat, and instream components combined and the compensation value of replacement habitat would be informed by a qualitative assessment of habitat value from the SAM model used throughout the Sacramento River basin and Sacramento–San Joaquin Delta flood control system. Amount of mitigation would be assessed using the slope-area method combined with the qualitative assessment.
- The Project Partners would incorporate compensation for SRA habitat losses by constructing off-site compensation sites, such as Arden Pond and others and if needed, purchasing additional credits at a NMFS-approved conservation bank, where appropriate, or by implementing a combination of the two. The Project Partners would compensate for lost habitat using NMFS-approved mitigation actions as approved in the 2021 NMFS BO. Off-site mitigation in the Lower American River would benefit fall-run Chinook, late fall-run Chinook and steelhead. Riparian plantings will be installed onsite on planting benches where feasible in NMFS approved mitigation sites. If the Project Partners find that onsite and offsite permittee responsible mitigation and mitigation bank opportunities have been exhausted, they will approach the resource agencies regarding the potential use of in-lieu fees for remaining mitigation needs.
- Compensation sites would be monitored, and vegetation would be replaced as necessary based on performance standards in the ARCF GRR HMMAMP and according to the conditions in the NMFS 2021 BO.

Summary

The mitigation measures in the ARCF GRR FEIS/FEIR, as modified above, would reduce the impacts on special-status species addressed in that document to a less-than-significant level. The ARCF GRR FEIS/FEIR did not consider impacts on special-status bats, American badger, or the Crotch bumble bee and, therefore, there would be a residual significant impact. Implementation of the following new Mitigation Measures BATS-1, BADGER-1, and BEE-1 would reduce impacts from the Proposed Action on special-status bats, American badger, and the Crotch bumble bee, respectively, to a less-than-significant level.

Additional Mitigation Measures

Implementation of the following additional Mitigation Measures BATS-1 and BADGER-1 not provided for in the ARCF GRR FEIS/FEIR would reduce impacts on special-status bats and American badger, respectively, to a less-than-significant level.

Mitigation Measure BATS-1: Implement Measures to Protect Maternity Roosts of Special-Status Bats. The ARCF GRR FEIS/FEIR does not identify a significant impact associated with special-status bats. Therefore, the following is a new mitigation measure. The Project Partners would implement the following measures to avoid and minimize effects on special-status bats, including pallid bat and western red bat:

- When possible, removal of trees identified as providing suitable roosting habitat should be conducted during seasonal periods of bat activity, including:
 - Between March 1 and April 15, and after evening temperatures rise above 45 degrees Fahrenheit and/or no more than ½ inch of rainfall within 24 hours occurs; or
 - Between September 1 and about October 15, and before evening temperatures fall below 45 degrees Fahrenheit and/or more than ½ inch of rainfall within 24 hours occurs.
- If removal of trees must occur during the bat pupping season (typically April-July), within 30 days of tree removal activities, all trees to be removed shall be surveyed by a qualified biologist for the presence of features that may function as special status bat maternity roosting habitat. Trees that do not contain potential special status maternity roosting habitat may be removed. For trees that contain suitable special status bat maternity roosting habitat, surveys for active maternity roosts shall be conducted by a qualified biologist in trees designated for removal. The surveys shall be conducted from dusk until dark.
- If a special-status bat maternity roost is located, appropriate buffers around the roost sites shall be determined by a qualified biologist and implemented to avoid destruction or abandonment of the roost resulting from tree removal or other Project activities. The size of the buffer shall depend on the species, roost location, and specific construction activities to be performed in the vicinity. High-visibility construction fencing would be installed around the buffer and would remain in place until the tree is no longer occupied by bats. No Project activity shall commence within the buffer areas until the end of the pupping season (September 1) or until a qualified biologist confirms the maternity roost is no longer active. If construction activities must occur within the avoidance buffer, then the activities would be monitored by a qualified biologist either continuously or periodically during work, as determined by the qualified biologist. The qualified biologist would be empowered to stop activities that, in the biologist's opinion, threaten to cause unanticipated and/or unpermitted adverse effects on special-status bats. If construction activities are stopped, the biological monitor would inform the Project Partners, and CDFW would be consulted to determine appropriate measures to minimize adverse effects.

- All trees designated for removal would be surveyed by a qualified biologist to identify features that provide habitat for roosting bats., such as cracks, crevices, or bark fissures for trees containing suitable bat roosting habitat that are planned for removal or trimming (irrespective of the time of year). Live trees that are indicated to contain roosting habitat trees should be removed in a two-phase removal system conducted over two consecutive days. The first day, under supervision of the biological monitor, limbs and branches would be removed. Removal activities on the first day should avoid limbs with bat habitat features for roosting bats and remove only branches or limbs without those features. On the second day, the entire tree would be removed and gently lowered to the ground. Tree material removed on the second day should be left undisturbed for the next 48-hours, as feasible. If it is not feasible to remove a tree using the two-phased approach, limbs containing habitat features should be removed and left undisturbed near the felled tree for 48-hours. A qualified biologist would monitor removal of these trees. If tree trimming results in the removal of vegetation that contains potential bat habitat, vegetation should be gently lowered to the ground and left near the tree for 48-hours prior to removal, as feasible.
- A qualified biologist would conduct a pre-construction emergence survey for special-status bats within 14 days before the start of work within 250 feet of the railroad and Interstate 80 Bridges. The survey would be conducted 1 hour before dusk to 1 hour after dusk to identify whether special-status bats are occupying the bridges as day roosts. If special-status bats are found roosting beneath any of these bridges and work would occur within 250 feet of the roost, a qualified biologist will monitor the bats and establish appropriate buffers if needed. If maternity roosts are found, they would be avoided by at least 250 feet until the offspring have fledged. If avoidance is not feasible, additional mitigation would be developed in consultation with CDFW.

Mitigation Measure BADGER-1: Implement Measures to Avoid and Minimize Effects on American Badger. The ARCF GRR FEIS/FEIR did not identify a significant impact on American badger. Therefore, the following is a new mitigation measure. The Project Partners would implement the following measures to avoid and minimize effects on American badger.

- The Project Partners would conduct pre-construction clearance surveys for American badgers. These surveys would be conducted within 14 days of the start of any ground-disturbing activity. If no potential American badger dens are present, no further mitigation is necessary.
- If a potential American badger den is discovered but deemed inactive, the qualified biologist would excavate the den during the initial clearance survey to prevent badgers from reoccupying the den during the construction period.
- If found to be present, occupied badger dens would be flagged and ground-disturbing activities would be avoided within 50 feet of an occupied den.

Maternity dens would be avoided during pup-rearing season (February 15 through July 1) and a minimum 200-foot buffer would be established.

- If avoidance of a non-maternity den is not feasible, badgers would be relocated by carefully evacuating the burrow (either by hand or using mechanized equipment, under the direct supervision of a qualified biologist) before or after the rearing season (February 15 through July 1). Any relocation of badgers would occur only after consultation with CDFW.

Mitigation Measure BEE-1: Implement Measures to Avoid and Minimize Effects on Crotch Bumble Bee. To avoid and minimize effects on Crotch bumble bee, the Project Partners would implement the following measure:

- Before construction activities, a qualified biologist would conduct a pre-construction survey, during the flight period for worker and male bees late March through September, within the construction disturbance area for active Crotch bumble bee nests. If an active bumble bee nest is located, recommendations for avoiding or minimizing disturbance of the colony would be developed (e.g., establishing a buffer surrounding entry/exits and avoiding direct disturbance). During rodent abatement efforts, no fumigation, use of treated bait, or other means of poisoning nuisance animals would occur within 100 feet of areas where Crotch bumble bees are known to occur (e.g., burrows with observed nesting bees).

3.7 Cultural Resources

3.7.1 Environmental Setting

3.7.1.1 Regulatory Setting

The regulatory setting in the ARCF GRR FEIS/FEIR (page 195) is generally applicable to the analysis in this Supplemental EIR and is not repeated here.

3.7.1.2 Existing Conditions

The area within which cultural resources are identified and within which potential effects to historic properties are analyzed is called the Area of Potential Effects (APE). The APE for the Proposed Action includes the project footprint (the area where any ground-disturbance would occur), such as bank excavation, riprap placement, and staging areas. These areas are described in detail in Chapter 2, *Alternatives*. The APE includes the area within which built-environment resources could be affected physically, including through vibration. No permanent substantial visual or auditory changes would occur as a result of implementation of the Proposed Action; therefore, no area of indirect effect (the area in which changes in the visual or auditory setting may occur) has been identified. The vertical extent of the project APE is variable but would have a maximum depth of up to approximately 18 feet below ground surface for bank excavation and placement of buried rock.

The APE for the Proposed Action may contain Native American human interments and artifacts of past human activity ranging from Native American sites to flood control structures. USACE has consulted with the State Historic Preservation Officer (SHPO) and other parties regarding the APE and executed a Programmatic Agreement (PA) to guide compliance with Section 106 of the National Historic Preservation Act (NHPA). USACE uses effects determinations arrived at through Section 106 compliance to assess effects to cultural resources under NEPA and to mitigate for adverse effects under both laws.

The PA, titled *Programmatic Agreement Among the U.S. Army Corps of Engineers and the California State Historic Preservation Officer Regarding the American River Common Features Project, Sacramento and Yolo Counties, California*, and executed on September 10, 2015, establishes the process USACE will follow to comply with Section 106 of the NHPA, taking into consideration the views of the signatory and concurring parties and interested Native American Tribes. The PA stipulates time frames and document review procedures; delineation of project APEs; development of a Historic Properties Management Plan (HPMP) to guide identification, evaluation, and findings of effect; Historic Property Treatment Plans (HPTs) to identify treatment for historic properties that would be adversely affected; a process to guide limited geotechnical investigations; Native American consultation procedures; and other processes and implementation procedures. The Project HPMP was completed in June 2017. The term “historic property” refers to any cultural resource that has been found eligible for listing, or is listed, in the National Register of Historic Places (NRHP).

Native American Consultation

USACE is the lead Federal agency responsible for compliance with Section 106 of the NHPA and has conducted consultations with Native American Tribes and interested parties according to the PA. Several Native American Tribes and interested parties were contacted while developing the PA and provided with general information about the ARCF 2016 Project. Consultations specifically related to the Proposed Action are a continuation of the ongoing process. All Native American Tribes identified in the PA have been contacted and provided a description of the Proposed Action and requested to provide information on resources important to Native Americans. Consultation with Native American Tribes is ongoing.

The CVFPB is the State lead agency responsible for CEQA compliance. The California Natural Resources Agency adopted the California Natural Resource Agency Final Tribal Coordination Policy on November 20, 2012, which was developed in response to Governor Brown’s September 19, 2011 Executive Order B-10-11. The CVFPB has adopted this Policy. Accordingly, Native American consultation for CEQA compliance will be conducted in accordance with the Policy adopted by the CVFPB. The purpose of the Policy is to ensure effective, meaningful, and mutually beneficial government-to-government consultation, communication, and coordination between the CVFPB and tribal entities relative to activities under the CVFPB’s jurisdiction that may affect tribal communities. USACE and the CVFPB has contacted Native American contacts identified by the California Native American Heritage Commission (NAHC) in an effort to identify

cultural resources important to Native Americans, including Tribal Cultural Resources (TCRs) as defined in California Public Resources Code Section 21074, that may be present in the project area.

Identification of Potential Historic Properties

Records searches conducted at the North Central Information Center (NCIC) on October 21, 2019, and the Northwest Information Center (NWIC) on November 2021, identified one recorded potential Historic Property within the Proposed Action APE: P-34-005121, American River Railroad Bridge, a 1910 stationary truss railroad bridge associated with the Central Pacific Railroad.

Letters describing the Proposed Action APE were mailed to potentially interested Native American Tribes on October 8, 2019 by USACE. Responses were received from the Shingle Springs Band of Miwok Indians, Wilton Rancheria, and the United Auburn Indian Community (UAIC) requesting additional information and to consult on the project. Consultation is ongoing; at this time, no specific information has been received regarding potential historic properties, defined according to NHPA, or Native American-identified TCRs, defined according to State law.

The Proposed Action APE was surveyed on November 15, 2021, by professional archaeologists meeting the Secretary of the Interior (SOI) requirements joined by UAIC representatives. These surveys were conducted using intensive standards (transects spaced no more than 15 meters apart). A Trimble 7 Series GPS unit capable of sub-meter accuracy was carried to record the location of any identified resources. Hard copy maps were used to ensure adequate coverage of the APE. No cultural resources were identified.

Much of the Proposed Action APE is covered in pavement, structures, levees, landscaped, or consists of very steep terrain and is heavily vegetated. No archaeological resources were identified during the pedestrian survey. As noted above, one cultural resource was identified in the Proposed Action APE.

Based on the record search, background research, pedestrian survey, and consultation with interested Native American Tribes, USACE has found that the Proposed Action would result in No Adverse Effect to historic properties.

3.7.2 Methodology and Basis of Significance

3.7.2.1 Methodology

For those resources recommended to be eligible for listing in the NRHP/California Register of Historical Resources (CRHR), analysis of the effects or likely effects was based on evaluation of the changes to the existing historic properties that would result from implementing the Proposed Action. In making a determination of the effects on Historic Properties, consideration was given to:

- Specific changes in the characteristics of Historic Properties in the APE;

- The temporary or permanent nature of changes to Historic Properties and the visual area around the Historic Properties; and
- The existing integrity considerations of Historic Properties in the APE and how the integrity was related to the specific criterion (or criteria) that makes a Historic Property eligible for listing in the NRHP.

An assessment of effects for the purposes of this Supplemental EIR and a determination of effect under Section 106 of the NHPA is made only for those resources determined to be eligible for listing in the NRHP. Resources that have been found or recommended to be ineligible for listing in the NRHP are not considered further in this Supplemental EIR. Similarly, because isolated artifacts are generally not considered to be potentially eligible for listing in the NRHP and because an assessment of effects for the purposes of this Supplemental EIR and a determination of effects under Section 106 of the NHPA is made only for those resources determined to be eligible for listing in the NRHP or that are listed in the NRHP, isolated artifacts are not considered to be Historic Properties and an assessment of effects on those resources is not necessary. Therefore, isolated artifacts are not considered further in this Supplemental EIR.

This evaluation of potential effects on cultural resources is based on detailed information compiled since the ARCF GRR FEIS/FEIR was prepared, as described above under “Existing Conditions.” The effects analysis considered the following factors related to the Proposed Action: project elements, including erosion counter measures, staging areas, potential effect mechanisms; the area that would be temporarily and permanently disturbed; known or potential locations of cultural resources, including locations identified by Native Americans as cultural landscapes, traditional cultural properties, sacred sites or other sensitive resources. In particular, the significance of each effect was evaluated in terms of its potential effect on resources that are eligible or potentially eligible for listing in the NRHP/CRHR. The mitigation identified in the ARCF GRR FEIS/FEIR for potential impacts on cultural resources included implementing stipulations of the ARCF PA.

USACE has not concluded determinations of NRHP eligibility for components of the Proposed Action based on consultation with SHPO and other ARCF PA Parties and, therefore, the impact analysis presented in this document does not reflect consensus findings under Section 106 of the NHPA as implemented through the ARCF PA. In accordance with the ARCF PA, confirmation of NRHP eligibility and findings of effect and appropriate mitigation would be made through consultation between USACE, SHPO, and other ARCF PA Parties as appropriate prior to initiating construction of the Proposed Action.

3.7.2.2 Basis of Significance

The following analysis uses the same basis of significance described in Section 3.9 (page 195) of the ARCF GRR FEIS/FEIR. Any adverse effects on cultural resources listed or eligible for listing in the NRHP (i.e., historic properties) are considered

significant. 36 CFR 800.5(a)(1) provides criteria for assessing an adverse effect. Effects are considered to be adverse under Section 106 of the NHPA if they:

- Alter, directly or indirectly, any of the characteristics of a cultural resource that qualify that resource for the NRHP so that the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association is diminished.
- Cause a substantial adverse change in the significance of a historic property through the physical demolition, destruction, relocation, or alteration of the historic property or of its immediate surroundings such that the significance of the resource would be materially impaired.

Under California law (i.e., CEQA), effects on a historic resource or unique archaeological resource are considered to be adverse if they:

- Materially impair the significance of a historic resource or unique archaeological resource.
- Require the demolition of a historic resource.

Two additional significance thresholds not included in the 2016 ARCF GRR FEIS/FEIR are considered in this analysis. The project would be determined to result in a potentially significant effect if it would:

- Disturb any Native American human remains, including those interred outside of formal cemeteries; or
- Result in a substantial adverse change in the significance of a Tribal Cultural Resource (as defined in California Public Resources Code [PRC] Section 21074 and above) when compared against existing conditions.

3.7.3 Impact Analysis

3.7.3.1 No Action/No Project Alternative

Under the No-Action Alternative, USACE would not construct the proposed erosion protection measures. As a result, if a flood event were to occur, the Sacramento area would remain at the same level of risk of a possible levee failure due to erosion as today. Continued severe erosion has the potential to destroy buried cultural resources or to expose them to the surface, increasing the possibility of damage from both natural forces and man-made impacts.

Potential levee failure and the resulting major flooding event could alter existing conditions by burying, destroying, or revealing cultural resources. Failure of the levee and subsequent flooding would trigger post-failure emergency repairs. Flooding could result in significant damage to cultural resources in a large geographic area through erosion and inundation. The required post-failure emergency repairs could have a large footprint, and the urgent need to immediately repair the levee would preclude proper

planning and environmental protection. These effects on cultural resources would be significant. However, the timing, duration, and magnitude of such a flood is unpredictable, and therefore a precise determination of significance is not possible.

3.7.3.2 Proposed Action

Erosion protection measures would include substantial ground disturbance, including bank excavation and riprap placement, and use of staging areas. These earthmoving activities could result in damage to or destruction of unknown or subsurface historic-period sites, prehistoric-period archaeological sites, and Native American-identified TCRs.

One potential historic property is located within the Proposed Action APE: P-34-005121, American River Railroad Bridge, a 1910 stationary truss railroad bridge associated with the Central Pacific Railroad. In accordance with the ARCF PA, confirmation of NRHP eligibility and findings of effect and appropriate mitigation would be made through consultation between USACE, SHPO, and other ARCF PA Parties as appropriate prior to initiating construction of the Proposed Action.

Unknown archaeological resources and TCRs also could be discovered and inadvertently damaged during project construction.

Implementing Mitigation Measures CR-1, CR-2, CR-3, CR-4, and CR-5 described below would reduce the potential impact related to inadvertent damage to or destruction of presently undocumented archaeological resources and TCRs to a less-than-significant level under CEQA because the measures would require that if archaeological resources or TCRs are discovered prior to or during project-related construction, appropriate treatment and protection measures must be implemented.

Although no Native American human remains have been discovered in or near the APE, they could be encountered during earthmoving activities associated with the project. This potential impact related to inadvertent damage to or destruction of presently undocumented human remains would be significant. Implementing the new mitigation measure (Mitigation Measure CR-6) described below would reduce the impact to a less-than-significant level because it requires disturbances in the area of a find must be halted and appropriate treatment and protection measures must be implemented. All of this measure must be done in consultation with the NAHC, Most Likely Descendant (MLD), and landowners, in compliance with California Health and Safety Code Section 7050 et seq. and PRC Section 5097.9 et seq.

Avoidance, Minimization, and Mitigation Measures

The following mitigation measures augment the mitigation identified in the ARCF GRR FEIS/FEIR, including actions to address TCRs under CEQA and specifically address discovery of archaeological resources and human remains. If the project is implemented, USACE and the CVFPB would implement the measures as described.

Mitigation Measure CR-1: Resolve Adverse Effects through a Programmatic Agreement and Historic Properties Treatment Plan. A Programmatic Agreement has been executed for the ARCF Project. A Historic Properties Treatment Plan (HPTP) would be developed if the proposed action is found to result in adverse effects.

Mitigation Measure CR-2: Prepare an Archaeological Discovery Plan and an Archaeological Monitoring Plan. In accordance with the procedures described in Section 9.2 of the ARCF HPMP, an archaeological discovery plan would be developed for the Proposed Action. The discovery plan would specify what actions must be taken by the contractor in the event of an archaeological discovery and describe what actions USACE may take in the event of a discovery.

In accordance with the procedures described in Section 9.3.9 of the ARCF HPMP, an archaeological monitoring plan would be developed for the Proposed Action. This plan would identify the locations of known Historic Properties as well as sensitive areas designated for archaeological monitoring, and would include methods and procedures for monitoring and the procedures to be followed in the event of a discovery of archaeological materials.

Mitigation Measure CR-3: Conduct Cultural Resources Awareness Training. In accordance with the procedures described in Section 9.1 of the ARCF HPMP, USACE would require the contractor to provide a cultural resources and TCRs sensitivity and awareness training program for all personnel involved in project construction, including field consultants and construction workers. The training would be developed in coordination with and delivered by an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology, as well as culturally affiliated Native American tribes. USACE may invite Native American representatives from interested culturally affiliated Native American tribes to participate.

Mitigation Measure CR-4: Implement Procedures for Discovery of Cultural Material. If the discovery of cultural materials (e.g., unusual amounts of shell, animal bone, any human remains, bottle glass, ceramics, building remains), TCRs, sacred sites, or landscapes is made at any time during project-related construction activities, USACE in consultation with the CVFPB and other interested parties would develop appropriate protection and avoidance measures where feasible. These procedures would be developed in accordance with the ARCF PA and ARCF HPMP, which specifies procedures for post-review discoveries. Additional measures, such as development of HPTPs prepared in accordance with the PA and HPMP, may be necessary if avoidance or protection is not possible.

Mitigation Measure CR-5: Evaluate Any Tribal Cultural Resources Discovered and Implement Avoidance and Minimization Measures to Avoid Significant Adverse Effects. California Native American Tribes have expertise regarding TCRs (PRC Section 21080.3.1). Consistent with the California Natural Resources Agency Tribal Consultation Policy, culturally affiliated Tribes would

be consulted concerning TCRs that may be affected, if these types of resources are discovered before or during construction. Consultation with culturally affiliated Tribes would focus on identifying measures to avoid or minimize impacts on any such resources discovered during construction. If TCRs are identified in the APE before or during construction, the following performance standards would be met before any further construction and associated activities that may result in damage to or destruction of TCRs:

- Each identified TCR would be evaluated for CRHR eligibility through application of established eligibility criteria (14 CCR 15064.636), in consultation with interested Native American Tribes.
- If a TCR is determined to be eligible for listing in the CRHR, USACE, in consultation with the CVFPB, would avoid damaging the Tribal Cultural Resource in accordance with PRC Section 21084.3, if feasible. If the CVFPB determines that the project may cause a substantial adverse change to a TCR, and measures are not otherwise identified in the consultation process, the following are examples of mitigation steps or alternatives capable of avoiding or substantially lessening potential significant impacts on a TCR:
 - i. Avoid and preserve resources in place, including, but not limited to, planning construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 - ii. Treat the resource with culturally appropriate dignity, taking into account the Tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - a. Protect the cultural character and integrity of the resource.
 - b. Protect the traditional use of the resource.
 - c. Protect the confidentiality of the resource.
 - d. Establish permanent conservation easements or other interests in real estate, with culturally appropriate management criteria for the purposes of preserving or using the resources or places.
 - e. Protect the resource.

Mitigation Measure CR-6: Implement Procedures for Discovery of Human Remains. The roles and responsibilities of USACE during the response to the discovery of human remains are outlined in the HPMP. To minimize adverse effects from encountering human remains during construction, the Project Partners would implement the following measures:

- In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, the CVFPB would consult

with USACE, and USACE would immediately halt potentially damaging excavation in the area of the burial and notify the Sacramento County Coroner and a professional archaeologist to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (California Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making that determination (California Health and Safety Code Section 7050.5[c]). After the coroner's findings have been made, the archaeologist and the NAHC-designated MLD, in consultation with the landowner, would determine the ultimate treatment and disposition of the remains.

- Upon the discovery of Native American human remains, USACE, in coordination with the CVFPB, would require that all construction work must stop within 100 feet of the discovery until consultation with the MLD has taken place. The CVFPB would lead consultation with the MLD, in coordination with USACE. The MLD would have 48 hours to complete a site inspection and make recommendations to the landowner after being granted access to the site. A range of possible treatments for the remains, including nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendants, or other culturally appropriate treatment may be discussed. PRC Section 5097.98(b)(2) suggests that the concerned parties may mutually agree to extend discussions beyond the initial 48 hours to allow for the discovery of additional remains. The following is a list of site protection measures that the CVFPB would employ:
 - Record the site with the NAHC or the appropriate Information Center.
 - Record a document with the county in which the property is located.
 - Rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. Reburial of the remains would be completed by the CVFPB or its authorized representative. If the NAHC is unable to identify an MLD, or if the MLD fails to make a recommendation within 48 hours after being granted access to the site, the CVFPB or its authorized representative may reinter the remains in a location not subject to further disturbance. If the CVFPB rejects the recommendation of the MLD and mediation by the NAHC fails to provide measures acceptable to the CVFPB, the CVFPB would implement mitigation to protect the burial remains. Construction work in the vicinity of the burials would not resume until the mitigation is completed.

Summary

The ARCF GRR FEIS/FEIR concluded that mitigation measures would reduce potential impacts of the project on cultural resources to a less-than-significant level as any adverse

effects would be resolved by implementing requirements contained in the PA. The ARCF GRR FEIS/FEIR also concluded that under CEQA the impacts of project construction on historic and unique archaeological resources would be significant and unavoidable. With implementation of new Mitigation Measures CR-1, CR-2, CR-3, CR-4, CR-5, and CR-6, the Proposed Action would have a less-than-significant impact with mitigation under CEQA.

3.8 Transportation and Circulation

3.8.1 Environmental Setting

3.8.1.1 Regulatory Setting

Section 3.10 (page 219) of the ARCF GRR FEIS/FEIR identified Federal, State, and local regulations that apply to transportation and circulation. Chapter 5 of the ARCF GRR FEIS/FEIR summarized the environmental laws and regulations and described the status of compliance with those laws and regulations. There are no additional laws or regulations applicable to transportation and circulation that have gone into effect since certification of the ARCF GRR FEIS/FEIR.

3.8.1.2 Existing Conditions

Section 3.10 of the ARCF GRR FEIS/FEIR (pages 220 through 224) describes the regional and local setting for the ARCF GRR Project, including the setting for the Proposed Action and vicinity. The following provides additional information specific to the Project Area.

The Project Area would be accessed from the State highway system from U.S. 50 and Business 80/Capital City Freeway. The nearest highway interchanges to the Project Area include the following:

- U.S. 50 and Howe Avenue
- Business 80/Capital City Freeway and Exposition Boulevard

In addition to the major arterial roadways used to access the Project Area described in the ARCF GRR FEIS/FEIR, including Howe Avenue, Arden Way, and Fair Oaks Boulevard, construction of the facilities planned under the Proposed Action would also require use of Exposition Boulevard, Ethan Way, and Hurley Way for construction traffic.

In addition, the Proposed Action would require use of minor arterial and collector roadways. In East Sacramento, H and J Streets would provide access to and from Site 1-1 from Howe Avenue.

3.8.1.3 Methodology

This analysis generally uses the same methodology described in Section 3.10.2 (page 224) of the ARCF GRR FEIS/FEIR. The methodology anticipated that the levee

improvements along the American River, including the Project Area, would generate intermittent substantial volumes of construction traffic, due to earthwork and delivery of materials. Operation of the Proposed Action would generate traffic volumes for maintenance activity that would be similar to traffic volumes for maintenance generated under existing conditions.

3.8.1.4 Basis of Significance

This analysis uses the same basis of significance described in Section 3.10.2 (page 224) of the ARCF GRR FEIS/FEIR, as stated below.

The Proposed Action would result in a significant effect related to transportation and circulation if it would:

- Substantially increase traffic in relation to existing traffic load and capacity of the roadway system;
- Substantially disrupt the flow of traffic;
- Expose people to significant public safety hazards resulting from construction activities on or near the public road system;
- Reduce the supply of parking spaces sufficiently to increase demand above supply;
- Cause substantial deterioration of the physical condition of nearby roadways;
- Result in inadequate emergency access; or
- Disrupt railroad services for a significant amount of time.

Since publication of the ARCF GRR FEIS/FEIR, changes to Appendix G of the State CEQA Guidelines were adopted. As a result, this analysis also takes into consideration the following modified significance criteria:

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

3.8.2 Impact Analysis

3.8.2.1 No Action/No Project Alternative

Under the No Action/No Project Alternative, the Proposed Action would not be implemented, and the Sacramento metropolitan area would experience no change in the present level of risk of flooding due to levee failure from seepage, slope stability, overtopping, or other erosion concerns.

Under these conditions, a flood event could cause portions of the levees to fail, possibly triggering widespread flooding and related damage. If a catastrophic flood were to occur, emergency flood fighting and clean-up efforts would be initiated, probably requiring mobilization of a large number of emergency vehicles and construction equipment. In addition, under the No Action/No Project alternative, if a flood event were to occur, roadways and railroads could be inundated with floodwaters, causing disruptions in traffic and deterioration of roadway conditions. These effects on transportation would be considered significant; however, the timing, duration, and magnitude of a flood event is unpredictable and precise significance determination cannot be made.

3.8.2.2 Proposed Action

Traffic Load and Capacity

Section 3.10 (pages 224 through 229) of the ARCF GRR FEIS/FEIR analyzed the impacts on transportation and circulation associated with construction of levee improvements throughout the Sacramento area, including the Project Area that encompasses Site 1-1. The ARCF GRR FEIS/FEIR described that implementation of the proposed levee improvements would require moving construction equipment and materials along highways and local roads such as Howe Avenue, Arden Way, and Fair Oaks Boulevard, as well as local minor arterial streets to access the construction sites. The ARCF GRR FEIS/FEIR transportation and circulation impact analysis identified that construction of proposed levee improvements and related mitigation activities would intermittently generate substantial volumes of traffic due to the earthwork involved and the need for materials deliveries and would result in significant temporary and short-term impacts.

In addition, construction of levee improvements and related mitigation activities in performance of the Proposed Action would require trucks to enter the American River Parkway and Sutter's Landing Regional Park, and the increased traffic in the Parkway, Sutter's Landing Regional Park, and Glenn Hall Park would result in significant temporary impacts to recreational users, bicycle commuters, commuters, and residents adjacent to the levee structure. Construction-related traffic on residential roads to access the Parkway would result in significant temporary and short-term impacts to residents along the selected routes. The following discussion provides additional details on transportation and circulation effects of the Proposed Action that were not available when the ARCF GRR FEIS/FEIR was prepared.

Site Preparation and Mobilization

Site preparation would begin with trimming and/or removal of trees where construction access and activities would occur. After these activities, mobilization would include the application of temporary best management practices for the control of off-site stormwater runoff and sedimentation, building temporary access roads and ramps, preparing staging areas, and installing signage for traffic and alternate transportation routes that would be affected by construction activities (e.g., bicycle routes). Vegetation clearing could be needed to allow for site access and to accommodate construction activities.

As described in Chapter 2, *Alternatives*, construction activities would coincide with planned improvements by the California Department of Transportation (Caltrans) and the City of Sacramento. Coordination with Caltrans and the City is currently underway to prevent conflicts during site preparation and construction activities.

Site Access and Haul Routes

As depicted on Figure 2-12 in Chapter 2, *Alternatives*, haul routes for riprap, bedding, gravel, soil, and IWM would be from either I-80 or from U.S. 50. The neighborhoods along the routes would be notified of haul routes, ingress and egress points, staging areas, detours, lane closures (if any), and closed recreational areas (including bike paths) approximately one week prior to commencement of construction activities. Signage would be installed at all ingress and egress locations approximately one week prior to construction to alert the public of construction activities and potential restrictions on access during construction activities. Coordination with the UPRR would occur well before construction starts to ensure railroad safety measures are in place.

As depicted on Figure 2-12, haul trucks would travel to the staging areas using the main ingress points at either the Sutter's Landing Regional Park entrance located off of 28th Street or at Glenn Hall Park located off of Carlson Drive. Haul trucks would travel along the top of the levee crossing the paved bicycle path adjacent to the 28th and B Street Skate Park. Bicycle traffic within Sutter's Landing Regional Park would be controlled by a dedicated flagger during construction to prevent collisions from occurring. All other areas along the levee east of Sutter's Landing Regional Park to Glenn Hall Park would be closed to pedestrian and bicycle traffic for safety reasons. All traffic passing over the UPRR at-grade crossing would require a dedicated flagger and other railroad safety measures during construction. Haul trucks would enter either main ingress points and use either the downstream or upstream temporary construction access ramps to deliver their loads on the waterside of the levee along Site 1-1 and then continue along the top of the levee to exit at either Glenn Hall Park or at Sutter's Landing Regional Park. Haul trucks would travel either north or south along Howe Avenue to either I-80 or to U.S. 50. Some smaller pickup trucks or equipment may enter from either Glenn Hall Park or at Sutter's Landing Regional Park to access Site 1-1. In addition, the haul routes shown on Figure 2-12 could be used in both directions if traffic or road closures occur for unforeseen reasons (e.g., emergencies, road construction, etc.) during the construction period.

Anticipated Construction Traffic Volumes and Distribution

Construction traffic associated with the Proposed Action would result from the transport of construction personnel, materials, and equipment to and from the Project Area. Most construction traffic volumes would be associated with the delivery of material and supplies to staging areas and Site 1-1, and export of fill to off-site locations. **Table 3-10** provides a summary of haul trips, as they would be anticipated to occur throughout the primary construction phases. The Proposed Action would result in approximately 15,790 truck trips, based on the anticipated size of haul vehicles. Haul trips would begin in approximately May 2023 and continue through approximately November 2023. The anticipated peak haul trips per hour would take place from May 2023 through October 2023 during the

TABLE 3-10
ANTICIPATED CONSTRUCTION TRAFFIC VOLUMES

Schedule	Materials	Total Imported Materials (cy or trees)	Total Haul Trips	Return/Unloaded Trips	Total Truck Trips	Scheduled Delivery Days	Trips/Day	Trips/Hr
May 2023 through October 2023	Excavated Soil	3,500 cy	360	360	720	12	60	5.5
	Bedding Material	7,520 cy	750	750	1500	12	125	11.4
	Riprap	23,400 cy	2,700	2,700	5,400	34	159	14.4
	Soil-filled Riprap	10,000 cy	1,500	1,500	3,000	14	214	19.5
	Planting Bench Soil	21,000 cy	2,090	2,090	4,180	26	161	14.6
November 2023	Aggregate Base	4,100 cy	455	455	910	9	101	9.2
	IWM	160 trees	40	40	80	20	4	0.4
Total			7,895	7,895	15,790	Peak Trips	214	19

NOTES:

1 CY: Cubic Yards

2 Truck Volume

Excavated Soil 9.72 cy

Bedding Material 10.03 cy

Riprap 8.67 cy

Soil-filled Riprap 6.67 cy

Planting Bench Soil 10.05 cy

Aggregate Base 9.01 cy

IWM 4 trees

3 Construction Day (Hours) 11

Source: USACE, 2022; ESA, 2021.

primary construction phase. Haul trips would be anticipated to take place intermittently throughout each project phase, with the number of delivery days for each type of material to occur as shown in Table 3-10, as the number of active construction days is greater than the number of delivery days required for each material quantity. On days in which deliveries would be anticipated to take place and based on an assumption of evenly distributed truck trips across an 11-hour workday, the construction phase of the Proposed Action could be anticipated to have a peak of approximately 19 truck trips per hour along the proposed haul routes during the primary construction phase from May 2023 through October 2023. This would be a significant and unavoidable impact.

Safety Hazards

Construction of levee improvements at Site 1-1 would require trucks to enter the Sutter's Landing Regional Park and the Parkway. The increased traffic in these recreational areas would result in significant temporary and short-term impacts on recreational users, bicycle commuters, and pedestrians. Without appropriate safeguards, implementation of the Proposed Action could expose people to significant public safety hazards resulting from construction activities on or near the public road system and within the Parkway.

While the transportation and circulation analysis in the ARCF GRR FEIS/FEIR did not specifically evaluate public safety hazards resulting from construction activities on or near the public road system, this topic was addressed in the ARCF GRR FEIS/FEIR by Mitigation Measure TR-1: Prepare and Implement a Traffic Control and Road Maintenance Plan, which is incorporated into the Proposed Action. The mitigation measure includes the requirement that safe pedestrian and bicyclist access be maintained around the construction areas at all times, the requirement that construction areas would be secured as required by the applicable jurisdiction to prevent pedestrians and bicyclists from entering the work site, and the requirement that all stationary equipment would be located as far away as possible from areas where bicyclists and pedestrians are present. Implementation of Mitigation Measure TR-1 identified in the ARCF GRR FEIS/FEIR and previously adopted and incorporated into the Proposed Action and new Mitigation Measure TR-2 would ensure that public safety hazards resulting from construction activities on or near the public road system would be reduced to less than significant.

Parking Demand

The ARCF GRR FEIS/FEIR determined that the increase in vehicle traffic within the project area that would be caused by the Proposed Action would not result in a reduction of public parking availability, because construction vehicles would be required to park in designated staging areas, as specified in the mitigation measure provided below.

Mitigation measures identified in the ARCF GRR FEIS/FEIR are incorporated into the Proposed Action, including the requirement that the construction contractor provide adequate parking for construction trucks, equipment, and construction workers within designated staging areas throughout the construction period. If inadequate space for parking is available at a given work site, the construction contractor would be required to provide an off-site staging area and as needed, coordinate the daily transport of

construction vehicles, equipment, and personnel to and from the work site. Several designated staging areas would include parking spaces at Sutter's Landing Regional Park at the request of the City of Sacramento. Use of the parking spaces would be temporary and would not impede or otherwise prevent users of the Sutter's Landing Regional Park from finding parking within the park or available neighboring street parking. Implementation of mitigation measures identified in the ARCF GRR FEIS/FEIR and incorporated into the Proposed Action would ensure that impacts related to the supply of parking spaces adjacent to project sites would be less than significant.

Deterioration of Roadways

The ARCF GRR FEIS/FEIR determined that construction of the levee improvements would result in a substantial increase in traffic on local roadways associated with truck haul trips during construction activities, and the haul trucks could cause additional damage or deterioration to roadway conditions.

Without appropriate safeguards, implementation of the Proposed Action, which would deploy substantial numbers of heavy-duty trucks hauling heavy loads of soil, rock, and other materials, could cause substantial deterioration of the physical condition of nearby roadways, including potholes, fractures, or other damages. Mitigation measures identified in the ARCF GRR FEIS/FEIR are incorporated into the Proposed Action, including the requirement that the construction contractor assess damage to roadways caused by the transit of project vehicles and equipment and repair all potholes, fractures, or other damages. Implementation of mitigation measures identified in the ARCF GRR FEIS/FEIR and incorporated into the Proposed Action (see below) would ensure that impacts related to substantial deterioration of the physical condition of nearby roadways would be less than significant.

Inadequate Emergency Access

The ARCF GRR FEIS/FEIR determined that construction of the levee improvements would result in a substantial increase in traffic on local roadways associated with truck haul trips during construction activities. The ARCF GRR FEIS/FEIR determined that traffic controls associated with truck haul trips during construction activities would cause or contribute to substantial temporary increases in traffic levels on several roadways, as traffic is detoured, slowed, or disrupted by lane closures. Traffic controls could cause delays during the morning and evening peak commute hours, which could disrupt emergency response times in the vicinity of the construction sites. Implementation of mitigation measures identified in the ARCF GRR FEIS/FEIR and incorporated into the Proposed Action would ensure that impacts related to inadequate emergency access would be less than significant.

Conflict or Inconsistency with State CEQA Guidelines Section 15064.3

State CEQA Guidelines Section 15064.3(b) was adopted in December 2018 by the California Natural Resources Agency and took effect on July 1, 2020. Amendments to the CEQA Guidelines Appendix G, Section XVII were also adopted. These revisions to

the State CEQA Guidelines criteria for determining the significance of transportation impacts shift the focus from vehicle delay to reduction of greenhouse gas emissions, creation of multimodal networks, and promotion of a mix of land uses for projects that are not roadway capacity projects. Vehicle miles traveled (VMT) is a measure of the total number of miles driven to or from a destination, such as work and home, and is sometimes expressed as an average per trip or per person.

CEQA Guidelines Section 15064.3(a) states, “For the purposes of this section, ‘vehicle miles traveled’ refers to the amount and distance of automobile travel attributable to a project,” where, in accordance to guidance provided by the California Office of Planning and Research,⁸² automobiles refer to on-road passenger vehicles, specifically cars and light trucks. Consequently, truck haul trips associated with construction for the Proposed Action are not factored into the assessment of project VMT, and the focus of this analysis is on passenger vehicle (i.e., cars and light trucks) trips generated by the Proposed Action. However, this Draft EIR also includes an analysis of emissions associated with truck traffic generated by the Proposed Action (as well as commuter trips; see Section 3.9, *Air Quality* Section 3.10, *Greenhouse Gas Emissions and Energy Consumption*)

While the Proposed Action would result in temporary construction-related vehicle trips (i.e., cars and light trucks) associated with workers traveling to and from construction sites, these additional trips would not be expected to result in a long-term change in travel behavior or a long-term increase in VMT. In addition, the Proposed Action would not develop any uses (e.g., residential, commercial, industrial) that would result in a long-term change in travel behavior or a long-term increase in VMT. Operations and maintenance trips associated with improvements implemented under the Proposed Action would not be anticipated to materially increase over existing trips. Consequently, the Proposed Action would not result in a long-term increase in VMT or result in conflicts or inconsistency with State CEQA Guidelines Section 15064.3, and the Proposed Action would result in a less-than-significant impact.

Conflict with a Program, Plan, or Ordinance: Decreased Performance or Safety of Alternative Modes of Transportation

Construction of the Proposed Action would have an impact on bicycle and pedestrian routes along the American River Parkway. As described in Chapter 2, *Alternatives*, construction of levee improvements at Site 1-1 would require trucks to enter the Parkway and Sutter’s Landing Regional Park. The increased traffic in these recreational areas would result in significant temporary and short-term impacts on recreational users, bicycle commuters, and pedestrians. Construction activities would result in the temporary closure of bicycle/pedestrian pathways, requiring commuters and recreational users to seek alternative routes within the Parkway and Sutter’s Landing Regional Park or in adjacent neighborhoods. While temporary, these impacts would have the potential to reduce safe access for bicycle and pedestrian users, which would conflict with the County

⁸² California Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.

of Sacramento's policy regarding pedestrian pathways along the Parkway or Sutter's Landing Regional Park. However, implementation of the previously adopted mitigation measures described below would reduce impacts to less than significant.

ARCF GRR FEIS/FEIR Mitigation Measures

The following ARCF GRR FEIS/FEIR mitigation measure found in Section 3.10 (pages 228-229) is incorporated into the Proposed Action:

Mitigation Measure TR-1: Prepare and Implement a Traffic Control and Road Maintenance Plan. Before the start of project-related construction activities, USACE in coordination with CVFPB would require the contractor to prepare a Traffic Control and Road Maintenance Plan. The items listed below would be included in the plan and as terms of the construction contracts:

- The contractor would be required to prepare a Traffic Control and Road Maintenance Plan. A traffic control plan describes the methods of traffic control to be used during construction. All on-street construction traffic would be required to comply with the City of Sacramento's standard construction specifications as detailed in City Code 12.20.030 to the satisfaction of the City Traffic Engineer. The plan would reduce the effects of construction on the roadway system in the Project Area throughout the construction period.
- Construction contractors would follow the standard construction specifications of affected jurisdictions, including UPRR, and obtain the appropriate encroachment permits, if required. The conditions of the encroachment permit would be incorporated into the construction contract and would be enforced by the agency that issues the encroachment permit.
- Proposed lane closures would be coordinated with the appropriate jurisdiction and would be minimized to the extent possible during the morning and evening peak traffic periods.
- Standard construction specifications also typically limit lane closures during commuting hours. Lane closures would be kept as short as possible. If a road must be closed, detour routes and/or temporary roads would be made to accommodate traffic flows. Detour signs would be provided to direct traffic through detours. Advance notice signs of upcoming construction activities would be posted at least 1 week in advance so that motorists are able to avoid traveling through the study area during these times. Within the Parkway, detours would be used to allow for continued use by bicycle commuters.
- Safe pedestrian and bicyclist access would be maintained around the construction areas at all times. Construction areas would be secured as required by the applicable jurisdiction to prevent pedestrians and bicyclists from entering the work site, and all stationary equipment would be located as far away as possible from areas where bicyclists and pedestrians are present.
- The construction contractor would provide adequate parking for construction trucks, equipment, and construction workers within the designated staging

areas throughout the construction period. If inadequate space for parking is available at a given work site, the construction contractor would provide an off-site staging area and, as needed, coordinate the daily transport of construction vehicles, equipment, and personnel to and from the work site.

- The construction contractor would assess damage to roadways used during construction and the UPRR at-grade railroad crossing and would repair all potholes, fractures, or other damages.
- The construction contractor would notify and consult with emergency service providers at least 14 days prior to commencement of construction that would partially or fully obstruct roadways to ensure that alternative emergency access routes are established to facilitate the passage of emergency vehicles on city streets.
- Emergency vehicle access would be made available at all times. The contractor would be required to coordinate with local emergency responders to inform them of the construction activities.

Summary

Implementation of the Proposed Action would generate temporary but substantial volumes of traffic on local roadways and highways, primarily numerous daily transits by haul trucks carrying material to and from project site. Mitigation measures identified in the 2016 ARCF GRR FEIS/FEIR are incorporated into the Proposed Action and would reduce the magnitude of impacts, but temporary traffic increases during project construction would remain significant and unavoidable. Construction of the Proposed Action would not cause new or more severe traffic impacts than those addressed in the ARCF GRR FEIS/FEIR

Implementation of the proposed new mitigation measure, not included in the ARCF GRR FEIS/FEIR, below would reduce anticipated impacts on the safety of alternative modes of transportation (e.g., bicycles and pedestrians) to a less-than-significant level.

Additional Mitigation Measure

Implementation of the following mitigation measure would reduce the impact on bicycle and pedestrian access to a less-than-significant level. To maintain safe usage of pedestrian and bicycle facilities that would intersect construction traffic, signal personnel would be in place to control construction vehicle, pedestrian, and bicycle traffic at those locations.

Mitigation Measure TR-2: Provide Bicycle and Pedestrian Access. The contractor would prepare a Traffic Control and Road Maintenance Plan that would include, but not be limited to, the following provisions related to bicycle and pedestrian access:

- Provide signs along affected pedestrian and bicycle pathways announcing scheduled closures and recommended detour routes.
- Place signal personnel at intersections of construction vehicle pathways and active bicycle and pedestrian facilities.

3.9 Air Quality

3.9.1 Environmental Setting

3.9.1.1 Regulatory Setting

Section 3.11 (page 229) of the ARCF GRR FEIS/FEIR identified the Federal Clean Air Act (CAA) and the California Clean Air Act (CCAA) that apply to regulating air quality emissions. Chapter 5 of the ARCF GRR FEIS/FEIR summarized the environmental laws and regulations that apply to the Proposed Action and described the status of compliance with those laws and regulations. Additional and updated applicable laws and regulations related to air quality are summarized below.

Federal

Criteria Air Pollutants

The CAA requires the U.S. Environmental Protection Agency (EPA) to set minimum emissions standards for a range of pollution sources. Specifically, EPA and the National Highway Traffic Safety Administration (NHTSA) regulate emissions from on-road vehicles include automobiles and light-duty trucks. In 2012, EPA and NHSTA established the Corporate Average Fuel Economy (CAFE) standards for automobiles and light-duty trucks for model years 2014 and beyond (77 *Federal Register* [FR] 62624). Under the original iteration of the CAFE standards, fuel economy would be raised to the equivalent of 54.6 miles per gallon by 2025 (77 FR 62630).

On August 2, 2018, the NHSTA and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule) (49 Code of Federal Regulations (CFR) 523, 531, 533, 536, and 537 and 40 CFR 85 and 86). This rule addresses emissions and fuel economy standards for motor vehicles and is separated in two parts as described below.

Part One, “One National Program” (84 *Federal Register* [FR] 51310), revokes a waiver granted by EPA to the State of California under Section 209 of the CAA to enforce more stringent emission standards for motor vehicles than those required by EPA for the explicit purpose of reducing greenhouse gas (GHG) and, indirectly, criteria air pollutants and ozone precursor emissions. This revocation became effective on November 26, 2019, restricting the ability of the California Air Resources Board (CARB) to enforce more stringent GHG emission standards for new vehicles and set zero-emission-vehicle mandates in California.⁸³ However, on April 26, 2021, EPA announced plans to reconsider Part One of the SAFE Rule as directed in Executive Order 13990, “Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis.” At this time, EPA is seeking public input on its reconsideration of the action. However, on April 26, 2021, EPA announced plans to reconsider Part One of the SAFE Rule as directed in Executive Order 13990, “Protecting Public Health and the Environment and Restoring Science to

⁸³ National Highway Traffic Safety Administration. 2019. The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One Nation Program. 49 CFR Parts 531 and 533. Available: <https://www.govinfo.gov/content/pkg/FR-2019-09-27/pdf/2019-20672.pdf>. Accessed December 22, 2021.

Tackle the Climate Crisis” (discussed below). Public comments to the Notice of Reconsideration ended on June 6, 2021, and EPA held a public hearing on June 22, 2021.⁸⁴

Part Two addresses CAFE standards for passenger cars and light trucks for model years 2021–2026. This rulemaking proposes new CAFE standards for model years 2022–2026 and would amend existing CAFE standards for model year 2021. The proposal would retain the model year 2020 standards (specifically, the footprint target curves for passenger cars and light trucks) through model year 2026, but comment is sought on a range of alternatives discussed throughout the proposed rule. This proposal addressing CAFE standards is being jointly developed with EPA, which is simultaneously proposing tailpipe carbon dioxide standards for the same vehicles covered by the same model years. The final SAFE Rule Part Two was released on March 31, 2020, and multiple lawsuits have been filed challenging the rulemaking.

Toxic Air Contaminants

TACs, or in federal parlance, HAPs, are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

For evaluation purposes, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants for which acceptable levels of exposure can be determined and for which the ambient standards have been established. Cancer risk from TACs is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure.

State

In December 2018, the California Supreme Court issued its decision in *Sierra Club v. County of Fresno* (226 Cal.App.4th 704), (herein referred to as the Friant Ranch decision). The case reviewed the long-term, regional air quality analysis contained in the EIR for the proposed Friant Ranch development. The Court ruled that the air quality analysis failed to adequately disclose the nature and magnitude of long-term air quality health impacts from emissions of criteria air pollutants and precursors “in sufficient detail to enable those who did not participate in its preparation to understand and consider meaningfully the issues the proposed project raises.” The Court noted that the air quality analysis did not discuss the foreseeable adverse health effects of project-generated emissions on Fresno County’s likelihood of exceeding the NAAQS and CAAQS for criteria air pollutants, nor did it explain why it was not “scientifically possible” to determine such a connection. The Court

⁸⁴ National Highway Traffic Safety Administration. 2019. The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One Nation Program. 49 CFR Parts 531 and 533. Available: <https://www.govinfo.gov/content/pkg/FR-2019-09-27/pdf/2019-20672.pdf>. Accessed December 22, 2021.

concluded that “because the EIR as written makes it impossible for the public to translate the bare numbers provided into adverse health impacts or to understand why such translation is not possible,” the EIR’s discussion of air quality impacts was inadequate. As a result, EIR analyses must make a reasonable effort to substantively connect the project’s air quality impacts to likely health consequences and that an EIR should relate the expected adverse air quality impacts to likely health consequences or explain in meaningful detail why it is not feasible to do so. In California, CARB is the agency responsible for coordination and oversight of state and local air pollution control programs and for implementing the CCAA and demonstrating compliance with the NAAQS. California law authorizes CARB to set ambient (outdoor) air pollution standards (California Health and Safety Code Section 39606) for criteria air pollutants in consideration of public health, safety, and welfare. CARB has established CAAQS for criteria air pollutants of ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM₁₀), fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less (PM_{2.5}), and lead, as well as sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particulate matter. The standards are generally explained by the health effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

Local

Sacramento Metropolitan Air Quality Management District

Criteria Air Pollutants

The Sacramento Metropolitan Air Quality Management District (SMAQMD) is the primary agency responsible for planning to meet NAAQS and CAAQS in Sacramento County. SMAQMD works with other local air districts in the Sacramento region to maintain the region’s portion of the State Implementation Plan (SIP) for ozone. The SIP is a compilation of plans and regulations that govern how the region and state will comply with the CCA requirements to attain and maintain the NAAQS for ozone. The Sacramento Region has been designated as a “moderate” nonattainment area for the 2015 8-hour ozone standard.⁸⁵

SMAQMD has developed a set of guidelines for use by lead agencies when preparing environmental documents. The guidelines contain thresholds of significance for criteria air pollutants and toxic air contaminants (TACs) and make recommendations for conducting air quality analyses. Thresholds of significance adopted by SMAQMD are designed on a cumulative basis, considering regional growth and anticipated development, such that projects that do not exceed the adopted thresholds would not impede the region from achieving the CAAQS and ultimately the NAAQS. Further, because the ambient air quality standards are designed to protect public health, projects that do not exceed SMAQMD-adopted thresholds, or are reduced to below the thresholds

⁸⁵ U.S. Environmental Protection Agency. 2021. Greenbook 8-Hour Ozone (2015) Designated Area (State/Area/County Report). Last updated November 30, 2021. Available: <https://www3.epa.gov/airquality/greenbook/jbcs.html#CA>. Accessed December 22, 2021.

with applied mitigation, would be considered to have a less-than-significant impact under CEQA, would not contribute to exceedance of a CAAQS or NAAQS, and would not result in adverse health effects.

After SMAQMD guidelines have been consulted and the air quality impacts of a project have been assessed, the lead agency's analysis undergoes a review by SMAQMD. SMAQMD submits comments and suggestions to the lead agency for incorporation into the environmental document.

All projects in the Sacramento area are subject to SMAQMD rules and regulations in effect at the time of construction. Specific rules applicable to the construction of the Proposed Action may include but are not limited to the following:

- **Rule 201:** General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may be required to obtain permit(s) from SMAQMD before equipment operation. Portable construction equipment (e.g., generators, compressors, pile drivers, lighting equipment) with an internal combustion engine greater than 50 horsepower must have a SMAQMD permit or CARB portable equipment registration.
- **Rule 402:** Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property.
- **Rule 403:** Fugitive Dust. The developer or contractor is required to control dust emissions from earthmoving activities or any other construction activity to prevent airborne dust from leaving the Project Area.

In addition, if modeled construction-generated emissions for a project are not reduced to less than SMAQMD's mass emission threshold (i.e., 85 pounds per day [lb/day]) after the standard construction mitigation is applied, then SMAQMD recommends charging an off-site construction mitigation fee. The fee must be paid before a grading permit can be issued. This fee is charged by SMAQMD to fund emission reduction programs. One example is SMAQMD's Heavy Duty Incentive Program, through which select owners of heavy-duty equipment in Sacramento County can repower or retrofit their old engines with cleaner engines or technologies.

Toxic Air Contaminants

At the local level, air districts may adopt and enforce CARB control measures. Under SMAQMD Rule 201 ("General Permit Requirements"), construction equipment that possess the potential to emit TACs must be permitted by SMAQMD. Permits may be granted if a project is constructed and operated in accordance with applicable regulations, including air toxics control measures. SMAQMD limits emissions and public exposure to TACs through several programs. SMAQMD prioritizes TAC-emitting stationary sources

based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. Sensitive receptors are people, or facilities that generally house people (e.g., schools, hospitals, residences), that may experience adverse effects from unhealthful concentrations of air pollutants.

In September 2020, SMAQMD released the most recent version of the Mobile Source Air Toxics Protocol (MSAT Protocol). The MSAT Protocol provides guidance to local land use jurisdictions on assessing and disclosing potential cancer risk and PM_{2.5} concentrations from major roadways and railways throughout Sacramento County. The MSAT Protocol replaces the *Recommended Protocol for the Evaluation of Sensitive Receptors Adjacent to Major Roadways*.⁸⁶

Odors

Although offensive odors rarely cause any physical harm, they can be unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and SMAQMD. SMAQMD's Rule 402 ("Nuisance") regulates odors.

Health Effects

In October 2020 SMAQMD issued Guidance to Address the Friant Ranch decision for CEQA Projects in SMAQMD's jurisdiction.⁸⁷ In that decision, the California Supreme Court held that an EIR should "relate the expected adverse air quality impacts to likely health consequences or explain in meaningful detail why it is not feasible at the time of drafting to provide such an analysis." The Final Guidance contains two screening tools, one for a "Minor Project" and another for "Strategic Area Projects." Strategic Area Projects are projects that generate emissions two to eight times greater than the maximum thresholds of significance (derived from identifying the greatest thresholds from air districts operating within the SVAB). Minor Projects are projects that generate emissions below the maximum thresholds of significance. Given its size and estimated level of emissions, the Proposed Action is considered a Strategic Area Project and was grouped into the Strategic Area Project III, "Downtown Sacramento," designation due to the Proposed Action's location.

3.9.1.2 Existing Conditions

Section 3.11 (pages 230 through 235) of the ARCF GRR FEIS/FEIR adequately describes the regional and local setting of the Project Area.

⁸⁶ Sacramento Metropolitan Air Quality Management District. 2020 (September) Mobile Source Air Toxics Protocol Guidance Document. Available: <http://www.airquality.org/LandUseTransportation/Documents/FinalMSATProtocolGuidancev1.3Sept2020.pdf>. Accessed December 22, 2021.

⁸⁷ Sacramento Metropolitan Air Quality Management District. 2020 (October). Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District. Available: <http://www.airquality.org/LandUseTransportation/Documents/SMAQMDFriantRanchFinalOct2020.pdf>. Accessed December 22, 2021.

3.9.2 Methodology and Basis of Significance

3.9.2.1 Methodology

This analysis generally uses the same methodology described in Section 3.11 (page 236) of the ARCF GRR FEIS/FEIR. Project-specific material quantities, haul routes, daily equipment use/types, and construction worker information have been added and are the basis for this analysis. The types of construction activities that would generate emissions of air pollutants include clearing of trees, vegetation, and loose materials; degrading and excavating the levee; installation of rock revetment; construction of a launchable-rock-filled trench; reconstruction of the levee; associated worker haul and commute trips; and construction of mitigation sites. Refer to **Appendix D** for all inputs, assumptions, and modeling results. Where significant air quality impacts are identified, mitigation measures to reduce these impacts are specified.

Construction would take place over a 1.5-year period. Based on available construction sequencing assumptions, site preparation would begin in November 2022 and last through the Summer of 2024. This would entail the removal and/or trimming of trees where access and construction activities would occur. Mobilization of construction equipment, site preparation, and construction would begin as early of May 2023 and would take approximately 7 months to complete, with another 6 months of post-construction work (e.g., plantings, irrigation, stormwater control monitoring). Post-construction work would be similar to existing maintenance activities; thus, emissions were not quantified. Maximum emissions associated with the Proposed Action would occur during the primary earthwork, during the second year of construction, modeled in 2023.

Construction would begin Monday through Saturday at 7:00 a.m. and end by 6:00 p.m.; Sundays from 9:00 a.m. to 6:00 p.m. Based on the construction sequencing anticipated, maximum construction activity would occur from May 2023 to December 2023 when rock hauling, on-site earth movement, and bank protection work would be underway simultaneously. The air quality analysis prepared for the Proposed Action quantified a “worst case scenario” scenario that would occur during 2023 and daily emissions were compared to SMAQMD’s thresholds of significance. A General Conformity Determination was also prepared, which quantified project emissions by calendar year and is included in **Appendix E**.

A variety of emissions modeling software and methods were used, consistent with SMAQMD guidance. The SMAQMD Roadway Construction Emissions Model Version 9.0 was used to obtain emission factors for heavy-duty construction equipment. Default off-road equipment emission factors, default horsepower, and load factors from the model were used, also consistent with defaults used in the California Emissions Estimator Model (CalEEMod) Version 2020.4.0.⁸⁸ Modeling incorporated the Proposed Action’s commitment that heavy-duty construction equipment of 50 horsepower or

⁸⁸ California Air Pollution Control Officers Association. 2021 (May). CalEEMod Users Guide Version 2020.4.0. Available: http://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/01_user-39-s-guide2020-4-0.pdf?sfvrsn=6. Accessed December 22, 2021.

greater would consist of, at a minimum, 90 percent EPA Tier 4 standards. No Tier 0 or uncontrolled equipment would be used as part of implementation without prior approval from the U.S. Army Corps of Engineers (USACE) and a proposed mitigation plan to reduce these emissions to a minimum of Tier 1 levels. Fugitive dust emissions of PM₁₀ were calculated from aggregate storage piles, dump truck travel on unpaved roads, hauling travel on paved roads, worker commute trips, and bulldozing and grading using emissions factors derived from EPA's AP-42 emissions factors using site specific information where available. Fugitive dust emissions of PM_{2.5} were calculated using a 0.1 ratio of PM_{2.5} to PM₁₀ from EPA's AP-42 emissions factors. Regarding hauling emissions, it was assumed that haul trucks to the construction site would consist of trucks with the capacity to haul 10 cubic yards (cy) of materials.

The SMAQMD's Guidance to Address the Friant Ranch Decision was used to evaluate health effects for the Proposed Action. Consistent with SMAQMD's Final Friant Ranch Guidance, the anticipated construction emissions of criteria air pollutants were used to estimate foreseeable adverse health outcomes using SMAQMD's Strategic Area Project Health Screening Tool. Strategic Area Project III, "Downtown Sacramento," was used because it is the closest to the Proposed Action. **Table 3-11**, below, summarizes the anticipated health effects in the region from the Project's unmitigated emissions across all populations in the Sacramento Region.

In addition to estimating mass emissions from criteria air pollutants, air dispersion modeling was conducted to estimate health risks from project construction. Emissions from TACs (i.e., diesel PM) was modeled using EPA's AERMOD and health risks were calculated using CARB's HARP 2. The health risk assessment (HRA) considered TAC emissions associated with the use of heavy-duty construction equipment at the Proposed Action's construction site and the potential health risk effects at the nearest sensitive receptors.

It was conservatively assumed that rock material could be hauled to the site from as far as 75 miles and instream woody material (IWM) from within a 100-mile radius. For the HRA, haul trucks with a capacity of 10 cy were assumed. As shown in Figure 2-11, there are two potential haul route scenarios, referred herein as Scenario 1 North and Scenario 2 South. Under Scenario 1 North, once haul trucks leave Site 1-1, they would travel north along Howe Avenue until they reach I-80. Under Scenario 2 South, once haul trucks leave Site 1-1, they would travel south along Howe Avenue until they reach U.S. 50. Because the specific route is unknown at this time, and due to the local nature of TAC health risk exposure, which is determined by local meteorological factors, mass emission rates, and proximity to receptors, the two scenarios were modeled separately for the HRA, assuming all anticipated hauling activity in each direction (north and south) for each hauling scenario. See Appendix E for modeling inputs and outputs.

In addition, note that if other, closer material sources were used, haul routes that could be used would result in shorter distances and associated lower emission levels, and therefore, the scenario modeled represents the highest potential diesel PM emissions, and associated risk levels.

TABLE 3-11
POTENTIAL ANNUAL INCREMENTAL HEALTH INCIDENCES FOR THE PROPOSED ACTION

Health Endpoint	Health Endpoint	Health Endpoint	Age Range	Incidences (Mean)	Percent of Background Incidences	Total Number of Health Incidences (per Year)
PM _{2.5}	Respiratory	Emergency Room Visits	0-99	2.0	0.011%	18,419
		Hospital Admissions, Asthma	0-64	0.13	0.0070%	1,846
		Hospital Admissions, All Respiratory	65-99	0.69	0.0035%	19,644
	Cardiovascular	Hospital Admissions, All Cardiovascular (less Myocardial Infarctions)	65-99	0.36	0.0015%	24,037
		Acute Myocardial Infarction, Nonfatal	18-24	0.00018	0.0048%	4
		Acute Myocardial Infarction, Nonfatal	25-44	0.016	0.0051%	308
		Acute Myocardial Infarction, Nonfatal	45-54	0.035	0.0048%	741
		Acute Myocardial Infarction, Nonfatal	55-64	0.061	0.0049%	1,239
		Acute Myocardial Infarction, Nonfatal	65-99	0.23	0.0046%	5,052
	Mortality	Mortality, All Causes	30-99	5.1	0.011%	44,766
Ozone	Respiratory	Hospital Admissions, All Respiratory	65-99	0.12	0.00060%	19,644
		Emergency Room Visits, Asthma	0-17	0.64	0.011%	5,859
		Emergency Room Visits, Asthma	18-99	1.0	0.0083%	12,560
	Mortality	Mortality, Non-Accidental	0-99	0.079	0.00026%	30,386
Total Incidences			0-99	10.46	0.0784%	184,505

NOTES:

PM_{2.5} = fine particulate matter

SOURCE: Modeling conducted by Ascent Environmental in 2021.

3.9.2.2 Basis of Significance

This analysis uses the same basis of significance described in Section 3.11 (page 238) of the ARCF GRR FEIS/FEIR, as summarized below.

The Proposed Action would result in a significant effect related to air quality if it would:

- Conflict with, or obstruct implementation of, the applicable air quality plan;

- Violate any air quality standard or substantial contribution to existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a non-attainment area under NAAQS and CAAQS;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

Since publication of the ARCF GRR FEIS/FEIR, changes to Appendix G of the State CEQA Guidelines were adopted. Specifically, Appendix G of the State CEQA Guidelines considers the direct, indirect, or cumulative effects of air pollutant emissions. In addition, Appendix G no longer includes the criterion of violation of any air quality standard or contribute substantially to an existing or projected air quality violation. As a result, this analysis also takes into consideration the following modified significance criterion:

- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

An air quality effect is considered significant if the Proposed Action's construction emissions would:

- Cause construction-generated criteria air pollutant or precursor emissions to exceed SMAQMD-recommended thresholds. The thresholds are as follows:
 - NO_x: 85 lb/day,
 - PM₁₀: zero, or if all feasible control measures are applied then 80 lb/day and 14.6 tons/year,
 - PM_{2.5}: zero, or if all feasible control measures are applied then 82 lb/day and 15 tons/year for PM_{2.5};
- Cause construction-generated criteria air pollutant or precursor emissions to exceed the General Conformity *de minimis* thresholds of 25 tons/year for ROG and NO_x, and 100 tons/year for CO, PM₁₀, and PM_{2.5};
- Result in a net increase in long-term operational criteria air pollutant or precursor emissions that exceed the SMAQMD-recommended thresholds of 65 lb/day for ROG and NO_x, 80 lb/day and 14.6 tons/year for PM₁₀, and 82 lb/day and 15 tons/year for PM_{2.5};
- Result in long-term operational local mobile-source CO emissions that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 parts per million or the 8-hour CAAQS of 9 parts per million;
- Expose sensitive receptors to a substantial incremental increase in TAC emission-related health risks that exceed 10 in 1 million for carcinogenic risk (e.g., the risk of contracting cancer) and/or a noncarcinogenic hazard index of 1.0 or greater; or
- Create objectionable odors affecting a substantial number of people.

3.9.3 Impact Analysis

3.9.3.1 No Action/No Project Alternative

Under the No Action/No Project Alternative, the Proposed Action would not be implemented, and the Sacramento metropolitan area would experience no change in the present level of risk of flooding due to levee failure due to seepage, slope stability, overtopping, or other erosion concerns.

Under these conditions, a flood event could cause portions of the levees to fail, possibly triggering widespread flooding and related damage. If a catastrophic flood were to occur, emergency responders would initiate flood fighting and clean-up efforts, probably involving the operation of numerous pieces of heavy-duty construction equipment. Air pollutants emitted by this equipment could contribute to an exceedance of an applicable air quality standard, expose sensitive receptors to substantial pollutant concentrations, and create objectionable odors. Depending on the magnitude of a flood, flood fighting could last for weeks or even months. Moreover, the application of best management practices to control emissions would be unlikely during such an emergency response. All of these effects on air quality could be significant; however, the timing, duration, and magnitude of a flood event is unpredictable, and therefore precise significance determination cannot be made.

3.9.3.2 Proposed Action

Construction Emissions

The ARCF GRR FEIS/FEIR Section 3.11 (pages 240 through 245) analyzed the impacts on air quality in the Project Area. Emission sources would include the operation of off-road construction equipment, on-road vehicles traveling to and from the site during construction phasing, haul truck trips, and fugitive dust associated with earth movement and soil-disturbance activities. The Proposed Action would generate emissions from all of these construction activities.

As discussed above in Section 3.9.2.1, *Methodology*, construction emissions were evaluated with the assumption that haul trucks would have a 10-cy capacity. Total maximum daily emissions for 2022 and 2023 were estimated for ROG, NO_x, CO, PM₁₀, and PM_{2.5} and evaluated against SMAQMD's thresholds and presented in **Table 3-12**.

As shown in Table 3-12, construction-related emissions under the Proposed Action, which includes reductions associated with project commitments of higher tiered engines, would exceed SMAQMD's mass daily emission threshold for NO_x, PM₁₀, and PM_{2.5} in 2023 and would exceed the mass daily emission threshold for PM₁₀ and PM_{2.5} in 2022 and 2023. USACE would be required to pay an off-site mitigation fee for NO_x emissions to reduce the impact to a less-than-significant level.

TABLE 3-12
ARCF 2016 PROJECT, AMERICAN RIVER CONTRACT 3A CONSTRUCTION EMISSIONS

Maximum Construction Activity	Maximum Daily ROG Emissions (lb/day) ¹	Maximum Daily NO _x Emissions (lb/day) ¹	Maximum Daily CO Emissions (lb/day) ¹	Maximum Daily PM ₁₀ Emissions (lb/day) ¹	Maximum Daily PM _{2.5} Emissions (lb/day) ¹
2022	<1	<1	<1	<1	<1
Exceed Threshold?	N/A	No	N/A	Yes	Yes
2023	4	176	20	47	6
Exceed Threshold?	N/A	Yes	N/A	Yes	Yes
CEQA Threshold	N/A	85	N/A	0 ²	0 ²

NOTES:

¹ Estimates represent a worst-case construction conditions which was assumed to be from July to October 2022. For annual emissions and a comparison to Federal *de minimis* levels, see Appendix D.

² SMAQMD has a zero pound per day threshold of PM, when best available controls are not implemented but threshold with incorporated controls are 80 lb/day for PM₁₀ and 82 lb/day for PM_{2.5}

SOURCE: Modeling conducted by Ascent Environmental in 2021.

The Strategic Area Project Health Effects Tool was used to evaluate potential health effects of mass emissions associated with implementation of the Proposed Action. The outputs reflect the potential increase in premature death over the background health incidence rate of each health endpoint in the region.⁸⁹ The outputs of the SMAQMD's Strategic Area Project Health Effects tool for the general geographic location of the Proposed Action indicate that ozone and PM_{2.5} exposure across the 5-air-district region would result in mortality of up to 20.7 persons per year above background health incidences of 75,000 mortality incidences per year, or an increase of about 0.011 percent of background incidences.

Table 3-11 summarizes the anticipated health effects in the region from the Proposed Action's emissions.

Consistent with SMAQMD's Guidance to Address the Friant Ranch Decision, the outputs summarized in Table 3-11 should be presented in the context of the current population of Sacramento County. From 2017–2019, Sacramento County experienced an annual average of 11,914 deaths from all causes (not limited to air pollution–related mortality).⁹⁰ Using the Strategic Area Project Health Effects Tool, this total number could be increased by an annual average of 6 persons per year from increased exposure to ground-level ozone and PM_{2.5} from emissions generated by the Proposed Action as shown in Table 3-11.

⁸⁹ Sacramento Metropolitan Air Quality Management District. 2020 (October). Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District. Available: <http://www.airquality.org/LandUseTransportation/Documents/SMAQMDFriantRanchFinalOct2020.pdf>. Accessed December 22, 2021.

⁹⁰ California Department of Public Health. 2021. County Health Status Profile. Available: <https://data.chhs.ca.gov/dataset/county-health-status-profiles/resource/3781a514-d658-4779-abb5-3c71e15c1944>. December 22, 2021.

Notably, the Strategic Area Project Health Effects Tool provides conservative health estimates for two reasons. The Strategic Area Project Health Effects Tool assumes that persons would be exposed to a full year of pollution at the maximum levels on a daily basis. Additionally, the Strategic Area Project Health Effects Tool assumes that a project will have emissions two to eight times SMAQMD's thresholds of significance.

The Proposed Action would generate daily mass emissions above SMAQMD's thresholds of significance; however, the estimates presented in Table 3-12 reflect a worst-case construction day where several pieces of equipment are expected to operate concurrently. Construction would not occur at those high levels every day; however, as stated above, the Strategic Area Project Health Effects Tool assumes that all persons in Sacramento County will be exposed to these levels of emissions for a full year, which would not be the case in actuality.

Additionally, the Proposed Action would not generate emissions of NO_x up to eight times SMAQMD's thresholds of significance. Thus, the outputs of the Strategic Area Project Health Effects Tool are inherently conservative. Nonetheless, the findings of the Strategic Area Project Health Effects Tool are presented above in Table 3-11 to provide information to the public that allow for a meaningful understanding of the Proposed Action's contribution of air pollution in Sacramento County.

As shown above, construction-generated exhaust emissions of NO_x would exceed SMAQMD's mass daily threshold of 85 lb/day. This impact would be significant; however, implementation of mitigation measures would reduce NO_x emissions to a less-than-significant level and, therefore, result in no adverse health effects.

Fugitive Dust

Construction of the Proposed Action would result in short-term dust emissions from grading and earth moving activities at the project construction sites and the soil borrow sites. The amount of dust generated would be highly variable and is dependent on the size of the disturbed area at any given time, amount of activity, soil conditions, and meteorological conditions. Nearby land uses, especially those residences and schools located downwind of the project sites could be exposed to dust generated during construction activities, indirectly resulting in potential adverse health effects associated with exposure to high concentrations of PM. This indirect effect would be significant, but implementation of mitigation measures set forth below would reduce dust emissions during construction to a less-than-significant level.

Toxic Air Contaminants

Construction of the Proposed Action would result in short-term diesel particulate emissions from on-site heavy-duty equipment and on-road haul trucks. Diesel PM, which is classified as a carcinogenic TAC by CARB, is the primary pollutant of concern regarding indirect health risks to sensitive receptors. Nearby land uses, especially residences and schools downwind of the project sites, could be exposed to diesel PM during construction activities, resulting in potential adverse health effects.

The assessment of health risks associated with exposure to diesel exhaust typically is associated with chronic exposure, in which a 70-year exposure period is often assumed. However, while cancer can result from exposure periods of less than 70 years, acute exposure periods (i.e., exposure periods of 2 to 3 years) to diesel exhaust are not anticipated to result in increased health risk, as health risks associated with exposure to diesel exhaust are typically seen in exposure periods that are chronic.⁹¹ Construction activities that would require diesel-powered heavy-duty equipment associated with the Proposed Action are not expected to be used for more than 18 months. Further, construction activities of the Proposed Action would not occur over a prolonged period in any one specific location, minimizing exposure from diesel PM at any one receptor. Additionally, as required by 13 CCR Section 2449(d)(3), no in-use off-road diesel vehicles may idle for more than 5 consecutive minutes. Nonetheless, an HRA was prepared for the Proposed Action and is appended to this Supplemental EIR in Appendix D.

As discussed above in the *Methodology* section, two separate hauling scenarios were modeled for the HRA; Scenario 1: Haul Route North and Scenario 2: Haul Route South. As detailed in Appendix D, construction of the Proposed Action would result in a maximum risk exposure (chances in 1 million for carcinogenic risk) of 1.66 for Scenario 1: Haul Route North and 1.57 for Scenario 2: Haul South. The estimated risk presented here represents the point of maximum exposure (PMI), which does not exceed the SMAQMD-adopted thresholds of significance of an incremental cancer risk of 10 in a million. Therefore, values would not exceed the applicable threshold at any other nearby receptors. Thus, no sensitive receptor would be exposed to substantial TAC concentrations. Because these values do not exceed 10 in 1 million, exposure of sensitive receptors to TACs would not be considered substantial. Moreover, the Proposed Action would apply SMAQMD-recommended construction mitigation which would further reduce emissions of TACs. For these reasons, and the reasons listed above, this impact would be less than significant.

Odors

The Proposed Action would not result in any major source of odor, and the project would not involve operation of any of the common types of facilities that are known to produce odors (e.g., landfill, wastewater treatment facility). Odors associated with diesel exhaust emissions from the use of construction equipment may be noticeable from time to time by nearby receptors. However, the odors would be intermittent and temporary and would dissipate rapidly from the source with an increase in distance. Further, as required by 13 CCR Section 2449(d)(3), no in-use off-road diesel vehicles may idle for more than 5 consecutive minutes. Therefore, this impact would be less than significant.

⁹¹ Office of Environmental Health Hazard Assessment. 2015. Guidance Manual for Preparation of Health Risk Assessments. Available: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>. Accessed January 27, 2021.

Operation and Maintenance

Long-term operational and maintenance activities under the Proposed Action would result in limited emissions of criteria air pollutants and precursors from the use of on-road vehicles on the levees for inspection and maintenance activities, mowing grasses on the levees, and possibly limited heavy earth-moving equipment for repair of any damage to the site. These emissions would be limited to a temporary time frame once or twice per year. Any emissions that result from long-term operational and maintenance activities would not exceed SMAQMD or *de minimis* thresholds and would be less than significant.

ARCF GRR FEIS/FEIR Mitigation Measures

All the following mitigation measures were presented in the ARCF GRR FEIS/FEIR (pages 251 to 254) but have been revised and updated to demonstrate consistency with the most current SMAQMD recommendations. The measure to install wind breaks by planting trees or installing fences at the upstream end of construction areas was not incorporated in the Proposed Action, because it is not a practical measure for a linear construction project consisting of multiple multi-thousand-foot construction areas. Mitigation measures incorporated into the Proposed Action are as follows:

Mitigation Measure AQ-1: Implement SMAQMD's Basic Construction Emissions Control Practices. SMAQMD requires construction projects to implement basic construction emissions control practices to control fugitive dust and diesel exhaust emissions.⁹² USACE would implement the following control measures during project construction:

- Control fugitive dust as required by SMAQMD Rule 403 and enforced by SMAQMD staff.
- Water all exposed surfaces twice daily. Exposed surfaces include but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would travel along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible track-out of mud or dirt from adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Complete all roadways, driveways, sidewalks, or parking lots to be paved as soon as possible. In addition, lay building pads as soon as possible after grading unless seeding or soil binders are used.
- Limit vehicle speeds on unpaved roads to 15 miles per hour.

⁹² Sacramento Metropolitan Air Quality Management District. 2019. Basic Construction Emissions Control Practices. Available: <http://www.airquality.org/LandUseTransportation/Documents/Ch3BasicEmissionControlPracticesBMPSFinal7-2019.pdf>. Accessed December 22, 2021.

- Minimize idling time, either by shutting equipment off when not in use or by reducing the time of idling to 5 minutes (required by 13 CCR Sections 2449[d][3] and 2485). Provide clear signage that posts this requirement for workers at the site entrances.
- Maintain all construction equipment in proper working condition according to the manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.

Mitigation Measure AQ-2: Implement Enhanced Fugitive Dust Control

Practices. Fugitive dust mitigation for the project would require the use of adequate measures during each construction activity and would include frequent application of water or application of soil additives, control of vehicle access, and vehicle speed restrictions. USACE would implement the dust mitigation measures listed below.⁹³

- Water exposed soil with adequate frequency for continued moist soil; however, do not overwater to the extent that sediment flows from the site.
- Suspend excavation, grading, and/or demolition activity when wind speeds exceed 20 miles per hour.
- Plant vegetative ground cover (fast-germinating native grass seed) in disturbed areas as soon as possible.
- Install wheel washers for all exiting trucks or wash off all trucks and equipment leaving the site.
- Treat site access to 100 feet from the paved road with a 6- to 12-inch layer of wood chips, mulch, or gravel to reduce generation of road dust and road dust carryout onto public roads.
- Post a publicly visible sign identifying the telephone number and person to contact at the lead agency regarding dust complaints. This person would respond and take corrective action within 48 hours. To ensure compliance, SMAQMD's phone number would also be visible.

Mitigation Measure AQ-3: Develop and Implement a Plan for Enhanced On-Site Exhaust Controls.⁹⁴ Actual emissions of nonattainment and maintenance pollutants would be tracked monthly using tools acceptable to SMAQMD (e.g., construction mitigation calculator, SMAQMD's Equipment List). USACE shall submit to SMAQMD a comprehensive inventory of all off-road construction equipment (50 horsepower or more) to be used 8 hours or more during project

⁹³ Sacramento Metropolitan Air Quality Management District. 2009. Enhanced Fugitive PM Dust Control Practices. Available: <http://www.airquality.org/LandUseTransportation/Documents/Ch3EnhancedFugitiveDustControlFINAL12-2009.pdf>. Accessed December 22, 2021.

⁹⁴ Sacramento Metropolitan Air Quality Management District. 2019. Enhanced On-Site Exhaust Controls. Available: <http://www.airquality.org/LandUseTransportation/Documents/Ch3On-SiteEnhancedExhaustMitigationFinal4-2019.pdf>. Accessed December 22, 2021.

construction. The tracking data would be used to verify that all pollutants remain below the CEQA daily thresholds, General Conformity *de minimis* thresholds, or are fully mitigated and offset if emissions exceed either.

The initial report would include all the following details:

- Information about the project information and the construction company.
- The equipment type, horsepower rating, engine model year, projected hours of use, and CARB equipment identification number for each piece of equipment in the plan.
- All owned, leased, and subcontracted equipment to be used.

Updated reports would be submitted monthly to demonstrate continued project compliance.

SMAQMD may conduct periodic site inspections to determine compliance. Nothing in this mitigation would supersede other air district, state, or federal rules or regulations.

Mitigation Measure AQ-4: Use Electric Construction Equipment. To the extent available and feasible, construction equipment would be powered by electricity, rather than diesel fuel, which would reduce construction-related criteria air pollutants, TACs, and tailpipe GHG emissions associated with diesel fuel combustion.

Mitigation Measure AQ-5: Pay NO_x Mitigation Fee to SMAQMD. Set in July 1, 2017 with no changes since writing this Draft Supplemental EIR (i.e., 2021), the mitigation fee rate is \$30,000 per ton of emissions.⁹⁵ The contractor would pay the appropriate SMAQMD-required NO_x mitigation fee to offset the project's NO_x emissions when they exceed SMAQMD's threshold of 85 lb/day. The NO_x mitigation fee would apply to all emissions from the Proposed Action: on-road (on- and off-site), off-road, portable, stationary equipment, and vehicles.

Summary

Implementation of the mitigation measures contained in the ARCF GRR FEIS/EIR would reduce construction-generated NO_x emissions to a less-than-significant level that would not result in adverse health effects. In addition, with incorporation of dust control measures, PM (fugitive dust) emissions would be further reduced (i.e., by up to 75 percent) and would not exceed applicable SMAQMD thresholds or result in adverse health effects. The application of BMPs combined with engagement in SMAQMD's NO_x mitigation fee program or offsets obtained through purchase or loan would be sufficient to reduce

⁹⁵ Sacramento Metropolitan Air Quality Management District, 2019 (April). Off-Site Construction Mitigation Fees. Available: <http://www.airquality.org/LandUseTransportation/Documents/Ch3Off-SiteMitigationFeesFinal4-2019.pdf>. Accessed December 22, 2021.

emissions to zero, in accordance with the Clean Air Act for projects that exceed *de minimis* levels, and consequently below SMAQMD's recommended daily mass emissions threshold of 85 lb/day. Emissions of ROG, PM₁₀, and PM_{2.5} would additionally be reduced through the application of the mitigation measures. As discussed in the General Conformity Determination, included in Appendix F, the project would be in conformity with the Clean Air Act and would not cause or contribute to a new violation, nor increase the frequency or severity of existing violations of the NAAQS. Based on the conformity analysis, no exceedance of the *de minimis* thresholds in 2023 would occur. Construction-related air quality impacts would be less than significant with mitigation.

3.10 Greenhouse Gas Emissions and Energy Consumption

3.10.1 Environmental Setting

3.10.1.1 Regulatory Setting

Section 3.12 (page 254) of the ARCF GRR FEIS/FEIR identifies applicable federal, state, and local environmental laws and regulations that apply to regulating greenhouse gas (GHG) emissions. Chapter 5 of the ARCF GRR FEIS/FEIR summarized the environmental laws and regulations that apply to the Proposed Action and described the status of compliance with those laws and regulations. Additional applicable laws and regulations related to GHG emissions are summarized below.

The ARCF GRR FEIS/FEIR did not evaluate potential adverse energy impacts. Therefore, this chapter presents the applicable federal, state, and local environmental laws and regulations that pertain to energy demand, consumption, and generation. Energy-related impacts are evaluated in Section 3.10.3.

Federal

Energy Policy and Conservation Act and Corporate Average Fuel Economy Standards

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Pursuant to this Act, the National Highway Traffic Safety Administration (NHTSA), part of the U.S. Department of Transportation (DOT), is responsible for revising existing fuel economy standards and establishing new vehicle economy standards.

Under the Energy Independence and Security Act of 2007 (described below), the CAFE standards were revised for the first time in 30 years then later updated in 2012 and 2019.

Energy Policy Act of 1992 and 2005

The Energy Policy Act of 1992 (EPAct) was enacted to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain Federal, State, and local government and

private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in EPAct. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs. The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a Federal purchase requirement for renewable energy.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. It represents a major step forward in expanding the production of renewable fuels, reducing dependence on oil, and confronting global climate change. The Energy Independence and Security Act of 2007 increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels; and reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020—an increase in fuel economy standards of 40 percent.

By addressing renewable fuels and the CAFE standards, the Energy Independence and Security Act of 2007 builds upon progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century; however, on August 2, 2018, the NHSTA and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule) (49 Code of Federal Regulations [CFR] 523, 531, 533, 536, and 537 and 40 CFR 85 and 86). This rule addresses emissions and fuel economy standards for motor vehicles and is separated in two parts as described below.

Part One, “One National Program” (84 *Federal Register* [FR] 51310), revokes a waiver granted by EPA to the State of California under Section 209 of the CAA to enforce more stringent emission standards for motor vehicles than those required by EPA for the explicit purpose of greenhouse gas (GHG) reduction and, indirectly, criteria air pollutants and ozone precursor emission reduction. This revocation became effective on November 26, 2019, restricting the ability of the California Air Resources Board (CARB) to enforce more stringent GHG emission standards for new vehicles and set zero-emission-vehicle mandates in California.⁹⁶ EPA released a Notice of Reconsideration of Part One of the SAFE Rule on April 26, 2021 for public input which ended on June 6, 2021.⁹⁷

⁹⁶ National Highway Traffic Safety Administration. 2019. The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One Nation Program. 49 CFR Parts 531 and 533. Available: <https://www.federalregister.gov/documents/2019/09/27/2019-20672/the-safer-affordable-fuel-efficient-safe-vehicles-rule-part-one-one-national-program>. Accessed December 22, 2021.

⁹⁷ U.S. Environmental Protection Agency. 2021 (April 26). EPA Reconsiders Previous Administration’s Withdrawal of California’s Waiver to Enforce Greenhouse Gas Standards for Cars and Light Trucks. Available: <https://www.epa.gov/newsreleases/epa-reconsiders-previous-administrations-withdrawal-californias-waiver-enforce>. Accessed December 22, 2021.

Part Two addresses CAFE standards for passenger cars and light trucks for model years 2021–2026. This rulemaking proposes new CAFE standards for model years 2022–2026 and would amend existing CAFE standards for model year 2021. The proposal would retain the model year 2020 standards (specifically, the footprint target curves for passenger cars and light trucks) through model year 2026, but comment is sought on a range of alternatives discussed throughout the proposed rule. This proposal addressing CAFE standards is being jointly developed with EPA, which is simultaneously proposing tailpipe carbon dioxide standards for the same vehicles covered by the same model years.

At the time of writing this Draft EIR, the provision of Parts One and Two of the SAFE Rule are still in effect; however, pending litigation, the SAFE Rule may not be in effect once construction of the Proposed Action commences. The analysis herein is therefore inherently conservative.

State

Statewide Greenhouse Gas Emissions Targets and the Climate Change Scoping Plan

Reducing GHG emissions in California has been the focus of the state government for approximately two decades. GHG emission targets established by the State Legislature include reducing statewide GHG emissions to 1990 levels by 2020 (Assembly Bill [AB] 32 of 2006) and reducing them to 40 percent below 1990 levels by 2030 (Senate Bill [SB] 32 of 2016). Executive Order S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. Executive Order B-55-18 calls for California to achieve carbon neutrality by 2045 and achieve and maintain net negative GHG emissions thereafter. These targets are in line with the scientifically established levels needed in the United States to limit the rise in global temperature to no more than 2 degrees Celsius, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.⁹⁸

California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by CARB, outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and “substantially advance toward our 2050 climate goals.”⁹⁹ It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste). CARB and other state agencies also released the January 2019 Draft California 2030 Natural and Working

⁹⁸ United Nations. 2015. Paris Agreement. Available: https://unfccc.int/sites/default/files/english_paris_agreement.pdf. Accessed January 26, 2021.

⁹⁹ California Air Resources Board. 2017 (November). California's 2017 Climate Change Scoping Plan. Available: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf. Accessed December 22, 2021. pp. 1, 3, 5, 20, and 25–26.

Lands Climate Change Implementation Plan consistent with the carbon neutrality goal of Executive Order B-55-18.¹⁰⁰

The state has also passed more detailed legislation addressing GHG emissions associated with industrial sources, transportation, electricity generation, and energy consumption, as summarized below.

Warren-Alquist Act

The 1974 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). The creation of the act occurred as a response to the state legislature's review of studies projecting an increase in statewide energy demand, which would potentially encourage the development of power plants in environmentally sensitive areas. The act introduced state policy for siting power plants to reduce potential environmental impacts, and additionally sought to reduce demand for these facilities by directing CEC to develop statewide energy conservation measures to reduce wasteful, inefficient, and unnecessary uses of energy. Conservation measures recommended establishing design standards for energy conservation in buildings that ultimately resulted in the creation of the Title 24 Building Energy Efficiency Standards, which have been updated regularly and remain in effect today. The act additionally directed CEC to cooperate with the Governor's Office of Planning and Research, the California Natural Resources Agency, and other interested parties in ensuring that a discussion of wasteful, inefficient, and unnecessary consumption of energy is included in all environmental impact reports required on local projects.

State of California Energy Action Plan

CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The current plan is the 2003 California Energy Action Plan (2008 update).¹⁰¹ The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs; and encouragement of urban design that reduces vehicle miles traveled (VMT) and accommodates pedestrian and bicycle access.

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to AB 2076 (Chapter 936, Statutes of 2000), CEC and CARB prepared and adopted a joint agency report in 2003, *Reducing California's Petroleum Dependence*. Included in this report are recommendations to increase the use of alternative fuels to

¹⁰⁰ California Environmental Protection Agency, California Natural Resources Agency, California Department of Food and Agriculture, California Air Resources Board, and California Strategic Growth Council. 2019 (January). *Draft California 2030 Natural and Working Lands Climate Change Implementation Plan*. Available: <https://ww3.arb.ca.gov/cc/natandworkinglands/draft-nwl-ip-1.3.19.pdf>. Accessed December 22, 2021.

¹⁰¹ California Energy Commission and California Air Resources Board. 2003. *Reducing California's Petroleum Dependence*. Available: <https://ww3.arb.ca.gov/fuels/carefinery/ab2076final.pdf>. Accessed December 22, 2021.

20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT.¹⁰² Further, in response to CEC's 2003 and 2005 *Integrated Energy Policy Reports*, Governor Davis directed CEC to take the lead in developing a long-term plan to increase alternative fuel use.

A performance-based goal of AB 2076 was to reduce petroleum demand to 15 percent below 2003 demand by 2030.

Integrated Energy Policy Report

SB 1389 (Chapter 568, Statutes of 2002) required CEC to: “conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state’s economy, and protect public health and safety” (Public Resources Code Section 25301[a]). This work culminated in the Integrated Energy Policy Report (IEPR).

CEC adopts an IEPR every 2 years and an update every other year. The 2020 IEPR Update, which is the most recent IEPR, was adopted March 23, 2021. The 2020 IEPR Update provides a summary of priority energy issues currently facing the state, outlining strategies and recommendations to further the State’s goal of ensuring reliable, affordable, and environmentally responsible energy sources. Energy topics covered in the report include progress toward statewide renewable energy targets and issues facing future renewable development; efforts to increase energy efficiency in existing and new buildings; progress by utilities in achieving energy efficiency targets and potential; improving coordination among the state’s energy agencies; streamlining power plant licensing processes; results of preliminary forecasts of electricity, natural gas, and transportation fuel supply and demand; future energy infrastructure needs; the need for research and development efforts to statewide energy policies; and issues facing California’s nuclear power plants.¹⁰³

Legislation Associated with Electricity Generation

The state has passed multiple pieces of legislation requiring the increasing use of renewable energy to produce electricity for consumers. California’s Renewable Portfolio Standard (RPS) Program was established in 2002 (SB 1078) with the initial requirement to generate 20 percent of their electricity from renewable by 2017, 33 percent of their electricity from renewables by 2020 (SB X1-2 of 2011), 52 percent by 2027 (SB 100 of 2018), 60 percent by 2030 (also SB 100 of 2018), and 100 percent by 2045 (also SB 100 of 2018).

¹⁰² California Energy Commission and California Air Resources Board. 2003. Reducing California’s Petroleum Dependence. Available: <https://ww3.arb.ca.gov/fuels/carefinery/ab2076final.pdf>. Accessed December 22, 2021.

¹⁰³ California Energy Commission. 2021. Final 2020 Integrated Energy Policy Report Update. Submission date: March 23, 2021. Available: <https://efiling.energy.ca.gov/getdocument.aspx?tn=237268>. Accessed December 22, 2021.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statutes of 2005) required CEC to prepare a state plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other Federal, State, and local agencies. The plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation to public health and environmental quality.

Executive Order S-06-06

Executive Order S-06-06, signed on April 25, 2006, establishes targets for the use and production of biofuels and biopower, and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The Executive Order establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The Executive Order also calls for the state to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the State can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 plan and provides a more detailed action plan to achieve the following goals:

- Increase environmentally and economically sustainable energy production from organic waste.
- Encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications.
- Create jobs and stimulate economic development, especially in rural regions of the state.
- Reduce fire danger, improve air and water quality, and reduce waste.

As of 2020, 2.44 percent of the total electricity system power in California was derived from biomass.¹⁰⁴

¹⁰⁴ California Energy Commission. 2021. Total System Electric Generation. Available: <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation>. Accessed December 22, 2021.

Local

Sacramento Metropolitan Air Quality Management District

SMAQMD provides guidance to lead agencies for conducting GHG analyses under CEQA and is currently in the process of updating their guidance and thresholds of significance for GHG emissions. In February 2021, SMAQMD adopted the final version of the *Greenhouse Gas Thresholds for Sacramento County* guidance document. The final guidance document provides recommendations for thresholds that can be applied to construction and operational activities, and provides a tailored approach for land use development projects. However, the Proposed Project does not fit the criterion of being a land use development project; therefore, the construction thresholds of significance identified by SMAQMD will be applied in this analysis.¹⁰⁵

3.10.1.2 Existing Conditions

The ARCF GRR FEIS/FEIR Section 3.12 (pages 255 through 260) describes the regional and local setting in the vicinity of the Project Area. The ARCF GRR FEIS/FEIR did not include a summary of the environmental setting as it pertains to energy resources. Therefore, a summary is provided below.

Electricity and Natural Gas Use

Electric services are provided to the City from Sacramento Municipal Utility District (SMUD). Natural gas is supplied to the City from Pacific Gas and Electric (PG&E).

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. One-third of energy commodities consumed in California is natural gas. In 2020, approximately 37 percent of natural gas consumed in the state was used to generate electricity. Large hydroelectric powered approximately 12 percent of electricity and renewable energy from solar, wind, small hydroelectric, geothermal, and biomass combustion totaled 33 percent.¹⁰⁶ In 2020, SMUD provided its customers with 34 percent eligible renewable energy (i.e., biomass combustion, geothermal, small scale hydroelectric, solar, and wind) and 29 percent and 35 percent from large scale hydroelectric and natural gas, respectively.¹⁰⁷ The contribution of in- and out-of-state power plants depends on the precipitation that occurred in the previous year, the corresponding amount of hydroelectric power that is available, and other factors. SMUD is the primary electricity and natural gas service provider in Sacramento County.

¹⁰⁵ Sacramento Metropolitan Air Quality Management District. 2021 (February). Greenhouse Gas Emissions. Available: <http://www.airquality.org/LandUseTransportation/Documents/Ch6GHG2-26-2021.pdf>. Accessed December 22, 2021.

¹⁰⁶ California Energy Commission. 2021. Total System Electric Generation. Available: <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation>. Accessed December 22, 2021.

¹⁰⁷ Sacramento Metropolitan Utility District. 2021. 2020 Power Content Label. Available: <https://www.smud.org/SMUDPCL>. Accessed December 22, 2021.

The proportion of SMUD-delivered electricity generated from eligible renewable energy sources is anticipated to increase over the next three decades to comply with the SB 100 goals, as described in Section 3.10.1.

Energy Use for Transportation

In 2019, the transportation sector comprised the largest end-use sector of energy in the state totaling 39.3 percent, followed by the industrial sector totaling 23.2 percent, the commercial sectors at 18.9 percent, and the residential sector of 18.7 percent.¹⁰⁸ On-road vehicles use about 90 percent of the petroleum consumed in California. CEC reported retail sales of 689 million and 44 million gallons of gasoline and diesel, respectively, in Sacramento County in 2020 (the most recent data available).¹⁰⁹ The California Department of Transportation projects that 996 million gallons of gasoline and diesel will be consumed in Sacramento County in 2030.¹¹⁰

3.10.2 Methodology and Basis of Significance

3.10.2.1 Methodology

This analysis generally uses the same methodology described in Section 3.12 (pages 261 through 262) of the ARCF GRR FEIS/FEIR. That analysis focused on evaluating GHG impacts from construction activities because operation and maintenance activities are part of the existing environmental baseline and thus would not create a substantial source of new emissions. Where significant climate change impacts are identified, mitigation measures to reduce these impacts are specified.

GHG emissions from project construction would result from fuel usage by off-road equipment, on-road vehicles, electricity consumption by office trailers, and delivery of materials. The project's potential GHG impact was analyzed using a conservative construction scenario to estimate the maximum construction emissions generated.

A variety of methods and emissions modeling software were used to quantify criteria air pollutants, described in Section 3.9, *Air Quality*. The emission factors and models described there were also used to quantify GHG emissions. GHG emissions were summed over the duration of all anticipated activity, including the use of heavy-duty equipment, haul trucks, and worker commute trips. All inputs and assumptions are included in Appendix D.

The ARCF GRR FEIS/FEIR did not evaluate potential energy impacts. The 2018 revisions to the State CEQA Guidelines amended Appendix G to include potentially significant

¹⁰⁸ U.S. Energy Information Administration. 2021. California Energy Consumption by End-Use Sector, 2019. Available: <https://www.eia.gov/state/?sid=CA#tabs-2>. Accessed December 22, 2021.

¹⁰⁹ California Energy Commission. 2021. California Annual Retail Fuel Outlet Report Results Spreadsheets. Available: <https://www.energy.ca.gov/media/3874>. Accessed December 22, 2021.

¹¹⁰ California Department of Transportation. 2008. 2007 California Motor Vehicle Stock, Travel, and Fuel Forecast. Available: https://planning.lacity.org/eir/8150Sunset/References/6.0.%20Other%20CEQA%20Considerations/OTHER.03_2008%20California%20Motor%20Vehicle%20Stock,%20Travel%20and%20Fuel%20Forecast.pdf. Accessed January December 22, 2021.

impacts related to energy consumption. Total gallons of diesel and gasoline were estimated for the Proposed Action using assumptions derived from CalEEMod and EMFAC.

3.10.2.2 Basis of Significance

This analysis uses a basis of significance described in in Section 3.12 (pages 262 through 263) of the ARCF GRR FEIS/FEIR, as restated below. The ARCF GRR FEIS/FEIR did not evaluate potential energy impacts, and significance thresholds were added for energy consumption.

The Proposed Action would result in a significant effect related to GHG emissions and energy consumption if it would:

- Conflict with an applicable plan adopted for the purpose of reducing GHG emissions.

SMAQMD has local jurisdiction over the Project Area. On October 23, 2014, the SMAQMD adopted GHG thresholds, which were informed by the California Air Pollution Control Officers Association, “CEQA and Climate Change, Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act” Document.¹¹¹ As noted in Section 3.10.1, SMAQMD adopted new thresholds of significance for GHG impacts; however, the February 2021 *Final Greenhouse Gas Thresholds for Sacramento County* guidance document is best applied to land use development projects, of which the Proposed Action is not.

Therefore, the mass-emissions thresholds for construction projects developed by SMAQMD using substantial evidence will continue to serve as the basis of determining the significance of the Proposed Action with respect to climate change impacts.

Based on the CEQA guidelines established by each air district, SMAQMD recommends quantifying and disclosing GHG emissions from construction activities; making a determination regarding the significance of these GHG emissions based on a threshold determined by the lead agency; and incorporating applicable BMPs to reduce GHG emissions during construction, as feasible and applicable. Based on the CEQA Guidelines and guidance provided by SMAQMD, the Proposed Action would have a significant contribution to global climate change if the project would:

- generate emissions of GHGs from construction activities exceeding 1,100 metric tons of carbon dioxide equivalent per year (MTCO₂e/year).

Since publication of the ARCF GRR FEIS/FEIR, changes to Appendix G of the State CEQA Guidelines have been adopted that identify criteria for evaluating potentially

¹¹¹ California Air Pollution Control Officers Association. 2008. CEQA and Climate Change. Available: <http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf>. Accessed December 22, 2021.

significant energy impacts. As a result, this analysis also takes into consideration the following additional or modified significance criteria:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Effects Not Evaluated Further

The Proposed Action would involve short-term construction activities to improve levee structures along the American River. Once construction activities are complete (approximately 1.5 years), emissions-generating activities would cease. Operational activities may require maintenance crews visiting the site for short periods of time. However, these activities occur now, and therefore, the Proposed Action would not result in any long-term increase in GHG emissions. This issue is not discussed further.

3.10.3 Impact Analysis

3.10.3.1 No Action/No Project Alternative

Under the No Action/No Project Alternative, the Proposed Action would not be implemented, and the Sacramento metropolitan area would experience no change in the present level of risk of flooding due to levee failure from seepage, slope stability, overtopping, or other erosion concerns.

Under these conditions, a flood event could cause portions of the levees to fail, triggering potentially widespread flooding and related damage. If a catastrophic flood were to occur, emergency flood fighting and clean-up efforts would involve the operation of heavy-duty construction equipment that would consume diesel fuel and emit GHGs. Timing and duration of use would correlate with flood fighting needs, but pollutants from this equipment could generate a notable amount of GHG emissions and fuel consumption. Depending on the magnitude of a flood, flood fighting could last for weeks or even months. All of these effects on GHG emissions would be considered significant; however, the timing, duration, and magnitude of a flood event is unpredictable and a precise significance determination cannot be made.

3.10.3.2 Proposed Action

Greenhouse Gas Emissions

The ARCF GRR FEIS/FEIR Section 3.12 (pages 261 through 266) analyzed the impacts on GHG emissions and energy consumption in the Project Area. Construction emissions associated with site-related activities and off-site commute and haul truck trips were estimated based on the emission rates and assumptions described in Section 3.9, *Air Quality*. Emission sources associated with Proposed Action-related activities include the off-road construction equipment operating in Project Area, on-road vehicles, and haul

trucks traveling to and from the Project Area. As summarized in Section 3.9, *Air Quality*, GHG emissions and fuel consumption were estimated using the assumption that haul trucks with a capacity to move 32 cubic yards (cy) would be used for all construction activities. Total annual GHG emissions (expressed in MTCO₂e/year) for the Proposed Action are summarized by year and are shown in **Table 3-13**.

TABLE 3-13
ARCF 2016 PROJECT, AMERICAN RIVER CONTRACT 2
CONSTRUCTION GREENHOUSE GAS EMISSIONS (SCENARIO 1)

Construction Year	Total GHG Emissions (MTCO ₂ e/year)
2022	6
Exceed Threshold?	No
2023	3,536
Exceed Threshold?	Yes
CEQA Threshold	1,100
NOTE: MTCO ₂ e/year = metric tons of carbon dioxide per year SOURCE: Modeling performed by Ascent Environmental in 2021.	

As shown in Table 3-13, construction-related GHG emissions caused by the Proposed Action would exceed SMAQMD's mass emission construction threshold of 1,100 MTCO₂e/year in 2023. This would constitute a significant climate change impact. Notably, however, the Proposed Action would increase the likelihood that the flood management system could accommodate future flood events because of climate change. Consequently, the Proposed Action would improve the resiliency of the levee system with respect to changing climatic conditions, potentially reducing exposure of property or persons to the effects of climate change. Nevertheless, because the Proposed Action would exceed the 1,100 MTCO₂e/year threshold established by SMAQMD, climate change impacts would be significant; however, this impact would be reduced to a less-than-significant level with mitigation that would require the purchase of GHG offsets, effectively reducing emission to the SMAQMD threshold of significance.

Energy

Construction of the Proposed Action would result in an increase in fuel consumption as compared to baseline conditions. Gasoline would be consumed from worker commute trips to and from the Project Area. Diesel fuel would be required to operate heavy-duty diesel-powered construction equipment and haul trucks. **Table 3-14** displays the estimated total gallons of diesel fuel and gasoline consumption from implementation of the Proposed Action.

TABLE 3-14
ARCF 2016 PROJECT, AMERICAN RIVER CONTRACT 1
CONSTRUCTION FUEL CONSUMPTION

Fuel Type	Total Fuel Consumption (gallons)
Gasoline	1,916
Diesel	193,578

SOURCE: Modeling performed by Ascent Environmental in 2021.

As shown in Table 3-14, construction-activities would result in the consumption of approximately 1,916 and 193,578 gallons of gasoline and diesel fuel, respectively. This increase in fuel consumption would be met through existing fueling infrastructure and would not require the construction of new infrastructure that would result in an adverse environmental effect. Additionally, the use of fuel would not be considered wasteful, inefficient, or unnecessary because the Proposed Action would implement a method of improving the resiliency of the Sacramento region to flood impacts, which would be considered a necessary action for the protection of residents in the Sacramento region.

The Proposed Action would also not prevent the implementation of goals, policies, or actions contained in a plan to increase renewable energy usage or improve energy efficiency. The Proposed Action constitutes a construction project and would not generate operational electricity demand. Therefore, energy-related impacts would be less than significant.

ARCF GRR FEIS/FEIR Mitigation Measures

The following ARCF GRR FEIS/FEIR on-site mitigation measure is incorporated into the Proposed Action during construction. The portion of the measure committing to perform on-site material hauling using trucks equipped with on-road engines (if determined to result in lower levels of emissions than the off-road engines) was not incorporated, because it is not feasible for the Proposed Action.

Mitigation Measure GHG-1: Avoid, Minimize, and Compensate for Greenhouse Gas Emissions Effects. The Project Partners would implement the following measures to avoid, minimize, and compensate for the Proposed Action's GHG emissions effects:

- Encourage and provide carpools, shuttle vans, transit passes, and/or secure bicycle parking for construction worker commutes.
- Recycle at least 75 percent of construction waste and demolition debris.
- Purchase at least 20 percent of the materials and imported soil from sources within 100 miles of the project site.

- Minimize idling time, either by shutting equipment off when not in use or by reducing the time of idling to no more than 3 minutes (a 5-minute limit is required by the State airborne toxics control measure [13 CCR Sections 2449(d)(3) and 2485]). Clear signage identifying this requirement for workers would be posted at the entrances to the site.
- Maintain all construction equipment in proper working condition according to the manufacturer's specifications. The equipment would be checked by a certified mechanic and determined to be running in proper condition before it is operated.
- Use equipment with new technologies (repowered engines, electric drive trains).
- Use a CARB-approved low-carbon fuel for construction equipment. (NO_x emissions from the use of low-carbon fuel would be reviewed and increases mitigated.)
- Purchase carbon offsets for program-wide GHG emissions (direct plus indirect emissions from on-road haul trucks plus commute vehicles) that meet the criteria of being real, quantifiable, permanent, verifiable, enforceable, and additional, consistent with the standards set forth in Health and Safety Code section 38562, subdivisions (d)(1) and (d)(2). Such credits shall be based on protocols approved by the California Air Resources Board (CARB), consistent with Section 95972 of Title 17 of the California Code of Regulations, and shall not allow the use of offset projects originating outside of California, except to the extent that the quality of the offsets, and their sufficiency under the standards set forth herein, can be verified by USACE or the Sacramento Metropolitan Air Quality Management District (SMAQMD). Such credits must be purchased through one of the following: (i) a CARB-approved registry, such as the Climate Action Reserve, the American Carbon Registry, and the Verified Carbon Standard; (ii) any registry approved by CARB to act as a registry under the California Cap and Trade program; or (iii) through the California Air Pollution Control Officers Association's (CAPCOA's) GHG Rx and SMAQMD. Purchase of carbon offsets shall be sufficient to reduce the Proposed Action's GHG emissions to below SMAQMD's significance thresholds applicable prior to the start of construction through a one-time purchase of credits, according to SMAQMD's timing requirements, based on the emissions estimates in this Supplemental EIR or on an ongoing basis based on monthly emissions estimates that would be prepared in accordance with procedures established by Measure AQ-3.

Summary

Implementation of the Mitigation Measure GHG-1 would improve the fuel and material efficiency of construction equipment, which would generate fewer emissions of GHGs. Once all on-site mitigation has been applied to the Proposed Action, carbon offsets would be purchased to reduce the remaining MTCO_{2e} to levels at or below SMAQMD's

1,100 MTCO₂e/year significance threshold. Therefore, implementation of the measures identified above would reduce impacts to a less-than-significant level.

3.11 Noise and Vibration

3.11.1 Environmental Setting

3.11.1.1 Regulatory Setting

Section 3.13 (page 266) of the ARCF GRR FEIS/FEIR identifies local noise ordinances that apply to regulating noise in the in the Project Area of the Proposed Action. Chapter 5 of the ARCF GRR FEIS/FEIR summarized the environmental laws and regulations that apply to the ARCF Project and described the status of compliance with those laws and regulations. There have been no changes to the applicable listed regulations related to Noise and Vibration. Specific regulations and guidelines used in this analysis are presented below.

Federal

Federal Transit Administration

To address the human response to ground vibration, the Federal Transit Administration (FTA) has set forth guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines are presented in **Table 3-15**, below.

TABLE 3-15
GROUND-BORNE VIBRATION IMPACT CRITERIA FOR GENERAL ASSESSMENT
(VdB RE 1 MICRO-INCH/SECOND)

Land Use Category	Frequent Events ^a	Occasional Events ^b	Infrequent Events ^c
<i>Category 1:</i> Buildings where vibration would interfere with interior operations.	65 ^d	65 ^d	65 ^d
<i>Category 2:</i> Residences and buildings where people normally sleep.	72	75	80
<i>Category 3:</i> Institutional land uses with primarily daytime uses.	75	78	83

NOTES:

VdB = vibration decibels referenced to 1 microinch per second and based on the root mean square velocity amplitude.

^a "Frequent Events" is defined as more than 70 vibration events of the same source per day.

^b "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

^c "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.

^d This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define acceptable vibration levels.

SOURCE: Federal Transit Administration. 2018 (September). *Transit Noise and Vibration Impact Assessment*. Washington, D.C. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed December 22, 2021.

State

California Department of Transportation

In 2013, Caltrans published the *Transportation and Construction Vibration Manual*.¹¹² The manual provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage.

Table 3-16 presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

TABLE 3-16
CALIFORNIA DEPARTMENT OF TRANSPORTATION RECOMMENDATIONS
REGARDING LEVELS OF VIBRATION EXPOSURE

Effect on Buildings	PPV (in/sec)
Architectural damage and possible minor structural damage	0.4-0.6
Risk of architectural damage to normal dwelling houses	0.2
Virtually no risk of architectural damage to normal buildings	0.1
Recommended upper limit of vibration to which ruins and ancient monuments should be subjected	0.08
Vibration unlikely to cause damage of any type	0.006-0.019

NOTES:

in/sec = inches per second; PPV = peak particle velocity

SOURCE: California Department of Transportation. 2020 (April). *Transportation and Construction Vibration Guidance Manual, 2020 Update*. Division of Environmental Analysis. Sacramento, CA. Available: <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf>. Accessed December 22, 2021.

3.11.1.2 Existing Conditions

The ARCF GRR FEIS/FEIR Section 3.13 (page 272) describes the regional and local setting in the vicinity of the Project Area. The following provides additional information specific to the Project Area.

Sensitive Receptors

Sensitive receptors along the American River include residents along the levee system and along the proposed haul routes. Refer to Figure 2-12 in Chapter 2, *Alternatives* for proposed haul routes and their proximity to existing land uses. Residential areas back up to the levees and in most cases, there is very little space between the levee toe and the back fence of private properties. Because the levee is higher than the houses, noise on the levees could travel into the backyards and houses. In addition, recreationists using the American River Parkway would be considered sensitive receptors, as would the local wildlife in the Parkway.

¹¹² California Department of Transportation, 2020 (April). *Transportation and Construction Vibration Guidance Manual, 2020 Update*. Sacramento, CA: Noise, Division of Environmental Analysis. Sacramento, CA. Available: <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf>. Accessed December 22, 2021.

Sources of Noise

The majority of the Project Area, including both the American River North and South basins, is in urban and residential areas, where the primary sources of noise are traffic, trains, common urban uses, and limited air traffic. Boating operation is common along the American River. Major highways and roadways which generate noise near the American River include Business 80, U.S. 50, California State Highway 160, Exposition Boulevard, Elvas Avenue, Hurly Way, C Street, and Howe Avenue. Arterial roadways and stationary sources have a localized influence on the noise environment.

Based on available existing traffic data for Business 80 (i.e., U.S. 51) and U.S. 50, existing noise levels at nearby major intersections (e.g., U.S. 51/E Street and I-50/Howe Avenue), range from approximately 83 A-weighted decibels (dBA) to 84 dBA community noise equivalent level (CNEL), respectively (see Appendix F for modeling).

3.11.2 Methodology and Basis of Significance

3.11.2.1 Methodology

This analysis generally uses the same methodology described in Section 3.13.2 (page 274) of the ARCF GRR FEIS/FEIR. Construction activities (including construction equipment used for long-term maintenance) are assumed to be the predominant source of noise and vibration associated with the project. Construction noise impacts were assessed using an analysis method recommended by the U.S. Department of Transportation for construction of large public works infrastructure projects.¹¹³ Based on anticipated construction equipment types and methods of operation, construction noise levels for various elements of the construction process were calculated. These predicted levels were compared to significance criteria to determine whether significant impacts are predicted to occur. Where significant noise impacts are identified, mitigation measures to reduce noise impacts are specified.

Project-generated construction noise and vibration levels were determined based on methodologies, reference noise levels, and usage factors from FTA's *Transit Noise and Vibration Impact Assessment* methodology.¹¹⁴ Reference levels for noise and vibration emissions for specific equipment or activity types are well documented and the usage thereof common practice in the field of acoustics. The magnitude of construction noise and vibration impacts at sensitive land uses depends on the type of construction activity, the noise and vibration levels generated by various pieces of construction equipment, the distance between the activity, and sensitive land uses. For this analysis, noise levels at various distances from the construction equipment were estimated using calculation

¹¹³ Federal Transit Administration, 2018 (September). *Transit Noise and Vibration Impact Assessment*. Washington, D.C. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed December 22, 2021.

¹¹⁴ Federal Transit Administration, 2018 (September). *Transit Noise and Vibration Impact Assessment*. Washington, D.C. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed December 22, 2021.

procedures recommended by FTA.¹¹⁵ The calculations used for this analysis include distance attenuation (6 decibels per doubling of distance) and attenuation from ground absorption for both hard ground and soft ground.

Regarding temporary increases in noise from haul trucks, noise levels were estimated based on anticipated maximum daily truck activity and traffic noise modeling using methods consistent with the Federal Highway Administration's (FHWA's) Traffic Noise Model.

3.11.2.2 Basis of Significance

This analysis uses the same basis of significance described in Section 3.13.2 (page 274) of the ARCF GRR FEIS/FEIR, as stated below.

Both the City and County of Sacramento noise ordinances state that a standard of 55 dBA is applied from 7:00 a.m. to 10:00 p.m., and a standard of 50 dBA is applied from 10:00 p.m. to 7:00 a.m. for residential and agricultural uses. The Proposed Activity at Site 1-1 and the staging area is located within City limits however truck hauling trips could extend into the County. Therefore, both the City and County of Sacramento noise ordinances are included in this analysis.

These noise levels are then adjusted according to the cumulative duration of the intrusive sound. For example, if the cumulative period is 5 minutes per hour, then the standard is adjusted by 10 dBA to 65 dBA during daytime hours and 60 dBA during nighttime hours. If the cumulative period is 30 minutes per hour, no adjustments are made and the standard is 55 dBA during the daytime and 50 dBA during the nighttime, functionally similar to the average hourly noise level, or L_{eq} . The noise level that must not be exceeded for any time per hour is 75 dBA during the day and 70 dBA during the night, functionally similar to a maximum noise level or L_{max} .

The Sacramento County noise ordinance further states that construction noise is exempt from 6:00 a.m. to 8:00 p.m. Monday through Friday and from 7:00 a.m. to 8:00 p.m. on Saturdays and Sundays (Chapter 6.68 Noise Control, County of Sacramento Code). The City of Sacramento exempts construction noise from 7:00 a.m. to 6:00 p.m. Monday through Saturday and from 9:00 a.m. to 6:00 p.m. on Sundays (8.68.080 Exemptions, Noise Control Standards, City of Sacramento Municipal Code). Thus, construction noise impacts were evaluated using the City and County noise codes, where applicable.

To evaluate potential structural damage from construction activities, Caltrans guidance was used. To evaluate disturbance to sensitive receptors from construction and hauling activities, FTA guidance was used. Thus, based on the aforementioned applicable

¹¹⁵ Federal Transit Administration, 2018 (September). *Transit Noise and Vibration Impact Assessment*. Washington, D.C. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed December 22, 2021.

regulations, the Proposed Action would result in a significant effect related to noise if it would result in:

- A substantial temporary (i.e., construction) or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Due to the nature of project construction that would vary throughout the day depending on individual construction activities, applicable thresholds include construction noise levels above 55 dBA L_{eq} , or construction activity that generates excessive noise levels during sensitive times of the day; or
- Exposure of sensitive receptors or structures to groundborne vibration, that exceed the following:
 - 72 vibration decibels (VdB) for hauling activities,
 - 80 VdB for heavy-duty equipment, or
 - 0.2 peak particle velocity (PPV) for structural damage from any activity.

Since publication of the ARCF GRR FEIS/FEIR, changes to Appendix G of the State CEQA Guidelines that became effective in December 2018 were intended to reflect recent changes to the CEQA statutes and court decisions. To the extent that the topics or questions in Appendix G are not reflected in the ARCF GRR FEIS/FEIR significance criteria, these topics and questions have been taken into consideration in the impact analysis below, even though the determination of significance relies on City and County of Sacramento thresholds. Specifically, Appendix G no longer includes the criterion of the effect of permanent, temporary, or periodic increases in ambient noise levels in the project vicinity above levels existing without the project, but rather defers to local noise ordinances and standards as the relevant criteria.

Effects Not Evaluated Further

The Proposed Action would not result in any long-term sources of vibration such as railways or transit centers, and therefore, operational vibration impacts are not discussed further. In addition, no new stationary noise sources are proposed. Regarding permanent increases in traffic noise, once construction is complete, operational activities would be limited to small maintenance crews traveling to and from the site periodically to conduct inspections and limited work on-site. These activities are similar to current operations and would not result in traffic increases that could generate perceptible increases in noise. Issues related to long-term operational vibration, stationary noise sources, and traffic noise increases are not evaluated further.

The Proposed Action does not include any new land use development (e.g., residences, commercial) where people work or live, and therefore, would not expose people to aircraft or airport-related noise. Noise from aircraft and airports is not discussed further.

3.11.3 Impact Analysis

3.11.3.1 No Action/No Project Alternative

Under the No Action/No Project Alternative, the Proposed Action would not be implemented, and the Sacramento metropolitan area would experience no change in the present level of risk of flooding due to levee failure from seepage, slope stability, overtopping, or other erosion concerns. These events would generate noise; however, noise levels would depend on the degree of severity of these events. For instance, a catastrophic flood event could generate high volumes of noise as compared to some spillage from levee overtopping.

Under the No Action/No Project Alternative, there would be no construction-related effects on the acoustic environment, including the generation of groundborne vibration. The noise levels in the study area would remain consistent with the existing ambient noise levels present under current conditions. It is highly likely that if the project is not constructed, a large flood event could result in levee failure. The amount of noise that would be generated to repair the damaged levee and cleanup of the flooded lands could exceed noise ordinances and expose sensitive receptors near the rivers to excessive noise levels and groundborne vibration from the placement of riprap to repair levees. These effects on noise would be significant; however, the timing, duration, and magnitude of a flood event is unpredictable, and a precise significance determination is not possible.

3.11.3.2 Proposed Action

Construction Noise

The project would generate construction noise from heavy-duty equipment operating at Site 1-1 and from the use of heavy-duty trucks to haul material to and from the project site and staging areas. Although these activities are associated with proposed construction activities, they are somewhat distinct and may affect different receptors; thus, they are described separately below.

Heavy-Duty Construction Equipment

The ARCF GRR FEIS/FEIR (pages 275 through 281) characterized construction noise levels from various activities that would occur during project construction, including stripping, levee degrading, soil placement, riprap installation, and roadway construction, as shown in Table 50 of the ARCF GRR FEIS/FEIR. Based on the modeling conducted for that analysis, noise levels associated with riprap installation (i.e., 88 dBA L_{eq}) would represent the loudest anticipated noise levels, which would occur during Proposed Action activities at Site 1-1. Based on modeled noise levels for riprap installation, ground absorption, and standard attenuation rates (i.e., 6-dBA reduction per doubling of distance), **Table 3-17** below shows anticipated noise levels at various distances from heavy-duty equipment use at Site 1-1.

TABLE 3-17
NOISE LEVELS DURING CONSTRUCTION OF EROSION PROTECTION

Distance Between Source and Receiver (feet)	Calculated 1-Hour L_{eq} Sound Level (dBA)
50	88
100	80
200	73
300	68
400	65
500	62
1,000	54
1,500	50
2,000	47
3,000	42

NOTE:

dBA = A-weighted decibels; L_{eq} = hourly average noise level

SOURCE: Modeled by Ascent Environmental Inc. 2021

Sensitive receptors near Site 1-1 primarily include nearby existing residential neighborhoods and neighborhood parks. The closest sensitive receptors to construction activity include single family residences located roughly 50 to 60 feet from the outer boundary of construction areas at Site 1-1. Based on the anticipated construction activities and associated noise levels, applicable thresholds (i.e., 55 dBA L_{eq}) would be exceeded where construction activity would occur within approximately 1,000 feet of existing sensitive land uses.

Haul Trucks

In addition to noise generated from the use of heavy-duty equipment required for the Proposed Activity at Site 1-1, material (e.g., bedding, riprap, soil-filled riprap, planting bench soil, and aggregate base) would be imported and excavated daily, at varying quantities from Site 1-1 and the staging area throughout the construction period (i.e., May to November). Based on aerial imagery of the site and the anticipated haul routes, receptors are located as close as 30 feet from haul routes (i.e., from directional travel lane).

To model noise levels from hauling activities, maximum daily and hourly hauling activity was calculated based on anticipated material quantities needed, as provided in Chapter 2, *Alternatives*, and in **Appendix F**.

Based on the anticipated construction schedule and sequencing of activities, haul truck trips would occur from May to November to import riprap, bedding, gravel, soil, and IWM to Site 1-1. As mentioned previously, each of the materials would be brought in and used before the next material would be needed, however some overlap in hauling in of materials could occur. According to Table 2-2, the maximum daily truck trips that could

occur if the hauling phases would overlap, could occur during material hauling phases for the rip rap and soil-fill rip rap. Table 2-2 indicates soil-filled rip rap material would require approximately 1,500 truckloads over a period of 14 days, and rip-rap material would require approximately 2,700 truckloads over a period of seven days. Based on these quantities and assuming 10 cubic-yard haul trucks, there could be a maximum of 187 one-way trips, or 374 round-trip truck trips, required to haul material. Therefore, based on a conservative estimate of an eight-hour workday (i.e., Sunday), there could be approximately 24 truck trips per hour, or the peak hour volume.

This maximum truck trip estimate was used for noise modeling purposes, but hourly and daily truck volumes may be lower in some places throughout the Proposed Activity at Site 1-1 and haul routes. Based on these quantities and assuming all trucks could be traveling on the same route, hauling activities could result in noise levels of approximately 57 dBA L_{eq} at 100 feet from the centerline of the haul routes. Predicted noise levels would not attenuate to below 55 dBA L_{eq} until 127 feet from the centerline of the haul route. Because receptors are located as close as 30 feet from haul routes (i.e., from directional travel lane), receptors along proposed haul routes would be exposed to exterior noise levels that exceed applicable thresholds of 55 dBA L_{eq} .

As discussed above, heavy-duty construction equipment at the work site, as well as peak-hourly haul truck activities would exceed City and County of Sacramento daytime noise standards of 55 dBA L_{eq} . Under the Proposed Action, there would be significant short-term impacts associated with temporary construction noise and haul truck activities; however, this impact could be reduced to a less-than-significant level with mitigation.

Vibration Generated during Construction

Regarding construction-related vibration, pile driving, and blasting activities are of primary concern for both structural damage and disturbance to sensitive receptors. Consistent with the analysis in the ARCF GRR FEIS/FEIR (pages 277 through 288) pile driving and blasting activity are not proposed. Thus, the analysis in the ARCF GRR FEIS/FEIR assumed that the highest levels of vibration could come from a vibratory compactor/roller, a likely piece of equipment that could generate groundborne vibration. In accordance with FTA guidance for determining impacts from vibration to structures (i.e., vibration levels that exceed 0.2 inch per second peak particle velocity [PPV]) and based on reference vibration levels and standard attenuation rates for a vibratory compactor, vibration from heavy-duty equipment would only be a potential issue if structures were located within 25 feet of construction activity. Regarding disturbance to sensitive land uses, construction equipment would exceed FTA-recommended criteria for infrequent events (i.e., 80 VdB) within 75 feet of construction activity. Based on aerial imagery and anticipated location of the Proposed Activity at Site 1-1, receptors are generally located 50 to 60 feet away, which is within 75 feet of construction activity. Therefore, construction equipment activity would exceed the FTA threshold for sensitive land uses and would result in an impact to nearby residential receptors.

In addition to vibration from heavy-duty equipment, vibration impacts could also result from daily haul truck activity occurring near existing sensitive land uses. The ARCF GRR FEIS/FEIR did not evaluate vibration from haul trucks, so this analysis focuses on impacts from hauling activities.

Project-related construction vibration levels were calculated using FTA guidelines based on the 30-foot distance of the nearest sensitive receptor to haul routes. For purposes of this analysis, movement of loaded haul trucks was conservatively considered to produce a vibration level of approximately 86 VdB (0.076 inch per second PPV at a distance of 25 feet).¹¹⁶ Assuming a maximum vibration level of 86 VdB at 25 feet, with an attenuation rate of 9 VdB per doubling of distance, the construction vibration level would exceed the FTA threshold for structural damage at a distance of 14 feet and would exceed the threshold for structural damage at 75 feet from haul truck activity. The closest receptors along the haul truck routes are located roughly 30 feet from the directional line of traffic. At a 30-foot distance, vibration levels would be approximately 84 VdB (0.058 inch per second PPV). This vibration level is below the FTA threshold of 0.2 inch per second PPV for structural damage of normal dwelling houses. However, this vibration level is above the FTA threshold of 72 VdB (frequent events) for human annoyance and would be perceptible.

As discussed above, the use of heavy-duty construction equipment could result in vibration impacts to nearby sensitive receptors located less than 75 feet away from nearby residential receptors. Further, due to the frequency (i.e., maximum 187 per day) of daily haul trucks, hauling activities could exceed FTA recommended guidelines for frequent events of 72 VdB at some receptors. Under the Proposed Action, there would be significant impacts associated with temporary construction-related vibration from heavy-duty equipment use and haul truck activities; however, this impact could be reduced to a less-than-significant level with mitigation incorporated.

ARCF GRR FEIS/FEIR Mitigation Measures

During construction, noise-reducing measures would be employed to ensure that construction noise would comply with local ordinances. Prior to the start of construction, a noise control plan would be prepared that would identify feasible measures to reduce construction noise, when necessary. The following ARCF GRR FEIS/FEIR mitigation measure (pages 281 to 282) is incorporated into the Proposed Action:

Mitigation Measure NOISE-1: Implement Noise Reduction Practices.

USACE and the CVFPB would implement the following noise control measures to reduce construction-related noise effects. The following noise reduction practices would reduce noise generated by construction activities and would apply

¹¹⁶ Federal Transit Administration, 2018 (September). *Transit Noise and Vibration Impact Assessment*. Washington, D.C. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed December 22, 2021.

to construction activities within 500 feet of sensitive receptors, including but not limited to residences.

- Coordinate with local residents, comply with noise ordinances, and implement Best Management Practices (BMPs).
- Provide written notice to residents within 1,000 feet of the construction zone, advising them of the estimated construction schedule. This written notice would be provided within one week to one month of the start of construction at that location.
- Display notices with such information as contractor contact telephone number(s) and proposed construction dates and times in a conspicuous manner, such as on construction site fences.
- Schedule the loudest and most intrusive construction activities during daytime hours (7:00 a.m. to 7:00 p.m.), where feasible.
- Require that construction equipment be equipped with factory-installed muffling devices, and that all equipment be operated and maintained in good working order to minimize noise generation.
- Locate stationary noise-generating equipment as far as practicable from sensitive receptors.
- Limit unnecessary engine idling (i.e., longer than 5 minutes) as required by State air quality regulations.
- Employ equipment that is specifically designed for low noise emission levels, when feasible.
- Employ equipment that is powered by electric or natural gas engines, as opposed to those powered by gasoline fuel or diesel, when available and feasible.
- If the construction zone is within 500 feet of a sensitive receptor, place temporary barriers (e.g., noise curtains, sound walls, etc.) between stationary noise equipment and noise-sensitive receptors to block noise transmission, when feasible, or take advantage of existing barrier features, such as existing terrain or structures, when feasible.
- If the construction zone is within 500 feet of a sensitive receptor, prohibit the use of backup alarms and provide an alternate warning system, such as a flagman or radar-based alarm that is compliant with State and Federal worker safety regulations.
- Locate construction staging areas as far as practicable from sensitive receptors.
- If there are any occupied buildings with plaster or wallboard construction within 40 feet of construction equipment, prepare a vibration control plan prior to construction.

Summary

Previously adopted ARCG GRR FEIS/FEIR mitigation (Mitigation Measure NOISE-1) would be incorporated into the Proposed Action and would reduce construction noise and vibration, and associated exposure, by ensuring that proper equipment is used, by requiring the noticing and installation of sound barriers to break the line of sight to nearby receptors, and by requiring alternative equipment types or alternative construction methods to be used to reduce noise to the extent possible. The mitigation limits construction activity to between 7:00 a.m. and 7:00 p.m.; however, the Proposed Action would limit construction activity to City of Sacramento daytime construction hours, which are from 7:00 a.m. to 6:00 p.m. on Mondays through Saturday and 9:00 a.m. to 6:00 p.m. on Sundays (see Section 2.1.2.4).

Additional Mitigation Measure

In addition to the mitigation measure incorporated from the ARCF GRR FEIS/FEIR (Mitigation Measure NOISE-1) above, a new Mitigation Measure NOISE-2 would require that a vibration control plan and site-specific measures would be implemented to ensure that applicable vibration thresholds would not be exceeded. Therefore, this mitigation measure would reduce the impact from vibration to a less-than-significant level.

Mitigation Measure NOISE-2: Implement Vibration Control Measures.

USACE and the CVFPB would implement the following vibration control measures to reduce construction-related vibration effects.

- To the extent feasible and practicable, the primary construction contractors would employ vibration-reducing construction practices so that vibration from construction would comply with applicable noise-level rules and regulations, including the construction vibration standards of the City or County of Sacramento. Project construction specifications would require the contractor to limit vibrations to less than 0.2 inch per second PPV and less than 72 VdB for frequent events (i.e., truck hauling) or 80 VdB for infrequent events (i.e., heavy-duty construction activities). If construction or truck hauling activity would occur within 75 feet of an occupied building, the contractor would prepare a vibration control plan prior to construction. The plan would include measures to limit vibration, including but not limited to the following:
 - Avoid vibratory rollers and packers near sensitive areas. Alternatives may include pad foot rollers drum rollers, or similar non-vibratory equipment.
 - Route heavily loaded trucks away from residential streets, if possible. If no alternatives are available, select the streets with the fewest homes. Depending on the specific truck type that would be used, the contractor could demonstrate with substantial evidence, to the City of Sacramento, that trucks would not exceed applicable thresholds mentioned above.
 - Prior to construction activities, notify each residence within 75 feet of construction with contact information to request pre- and post-construction surveys to assess potential architectural damage from levee construction

vibration. The survey would include visual inspection of the structures that could be affected and documentation of structures by means of photographs and video. This documentation would be reviewed with the individual owners prior to any construction activities. Post-construction monitoring of structures would be performed to identify (and repair, if necessary) damage, if any, from construction vibration. Any damage would be documented with photographs and video. This documentation would be reviewed with the individual property owners.

- Place vibration monitoring equipment at the property line adjacent to large equipment and, with owner approval, at the back of the residential structures adjacent to the large equipment. Record measurements daily.

3.12 Recreation

3.12.1 Environmental Setting

3.12.1.1 Regulatory Setting

Section 3.14 (page 282) of the ARCF GRR FEIS/FEIR summarized the environmental laws and regulations that apply to the proposed action and Chapter 5 of the ARCF GRR FEIS/FEIR described in detail the status of compliance with those laws and regulations. There has been no change to the applicable listed regulations related to recreation as listed in the ARCF GRR FEIS/FEIR.

3.12.1.2 Existing Conditions

The ARCF GRR FEIS/FEIR Section 3.14 (pages 282 through 287) describes the regional and local setting in the vicinity of the Project Area, including descriptions of the recreational facilities, uses, and access to the Project Area. These include descriptions of the following: the American River Parkway (Parkway), and the Sutter's Landing Regional Park. In addition to the recreational facilities described in the ARCF GRR FEIS/EIR, the Proposed Action includes staging areas, an ingress/egress location, and haul routes in the Sutter's Landing Regional Park, and an ingress/egress location for construction at Glenn Hall Park in the Riverpark neighborhood. The City of Sacramento's Two Rivers Recreational Trail is located on the waterside of the levee crown road in Sutter's Landing Regional Park and is paved until it meets the Union Pacific Railroad, where the recreational trail currently ends. Glen Hall Park is located on Sandburg Drive and the terminus of Carlson Drive. The parking lot of Glenn Hall Park would be used for temporary construction vehicle access to the levee crown road. The Parkway's open spaces and natural resources provide a highly valued natural setting and variety of recreational activities include biking, running, walking, birding, fishing, and boating. The location of these sites are identified within the described context of the Proposed Action in Chapter 2, *Alternatives*.

3.12.2 Methodology and Basis of Significance

3.12.2.1 Methodology

This analysis uses the same methodology as described in Section 3.14 (page 287) of the ARCF GRR FEIS/FEIR to analyze impacts of the Proposed Action on recreational opportunities within the Project Area based on temporary and permanent changes to recreational resources.

3.12.2.2 Basis of Significance

This analysis uses the same basis of significance described in Section 3.14 (page 287) of the ARCF GRR FEIS/FEIR, as restated below.

The Proposed Action would result in a significant effect related to recreation if it would:

- Eliminate or substantially restrict or reduce the availability, access, or quality of existing recreational sites or opportunities in the Project Area;
- Cause substantial long-term disruption in the use of an existing recreation facility or activity;
- Result in inconsistencies or non-compliance with regional planning documents; or
- Result in inconsistencies with the Rivers and Harbors Act or the Wild and Scenic Rivers Act.

3.12.3 Impact Analysis

3.12.3.1 No Action/No Project Alternative

Under the No Action/No Project Alternative, the proposed action would not be implemented, and the Sacramento metropolitan area would experience no change in the present level of risk of flooding due to levee failure from seepage, slope stability, overtopping, or other erosion concerns.

Under these conditions, a flood event could cause portions of the levees to fail, triggering widespread flooding and related damage. If a catastrophic flood were to occur, flooding and inundation of existing recreational facilities (e.g., Sutter's Landing Regional Park), trails, bike paths, fishing access, and other recreation areas would render the American River Parkway unusable until cleanup and restoration activities could take place. All of these effects on recreation would be considered significant; however, the timing, duration, and magnitude of a flood event is unpredictable. Therefore, a precise significance determination cannot be made.

3.12.3.2 Proposed Action

The ARCF GRR FEIS/FEIR Section 3.14 (pages 282 through 293) analyzed impacts on recreation within the Project Area. The Proposed Action would result in temporary

closures of parts of the Sutter's Landing Regional Park, the Two Rivers Recreational Trail, and Glenn Hall Park during construction activities, as described in Chapter 2, *Alternatives*. Haul trucks and other construction equipment would use portions of the recreational trail to move materials, temporarily reducing accessibility to recreationists. Access roads and staging areas would be restored and reseeded, as necessary to pre-project conditions or better. Mitigation Measure REC-1 would reduce impacts on walkers, runners, cyclists, and recreationists accessing the river, by providing marked detours for bicycle trails and street bicycle routes in consultation with Sacramento County Regional Parks and the City of Sacramento Bicycle and Pedestrian Coordinator. In addition, traffic controls (including signage and pre-construction notification) would be implemented in areas where recreational traffic would intersect with construction vehicles.

All the open available recreational trails would have some locations where construction equipment would cross from staging areas or hauling of materials from off-site to the staging areas. At these locations, flaggers would be stationed to provide traffic control of construction equipment and recreationists to prevent accidents. Construction staging areas would also restrict the use of and access to recreational areas, reducing the quality of recreational experiences in that area.

While bike trails and running paths could be rerouted or accessible a short distance away from the construction site, there would still be an overall reduction in recreational quality with the construction over a 1.5-year period, or longer, and therefore, short-term temporary effects on recreation would be significant. Construction would also occur during the summer months at the peak of recreation activities in the American River Parkway. Further, proximity to construction equipment and activities may degrade the quality of recreational experiences due to noise, visual effects, odors, and air pollutants.

Such closures and disturbances would result in temporary non-compliance with American River Parkway Plan Policy 4.13, which states that flood control berms, levees, and other facilities should be, to the extent consistent with proper operation and maintenance of these facilities, open to the public for approved uses, such as hiking, biking, and other recreational activities. However, the Proposed Action would result in localized and temporary closures and the proposed improvements to the levees would improve stability required for the proper maintenance of the levees to prevent future flood risk, reducing potential for future closures of recreational facilities. The Proposed Action also would also not preclude future access to recreational areas and would not conflict with the purposes and intents of the American River Parkway Plan.

Although the construction period would be short term, temporary and localized, effects on recreational access and activities during construction would be significant. Mitigation measures would be implemented to reduce impacts on recreation. However, even with mitigation measures, the Proposed Action's effects on recreation during construction would remain significant and unavoidable.

ARCF GRR FEIS/FEIR Mitigation Measures

The following 2016 ARCF GRR FEIS/FEIR mitigation measure found in Section 3.14 (page 292) is incorporated into the Proposed Action, with modifications to provide clarity and greater local specificity on notification of the public on closures of recreation facilities affected by the Proposed Action.

Mitigation Measure REC-1: Avoid and Minimize Effects on Recreational Use. USACE and the CVFPB would implement the following measures to reduce temporary, short-term construction effects on recreational facilities in the Project Area:

- Coordinate with recreation user groups prior to and during construction for input into mitigation measures that would reduce effects to the maximum extent practicable. Advance notice would be given to recreation users, informing them of anticipated activities and detours to reduce the effects. Closures of paved trails would be noticed 14-days in advance via signage at the detour locations.
- Post signs at major entry points for parks and recreation facilities clearly indicating closures and estimated duration of closures. Information signs would notify the public of alternate parks and recreation sites, including boat launch ramps, and provide a contact number to call for questions or concerns.
- Provide flaggers and post warning signs and signs restricting access before and during construction to ensure public safety.
- Provide marked detours for all bike trails and on-street bicycle routes that would be temporarily closed during construction. Detours would be developed in consultation with the City of Sacramento Bicycle and Pedestrian Coordinator at least 10 days before the start of construction activities, as applicable. Signs that clearly indicate closure routes would be posted at major entry points for bicycle trails, information signs would be posted to notify motorists to share the road with bicyclists where necessary, and a contact number would be provided to call for questions or concerns. Fences would be erected to prevent access to the Project Area.
- Provide traffic control in areas where recreational traffic would intersect with construction vehicles.
- If any access point needs to be closed during construction, post notices providing alternative access routes.
- Upon completion of levee improvements, coordinate with the City of Sacramento and Sacramento County to restore access and repair any construction-related damage to recreational facilities to pre-project conditions.

Summary

The ARCF GRR FEIS/FEIR concluded that the mitigation measure would reduce project impacts on recreation, but construction-related impacts would remain significant and unavoidable. Previously adopted ARCF GRR FEIS/FEIR Mitigation Measure REC-1, would reduce impacts on recreational activities to the extent feasible. Although the temporary closures of recreational facilities would remain significant and unavoidable, construction of the Proposed Action would not result in recreation impacts that would be new or more severe than those addressed in the ARCF GRR FEIS/FEIR.

3.13 Public Utilities and Service Systems

3.13.1 Environmental Setting

3.13.1.1 Regulatory Setting

Section 3.16 of the ARCF GRR FEIS/FEIR (page 313) identified no Federal or State environmental laws and regulations that apply to regulating public utilities and service systems. Chapter 5 of the ARCF GRR FEIS/FEIR summarized the environmental laws and regulations that apply and described the status of compliance with those laws and regulations. There has been no change to the applicable listed regulations related to public utilities and service systems.

3.13.1.2 Existing Conditions

Although the Proposed Action contains previously unanalyzed improvements and related actions, Section 3.16 of the ARCF GRR FEIS/FEIR (pages 313 through 315) describes the regional and local setting in the vicinity of the ARCF 2016 Project, which have not changed.

3.13.2 Methodology and Basis of Significance

3.13.2.1 Methodology

This analysis uses the same methodology described in the ARCF GRR FEIS/FEIR Section 3.16 (page 316). Effects on public utilities and service systems were identified by comparing existing service capacity and facilities to public utilities and service systems during and after construction of the Proposed Action. The evaluation assumed the Proposed Action would occur in phases over approximately two years.

3.13.2.2 Basis of Significance

This analysis uses the same basis of significance described in Section 3.16 (page 316) of the ARCF GRR FEIS/FEIR, as summarized below.

The Proposed Action would result in a significant effect related to utilities and public services if it would:

- Require the construction or expansion of any utility systems due to project implementation;
- Disrupt or significantly diminish the quality of the public utilities and services for an extended period of time;
- Create an increased need for new fire protection, police protection, or ambulance services or significantly affect existing emergency response times or facilities;
- Create damage to public utility and service facilities, pipelines, conduits, or power lines; or
- Create inconsistencies or non-compliance with regional planning documents.

Since publication of the ARCF GRR FEIS/FEIR, changes to Appendix G of the State CEQA Guidelines were adopted that take into consideration the following additional or modified significance criteria:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- Generate solid waste more than State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste.

Effects Not Evaluated Further

The Proposed Action includes construction activities, including clearing, grubbing, grading, bank protection, creation of planting benches, and installation of launchable rock trenches. These construction activities would result in an increase in dust in the Project Area. To meet air quality requirements, some amount of water would be used for dust suppression purposes during construction activities. The Proposed Action does not include residential or commercial developments that would create new potable water demand, generate new wastewater demand or contribute to existing wastewater systems, or require new sources of gas, electricity, or other utilities that would require the

expansion of public utilities. Therefore, no further evaluation of effects of the Proposed Action on these public services and utilities is necessary.

3.13.3 Impact Analysis

3.13.3.1 No Action/No Project Alternative

Under the No Action/No Project Alternative, the Proposed Action would not be implemented, and the Sacramento metropolitan area would experience no change in the present risk of flooding due to levee failure from seepage, slope stability, overtopping, or other erosion concerns. If a levee failure were to occur, major government facilities would be impacted until flood waters recede. Such an event could cause inundation from high flows and destruction or damage to utility lines, natural gas supply lines, and water or wastewater piping or facilities, all of which could lead to widespread contamination, temporary power outages, and interruptions of other utilities in the Project Area and surrounding areas. This could cause a temporary shutdown or slowdown of many State and local government functions. Many transportation corridors within the Project Area could be flooded if levees were to fail. All of these effects on public utilities and service systems would be considered significant; however, the timing, duration, and magnitude of a flood event is unpredictable. Therefore, a precise significance determination cannot be made.

3.13.3.2 Proposed Action

Section 3.16 of the ARCF GRR FEIS/FEIR (pages 317 through 323) analyzed impacts on public utilities and service systems in the Project Area. The analysis determined that construction activities could adversely affect existing electric power, natural gas, or telecommunications—specifically, overhead power lines and telecommunication facilities or stormwater and wastewater infrastructure facilities and systems. Drop inlets, outfall structures, drainage pipes, and other infrastructure elements that are buried, penetrate, or protrude from the levee would have to be identified, removed, or relocated before or during construction activities. Existing utilities that are functional and operational would be relocated accordingly. Possible relocation methods could be: (1) a surface line over the levee prism; or (2) a through-levee line equipped with positive closure devices.

Under the Proposed Action, no active utilities are to be relocated by construction activities associated with Site 1-1. Within Site 1-1, the Caltrans and City of Sacramento stormwater outfalls would not be altered or otherwise obstructed by the Proposed Action, resulting in no interruption or alteration of service. As further described in Chapter 2, *Alternatives*, temporary irrigation systems would be installed for the establishment and maintenance period for plantings at Site 1-1. The water source for the irrigation system would be provided through an irrigation mainline to pump water from the river. Irrigation would be temporary and applied by drip or spray. The onsite irrigation system would be temporary, use minimal water, and would not interrupt water service to the public. Therefore, there would be a less than significant impact to water availability or demand.

Construction Solid Waste

Construction of the Proposed Action would temporarily increase the generation of solid waste in the Project Area. Sources of solid waste related to construction activities would include cleared vegetation and debris. Waste materials (including cleared vegetation) and excess earth materials (e.g., soil, roots, grass, and excavated materials that do not meet levee embankment criteria) would be hauled off-site to a suitable disposal location. These materials, along with other potential solid waste materials, such as asphalt, concrete, pipes, etc., would also be removed from Project Area and would be disposed of at an appropriate, licensed landfill.

The location of the landfill used for disposal of construction-related waste would be determined by the construction contractor before the start of construction activity. This disposal would be determined based on capacity, type of waste, and other factors. Only those landfills determined to have the ability to accommodate the construction disposal needs of the Proposed Action would be used. The Kiefer Landfill, owned and operated by Sacramento County and located about 14 miles southeast of the Project Area, would likely be the landfill used. The Kiefer Landfill has more than 117 million cubic yards of total capacity within the 660-acre disposal area. Currently, 40 million cubic yards of waste occupy 3 of the 11 modules that are actively used for disposal of solid waste materials and these could accommodate all construction waste from the Proposed Action. Other landfills that may also be utilized include the L and D Landfill, Yolo County Central Landfill, and the Western Regional Landfill in Placer County. Project construction and operation would not cause existing regional landfill capacity to be exceeded; therefore, this impact would be less than significant.

Emergency Response Services

The extent and intensity of proposed construction activities, including road closures and traffic circulation patterns associated with the Proposed Action, could increase the time for first responders to quickly respond to emergency situations in the Project Area, that could result in a temporary significant impact on the capacity of emergency response services. Implementation of mitigation measures identified in the ARCF GRR FEIS/FEIR would reduce impacts on associated emergency response service levels to a less-than-significant level, because USACE and the CVFPB would prepare and implement a response plan to streamline access points and reduce response times, and would notify first responders of the potential for disruptions in the Project Area.

ARCF GRR FEIS/FEIR Mitigation Measures

The following ARCF GRR FEIS/FEIR mitigation measure found in Section 3.16 is incorporated into the Proposed Action to mitigate potential damage to utilities and infrastructure and reduce service disruptions during construction of the Proposed Action.

Mitigation Measure UTIL-1: Avoid and Minimize Service Disruptions and Damage to Utilities and Infrastructure. USACE and the CVFPB would implement the measures listed below before construction begins to avoid and

minimize potential damage to utilities and infrastructure and reduce service disruptions during construction.

- Coordinate with applicable utility and service providers to implement the orderly relocation of utilities that need to be removed or relocated.
- Notify the appropriate agencies and affected landowners regarding any potential interruptions of service.
- Verify through field surveys and the use of Underground Service Alert services the locations of buried utilities in the Project Area, including natural gas, petroleum, and sewer pipelines. Any buried utility lines would be clearly marked in construction (e.g., in the field) and on the construction specifications in advance of any earthmoving activities.
- Before the start of construction, prepare and implement a response plan that addresses potential accidental damage to a utility line. The plan would identify chain-of-command rules for notifying authorities and appropriate actions and responsibilities regarding the safety of the public and workers. A component of the response plan would include worker education training in response to such situations.
- Stage utility relocations during project construction to minimize interruptions in service.
- Communicate construction activities with first responders to avoid response delays caused by construction detours.

Summary

The previously adopted ARCF GRR FEIS/FEIR Mitigation Measure UTIL-1 would adequately reduce impacts service disruptions to a less-than-significant level. Therefore, there would be no residual significant impact.

3.14 Hazards and Hazardous Materials

3.14.1 Environmental Setting

3.14.1.1 Regulatory Setting

Section 3.17 of the ARCF GRR FEIS/FEIR (pages 322–323) identified Federal or State environmental laws and regulations that apply to hazards and hazardous materials. Chapter 5 of the ARCF GRR FEIS/FEIR summarized the environmental laws and regulations that apply to the ARCF Project and described the status of compliance with those laws and regulations. Additional applicable laws and regulations not previously listed in the ARCF GRR FEIS/FEIR are listed below.

Federal

- Community Right-to-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act)
- 49 CFR 171.1—Applicability of Hazardous Materials Regulations
- 40 CFR Part 260 - Resources and Conservation Recovery Act (RCRA)
- 49 USC 5101 -Department of Transportation Hazardous Materials Transportation Act
- 29 USC 15 – Occupational Safety and Health Administration (OSHA)

State

- 19 CCR Division 2, Chapter 4, Hazardous Material Release Reporting, Inventory, and Response Plans
- 26 CCR, California Health and Safety Code [HSC], Chapter 6.95, Section 25501; Section 25503.5, Hazardous Material Management Plans and Hazardous Material Inventory Statement Programs
- 22 CCR HSC Division 4.5, Chapter 6.5, Hazardous Waste Control Law; Chapter 11, Section 66261.3; Section 66260.10, Hazardous Materials Transportation
- 22 CCR HSC Division 37, Section 57008, California Human Health Screening Levels, California Land Environmental Restoration and Reuse Act of 2001 (Chapter 764, Statutes of 2001, Office of Environmental Health Hazard Assessment, 2010)
- 19 CCR HSC Division 2, Section 25531, California Accidental Release Response Plan Programs
- 29 CFR, Occupational Safety and Health Administration (OSHA); 8 CCR, Cal/OSHA regulations for use of hazardous materials in the workplace

3.14.1.2 Existing Conditions

Section 3.17 of the ARCF GRR FEIS/FEIR (pages 323 through 325) describes the regional and local setting in the vicinity of the Project Area related to hazards and hazardous materials. A Phase 1 Environmental Site Assessment (Phase 1) was conducted as part of the ARCF GRR FEIS/FEIR. The Phase 1 identified five hazardous waste or materials sites within the ARCF GRR FEIS/FEIR study area; however, none of the identified sites are not located within the Project Area. An updated review of the California Department of Toxic Substances Control's EnviroStor database and State Water Resources Control Board's Geotracker¹¹⁷ was conducted in December 2021, and no new hazardous waste sites were listed or shown within the Project Area.

¹¹⁷ California Department of Toxic Substances Control, 2021. Available: <https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Sacramento+Ca>. Accessed December 10, 2021.

The California Department of Forestry and Fire Protection's mapping information determined that the Project Area is not located within a very high fire hazard severity zone.¹¹⁸

3.14.2 Methodology and Basis of Significance

3.14.2.1 Methodology

This analysis generally uses the same methodology described in Section 3.17 (page 322) of the ARCF GRR FEIS/FEIR. The methodology addressed potential sources of hazards and risks from hazardous materials that may be associated with the proposed alternatives.

3.14.2.2 Basis of Significance

This analysis uses the same basis of significance described in Section 3.17 (page 325) of the ARCF GRR FEIS/FEIR, as summarized below.

The Proposed Action would result in a significant impact related to hazardous wastes and materials if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or involve the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment; or
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency excavation plan.

Since publication of the ARCF GRR FEIS/FEIR, changes to Appendix G of the State CEQA Guidelines were adopted that address excessive noise effects on people living or working within two miles of a public airport, and risks associated with wildfire. As a result, this analysis also takes into consideration the following additional or modified significance criteria:

- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport, would the project result in a safety hazard or excessive noise for people residing or working in the Project Area.

¹¹⁸ California Department of Forestry and Fire Protection, 2007. Fire Hazard Severity Zone Maps and Adopted State Responsibility Area Fire Hazard Severity Zone Maps. <https://egis.fire.ca.gov/FHSZ/>. Accessed December 10, 2021.

- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Effects Not Evaluated Further

The Project Area is not located within an airport land use plan or within two miles of a public airport. The closest public airports to the Project Area are Sacramento Executive Airport (5.5 miles) and Sacramento Mather (6 miles). Therefore, the Proposed Action would result in no impacts to safety from either airport. Noise impacts are analyzed in Section 3.11, *Noise and Vibration* of this document.

The Project Area is not located in a very high fire hazard severity zone as mapped by the California Department of Forestry and Fire Protection.¹¹⁹ In addition, the Proposed Action does not involve the development of occupied structures that could be at risk as a result of wildfires. Therefore, no fire hazard impact would occur. The ARCF GRR FEIS/FEIR identified five hazardous waste sites in the study area. As described previously, because none of these hazardous waste sites are within the Project Area and no active sites were found based on an updated search, no further evaluation is necessary.

3.14.3 Impact Analysis

3.14.3.1 No Action/No Project Alternative

Under the No Action/No Project Alternative, the proposed action would not be implemented, and the Sacramento metropolitan area would experience no change in the present level of risk of flooding due to levee failure from seepage, slope stability, overtopping, or other erosion concerns.

Under these conditions, a flood event could cause portions of the levees to fail, possibly triggering widespread flooding and related damage. If a catastrophic flood were to occur, emergency flood fighting and clean-up efforts would commence, in part to contain releases of hazardous materials. Hazardous materials could be released in floodwaters, exposing the public and environment to possibly dangerous pollutant concentrations. The application of best management practices to control all hazards and hazardous materials might not be feasible. All of these effects on hazards and hazardous materials would be considered significant; however, the timing, duration, and magnitude of a flood event is unpredictable, and therefore precise significance determination cannot be made.

3.14.3.2 Proposed Action

Section 3.17 of the ARCF GRR FEIS/FEIR (pages 325 through 329) analyzed the impacts associated with Hazardous Wastes and Materials during construction of levee improvements throughout the Sacramento area, including construction of levee improvements in the Project Area. Over the construction period for the Proposed Action, construction contractors would be required to use, store, and transport hazardous

¹¹⁹ California Department of Forestry and Fire Protection, 2007. Fire Hazard Severity Zone Maps and Adopted State Responsibility Area Fire Hazard Severity Zone Maps. <https://egis.fire.ca.gov/FHSZ/>. Accessed December 10, 2021.

materials (e.g., fuel, oils, lubricants, etc.) in compliance with Federal, State, and local regulations. The ARCF GRR FEIS/FEIR stated that any hazardous substance encountered during construction would be removed and properly disposed of by a licensed contractor in accordance with Federal, State, and local regulations.

Compliance with applicable regulations would reduce the potential for accidental release of hazardous materials during transport and construction activities. While the risk of exposure is considered low and potentially significant, implementation of the mitigation measures discussed below would reduce the impacts of the Proposed Action to a less-than-significant level.

While small quantities of construction related fuels, oils, and lubricants would be used and/or stored within the staging areas, there are no schools within a 0.25 mile radius from the storage areas. In addition, the materials to be stored would not be classified as acutely hazardous and implementation of the Proposed Action would not emit any substantive quantities of hazardous materials or require handling of acutely hazardous materials, substances or waste during construction. Carlson Drive, adjacent to Caleb Greenwood Elementary School and J Street north of CSUS, would be used as a potential haul route for the Proposed Action. However, construction activities would not require the use or handling of acutely hazardous materials, substances or waste, and transportation of all other hazardous materials would be undertaken in accordance with U.S. Department of Transportation (DOT) and California Department of Transportation (CalTrans) requirements. Therefore, this impact would be less than significant.

Emergency Access

For Site 1-1, haul routes for riprap, bedding, gravel, and IWM would travel to the sites from either Interstate 80 (I-80) to the north or from U.S. 50 to the southeast. As discussed in Section 3.8, *Transportation and Circulation*, in this Supplemental EIR, haul trucks would travel to the staging areas using either of these haul routes shown on Figure 2-12 in Chapter 2, *Alternatives*. Haul trucks would travel along the top levee road between designated ingress and egress locations. In addition, soil removed during the cut bank excavation and grading at Site 1-1 would be hauled off site to either a landfill, soil stockpile locations used by the local maintaining agency (LMA) for such purposes, or both, within a 15-mile distance.

Construction traffic associated with the Proposed Action could temporarily slow traffic flow and impair implementation of or physically interfere with an adopted emergency response plan or emergency excavation plan in or near the haul routes within the Project Area during the construction period, which is expected to occur from May to October. Construction activities are anticipated during weekdays and Saturdays between 7:00 a.m. and 6:00 p.m. It is possible that during these periods, emergency response or evacuation could be briefly delayed along haul routes and response times could be reduced. Therefore, the Proposed Action effects on an emergency response plan or emergency evacuation plan would be short-term and significant until construction is completed. Implementation of the mitigation measures from the ARCF GRR FEIS/FEIR as clarified

in Section 3.8, *Transportation and Circulation*, and Section 3.13, *Public Utilities and Service Systems*, in this Supplemental EIR would reduce potential impacts on emergency access to a less-than-significant level.

ARCF GRR FEIS/FEIR Mitigation Measures

The following ARCF GRR FEIS/FEIR mitigation measure is incorporated into the Proposed Action with some modifications as detailed below.

Mitigation Measure HAZ-1: Avoid and Minimize Hazards. USACE and the CVFPB would implement the following measures to avoid and minimize the impact of hazards and hazardous materials.

- Comply with applicable regulations to reduce the potential for an accidental release of hazardous materials during construction. The contractor would also be required to prepare a SWPPP, which details the methods to prevent run-on and discharges from the construction sites into drainage systems, lakes, or rivers. The SWPPP would also include BMPs that detail hazardous materials handling and storage requirements as well as spill prevention and response measures that would be implemented accordingly.
- Test each erosion protection site for contaminants before construction and dispose of any materials found in accordance with all Federal, State, and local regulations at an approved disposal site.

Implementation of these mitigation measures would reduce impacts from hazardous materials in the Project Area to a less-than-significant level. If significant time has elapsed (i.e., five years) between approval of this document and construction, additional investigations should be performed to reduce the risk of encountering hazardous wastes during construction.

Summary

Previously adopted ARCF GRR FEIS/FEIR Mitigation Measure HAZ-1, would reduce impacts addressed to a less-than-significant level. There would be no residual significant impact.

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CHAPTER 4

Cumulative and Growth-Inducing Effects

CEQA requires the consideration of cumulative effects of the proposed action, combined with the effects of other projects. The State CEQA Guidelines define cumulative effects as “two or more individual effects which, when considered together, compound or increase other environmental impacts” (14 CCR Section 15355). The cumulative effects of the overall ARCF project were analyzed in the 2016 ARCF GRR FEIS/FEIR (pages 335 through 357). The thorough cumulative analysis in the 2016 ARCF GRR FEIS/FEIR is incorporated by reference. But the temporal scope of the analysis was necessarily programmatic and, therefore, for the purposes of the Proposed Action, the temporal scope of the cumulative effects analysis in this Supplemental EIR considers past projects that continue to affect the Project Area in 2021, projects that are under construction in 2022, and any reasonably foreseeable future projects.

4.1 Cumulative Projects

4.1.1 Projects Contributing to Potential Cumulative Effects

This section briefly describes other similar or related projects, focusing on flood-risk reduction and habitat restoration projects that have similar effect mechanisms and affect similar resources as would the Proposed Action. Although the 2016 ARCF GRR FEIS/FEIR identified several of these projects in the cumulative scenario, the descriptions in this section include additional projects and updated timing and schedule information that provide the cumulative context based on current documentation. The following projects are a representative sample of the reasonably foreseeable and probable programs, projects, and policies that could have impacts that could cumulatively combine with the impacts of the Proposed Action, and the other programs, projects, and policies included in the cumulative impact assessment.

Past and present projects and activities have contributed on a cumulative basis to the existing environment within the Project Area via various mechanisms, such as the following:

- population growth and associated development of socioeconomic resources and infrastructure;
- conversion of natural vegetation to agricultural and developed land uses, and subsequent conversion or restoration of some agricultural lands to developed or natural lands;

- alteration of riverine hydrologic and geomorphic processes by flood management, water supply management, and other activities; and
- introduction of nonnative plant and animal species.

Past, present, and probable future projects causing related impacts are considered in this cumulative effects analysis, including regional projects for which USACE has provided approval or is in the process of considering Section 408 permission. For elements of these projects proposed for future implementation, the construction timing and sequencing is highly variable and may depend on uncertain funding sources. However, each of these past, present, and probable future projects must be considered in the context of environmental effects from the Proposed Action to properly evaluate the cumulative effects of this action and these other similar projects on the environment.

4.1.1.1 Lower American River Common Features Project

Congressional authorizations in WRDA 1996 and WRDA 1999 enabled USACE, the CVFPB, and SAFCA to undertake various improvements to the levees along the north and south banks of the American River, as well as the east bank of the Sacramento River. Under WRDA 1996, this involved the construction of 26 miles of slurry walls along the left and right banks of the American River. The WRDA 1999 authorization included a variety of additional levee improvements, such as levee raises and levee widening improvements, to ensure that the levees could pass an emergency release of 160,000 cfs. The WRDA 1996 and 1999 projects were completed in 2016, with mitigation site monitoring ongoing.

4.1.1.2 American River Watershed Common Features 2016 Project

The greater ARCF project is scheduled for construction from 2019 through 2025. The project involves construction of levee improvements along the American and Sacramento River levees as well as proposed improvements to the Natomas East Main Drainage Canal east levee and Magpie Creek (SAFCA previously completed improvements as an early implementation action in 2018). The levee improvements scheduled for implementation include construction of cutoff walls, erosion protection, seepage and stability berms, relief wells, levee raises, and a small stretch of new levee. In addition, USACE would widen the Sacramento Weir and Bypass. The project would also involve construction of several mitigation sites in the area. In addition to the improvements that are part of the Proposed Action, the ARCF GRR includes:

- construction of a seepage and stability berm along Front Street (constructed);
- construction of the Beach Stone Lakes Mitigation Site (constructed);
- construction of the large-scale fish habitat mitigation site in the Sacramento-San Joaquin Delta (planned for 2023-2024);
- Sacramento River East Levee Seepage and Stability Contract 1 (constructed);

- additional improvements to the Sacramento River East Levee between downtown Sacramento and Freeport (planned for 2021–2024);
- erosion protection on the American River (planned for 2021–2024);
- erosion protection on the Sacramento River (planned between 2021 and 2024);
- improvements to the “East Side Tributaries, including the Magpie Creek Diversion Channel, the east bank of the Natomas East Main Drainage Canal/Steelhead Creek, Pleasant Grove Creek Canal, and Dry, Robla, and Arcade Creeks (planned for 2023); and
- widening the Sacramento Weir and Bypass, located along the north edge of the City of West Sacramento in Yolo County (planned for 2023–2025).

4.1.1.3 American River Common Features Natomas Basin Project

In 2007, the Natomas Levee Improvement Project was authorized as an early-implementation project initiated by SAFCA to provide flood protection to the Natomas Basin as quickly as possible. These projects consist of improvements to the perimeter levee system of the Natomas Basin in Sutter and Sacramento Counties, as well as associated landscape and irrigation/drainage infrastructure modifications. SAFCA, DWR, the CVFPB, and USACE have initiated this effort with the aim of incorporating the Landside Improvements Project and the Natomas Levee Improvement Project into the Federally authorized American River Watershed Common Features Project. Construction of this early implementation project was completed in 2013. In 2014, the Natomas Basin Project was authorized by Section 7002 of the Water Resources Reform and Development Act of 2014 (Public Law 113-121). Construction of Reach H and I started in 2019 and are now completed. Reach B began construction in late 2021, and Reaches A, E, F, G, and are still in design. Construction on Reach A, starting with tree clearing, is expected to begin in late 2021. Construction and construction traffic effects of this project have the potential to contribute to cumulative impacts with the Proposed Action.

4.1.1.4 Local Funding Mechanisms for Comprehensive Flood Control Improvements for the Sacramento Area

SAFCA created a new assessment district (“CCAD2”) to replace the existing Consolidated Capital Assessment District and updated the existing development impact fee to provide the local share of the cost of constructing and maintaining flood-risk reduction improvements and related environmental mitigation and floodplain habitat restoration along the American and Sacramento Rivers and their tributaries in the Sacramento metropolitan area. The program includes the projects necessary to provide at least a 100-year level of flood protection for developed areas in Sacramento’s major flood plains as quickly as possible; achieve the State’s 200-year flood protection standard for these areas within the time frame mandated by the Legislature; and improve the resiliency, robustness and structural integrity of the flood control system over time so that the system can safely contain flood events larger than a 200-year flood. The program

includes Yolo and Sacramento Bypass system improvements, levee modernization, and Lower Sacramento River erosion control. The Updated Local Funding Mechanisms Final Subsequent Program EIR was certified and the project was adopted in April 2016.

4.1.1.5 Sacramento River Bank Protection Project

The Sacramento River Bank Protection Project (SRBPP) was authorized to protect existing levees and flood control facilities of the Sacramento River Flood Control Project. The SRBPP was instituted in 1960 to be constructed in phases. Bank protection has generally been constructed on an annual basis. Phase I was constructed from 1963 to 1975 and consisted of 436,397 linear feet of bank protection. Phase II was authorized in 1974 and provided 405,000 linear feet of bank protection. The SRBPP directs USACE to provide bank protection along the Sacramento River and its tributaries, including that portion of the lower American River bordered by Federal flood control project levees. Beginning in 1965, erosion control projects at twelve sites covering 16,141 linear feet of the south and north banks of the lower American River have been implemented. This is an ongoing project, and additional sites requiring maintenance would continue to be identified indefinitely until authorized linear footage under the project is exhausted. WRDA 2007 authorized an additional 80,000 linear feet of bank protection to Phase II, which will be implemented under the SRBPP Post Authorization Change Report, which received approval in June 2020. This project is ongoing as of the date of this Draft Supplemental EIR.

4.1.1.6 West Sacramento General Reevaluation Report

The West Sacramento GRR study determined the Federal interest in reducing the flood risk within the West Sacramento project area. The purpose of the West Sacramento GRR is to bring the 50 miles of perimeter levees surrounding West Sacramento into compliance with applicable Federal and State standards for levees protecting urban areas. Proposed levee improvements would address seepage, stability, levee height, and erosion concerns along the West Sacramento levee system. Measures to address these concerns would include: (1) seepage cutoff walls; (2) stability berms; (3) seepage berms; (4) levee raises; (5) flood walls; (6) relief wells; (7) sheet pile walls; (8) jet grouting; and (9) bank protection.

The GRR was authorized in WRDA 2016 and, in the Fiscal Year 2019 work plan, received initial funding to begin preconstruction design. However, under the West Sacramento Area Flood Control Agency Early Implementation Program, three levee segments have already been completed: a small segment along the Sacramento River adjacent to the I Street Bridge, a stretch along the Sacramento River in the northern portion of the city near the neighborhood of Bryte, and the south levee of the Sacramento Bypass. The Southport setback levee was completed in 2020, with continued work to establish habitat vegetation in the floodplain in 2021. Construction and construction traffic effects of this project have the potential to contribute to cumulative impacts with the Proposed Action.

4.1.1.7 Central Valley Flood Protection Plan of 2017

The Central Valley Flood Management Planning Program is one of several programs managed by DWR under FloodSAFE California, a multifaceted initiative launched in 2006 to improve integrated flood management in the Central Valley, including the North Sacramento Streams and Sacramento River East Levee Improvements areas. The Central Valley Flood Management Planning Program addresses State flood management planning activities in the Central Valley.

The Central Valley Flood Protection Plan (CVFPP) is one of several documents adopted by the CVFPB to meet the requirements of flood legislation enacted in 2007 and, specifically, the Central Valley Flood Protection Act of 2008. DWR adopted the updated CVFPB in 2017, with a focus on the Sacramento and San Joaquin Watershed Basin-Wide Feasibility Studies (BWFSs), Regional Flood Management Planning, and the Central Valley Flood System Conservation Strategy. DWR is in the process of preparing the 2022 CVFPP Update that will focus on climate resilience, project implementation, accomplishments, and performance tracking, and alignment with other State efforts. The results of these efforts support implementation of future CVFPP actions.

The CVFPP contains a broad plan for flood management system improvements, and ongoing planning studies, engineering, feasibility studies, designs, funding, and partnering are required to better define, and incrementally fund and implement, these elements over the next 20 to 25 years. Although most CVFPP projects are not well-defined and would be implemented substantially later than the Proposed Action, it is important to consider the long-term aspects of the CVFPP in conjunction with the Proposed Action.

As part of the CVFPP, the Sacramento BWFS indicates that the following improvements to the Yolo Bypass flood control system could be made and therefore are considered as future projects: constructing a setback levee in the Lower Elkhorn Basin on the east side of the Upper Yolo Bypass and on the north side of the Sacramento Bypass (discussed separately in further detail below); widening the Fremont Weir and the Sacramento Weir; widening the Upper Yolo Bypass by constructing setback levees along the east side of the Bypass in the Upper Elkhorn Basin; constructing fix-in-place improvements to the existing levees in various locations along the west and east sides of the Upper Yolo Bypass; widening the Upper Yolo Bypass by constructing setback levees north of Willow Slough and north of Putah Creek on the west side of the Bypass; adding a tie-in to the Stockton Deep Water Ship Channel and channel closure gates; and constructing a floodwall on the west side of the Sacramento River at Rio Vista.

Additional actions contemplated under the Sacramento BWFS include the following: extending the life of the Cache Creek Settling Basin by expanding it to the north; degrading the step levees at the north end of Liberty Island; widening the Lower Yolo Bypass by constructing a setback levee on the west side of the Bypass near the north end of Little Egbert Tract; degrading the existing levees along the Stockton Deep Water Ship Channel along the west side of Prospect Island; degrading the existing levees on the

northern and southern ends of Little Egbert Tract; removing the Yolo Shortline Railroad tracks and crossing over the Yolo Bypass near the I-80 overcrossing; and raising and strengthening the levees along the entire west side of the Lower Yolo Bypass.

4.1.1.8 Lower Elkhorn Basin Levee Setback Project

The project encompasses a portion of the Phase I implementation of Yolo Bypass System Improvements pursuant to DWR's Sacramento BWFS and therefore is focused on levees in the Lower Elkhorn Basin and the Sacramento Bypass. Consistent with the Sacramento BWFS, the project is intended to reduce flooding in the Lower Sacramento River Basin by increasing the capacity of the Yolo Bypass. This increased capacity will be accomplished by constructing a setback levee on the north side of the Sacramento Bypass as an early implementation action for the ARCF project and constructing a setback levee in the Lower Elkhorn Basin on the east side of the Yolo Bypass.

The Lower Elkhorn Basin Levee Setback project will also include implementing a project mitigation strategy designed to avoid, minimize, reduce, and mitigate impacts on sensitive habitats and special status species caused by the project, in a manner that optimally protects the natural environment, especially riparian habitat and stream channels suitable for native plants, wildlife habitat, agricultural lands, and public recreation. Construction of the Lower Elkhorn Basin Levee Setback project began construction in 2020 and is projected to be completed in 2025. Construction effects of this project have the potential to contribute to cumulative impacts with the Proposed Action.

4.1.1.9 Folsom Dam Safety and Flood Damage Reduction Project

The Folsom Dam Safety and Flood Damage Reduction Project, referred to as the Joint Federal Project, addressed the dam safety hydrologic risk at Folsom Dam and improved flood protection to the Sacramento area. Several activities associated with the project included: the Folsom Dam Auxiliary Spillway, static upgrades to Dike 4, Mormon Island Auxiliary Dam modifications, and seismic upgrades (piers and tendons) to the Main Concrete Dam. The project was completed in fall 2017.

4.1.1.10 Folsom Dam Water Control Manual Update

The Folsom Dam Water Control Manual (WCM) was updated on June 12, 2019 to reflect authorized changes to the flood management and dam safety operations at Folsom Dam to reduce flood risk in the Sacramento area. The WCM Update utilizes existing and authorized physical features of the dam and reservoir, specifically the recently completed auxiliary spillway. Along with evaluating operational changes to utilize the additional capabilities created by the auxiliary spillway, the WCM Update assessed the use of available technologies to enhance the flood risk management performance of Folsom Dam to includes a refinement of the basin wetness parameters and the use of real time forecasting.

Further, the WCM Update evaluated options for the inclusion of creditable flood control transfer space in Folsom Reservoir in conjunction with Union Valley, Hell Hole, and

French Meadows Reservoirs (also referred to as Variable Space Storage). The evaluation resulted in an Engineering Report as well as a Water Control Manual implementing the recommendations of the analysis.

4.1.1.11 Folsom Dam Raise

Construction of the Folsom Dam Raise project will follow completion of the Joint Federal Project and the WCM projects. The Dam Raise project includes raising the right- and left-wing dams, Mormon Island Auxiliary Dam, and Dikes 1–7 around Folsom Reservoir by 3.5 feet. The raising of Dike 8 was completed in 2020. The Dam Raise project also includes the three emergency spillway gates and three ecosystem restoration projects (automation of the temperature control shutters at Folsom Dam and restoration of the Bushy and Woodlake sites downstream). Similar to the ARCF Project, the Folsom Dam Raise Project was fully funded by the Bipartisan Budget Act of 2018. Construction activities began in 2019 included Dike 8 construction, to be followed by Dikes 1-7, the Mormon Island Auxiliary Dam, and the Left and Right wing of Folsom Dam in 2022. The ecosystem restoration projects are not scheduled at this time. Construction and construction traffic effects of this project have the potential to contribute to cumulative impacts with the Proposed Action.

4.1.1.12 SAC 5 Corridor Enhancement Project

Caltrans is constructing the SAC 5 Corridor Enhancement Project on Interstate 5 (I-5) from 1.1 miles south of Elk Grove Boulevard to the American River Viaduct. The project will rehabilitate pavement and other related assets, construct 23 miles of new High Occupancy Vehicle lanes, install new fiber optic lines, and extend the I-5 northbound #1 lane to improve merging. The project includes rehabilitating 67 lane miles of mainline and all ramps/connectors. The project also includes adding auxiliary lanes and extending acceleration and deceleration lanes. Project construction requires lane closures on I-5 and is expected to continue through December 2022. Construction and construction traffic effects of this project have the potential to contribute to cumulative impacts with the Proposed Action.

4.1.1.13 Bridge District Specific Plan

The Bridge District Specific Plan, formerly the Triangle Plan, was adopted in 1993 and significantly updated in 2009 (City of West Sacramento 2009). The intent of the Bridge District Specific Plan was to provide a framework for development of a well-planned, waterfront-oriented urban district for the City of West Sacramento, along the west bank of the Sacramento River. Several housing complexes have been built, as well as other riverfront recreational improvements, and the Barn, a local event space and beer garden along the Sacramento River just south of Sutter Health Park (formerly known as Raley Field). Ongoing development includes additional housing units currently under construction. Construction, road construction, and construction traffic associated with the Bridge District have the potential to contribute to cumulative impacts with the Proposed Action.

4.1.1.14 Sacramento Railyards Project

The Railyards district is located just north of Downtown Sacramento and south of the River District and once served as the western terminus of the 1860s Transcontinental Railroad, with the largest locomotive repair and maintenance facility west of the Mississippi River. Today, the Railyards continue to house a major transportation hub and the City of Sacramento has proposed to redevelop the area into a mixed-use, transit-oriented development. The historic 244-acre Southern Pacific site would be transformed into a dynamic, urban environment featuring a state-of-the-art mass transit hub that would serve residents, workers, and visitors. In October 2016, the City Council approved a planning entitlement for the Sacramento Railyards. The project includes housing units, retail space, office space, a medical campus, hotels, parks, and a soccer stadium. Construction has been scheduled on Phase 1 starting in 2018 with development of the remaining phases to be determined at some future time. Construction, road construction, and construction traffic associated with the Railyards project have the potential to contribute to cumulative impacts with the Proposed Action.

4.1.1.15 Delta Shores Development Project

The Delta Shores is an approximately 800-acre master planned development that includes an estimated 1.3 million square feet of constructed and operating retail space, an estimated 250,000 square feet of hotel and commercial uses, and an estimated 4,900 residential units. Most of the project site is located east of I-5 at Cosumnes River Boulevard, east of Freeport and north of the Sacramento Regional County Sanitation District Wastewater Treatment Plant Bufferlands. The Beach Lake Levee (operated and maintained by SAFCA) is adjacent to the Delta Shores southern boundary (east of I-5). Approximately 100 acres of the Delta Shores project site lies along the west side of I-5 and abuts the Sacramento River East Levee in the northwest corner and near the southwest corner. In this western portion of Delta Shores, medium- and high-density residential housing will be developed on the north side of Stonecrest Avenue. Adjacent to and north of the housing, and adjacent to Freeport Boulevard on the west side, a park will be developed. Medium- and low-density residential housing will be developed on the south side of Stonecrest Avenue.

Cosumnes River Boulevard was recently extended by approximately 3.5 miles (from the east side of State Route 99 to I-5), and a new I-5 interchange was constructed to provide regional connectivity for local residents and access to the future Delta Shores development (particularly the shopping center); the road and interchange improvements were completed in 2015. Construction on the shopping center began in 2016, and the complex opened in 2017. Construction and construction traffic associated with Delta Shores have the potential to contribute to cumulative impacts with the Proposed Action.

4.1.1.16 Caltrans SAC-51 American River Bridge Deck Replacement Project

Caltrans proposes to rehabilitate the American River Bridge along State Route (SR) 51/ Business Intestate 80 in Sacramento County. The project would remove and replace the existing concrete deck, remove and replace the steel girder post-tensioning systems, modify the existing soundwall, install sheet piling around piers for scour mitigation, construct concrete catcher blocks, widen the bridge to accommodate traffic during construction, add a Class I bike/pedestrian path, and plan for future transportation needs on SR 51. The purpose of the project is to replace the deck on the American River Bridge on SR 51 in Sacramento County, prevent scour, and provide a multimodal connection between downtown and eastern Sacramento and plan for future transportation needs. The proposed work would repair, protect, and extend the service life of the deck starting in 2022. Construction and construction traffic associated with Caltrans SAC-51 project have the potential to contribute to cumulative impacts with the Proposed Action.

4.1.1.17 City of Sacramento Two Rivers Trail Phase II Project

The Two Rivers Trail Phase II project will provide a 2.4 mile long multi-use trail between Sutter's Landing Regional Park and H Street near California State University - Sacramento. The trail will provide residents of River Park and East Sacramento a safe, convenient, and protected path into downtown Sacramento. The overall goal of the project is to eventually have the trail connect to the Sacramento River Parkway and create a continuous trail system along both sides of the Sacramento and American Rivers. In addition, the project will clear the next phase of the trail between Sutter's Landing Park and the Sacramento Northern Bike Trail. The proposed work to construct the trail will begin in 2023. Construction and construction traffic associated with the Two Rivers Trail Phase II project have the potential to contribute to cumulative impacts with the Proposed Action.

4.2 Cumulative Effects

4.2.1 Visual Resources

Cumulative impacts on visual resources are primarily related to other construction projects that could occur within the same visual viewscape as the Proposed Action Area at the same time and result in loss of visual quality both during construction and after construction. Construction of Alternative 2 approved of in the Record of Decision for the ARCF GRR FEIS/FEIR would result in a significant number of large trees and other vegetation removed along the Sacramento River and the American River. Other projects in the cumulative setting (see Section 4.1 in this chapter) have and could result in the removal of large trees and other vegetation. Implementation of the Proposed Action, when combined with other past, current, and future projects in the vicinity, would result in a significant cumulative impact on visual resources, primarily from removal of vegetation. Additionally, the long time period for replanted vegetation to reach a size similar to the vegetation removed as a result of construction would be considered a cumulatively significant effect on visual resources along the Sacramento and American Rivers.

As part of the Proposed Action, construction crews, equipment, and haul trucks would be visible to residents adjacent to local streets, and staging areas, and to residences adjacent to the work sites. In addition, construction would be visible to recreationists within the American River Parkway. However, construction would be temporary, and because construction would proceed along the levees in a linear fashion, the views of construction crews, equipment, and haul trucks would be of short duration, and other current projects in the cumulative setting would not be visible within the same viewshed as the Proposed Action. Additional nighttime lighting for the Proposed Action staging areas would be short term and would add few sources of light to the current cumulative nighttime light in the urbanized areas adjacent to the staging areas. Further, nighttime light from the Proposed Action would be mitigated to reduce effects to minimal levels, as described in Chapter 3, Section 3.2, *Visual Resources*, and the Proposed Action would not result in a cumulatively considerable incremental contribution to significant cumulative effects related to visual resources.

4.2.2 Hydrology and Water Quality

Most of the levee projects in the cumulative setting, including the Proposed Action, involve subsurface geotechnical work to repair levees in place and, consequently, there would be no effects on flooding. Some projects, such as the West Sacramento GRR and the SRBPP, include levee raises, flood walls, and bank protection. In addition, the West Sacramento GRR and Lower Elkhorn Basin Levee Setback Project include construction of new setback levees. The Proposed Action, in addition to other levee projects in the region, are designed to current Federal flood design criteria and include vegetation to help stabilize the banks and, thus, reduce the rate and amounts of surface run-off from the levee slope into waterways. The Proposed Action would not result in a cumulatively considerable incremental contribution to significant cumulative effects related to flood system capacity.

Related projects, including the Sacramento River Bank Protection Project and the West Sacramento GRR, could be under construction during the same time frame as the Proposed Action. If construction occurs during the same time frame, water quality could be diminished, primarily due to increased turbidity from soil released during construction activities. Water quality could be affected in or adjacent to the Proposed Project area and upstream and downstream of the work area. Construction activities such as clearing and grubbing, grading, and rock placement, have the potential to temporarily degrade water quality through the direct release of soil and construction materials into water bodies or the indirect release of contaminants into water bodies through runoff. All projects would be required to comply with the NPDES Construction General Permit requirements of the RWQCB and overall water quality would be required to meet the Basin Plan objectives. The Proposed Action would not result in a cumulatively considerable incremental contribution to significant cumulative effects related to water quality.

4.2.3 Vegetation and Wildlife

The Proposed Action has the potential to contribute to the loss or degradation of sensitive habitats, including riparian woodland and scrub, waters of the United States, and waters of the State and forestland. Similar potential for adverse effects on habitats would be associated with the flood-risk reduction projects, including future ARCF contracts proposed along the Sacramento River and the American River, and removal of high-hazard vegetation by levee maintaining agencies in the Sacramento area and surrounding region. Such projects would generally continue to contribute to the loss or degradation of sensitive habitats and forestland. Most potential adverse effects of the Proposed Action and the related levee projects would be associated with construction disturbances of habitats, but permanent loss of habitat would also result from some of the individual levee improvement projects and the development projects. Implementation of Mitigation Measures described in Section 3.4, *Vegetation and Wildlife*, would reduce or avoid the effects of the Proposed Action in accordance with the requirements of the Federal Endangered Species Act and California Fish and Game Code (including the California Endangered Species Act) and other regulatory programs that protect habitats, such as Clean Water Act (CWA) Sections 401 and 404. Although the Proposed Action's temporary impacts would be significant, the Proposed Action would not result in a cumulatively considerable incremental contribution to significant cumulative effects related to the permanent loss or degradation of sensitive habitats or loss of forestland.

4.2.4 Fisheries

Project implementation has the potential to contribute to the loss or degradation of fish habitat, including near-shore aquatic SRA habitat. Similar potential for adverse effects on habitats would be associated with the flood-risk reduction projects, including future ARCF contracts proposed along the American River and Sacramento River, and construction of bank protection projects and removal of high-hazard vegetation by levee maintaining agencies in the Sacramento area and surrounding region. Such projects would generally continue to contribute to the loss or degradation of fish habitat, including SRA habitat, resulting in significant cumulative impacts. Potential adverse effects of the Proposed Action and the related levee projects would be associated with construction disturbances of aquatic habitats, but permanent loss of SRA habitat would also result from some of the individual levee improvement projects and the development projects. Implementation of Mitigation Measures described in Section 3.5, *Fisheries*, including water quality protection measures, and establishment of on-site and off-site SRA habitat creation, and would reduce or avoid the effects of the Proposed Action in accordance with the requirements of the Federal Endangered Species Act and California Fish and Game Code (including the California Endangered Species Act) and other regulatory programs that protect habitats, such as CWA Sections 401 and 404. Although the Proposed Action's temporary impacts would be less than significant with mitigation, the Proposed Action would not result in a cumulatively considerable contribution to significant cumulative effects on the permanent loss or degradation of fish habitat.

4.2.5 Special Status Species

Project implementation has the potential to adversely affect special status species: Crotch bumble bee, valley elderberry longhorn beetle, western pond turtle, western yellow-billed cuckoo, bank swallow, Swainson's hawk, Cooper's hawk, burrowing owl, white-tailed kite, purple martin, heron- and egret rookeries, other nesting birds, and bats, American badger, Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, Central Valley steelhead, Central Valley fall-/late fall-run Chinook salmon, hardhead, western river lamprey, and Sanford's arrowhead. Similar potential for adverse effects on special status species and their habitats would be associated with the flood-risk reduction projects, including future ARCF contracts proposed along the American River and Sacramento River, and removal of high-hazard vegetation by levee maintaining agencies in the Sacramento area and surrounding region. Such projects would generally continue to adversely affect special status species. Most potential adverse effects of the Proposed Action and nearby levee projects relate to plants, fish, and wildlife would be associated with construction disturbances of special status species and their habitats, but permanent loss of habitat would also result from some of the individual levee improvement projects and the development projects. These adverse effects could contribute to species declines and losses of habitat that have led to the need to protect these species under the Federal Endangered Species Act and the California Fish and Game Code (including the California Endangered Species Act). Implementation of Mitigation Measures described in Section 3.6, Special Status Species, would reduce or avoid the effects of the Proposed Action in accordance with the requirements of the Federal and California Endangered Species Acts, and other sections of the California Fish and Game Code. Therefore, the Proposed Action would not result in a cumulatively considerable incremental contribution to significant cumulative adverse effects on special status species.

4.2.6 Cultural Resources

Implementation of the Proposed Action, other flood-risk reduction projects, including the ARCF GRR projects proposed along the American River and Sacramento River, and other projects considered in this cumulative analysis, have the potential to contribute to the loss or degradation of known and unrecorded archaeological resources, known prehistoric-period cultural landscapes, known and unknown human remains, and known and unknown historic-period archaeological resources.

Most potential effects of the Proposed Action and other related projects to cultural resources would be associated with construction disturbances of archaeological sites, prehistoric cultural landscapes, and human remains. These effects could contribute to the loss of intact cultural resources and human remains in the Sacramento region.

Implementation of the mitigation measures presented in Chapter 3, Section 3.7, *Cultural Resources*, would reduce or avoid the effects of the Proposed Action on known cultural and tribal cultural resources and on unknown archaeological resources, tribal cultural, and human remains that could potentially be discovered during project construction. As

such, the Proposed Action would not result in a cumulatively considerable incremental contribution to significant cumulative effects on cultural resources.

4.2.7 Transportation

Most traffic effects related to the Proposed Action would occur along I-80, U.S. 50, and local roadways within the City and County of Sacramento, in the vicinity of the Proposed Action area. Other levee projects would occur at locations that are more distant from the Proposed Action. There are no known projects that would affect the local haul routes shown in Chapter 2, *Project Description*. Because potentially significant traffic effects are only expected to occur for approximately six months during the project construction period, it is difficult to predict if other projects would have traffic volumes that would cumulatively affect traffic during these same time periods. If other projects substantially affect traffic during these peak construction periods, the potential cumulative effects would be significant on segments of I-80 and U.S. 50, and the Proposed Action would make a considerable contribution. Mitigation described in Section 3.8, *Transportation and Circulation*, includes a traffic control and road maintenance plan to reduce the Proposed Action's impact. This mitigation requires emergency service providers be notified in advance of road closures and detours and requires emergency access to be maintained. Because other major construction projects would also implement traffic control plans specifically designed to provide appropriate emergency access, the Proposed Action would not result in an incremental contribution to a significant cumulative effect related to emergency vehicle access or response times.

Bicycle and pedestrian paths affected by the Proposed Action would be in the vicinity of the construction activities and along potential haul routes within the American River Parkway and nearby neighborhoods. As part of mitigation measures, the Proposed Action would always provide signage and detours to maintain safe pedestrian and bicyclist access around the construction areas. In general, major construction projects concurrent with the Proposed Action would also implement traffic control plans specifically designed to provide continued safe routes for alternative modes of transportation during construction. Therefore, the Proposed Action would not result in an incremental contribution to a significant cumulative effect related to performance or safety of alternative modes of transportation.

4.2.8 Air Quality

Air quality is inherently a cumulative effect because existing air quality is a result of past and present projects. No single project would be sufficient in size, by itself, to result in nonattainment of the regional air quality standards.¹²⁰ Several other construction projects (see list in Section 4.1.1, *Projects Contributing to Potential Cumulative Effects*) are expected to occur simultaneously in the Sacramento Valley Air Basin during the planned construction period for the Proposed Action. The related projects have the potential to

¹²⁰ SMAQMD. 2014 (as amended). *Guide to Air Quality Assessment in Sacramento County* (CEQA Guide). Available: <http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools>. Accessed March 26, 2020.

generate construction-related emissions that individually exceed SMAQMD's threshold of significance. However, all construction projects in the SMAQMD, including the Proposed Action are required to mitigate and offset emissions that have the potential to negatively affect air quality in the Sacramento Valley Air Basin through implementation of SMAQMD emissions reductions practices. In addition, many offset projects create long-term, permanent emissions reductions (which result in a benefit).

Furthermore, the Proposed Action is part of the larger ARCF project, which has been determined to meet the requirements of general conformity with the provisions of the Clean Air Act (CAA) through payment of fees to offset NO_x emissions. As discussed in Section 3.9, *Air Quality*, the Proposed Action would result in a cumulatively considerable incremental contribution to a significant cumulative effect related to regional air quality, and this contribution would be mitigated through implementation of Mitigation Measures described in Section 3.9, *Air Quality*.

With respect to localized air pollutants such as CO, TACs, and odors, the Proposed Action and the related projects would generate these pollutants only during construction, and the construction activities for these projects would be temporary and short term. Some of the related projects may generate concentrations of these pollutants at levels that exceed applicable thresholds. However, the CEQA and NEPA documents for the related cumulative projects contain mitigation measures that must be implemented to reduce individual project emissions. As discussed in Section 3.9, the Proposed Action would not generate CO, TACs, or odors at levels that would represent a health hazard. Therefore, the proposed project would not result in a cumulatively considerable incremental contribution to a significant cumulative effect related to generation of CO, TACs, or odors during construction.

4.2.9 Greenhouse Gas Emissions and Energy Consumption

Climate change as related to GHG emissions is inherently cumulative. Though significance thresholds can be developed by air districts and State and Federal regulatory agencies, these thresholds and their related goals are ultimately designed to affect change at a global level. Therefore, the analysis presented in Section 3.10, *Greenhouse Gas Emissions and Energy Consumption*, includes the analysis of both the project and cumulative effects. The Proposed Action and the related cumulative projects would result in the generation of GHGs, in proportion to the size of each individual project, amount and time of operation of construction equipment, and distances traveled. However, the Proposed Action and the related projects that would generate GHG emissions more than threshold levels would implement the mitigation measures identified in their respective CEQA and/or NEPA documents and adopted to reduce emissions and/or purchase carbon offsets. Furthermore, the Proposed Action would not exceed the Council on Environmental Quality's GHG threshold guidance levels and the Proposed Action would be consistent with Statewide climate change adaptation strategies. Therefore, the Proposed Action would not result in a considerable incremental contribution to a significant cumulative effect related to climate change or energy consumption.

4.2.10 Noise

None of the cumulative projects would be located in the immediate vicinity of the Proposed Action. A cumulative effect might occur if construction activities associated with any of the related project(s) were to occur within 500 feet of the Proposed Action's construction activities, and also, if the construction activities of other projects were to occur at the same time or overlap at some point during the construction activities of the Proposed Action. Furthermore, although any of the related cumulative projects could require construction that exceeds the respective local City or County noise ordinances, the Proposed Action would limit noise-generating activities to the hours when the City of Sacramento exempts construction noise. Therefore, the Proposed Action would not result in a considerable incremental contribution to a significant cumulative effect related to construction equipment or traffic noise levels in excess of standards established in the local general plan or noise ordinance, in other applicable local, State, or Federal standards, or exceeding the ambient background.

4.2.11 Recreation

The Proposed Action, along with the related cumulative projects, may result in temporary closure of recreational facilities, potential damage to recreational facilities, and temporary diminishment of recreational experiences during construction. Implementation of Mitigation Measures described in Section 3.12, Recreation, would reduce the Proposed Action's effects, but temporary impacts would remain significant and unavoidable. Because of the temporary nature of the construction effects and the likelihood that any access restrictions or degradation of the quality of recreational experiences would last for approximately 3–7 months in any location, the Proposed Action's effects on local recreation are not anticipated to overlap with effects of other related cumulative projects. Consequently, cumulative effects related to recreation resources would be less than significant, and the Proposed Action would not result in a considerable incremental contribution to a significant cumulative effect related to short-term temporary changes in recreational opportunities during project construction activities.

4.2.12 Public Utilities and Service Systems

The Proposed Action, and future ARCF projects along the American River and Sacramento River, and all the other related cumulative projects, could temporarily disrupt utility service as a result of inadvertent damage to existing utility equipment, facilities, and infrastructure. However, any utility and service system effects would be geographically isolated, short in duration, and occur on a project-by-project basis. Thus, these disruptions would not combine to form cumulative effects. Therefore, the Proposed Action would not result in a considerable incremental contribution to a significant cumulative effect related to potential disruption of utility services.

Temporary construction activities associated with the Proposed Action and related projects in the Sacramento Region would generate organic and non-organic solid waste. Waste material that is not suitable for disposal on-site would likely be disposed of in

Kiefer or the L and D Landfills. Both landfills currently provide solid waste disposal services to municipal and commercial customers and provide construction demolition and debris disposal in Sacramento County. Both landfills have sufficient permitted capacity to accommodate solid waste disposal needs for Sacramento County, including the disposal needs of the Proposed Action and the related cumulative projects. Therefore, the Proposed Action would not result in a considerable incremental contribution to a significant cumulative effect related to increases in solid waste generation.

4.2.13 Hazards and Hazardous Materials

Implementation of the Proposed Action and the related projects would include handling small quantities of hazardous materials used in construction equipment (e.g., fuels, oils, lubricants) and during construction activities. The storage, use, disposal, and transport of hazardous materials are extensively regulated by various Federal, State, and local agencies. Permits are required for the use, handling, and storage of these materials, and compliance with appropriate regulatory agency standards agencies is also required to avoid releases of hazardous waste. Construction companies that handle hazardous substances for the Proposed Action and all the related projects are required by law to implement and comply with these existing regulations. Furthermore, any effect that might occur would be localized to the area where the materials are being used and would not be additive to other hazardous materials-related effects associated with the Project Area. None of the materials would be acutely hazardous, and they would not be used in within 0.25 mile of schools. Thus, the Proposed Action would not result in a cumulatively considerable incremental contribution to a significant cumulative effect related to the potential for accidental spills of materials used during construction activities or handling of hazardous materials within 0.25 mile of a school.

Project implementation could result in exposure to unknown hazardous materials sites during construction activities. It is unknown whether any of the related project sites contain existing hazards materials. However, Mitigation Measures identified in Section 3.14, *Hazards and Hazardous Materials*, would minimize potential exposure to unknown hazards and hazardous materials during implementation of the Proposed Action. Further, only future related ARCF GRR projects along the LAR are located in close proximity to the Project Area. Therefore, the Proposed Action would not result in a considerable incremental contribution to a significant cumulative effect related to existing hazardous materials.

Wildland fire represents a hazard particularly during the hot, dry summer and fall in the Central Valley. Most of the related projects, including future levee and development projects, would be implemented in urbanized areas, similar to the Proposed Action, with a relatively low risk of wildland fire, and the Proposed Action and related projects are not located in a high fire hazard severity zone. Therefore, there would be no significant cumulative impact related to wildland fire risk, and the Proposed Action would not result in a considerable incremental contribution to a significant cumulative effect related to wildland fire hazards.

4.3 Growth-Inducing Effects

Because the Proposed Action would not involve construction of housing, the action would not directly induce growth. Proposed Action-related construction activities would generate temporary and short-term employment, but the construction jobs would be filled from the existing local employment pool and would not indirectly result in a population increase or induce growth by creating permanent new jobs. Furthermore, the project would not involve constructing businesses or extending roadways or other infrastructure that could indirectly induce population growth. Consequently, the Proposed Action would not induce growth leading to changes in land use patterns, population densities, or related impacts on environmental resources.

Levee improvements would benefit areas identified for future growth anticipated in the vicinity of the American River in the City of Sacramento and Sacramento County. Local land use decisions are within the jurisdiction of the City of Sacramento and Sacramento County, both of which have adopted general plans consistent with State law. The City of Sacramento 2035 General Plan¹²¹ and currently planned 2040 General Plan provide an overall framework for growth and development in the City. The City General Plan identified a few areas as “New Growth Areas” throughout the City boundaries and in “Special Study Areas.” The Sacramento County 2030 General Plan¹²² and current proposed amendments to the general plan provide a framework for development in the County, including areas identified for future growth that benefit from the levee system along the American River.

The levee improvements would increase the levee’s resistance to erosion, provide better overall levee stability and reliability, and provide additional flood protection for growth anticipated in the City’s and County’s General Plans. Growth throughout the Project Area has already been planned as part of the City’s and County’s General Plans. The Proposed Action would not allow additional growth to occur other than the growth that has already been planned and approved, nor would it change the locations where this growth is planned to occur. Consequently, implementation of the Proposed Action would not affect current and/or projected population growth patterns within the City of Sacramento and County of Sacramento as already evaluated and planned for in the both the City’s and County’s General Plans and, therefore, would not have an indirect effect on growth. The Proposed Action would mitigate flood risks by improving levees to meet engineering standards associated with the National Flood Insurance Program; it would not alter protection for the 100-year event nor does it transfer any such risk to other areas. The Proposed Action would not directly or indirectly support development in the base floodplain.

¹²¹ City of Sacramento. 2015. *2035 General Plan*. Adopted March 3, 2015.

¹²² Sacramento County. 2011. *2030 General Plan*. Adopted November 9, 2011, as amended.

4.4 Irreversible and Irretrievable Commitment of Resources

The discussion of irreversible and irretrievable commitments of resources in the 2016 ARCF GRR FEIS/FEIR adequately describes the effects of the Proposed Action.

CHAPTER 5

Compliance with Federal and State Laws and Regulations

5.1 Federal Laws and Regulations

5.1.1 Clean Air Act of 1970

The Federal Clean Air Act (CAA) of 1970, as amended (42 USC 7401 et seq.) requires the U.S. Environmental Protection Agency (EPA) to establish national ambient air quality standards (NAAQS). EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, PM₁₀, PM_{2.5}, CO, NO₂, SO₂, and lead. The primary standards protect the public health and the secondary standards protect public welfare. The CAA also requires each state to prepare an air quality control plan, referred to as a State Implementation Plan.

An analysis of air quality effects of the Proposed Action is presented in Section 3.9, *Air Quality*. The Proposed Action is not expected to violate any Federal air quality standards. Although the NO_x emissions of the ARCF 16 project as a whole are expected to exceed the EPA's General Conformity *de minimis* thresholds during several of the ARCF 16 project's construction years, including 2022, and 2023, USACE expects to purchase offsets for NO_x emissions from SMAQMD. The CAA requires that EPA set emissions standards for a range of pollution sources. Specifically, EPA and the National Highway Traffic Safety Administration (NHTSA) regulate emissions from on-road vehicles include automobiles and light-duty trucks. In 2012, EPA and NHSTA established the Corporate Average Fuel Economy (CAFE) standards for automobiles and light-duty trucks for model years 2014 and beyond (77 *Federal Register* [FR] 62624). Under the original iteration of the CAFE standards, fuel economy would be raised to the equivalent of 54.6 miles per gallon by 2025 (77 FR 62630).

On April 2, 2018, EPA administrator announced a final determination that the current standards should be revised. On August 2, 2018, the U.S. Department of Transportation (DOT) and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule), which would amend existing CAFE standards for passenger cars and light-duty trucks through retaining the current model year 2020 standards through model year 2026 and establish new standards covering model years 2021 through 2026 (NHTSA 2018).

The CAA grants California the ability to enact and enforce stricter fuel economy standards through the acquisition of an EPA-issued waiver. Each time California adopts a new vehicle emission standard, the State applies to EPA for a preemption waiver for

those standards. However, Part One of the SAFE Rule, which became effective on November 26, 2019, revokes California's existing waiver to establish a nation-wide standard (84 FR 51310). At the time of preparing this environmental document, the implications of the SAFE Rule on California's future emissions are contingent upon a variety of unknown factors.

5.1.2 Community Right-to-Know Act of 1986

The Community Right-to-Know Act of 1986, also known as Title III of the Superfund Amendments and Reauthorization Act, imposes requirements to ensure that hazardous materials are properly handled, used, stored, and disposed of and to prevent or mitigate injury to human health or the environment in the event that such materials are accidentally released. The Proposed Action would comply with this law.

5.1.3 Energy Policy and Conservation Act and Corporate Average Fuel Economy Standards

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Pursuant to this Act, the National Highway Traffic Safety Administration (NHTSA), part of the U.S. Department of Transportation (DOT), is responsible for revising existing fuel economy standards and establishing new vehicle economy standards.

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with the CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the country. EPA calculates a CAFE value for each manufacturer based on the city and highway fuel economy test results and vehicle sales. The CAFE values are a weighted harmonic average of the EPA city and highway fuel economy test results. Based on information generated under the CAFE program, DOT is authorized to assess penalties for noncompliance. Under the Energy Independence and Security Act of 2007 (described below), the CAFE standards were revised for the first time in 30 years then later updated in 2012 and 2019. The Proposed Action would comply with this law.

5.1.4 Energy Policy Act of 1992 and 2005

The Energy Policy Act of 1992 (EPAct) was enacted to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain Federal, State, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in EPAct. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs. The Energy Policy Act of 2005 provides

renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a Federal purchase requirement for renewable energy. The Proposed Action would comply with this law.

5.1.5 Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. It represents a major step forward in expanding the production of renewable fuels, reducing dependence on oil, and confronting global climate change. The Energy Independence and Security Act of 2007 increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels; and reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020—an increase in fuel economy standards of 40 percent.

By addressing renewable fuels and the CAFE standards, the Energy Independence and Security Act of 2007 builds upon progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century; however, on April 2, 2018, EPA administrator announced a final determination that the current standards should be revised. On August 2, 2018, DOT and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule), which would amend existing CAFE standards for passenger cars and light-duty trucks through retaining the current model year 2020 standards through model year 2026 and establish new standards covering model years 2021 through 2026 (NHTSA 2018).

The CAA grants California the ability to enact and enforce stricter fuel economy standards through the acquisition of an EPA-issued waiver. Each time California adopts a new vehicle emission standard, the State applies to EPA for a preemption waiver for those standards. However, Part One of the SAFE Rule, which became effective on November 26, 2019, revokes California's existing waiver to establish a nation-wide standard (84 FR 51310). At the time of preparing this environmental document, the implications of the SAFE Rule on California's future emissions are contingent upon a variety of unknown factors. The Proposed Action would comply with this law.

5.1.6 Hazardous Materials Transportation Act

The Secretary of the U.S. Department of Transportation (DOT) receives the authority to regulate the transportation of hazardous materials from the Hazardous Materials Transportation Act, as amended and codified in 49 USC 5101 et seq. DOT, in conjunction with the USEPA, is responsible for enforcement and implementation of federal laws and regulations pertaining to safe storage and transportation of hazardous materials. 49 CFR Sections 171 through 180, regulate the transportation of hazardous materials, types of material defined as hazardous, and the marking of vehicles

transporting hazardous materials. Contractors would be required to comply with the Act for all storage and transportation of hazardous materials and wastes to reduce the possibility of inadvertent releases and spills. The Proposed Action would comply with this law.

5.1.7 Resources Conservation and Recovery Act (RCRA) of 1976

The Resource Conservation and Recovery Act (42 USC § 6901 et seq.) was adopted in 1976 and codified in 40 CFR Part 260. RCRA Subtitle C regulates the generation, transportation, treatment, storage and disposal of hazardous waste by “large-quantity generators” (1,000 kilograms per month or more) as well as “small quantity generators” (under 1,000 kilograms) through comprehensive life cycle or “cradle to grave” tracking requirements. The requirements include maintaining inspection logs of hazardous waste storage locations, records of quantities being generated and stored, and manifests of pick-ups and deliveries to licensed treatment/storage/disposal facilities. RCRA also identifies standards for treatment, storage, and disposal. Contractors would be required to comply with RCRA hazardous waste requirements to reduce the possibility of inadvertent releases and spills. The Proposed Action would comply with this law.

5.1.8 Occupational Safety and Health Administration (OSHA) of 1970

OSHA is the Federal agency responsible for ensuring worker safety. The Occupational Safety and Health Act of 1970 (29 USC 15) and its implementing regulations provide standards for safe workplaces and work practices, including those relating to hazardous materials handling. All workers during construction would comply with OSHA’s hazardous materials management and handling requirements including such measures as having all appropriate personal protective equipment (PPE) to reduce the possibility of acute or chronic exposure hazards and protect worker safety. The Proposed Action would comply with this law.

5.1.9 Endangered Species Act of 1973

Pursuant to the Endangered Species Act (ESA), as amended (16 USC 1531 et seq.), USFWS and NMFS have regulatory authority over Federally listed species. Under the ESA, a permit to take a listed species is required for any Federal action that may harm an individual of that species. “Take” is defined under ESA Section 9 as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Under Federal regulation, take is further defined to include habitat modification or degradation where it would be expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. ESA Section 7 outlines procedures for Federal interagency cooperation to conserve Federally listed species and designated critical habitat. Section 7(a)(2) requires Federal agencies to consult with USFWS and NMFS to

ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species. A list of threatened and endangered species that may be affected by the Proposed Action was obtained from USFWS in 2019 (Appendix B). USACE formally consulted with USFWS on the ARCF Project and received a Biological Opinion (BO) on September 11, 2015 (08ESMF00-2014-F-0518). USACE conducted reinitiations for this BO with USFWS in June 2017, May 2019, and September 2020. The Proposed Action is an element of the ARCF Project. USACE formally consulted with NMFS on the ARCF Project and received a Biological Opinion on September 9, 2015. USACE is required to reinitiate formal consultation with USFWS and/or NMFS if effects on listed species would vary from what was provided at the time of formal consultation. USACE continues to update USFWS and NMFS on impacts and mitigation for covered species associated with implementing ARCF Project actions, and USACE would reinitiate consultation with USFWS and/or NMFS if completed design documents and specifications for associated ARCF projects provide more detailed data concerning anticipated adverse effects on listed species. Consultation with USFWS and NMFS was ongoing at the time of publication of this document. The Proposed Action would comply with this law.

5.1.10 Executive Order 11988, Floodplain Management

Executive Order (EO) 11988 directs all Federal agencies approving or implementing a project to avoid, to the extent possible, the long- and short-term adverse effects associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. Guidelines for implementing the EO include an eight-step process that agencies should carry out as part of their decision-making on projects that have potential effects on or within the floodplain. The decision-making process required in Section 2(a) of EO 11988 is reflected in the eight steps that are listed below, along with information showing how each step is being addressed for the Proposed Action. The Proposed Action would comply with this law.

1. Determine if a proposed action is in the base floodplain (that area which has a 1 percent or greater chance of flooding in any given year (i.e., the 100-year floodplain). The project includes levee improvements, some of which form the boundary of the base (FEMA's 100-year) floodplain.
2. Conduct early public review, including public notice. Public review is being accomplished through the NEPA Supplemental EA and the CEQA Supplemental EIR process; SAFCA previously conducted extensive public outreach for an earlier iteration of the project prior to authorization by Congress.
3. Identify and evaluate practicable alternatives to locating in the base floodplain, including alternative sites outside of the floodplain. Alternatives to the Proposed Action are discussed in Chapter 2, *Alternatives*.
4. Identify effects of the proposed action. This Supplemental EIR analyzes the environmental effects potentially resulting from the project, per CEQA requirements.

Effects of the Proposed Action are described in Chapter 3, *Affected Environment and Environmental Consequences*. Effects are also being evaluated in compliance with the CWA, and other Federal and State environmental regulations.

5. Minimize threats to life and property and restore and preserve natural and beneficial floodplain values. The Proposed Action would reduce flood risk to life and property by ensuring the American River Levees at Sites 2-2 and 2-3 meet the engineering standards associated with the National Flood Insurance Program (NFIP). The project includes mitigation to maintain or improve habitat values along the American River Levees at Sites 2-2 and 2-3.
6. Reevaluate alternatives. USACE is conducting an extensive engineering review of SAFCA's initial designs for improvements to address through-and under-seepage hazards on the American River Levees at Sites 2-2 and 2-3. The Proposed Action includes those portions of SAFCA's initial design which were initially reviewed and approved, in addition to several modifications that were developed because of USACE's reevaluation of the alternatives. The alternatives are also evaluated and may be refined through consultation with the resource agencies for compliance with CWA, and other project authorizations.
7. Present the findings and a public explanation. As part of the CEQA process, the public would be able to review and comment on this Supplemental EIR.
8. Implement the action. USACE intends to implement the Proposed Action in 2020, assuming receipt of all necessary approvals, clearances, permits, and permissions.
9. The project would mitigate flood risks by improving levees to meet engineering standards associated with the NFIP; it would not alter protection for the 100-year event, nor does it transfer any such risk to other areas. Because the project would not directly or indirectly support development in the base floodplain, it would comply with EO 11988.

5.1.11 Executive Order 11990, Protection of Wetlands

The purpose of EO 11990 is to “minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.” To meet these objectives, EO 11990 requires Federal agencies, in planning their actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. EO 11990 applies to:

- acquisition, management, and disposition of Federal lands and facilities construction;
- improvement projects which are undertaken, financed, or assisted by Federal agencies; and
- Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities.

- As discussed in Section 3.4, *Vegetation and Wildlife*, forested wetlands are located within the footprint of the Proposed Action and will be impacted during construction activities. However, impacts to forested wetlands will be minimized to the greatest extent feasible. Where feasible, forested wetlands will be restored onsite and additional forested wetlands will be created within the American River and other offsite locations to ensure no net loss of wetlands as a result of implementation of the Proposed Action.

The Proposed Action would comply with this law.

5.1.12 Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

The purpose of EO 12898 is to identify and address the disproportionate placement of adverse environmental, economic, social, or health effects from Federal actions and policies on minority and/or low-income communities. EO 12898 requires that adverse effects on minority or low-income populations be taken into account during preparation of environmental and socioeconomic analyses of projects or programs that are proposed, funded, or licensed by Federal agencies. Section 2-2 of EO 12898 requires all Federal agencies to conduct programs, policies, and activities that substantially affect human health or the environment in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons the benefits of, or subjecting persons to discrimination because of their race, color or national origin. Section 1-101 of EO 12898 requires Federal agencies to identify and address, as appropriate, disproportionately high, and adverse human health or environmental effects of programs on minority and low-income populations.

The Proposed Action would reduce the risk of flooding to existing residential, commercial, and industrial development protected by the American River Levees at Sites 2-2 and 2-3. This benefit would accrue to all segments of the population in the Project Area and would have no disproportionately high adverse environmental effect on any minority or low-income population. The Proposed Action would comply with this law.

5.1.13 Executive Order 13112, Invasive Species

EO 13112 directs Federal agencies to take actions to prevent the introduction of invasive species, provide for control of invasive species, and minimize the economic, ecological, and human health impacts that invasive species cause. EO 13112 also calls for the restoration of native plants and tree species.

Project construction activities have potential to introduce new invasive plants or spread existing invasive plants on the project site, but temporarily disturbed areas would be hydroseeded with a native seed mix for erosion protection and to prevent colonization of exotic vegetation and mitigation measures would include planting of native riparian

species. Additional information is provided in Section 3.4, *Vegetation and Wildlife*. The Proposed Action would comply with this law.

5.1.14 Farmland Protection Policy Act

The Farmland Protection Policy Act (7 USC 4201 et seq.) is intended to minimize the effect of Federal programs with respect to the conversion of farmland to nonagricultural uses. It ensures that, to the extent possible, Federal programs are administered to be compatible with State, local, and private programs and policies to protect farmland. The Natural Resources Conservation Service is the agency primarily responsible for implementing the Farmland Protection Policy Act.

There are no prime farmlands in the levee improvement area.

5.1.15 Clean Water Act

EPA is the lead Federal agency responsible for water quality management. The CWA of 1972, as amended (33 USC 1251 et seq.), is the primary Federal law that governs and authorizes water quality control activities by EPA, as well as the State.

The Proposed Action would involve the placement of fill materials or construction within surface waters, local waterways, or any other Waters of the United States and, therefore, would comply with permit requirements of Sections 401 and 404 of the Clean Water Act. USACE prepared a Section 404(b)(1) Evaluation. At the time of publication of this document, USACE was preparing a Notice of Intent for Contract 3A to be appended to the ARCF GRR Project Programmatic Water Quality Certification issued by the Central Valley Regional Water Quality Control Board on July 13, 2021. Prior to construction, the contractor will be required to obtain a NPDES permit for potential effects on stormwater discharge, including preparation of a SWPPP. With the implementation of these permits, the Proposed Action would be in compliance with the Clean Water Act.

5.1.16 Fish and Wildlife Coordination Act of 1958

The Fish and Wildlife Coordination Act of 1958, as amended (16 USC 661 et seq.), ensures that fish and wildlife receive consideration equal to that of other project features for projects that are constructed, licensed, or permitted by Federal agencies. It requires that the views of USFWS, NMFS, and the applicable State fish and wildlife agency (CDFW) be considered when effects are evaluated and mitigation needs are determined.

In 2015, during preparation of the ARCF GRR FEIS/FEIR, USACE coordinated with USFWS to consider potential effects on vegetation and wildlife from implementation of the overall ARCF 2016 project. On October 5, 2015, USFWS issued a final Coordination Act Report that provided mitigation recommendations (USFWS File # 08ESMF00-20 13-CPA-0020). USACE considered all recommendations and responded to them in the final ARCF GRR FEIS/FEIR. Reinitiation of the BA was conducted in 2020. The Proposed Action would therefore comply with this act.

5.1.17 Magnuson-Stevens Fishery Conservation and Management Act

The Proposed Action would involve in-water work, and implementing standard water quality protection measures, stormwater pollution prevention BMPs, and mitigation measures for monitoring and control of turbidity would avoid indirect effects on essential fish habitat. The Proposed Action would therefore be in compliance with this act.

5.1.18 Migratory Bird Treaty Act of 1936

The Migratory Bird Treaty Act (MBTA) of 1936, as amended (16 USC 703 et seq.), implements domestically a series of international treaties that provide for migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds; the act provides that it is unlawful, except as permitted by regulations, “to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird ...” (16 USC 703). This prohibition includes both direct and indirect acts, although harassment and habitat modification are not included unless they result in direct loss of birds, nests, or eggs. The current list of species protected by the MBTA includes several hundred species and essentially includes all native birds. Permits for take of nongame migratory birds can be issued only for specific activities, such as scientific collecting, rehabilitation, propagation, education, taxidermy, and protection of human health and safety and personal property.

The Proposed Action incorporates mitigation measures that minimize the potential for the take of migratory birds as a consequence of project construction, as discussed in Section 3.4, *Vegetation and Wildlife*. The Proposed Action would comply with this law.

5.1.19 National Flood Insurance Program

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 were intended to reduce the need for large, publicly funded flood control structures and disaster relief by restricting development on floodplains. The Federal Emergency Management Agency (FEMA) manages the National Flood Insurance Program (NFIP) to subsidize flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA issues Flood Insurance Rate Maps for communities participating in the NFIP. These maps delineate flood hazard zones in the community. The maps are designed for flood insurance purposes only and do not necessarily show all areas subject to flooding. The maps designate lands likely to be inundated during a 1 percent (100-year) storm event and elevations of the base flood. They also depict areas between the limits affected by 1 percent (100-year) and 0.2 percent (500-year) events and areas of minimal flooding. Flood Insurance Rate Maps are often used to establish building pad elevations to protect new development from flooding effects.

The Proposed Action would bring the American River South Basin and American River North Basin to Annual Exceedance Probabilities of 1 in 147 and 1 in 256, respectively. The Proposed Action would comply with this law.

5.1.20 National Historic Preservation Act of 1966

The NHPA (54 U.S.C. 300101 *et seq.*) is the primary Federal legislation specific to cultural resources. Section 106 of the NHPA and its implementing regulations (36 CFR Part 800) require Federal agencies to consider the potential effects of their proposed undertakings on historic properties. Historic properties are cultural resources that are included in, or are eligible for inclusion in, the NRHP (36 CFR § 800.16[1]). Undertakings include activities directly carried out, funded, or permitted by Federal agencies. Federal agencies must also allow the Advisory Council on Historic Preservation the opportunity to comment on proposed undertakings and their potential effects on historic properties.

Because the ARCF 2016 Project is being implemented in phases, and because implementation of phases of the ARCF 2016 Project may have an effect on historic properties, USACE consulted with the SHPO and other parties and executed a PA to govern Section 106 compliance. The PA establishes the process USACE would follow for compliance with Section 106, taking into consideration the views of the signatory and concurring parties and interested Native American Tribes.

The Proposed Action incorporates treatment measures in consideration of cultural resources listed on or eligible for listing on the NRHP, as discussed in Section 3.7, *Cultural Resources*. Determinations of the specific mitigation measures to be implemented to resolve or avoid effects on known Historic Properties would be made by USACE, in consultation with SHPO and other PA Parties, as required by the PA and as described in detail in the HPMP for the ARCF Project. Specific mitigation measures that are consistent with the PA and the HPMP are also identified in Section 3.7 to address potential impacts on unknown cultural resources that could be discovered during construction.

In accordance with the PA and HPMP procedures, USACE has consulted with Native Americans who attach religious or cultural significance to historic properties that may be affected by the proposed undertaking, i.e., Proposed Action. A detailed description of consultation with Native Americans is provided under *Native American Consultation* in Section 3.7. In accordance with the PA, USACE will consult with the SHPO, requesting concurrence on the delineation of the APE, on the adequacy of inventory methods, and on the findings of cultural resources investigations. Through implementation of the actions specified in the PA, the Proposed Action complies with Section 106 of the NHPA.

5.1.21 Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970

Federal, State, regional, and local government agencies, and others receiving Federal financial assistance for public programs and projects that require the acquisition of real property, must comply with the policies and provisions set forth in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended in 1987 (42 USC 4601 *et seq.*), and its implementing regulation, 49 CFR Part 24.

Relocation advisory services, moving costs reimbursement, replacement housing, and reimbursement for related expenses and rights of appeal are provided in the Uniform Act.

All or portions of some uninhabited parcels within the project footprint would need to be acquired for easement for project construction. All property acquisition would be made in compliance with the Uniform Act. The Proposed Action would comply with this law.

5.1.22 Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act (16 USC 1217 et seq.) was enacted to preserve selected rivers or sections of rivers in their free-flowing condition to protect the quality of river waters and to fulfill other national conservation purposes. The Lower American River, below Nimbus Dam, has been included in the Federal Wild and Scenic Rivers system since 1981. The ARCF project is consistent with the land use management, flood risk reduction, and levee protection policies of the American River Parkway Plan, the management plan for the Wild and Scenic Rivers Act. These policies require that flood management agencies maintain and improve the existing flood control system, and manage vegetation in the Parkway to maintain the structural integrity and conveyance capacity of the flood control system, consistent with the need to provide a high level of flood risk reduction.

USACE will ensure that the Proposed Action complies with the Wild and Scenic Rivers Act by coordinating with the National Park Service to determine whether the Proposed Action would result in a direct and adverse effect on the Lower American River's free-flowing nature, water quality, anadromous fish Outstandingly Remarkable Value, or recreational Outstandingly Remarkable Value.

5.2 State Laws, Regulations, and Policies

5.2.1 Assembly Bill 1007: State Alternative Fuels Plan

Assembly Bill (AB) 1007 (Chapter 371, Statutes of 2005) required the California Energy Commission (CEC) to prepare a State plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other State, Federal, and local agencies. The plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation to public health and environmental quality. The Proposed Action would comply with this law.

5.2.2 Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to AB 2076 (Chapter 936, Statutes of 2000), CEC and the California Air Resources Board (CARB) prepared and adopted a joint agency report in 2003, *Reducing California's Petroleum Dependence*. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT (CEC and CARB 2003). Further, in response to CEC's 2003 and 2005 *Integrated Energy Policy Reports*, Governor Davis directed CEC to take the lead in developing a long-term plan to increase alternative fuel use.

A performance-based goal of AB 2076 was to reduce petroleum demand to 15 percent below 2003 demand by 2030. The Proposed Action would comply with this law.

5.2.3 California Clean Air Act of 1988

Section 3.9 of this document discusses the effects of the Proposed Action on local and regional air quality. CARB is responsible for the development, implementation, and enforcement of California's motor vehicle pollution control program, GHG statewide emissions and goals, and development and enforcement of GHG emission reduction rules. Section 202(a) of the California Clean Air Act requires projects to determine whether emission sources and emission levels significantly affect air quality, based on Federal standards established by EPA and State standards set by CARB.

SMAQMD has local jurisdiction over the Project Area. The analysis in Section 3.9 shows that expected short-term project-related emissions would exceed local thresholds administered by SMAQMD, but would not exceed annual general conformity thresholds. Additionally, SMAQMD recommends that a lead CEQA agency consider a GHG emissions threshold of 1,100 metric tons/year; the Proposed Action would exceed this GHG emissions threshold. Additional BMPs would be incorporated to reduce GHG emissions during construction, to the maximum extent feasible.

In December 2018, the California Supreme Court issued its decision in *Sierra Club v. County of Fresno* (226 Cal.App.4th 704), also known as the "Friant Ranch decision," which requires a project's environmental documents to include a clear analysis of potential long term air quality health impacts from the project's anticipated emissions of air pollutants.

The Proposed Action was analyzed using a health risk analysis (HRA) to identify whether there would be adverse health impacts from emissions during construction. The results of the HRA show that the Proposed Action would be in compliance with the California Clean Air Act and the court's Friant Ranch holding.

5.2.4 California Environmental Quality Act of 1970

The CVFPB, as the non-Federal sponsor and CEQA lead agency, would undertake activities to ensure compliance with CEQA. CEQA requires full disclosure of the environmental effects, potential mitigation, and environmental compliance of the project. Certification of the Final Supplemental EIR by the CVFPB, adoption and incorporation of all feasible mitigation measures into the Proposed Action, and monitoring and reporting on implementation of the adopted mitigation measures would provide full compliance with the requirements of CEQA.

5.2.5 California Environmental Protection Agency

The Secretary of the California Environmental Protection Agency (Cal EPA) is directly responsible for coordinating the administration of the Unified Program. The Secretary certifies Unified Program Agencies. The Secretary has certified 83 Certified Unified Program Agencies (CUPAs) to date. These 83 CUPAs carry out the responsibilities previously handled by approximately 1,300 State and local agencies. In January 1996, Cal EPA adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The program has six elements: hazardous waste generators and hazardous waste on-site treatment; underground storage tanks; aboveground storage tanks; hazardous materials release response plans and inventories; risk management and prevention programs; and Unified Fire Code hazardous materials management plans and inventories. The plan is implemented at the local level. The CUPA is the local agency that is responsible for the implementation of the Unified Program. The Proposed Action would comply with this law.

5.2.6 California Endangered Species Act

The California Endangered Species Act (CESA) requires non-Federal agencies to consider the potential adverse effects on State-listed species. As discussed in Section 3.6 of this document, with implementation of mitigation measures, activities associated with the Proposed Action are not anticipated to adversely affect any State-listed species, so no further action is required to achieve compliance with CESA.

5.2.7 California Fish and Game Code Sections 3503 and 3513

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nests of eggs of any bird. Section 3503.3 states that it is unlawful to take, possess, or destroy any raptors, including nests or eggs. With implementation of mitigation measures described in Section 3.6, activities associated with the proposed project are not anticipated to adversely affect nesting birds, raptors, or their eggs.

Section 3513 of the California Fish and Game Code states that it is unlawful to take or possess any migratory nongame bird, as designated in the Federal MBTA (16 USC 703

et seq.) before January 1, 2017; any additional migratory nongame bird designated in the MBTA after that date; or any part of a migratory nongame bird described in Fish and Game Code Section 3513, except as provided by rules and regulations adopted by the U.S. Secretary of the Interior under the MBTA, unless those rules or regulations are inconsistent with the Fish and Game Code. The Proposed Action would comply with this law.

5.2.8 California Health and Safety Code

Hazardous Waste Control Law; Hazardous Materials Transportation—CCR Title 22 and Hazardous Waste Control Law, Chapter 6.5

The California Department of Toxic Substances Control regulates the generation, transportation, treatment, storage, and disposal of hazardous waste under the Resource Conservation and Recovery Act and the California Hazardous Waste Control Law. Both laws impose “cradle-to-grave” regulatory systems for handling hazardous waste in a manner that protects human health and the environment.

Cal EPA has delegated some of its authority under the Hazardous Waste Control Law to county health departments and other CUPAs. The Office of the State Fire Marshal is responsible for ensuring implementation of the Hazardous Material Management Plans and the Hazardous Material Inventory Statement Programs. These programs tie in closely with the Hazardous Material Release Response Plan (Business Plan) Program. The Governor’s Office of Emergency Services is responsible for providing technical assistance and evaluation of the Business Plan Program and the California Accidental Release Response Plan Program. The Proposed Action would comply with this law.

California Human Health Screening Levels and California Land Environmental Restoration and Reuse Act of 2001

The California Human Health Screening Levels (CHHSLs) were developed as a tool to assist in the evaluation of contaminated sites for potential adverse threats to human health. Preparation of the CHHSLs was required by the California Land Environmental Restoration and Reuse Act of 2001 (SB 32) (Chapter 764, Statutes of 2001; OEHH, 2010). The CHHSLs are concentrations of 54 hazardous chemicals in soil or soil gas that Cal EPA considers to be below thresholds of concern for risks to human health. The CHHSLs were developed by the Office of Environmental Health Hazard Assessment and are contained in its report entitled *Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soil* (OEHH and Cal EPA 2005). The thresholds of concern used to develop the CHHSLs are an excess lifetime cancer risk of 1 in 1 million and a hazard quotient of 1.0 for noncancer health effects. The CHHSLs were developed using standard exposure assumptions and chemical toxicity values published by EPA and Cal EPA. The CHHSLs can be used to screen sites for potential human health concerns where releases of hazardous chemicals to soils have occurred. Under most circumstances, the presence of a chemical in soil, soil gas, or indoor air at concentrations below the corresponding CHHSLs can be assumed to not pose a significant

health risk to people who may live (residential CHHSLs) or work (commercial/industrial CHHSLs) at the site. The Proposed Action would comply with this law.

Code of Federal Regulations Title 29 (OSHA) and California Code of Regulations Title 8 (Cal/OSHA)

The California Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations in California. Because California has a Federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in CFR Title 29. Cal/OSHA standards are generally more stringent than Federal regulations. Cal/OSHA regulations (8 CCR) for the use of hazardous materials in the workplace require employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces hazard communication program regulations, which contain training and information requirements, including procedures for identifying and labeling hazardous substances, and communicating hazard information relating to hazardous substances and their handling. State laws, like Federal laws, include special provisions for hazard communication to employees in research laboratories, including training in chemical work practices. The Proposed Action would comply with this law.

5.2.9 Executive Order S-06-06

EO S-06-06, signed on April 25, 2006, establishes targets for the use and production of biofuels and biopower, and directs State agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The executive order establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. EO S-06-06 also calls for the State to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the State can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 plan and provides a more detailed action plan to achieve the following goals:

- Increase environmentally and economically sustainable energy production from organic waste.
- Encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications.
- Create jobs and stimulate economic development, especially in rural regions of the state.
- Reduce fire danger, improve air and water quality, and reduce waste.

As of 2018, 2.35 percent of the total electricity system power in California was derived from biomass (CEC 2019). The Proposed Action would comply with this law.

5.2.10 Porter-Cologne Water Quality Control Act of 1970

The Porter-Cologne Water Quality Control Act requires each of the state's nine regional water quality control boards (RWQCBs) to prepare and periodically update basin plans for water quality control. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. The jurisdiction of each RWQCB includes Federally protected waters as well as areas that meet the definition of "waters of the State," which are defined as any surface water or groundwater, including saline waters, within the State's boundaries.

With implementation of mitigation measures described in Section 3.4, the Proposed Action would have no effect on waters of the United States or waters of the State.

5.2.11 California Energy Action Plan

CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The current plan is the 2003 California Energy Action Plan (2008 update). The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs; and encouragement of urban design that reduces vehicle miles traveled (VMT) and accommodates pedestrian and bicycle access. The Proposed Action would comply with this law.

5.2.12 Integrated Energy Policy Report

SB 1389 (Chapter 568, Statutes of 2002) required CEC to: "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (Public Resources Code Section 25301[a]). This work culminated in the Integrated Energy Policy Report (IEPR).

CEC adopts an IEPR every two years and an update every other year. The 2017 IEPR, the most recent IEPR, was adopted March 16, 2018. The 2017 IEPR summarizes priority energy issues currently facing California, outlining strategies and recommendations to

further the State’s goal of ensuring reliable, affordable, and environmentally responsible energy sources. The report covers the following energy topics:

- Progress toward statewide renewable energy targets and issues facing future renewable development.
- Efforts to increase energy efficiency in existing and new buildings.
- Progress by utilities in achieving energy efficiency targets and potential.
- Improving coordination among the State’s energy agencies.
- Streamlining power plant licensing processes.
- Results of preliminary forecasts of electricity, natural gas, and transportation fuel supply and demand.
- Future energy infrastructure needs.
- The need for research and development efforts to statewide energy policies.
- Issues facing California’s nuclear power plants.

The Proposed Action would comply with this law.

5.2.13 Statewide Greenhouse Gas Emissions Targets and the Climate Change Scoping Plan

Reducing GHG emissions in California has been the focus of the State government for approximately two decades (State of California 2018). GHG emission targets established by the State Legislature include reducing statewide GHG emissions to 1990 levels by 2020 (AB 32, 2006) and reducing them to 40 percent below 1990 levels by 2030 (Senate Bill [SB] 32, 2016). Executive Order S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. Executive Order B-55-18 calls for California to achieve carbon neutrality by 2045 and achieve and maintain net negative GHG emissions thereafter. These targets are in line with the scientifically established levels needed in the United States to limit the rise in global temperature to no more than 2 degrees Celsius, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius (United Nations 2015:3).

California’s 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by the California Air Resources Board (CARB), outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and “substantially advance toward our 2050 climate goals” (CARB 2017:1, 3, 5, 20, 25–26). It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste). CARB and other State agencies are currently

developing a Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal of EO B-55-18.

The State has also enacted more detailed legislation addressing GHG emissions associated with industrial sources, transportation, electricity generation, and energy consumption, as summarized below. The Proposed Action would comply with this law.

5.2.14 Warren-Alquist Act

The 1974 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). This law was enacted in response to the State Legislature's review of studies projecting an increase in statewide energy demand, which would potentially encourage the development of power plants in environmentally sensitive areas. The act introduced State policy for siting power plants to reduce potential environmental impacts, and additionally sought to reduce demand for these facilities by directing CEC to develop statewide energy conservation measures to reduce wasteful, inefficient, and unnecessary uses of energy. Conservation measures recommended establishing design standards for energy conservation in buildings that ultimately resulted in the creation of the Title 24 Building Energy Efficiency Standards (California Energy Code), which have been updated regularly and remain in effect today. The act additionally directed CEC to cooperate with the Governor's Office of Planning and Research, the California Natural Resources Agency, and other interested parties in ensuring that a discussion of wasteful, inefficient, and unnecessary consumption of energy is included in all environmental impact reports required on local projects. The Proposed Action would comply with this law.

CHAPTER 6

Coordination and Review of the Draft EIR

This Draft Supplemental EIR has been circulated for 45 days (April 13, 2022 to May 27, 2022) to agencies, organizations, and the public, including, but not limited, to: NMFS, USFWS, NPS, SHPO, CVRWQCB, State Lands Commission, Sacramento County, and the City of Sacramento. The Draft Supplemental EIR is posted on the CVFPB website and made available for viewing at local public libraries (if open), or provided by mail upon request. In addition, notice of a public meeting for the Draft Supplemental EIR will be posted on the CVFPB website. This project was coordinated with all the appropriate Federal, State, and local governmental agencies including USFWS, SHPO, and DWR prior to the publication of this document.

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CHAPTER 7

Report Preparers and Reviewers

This Supplemental EIR was prepared by Environmental Science Associates at the direction of the USACE Sacramento District and CVFPB, with assistance from SAFCA.

The following is a list of the individuals who prepared this Supplemental EIR, provided important background materials, or provided engineering clarifications for the project description.

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Paul Bergman	M.S., Fisheries; B.S., Fisheries and Limnology, and Biology; 16 years' experience	Fisheries; Special Status Species
Erick Cooke	M.S., Environmental Science; B.A., Biology; 21 years' experience	Project Manager; Project Description; Recreation; Utilities and Service Systems; Hazards and Hazardous Materials; Cumulative and Growth Inducing Effects; Other Required Analyses
Christy Dawson	B.S., Fisheries and Wildlife Science with Emphasis in Wildlife, Minor in Environmental Science; 16 years' experience	Vegetation and Wildlife; Special Status Species
Catherine McEfee	M.S., Water Science; B.S., Environmental Policy Analysis & Planning; 29 years' experience	CEQA/NEPA Review
Kristine Olsen	A.S., Natural Science; 20 years' experience	Publications Specialist
Eryn Pimentel	Certificate of Study, GIS and Remote Sensing; B.A., Geography; B.A., Art; 12 years' experience	GIS Specialist
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Steve Smith	B.A., History; M.A., History; 20 years' experience	Visual; Transportation and Circulation
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Name	Qualifications and Experience	Participation
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Name	Qualifications and Experience	Participation
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Christopher Lovett	Ph.D., Environmental Engineering; M.S., Environmental Engineering; B.S., Biochemistry and Molecular Biology; 12 years' experience	Air Quality; Greenhouse Gas Emissions and Energy
Honey Walters	M.S., Atmospheric Science; B.S., Environmental Science; 22 years' experience	Air Quality; Greenhouse Gas Emissions and Energy; Noise
Julia Wilson	B.A., Environmental Studies; 5 years' experience	Noise

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Appendix A

American River Watershed Common Features 2016 Project, American River Contract 3A and 4A Wildlife Habitat Survey Report

AMERICAN RIVER COMMON FEATURES 2016 PROJECT

Wildlife Habitat Survey Report

Prepared for
U.S. Army Corps of Engineers
Central Valley Flood Protection Board
Sacramento Area Flood Control Agency

February 2022



AMERICAN RIVER COMMON FEATURES 2016 PROJECT

Wildlife Habitat Survey Report

Prepared for
U.S. Army Corps of Engineers
Central Valley Flood Protection Board
Sacramento Area Flood Control Agency

February 2022

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Acronyms and Other Abbreviations

Acronym or Abbreviation	Definition
ARCF GRR EIS/EIR	<i>American River Common Features General Reevaluation Report, Final Environmental Impact Statement/Environmental Impact Report</i>
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
FESA	Federal Endangered Species Act
LAR	Lower American River
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
Project	American River Common Features 2016 Project
RM	river mile
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service
VELB	valley elderberry longhorn beetle

EXECUTIVE SUMMARY

In an effort to reduce flood risk in the Sacramento Region, the U.S. Army Corps of Engineers (USACE), the Central Valley Flood Protection Board, and the Sacramento Area Flood Control Agency have partnered to complete the American River Common Features 2016 Project (Project). In July 2018, Congress granted the USACE construction funding to complete this urgent flood control project under the Bipartisan Budget Act of 2018.

Most of the Project's environmental effects were addressed in the Revised 2016 American River Common Features General Reevaluation Report (ARCF GRR), Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) (USACE 2016). This report was prepared to support a supplemental National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) analysis by characterizing terrestrial wildlife species and the natural communities along the Lower American River (LAR). The Contract 3A site (Site 1-1) covers approximately 30 acres from roughly river mile (RM) 3.8 to 4.2 and Contract 4A site (Site 1-17B), encompasses approximately 150-acres and is set back from the river and parallels the levee. The erosion protection and work areas (staging and access) had not been defined for Contract 4A, so a much larger area was surveyed to accommodate future adjustments to the footprints of Contracts 3A and 4A. This reach is referred to as Subreach 1 and is one of four established subreaches along the LAR for the Project. It is important to note that Subreach 1 is within the area identified in the GRR as Reach A for both the American River North (ARN) and American River South (ARS) study basins. The survey area encompasses only that portion of Subreach 1 that has been identified as having an unacceptable risk of levee failure due to erosion. Erosion protection measures have been proposed for these sites to improve the levees. The survey area includes the two sites, their associated (or potential) work areas, staging areas, access routes, and associated buffers. Two buffer areas were established for the survey: a 100-foot buffer where the survey area abuts residential and commercial neighborhoods as well as railroad properties, and a 500-foot buffer in parkway areas along the Lower American River where the potential for sensitive species to be present is higher.

Although the constructed levee system and surrounding infrastructure have modified most of the survey area's native vegetation types and habitats, remnant stands of native vegetation are present. Natural communities present in the survey area include riverine (open water), annual grassland, mixed oak woodland, upland scrub, riparian scrub, and riparian woodland. Several sensitive natural communities (present in the aforementioned communities) also occur within the survey area. The natural communities were cross referenced with the California Wildlife Habitat Relationships System, which describes predominant wildlife species observed in these communities. Non-native communities and disturbed/developed areas that do not correspond to natural communities are also present in the survey area. Although these areas generally provide

fewer habitat opportunities for wildlife, they may still provide cover and forage for some species.

One California species of special concern, a migrant yellow warbler, was observed during field surveys in the survey area. In addition, although it was not observed, the Federally listed threatened valley elderberry longhorn beetle was assumed present based on the occurrence of its host plant and exit holes indicating its presence. Several other sensitive species have high potential to occur in the survey area, including nesting migratory birds and raptors and protected bat species.

CHAPTER 1

Introduction

1.1 Background and Purpose

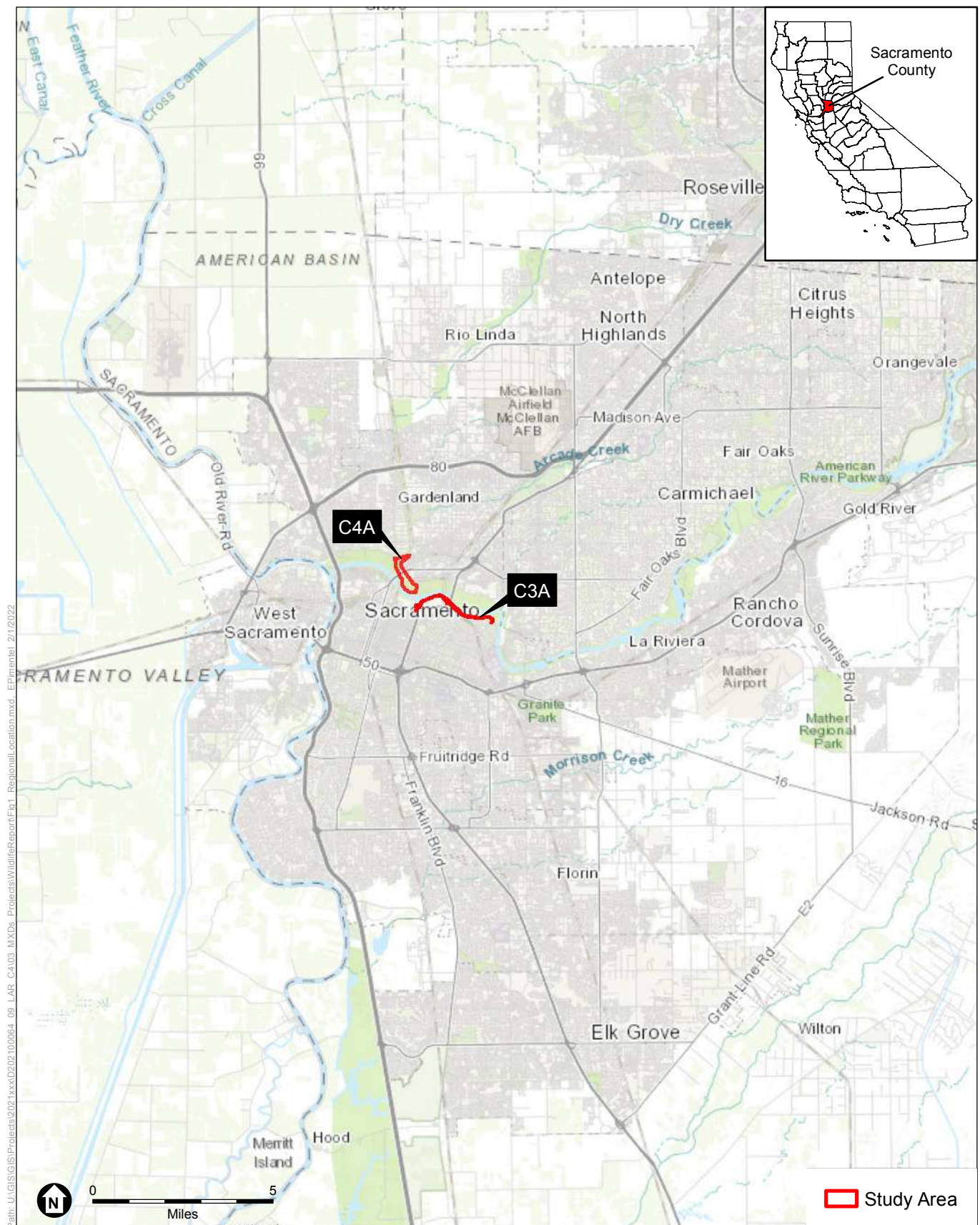
The U.S. Army Corps of Engineers (USACE), the Central Valley Flood Protection Board, and the Sacramento Area Flood Control Agency are partnering to complete the American River Common Features 2016 Project (Project) to reduce flood risk for the Sacramento region. This report was prepared to support a supplemental environmental analysis of planned levee improvements to address erosion within Subreach 1, one of the four subreaches of the leveed reach of the American River that have been established for the purposes of analysis for this Project. Although most of the Project's environmental effects were addressed in the 2016 *American River Common Features General Reevaluation Report, Final Environmental Impact Statement/Environmental Impact Report* (ARCF GRR EIS/EIR), a supplemental environmental analysis under the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) is underway to address the environmental effects of changed circumstances and new information regarding the Project that were not covered in the ARCF GRR EIS/EIR.

Subreach 1 is located along the Lower American River (LAR) and extends from the mouth of the river at its confluence with the Sacramento River to river mile (RM) 5.2. Within Subreach 1, two sites requiring levee modification were identified: Site 1-1 and Site 1-17B. Subreach 1 is within the area identified in the GRR as Reach A for both the American River North (ARN) and American River South (ARS) study basins.

The intent and scope of this report are to characterize biological resources present within the erosion protection areas, their associated work areas, staging areas, access routes, and associated buffers. Two buffer areas were established for the survey: a 100-foot buffer where the survey area abuts residential and commercial neighborhoods and inaccessible railroad property, and a 500-foot buffer in parkway areas along the Lower American River where the potential for sensitive species to be present is higher. The surveys focused on terrestrial wildlife and natural communities that could provide habitat for these species.

1.2 Property Location

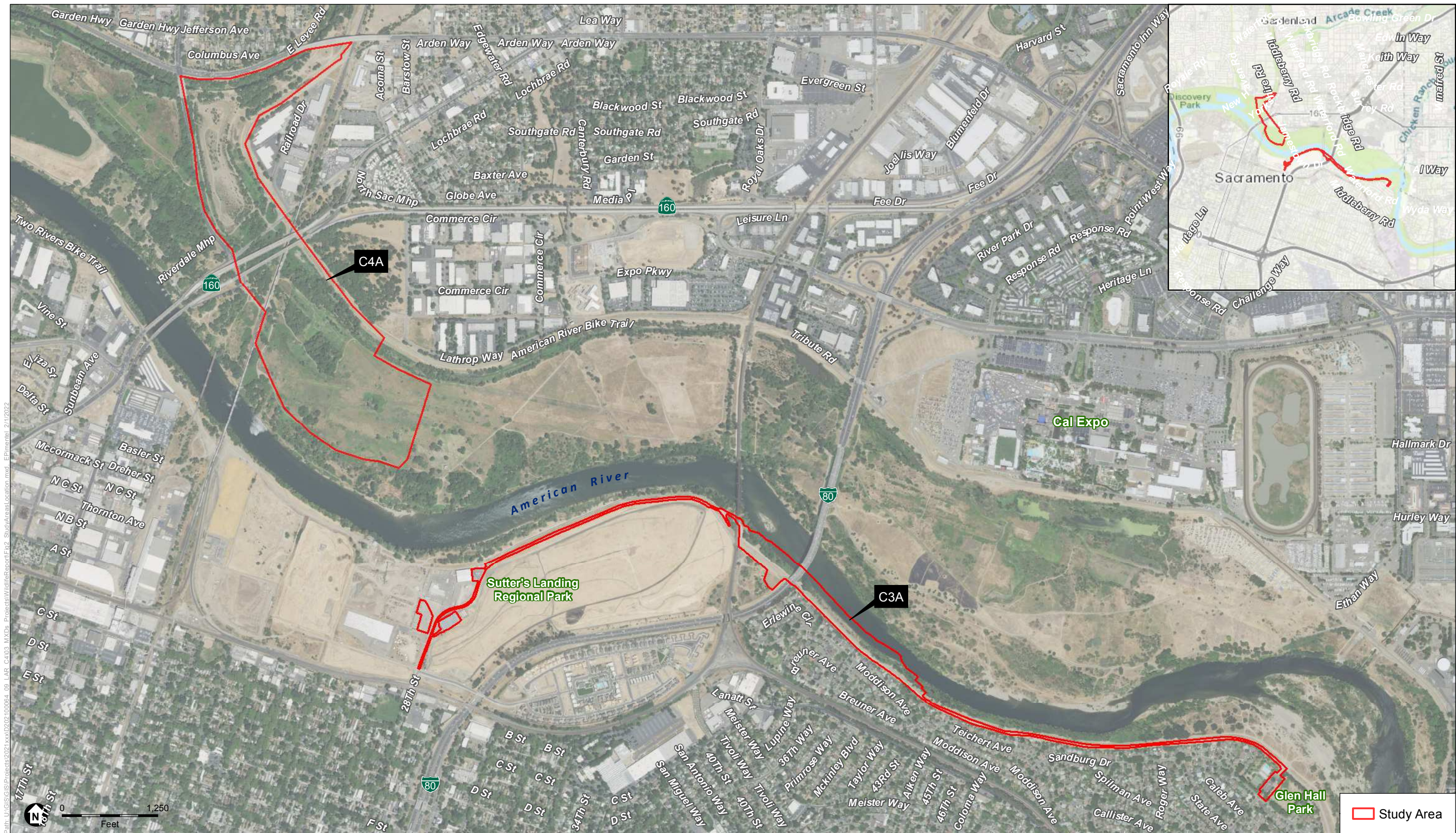
The survey areas for American River Contracts 3A and 4A are located in Subreach 1 of the LAR, Sacramento, between the mouth of the LAR at the confluence of the Sacramento River (RM 0) and Paradise Bend (RM 5.2) (**Figure 1**). The survey areas are bordered on the north by commercial properties, including Cal Expo and railroad property and residential neighborhoods on the south (**Figure 2**).



SOURCE: Esri, 2021; ESA, 2022

American River Common Features Contracts 3A and 4A

Figure 1
Regional Location



SOURCE: Esri, 2021; USDA, 2018; ESA, 2022

American River Common Features Contracts 3A and 4A

Figure 2
Study Area

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The Contract 3A site is located in Township 9 north, Range 5 east, Sections 32 and 33, and Township 8 north, Range 5 east, Sections 3 and 4 and the Contract 4A site falls within Township 9 north, Range 5 east, Sections 30 and 31 of the Sacramento East, California U.S. Geological Survey (USGS) 7.5-minute series quadrangle.

The survey area includes two sites requiring levee modification, along with their associated staging areas and access roads, approximately between RM 2.8 and RM 5.4 (Figure 2):

- The site for Contract 3A (Site 1-1) is located on the left bank of the LAR between LAR RM 3.8 and 4.2 from downstream of the Interstate 80 Business (I-80 or Capital City Freeway) to underneath and upstream of the Capital City Freeway.
- The site for Contract 4A (*Site 1-17B*) is located on the right bank and runs parallel to the levee from Del Paso Road to approximately 1,100 feet to the southeast crossing under the railroad bridge and Highway 160 (North Sacramento Freeway). In this section of the LAR, the levee is set back from the channel during summer flows by approximately 1,800 feet. It is situated approximately between RM 1.9 and 2.2. The design for Contract 4A has not been completed, so the survey area was expanded to capture a much larger area to provide flexibility for access and staging areas.

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CHAPTER 2

Methods

2.1 Survey Area

In this report, the term “survey area” refers to the area where direct, indirect, or cumulative effects on biological resources could occur as a result of the proposed levee work. This area includes the two levee erosion protection sites and the associated staging areas and access roads. The footprint of proposed activities was generally the starting point for defining the biological survey area; however, in practical terms, biological resources have varied sensitivity to disturbance and many species need a somewhat larger survey area. The survey area therefore includes the footprint of the proposed facilities, plus a buffer ranging from approximately 100 feet to 500 feet, depending on habitat quality and access (Figure 2).

2.2 Survey Methodology

2.2.1 Survey Dates and Survey Personnel

ESA wildlife biologists Kelly Bayne and Christy Dawson conducted reconnaissance-level wildlife surveys and habitat assessments of the survey areas on November 12, 2021, and December 1, 2021. The survey was conducted to observe and characterize vegetation communities, previously mapped in 2018, to assess habitat quality, and to determine the potential for common and special-status wildlife species to occur.

In addition to this general survey, focused surveys for valley elderberry longhorn beetle (VELB) were conducted by ESA biologists for Contract 3A between September 20 and October 10, 2019, and September 1, 2021 and for Contract 4A on September 22, 2021. These surveys were performed in accordance with methods described in U.S. Fish and Wildlife Service (USFWS) publications for VELB (USFWS 2017).

2.2.2 Natural Communities and Vegetation Surveys

Vegetation communities were surveyed in August 2018 to map natural and sensitive communities to the alliance level as described in the *Manual of California Vegetation, second edition* (Sawyer et al. 2009). The vegetation community mapping was confirmed to still be accurate during the various site visits in 2021. Protocol-level botanical surveys were not conducted for the survey area, but will be conducted in spring and summer 2022, when special-status plants with potential to occur in the survey area will be flowering and will be reported separately from this report.

2.2.3 Wildlife Surveys

The wildlife surveys cataloged any common or special-status wildlife species observed in the survey area and determined the potential for the presence of suitable habitat for special-status wildlife species. The wildlife surveys were performed by walking meandering transects over the entire survey area to identify features that support wildlife species. A record was kept of all wildlife species encountered. Special-status species were mapped, and global positioning system coordinates were collected for each occurrence.

2.3 Review of Background Information

Before conducting reconnaissance-level vegetation and wildlife surveys, ESA reviewed publicly available and subscription-based data on biological resources. The field surveys provided partial confirmation of the accuracy of publicly available data. The following data sources assisted in this analysis:

- Topographic maps (Sacramento East and surrounding eight 7.5-minute quadrangles)
- Historic and current aerial imagery
- California Wildlife Habitat Relationships database
- The California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) for the quadrangles indicated below
- A USFWS species list for the survey area in Figure 2 generated using the online Information for Planning and Consultation (IPaC) database

Several wildlife species known to occur in or in the vicinity of the survey area are protected under Federal and/or State endangered species laws or have been designated as species of special concern by CDFW. In addition, Section 15380(b) of the State CEQA Guidelines provides a definition of rare, endangered, or threatened species that are not included in any listing. Species recognized under these terms are referred to collectively as “special-status species.”

A list of special-status wildlife species with potential to occur in or in the vicinity of the survey area was compiled from a nine-quadrangle search of the CNDDB (CDFW 2021), a search of the USFWS Information for Planning and Consultation endangered species database (USFWS 2021), and biological literature of the region. The search encompassed the following 7.5-minute U.S. Geological Survey topographic quadrangles:

Taylor Monument	Rio Linda	Citrus Heights
Sacramento West	Sacramento East	Carmichael
Clarksburg	Florin	Elk Grove

Each species on the list was assessed individually based on its habitat requirements and distribution relative to the location and vegetation communities that occur in and around the survey area. Those species with a moderate or high potential to occur in the survey area are described in Chapter 3 in greater detail. If habitat was not present or the survey area is outside of the known range of the species, the species was assumed absent and excluded from the list.

The “Potential to Occur” categories are defined as follows:

- **Low:** The survey area provides only limited and low-quality habitat for a particular species. In addition, the known range for a particular species may be outside of the survey area.
- **Moderate:** The survey area and/or immediate vicinity provides suitable habitat for a particular species.
- **High:** The survey area and/or immediate vicinity provide ideal habitat conditions for a particular species and/or known populations occur in the survey areas or within its immediate vicinity.
- **Present:** The species was observed during the biological surveys within the survey area.

In addition to the above resources, background information for the Project can be found in the ARCF GRR Final EIS/EIR (USACE 2016), which was reviewed during preparation of this report.

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CHAPTER 3

Environmental Setting

3.1 Natural Communities and Associated Wildlife Habitats

Natural communities are assemblages of plant species that occur together in the same area and are defined by species composition and relative abundance. The natural communities described here are largely consistent with the CDFW natural communities, which comply with the National Vegetation Classification Standard. These communities were cross walked from previously mapped alliances, in accordance with the membership rules described in the *Manual of California Vegetation, second edition* (Sawyer et al. 2009). A crosswalk table is presented in **Appendix A**.

Botanical taxonomy and nomenclature conform to *The Jepson Manual: Vascular Plants of California, second edition* (Baldwin et al. 2012), as revised by the Jepson eFlora (Jepson Flora Project 2019). Common names of plant species are derived from the Jepson Manual or Calflora (2019). Plant communities generally correlate with wildlife habitat types; wildlife habitats were classified and evaluated using *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988).

Natural communities present in the survey area include open water, California annual grassland, mixed oak woodland, upland scrub, riparian scrub, riparian woodland, and fresh emergent wetlands all of which support various life stages for a wide array of wildlife. Non-native communities, invasive plants, and disturbed/developed areas that do not correspond to natural communities also are present in the survey area. Although these areas generally provide fewer habitat opportunities for wildlife, they may still provide cover and forage. **Figures 3a and 3b** identify the distribution of native and non-native communities in the survey area.

Appendix B, Tables B-1 and B-2, respectively, present lists of wildlife and plant species that were observed during focused and reconnaissance-level surveys. A complete plant list will be developed during botanical surveys.

3.1.1 California Annual Grassland

Grasslands can be found throughout the survey area, typically in upland areas, and consist mainly of non-native grasses and forbs.¹ Common grass species observed in this community include wild oat (*Avena barbata*), bromes (*Bromus diandrus*, *B. hordeaceus*), foxtail barley (*Hordeum*

¹ Annual grasslands were previously called “ruderal herbaceous” in the 2016 ARCF GRR EIS/EIR.

murinum), rye grass (*Festuca perennis*), Bermuda grass (*Cynodon dactylon*), and Johnson grass (*Sorghum halepense*). Pockets of native grasses, such as beardless wild rye (*Elymus triticoides*), occur sporadically throughout the grasslands in the survey area as well.

An assemblage of native and non-native forbs also occurs in these grasslands. Among the many common non-native forbs observed are spring vetch (*Vicia sativa ssp. sativa*), cranes bill (*Geranium dissectum*), Italian thistle (*Carduus pycnocephalus*), yellow star thistle (*Centaurea solstitialis*), prickly lettuce (*Lactuca serriola*), poison hemlock (*Conium maculatum*), wild radish (*Raphanus sativus*), bull thistle (*Cirsium vulgare*), rose clover (*Trifolium hirtum*), and white sweet clover (*Melilotus indicus*). Some common native forbs observed include Canada horseweed (*Erigeron canadensis*), fringed willowherb (*Epilobium ciliatum*), ragweed (*Ambrosia psilostachya*), and turkey-mullein (*Croton setiger*).

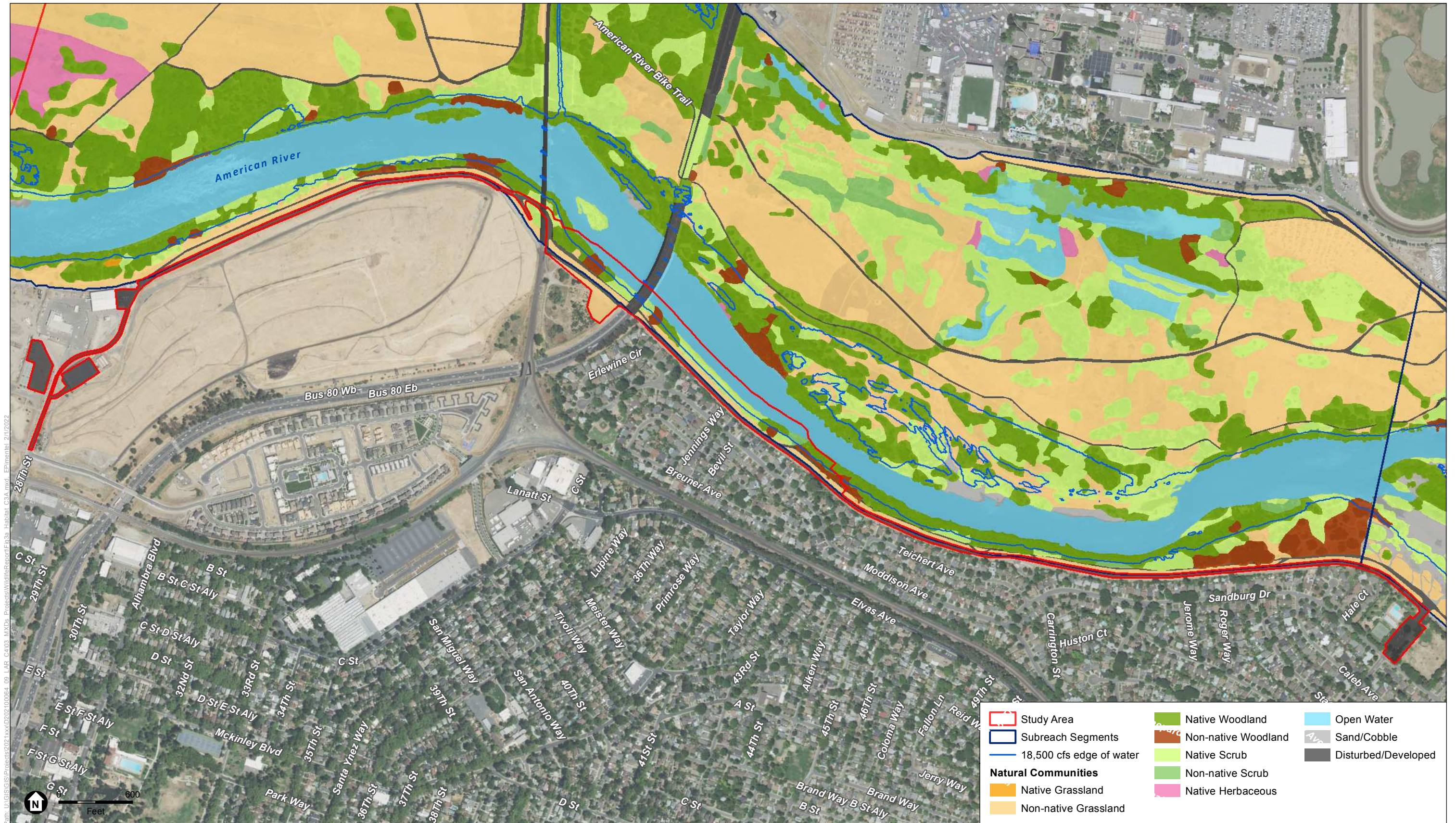
The species composition and structure of grasslands in the survey area vary. Some areas are relatively homogeneous, dominated by one or two species such as yellow star thistle and Bermuda grass, and other areas are much more heterogeneous, with several species occurring. Also, although some annual grasslands occur on levee slopes, most of these areas are mowed regularly and thus may provide fewer habitat opportunities for some wildlife species than unmowed grassland areas.

Wildlife Habitat Relationship with California Grassland

Annual grassland provides little cover for most wildlife, yet numerous species forage and several species breed in this habitat type. Grasslands attract bees and other insects that rely on flowering grassland species. They also attract reptiles and amphibians, such as western fence lizard (*Sceloporus occidentalis*), common garter snake (*Thamnophis sirtalis*), and gopher snake (*Pituophis melanoleucus*); and birds, including California quail (*Callipepla californica*), western bluebird (*Sialia mexicana*), lesser goldfinch (*Carduelis psaltria*), and barn swallow (*Hirundo rustica*).

Common small mammals expected to occur in grasslands in the survey area include western harvest mouse (*Reithrodontomys megalotis*), deer mouse (*Mus musculus*), California vole (*Microtus californicus*), black-tailed jackrabbit (*Lepus californicus*), and Botta's pocket gopher (*Thomomys bottae*). Small rodents, reptiles, and invertebrates attract raptors (birds of prey) including red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Accipiter striatus*), and American kestrel (*Falco sparverius*), and special-status birds such as white-tailed kite (*Elanus leucurus*), burrowing owl (*Athene cunicularia*), and Swainson's hawk (*Buteo swainsoni*).

Non-native grasslands are important foraging grounds for aerial and ground-foraging insect eaters such as *Myotis* bat species and pallid bats (*Antrozous pallidus*). Larger mammals such as black-tailed deer (*Odocoileus hemionus*) and coyote (*Canis latrans*) were observed moving through grasslands along the American River during the biological resources surveys conducted in 2018 and 2019.



SOURCE: NHC, 2021; USACE, 2021; ESA, 2022

American River Common Features Contracts 3A and 4A

Figure 3a
Natural Communities of the Lower American River
Contract 3A Project Site



SOURCE: NHC, 2021; USACE, 2021; ESA, 2021

American River Common Features Contracts 3A and 4A

Figure 3b
Natural Communities of the Lower American River
Contract 4A Project Site

3.1.2 Mixed Oak Woodland and Upland Scrub

Oak Woodland

Oak woodlands within the survey area are dominated by coast live oak (*Quercus agrifolia*), valley oak (*Q. lobata*), and interior live oak (*Q. wislizeni*); Northern California black walnut (*Juglans hindsii*) and California bay (*Umbellularia californica*) are less frequent contributors to the tree canopy.

Oak woodlands in the survey area support a variety of understory plant species and vegetative structures. When no shrub layer is present, an annual grassland is the dominant understory and includes the common species described above for the California annual grassland community description. When oak woodlands support understory shrubs, common native shrubs observed include California rose (*Rosa californica*), California blackberry (*Rubus ursinus*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), and coyote brush (*Baccharis pilularis* ssp. *consanguinea*).

Oak woodland is considered a sensitive natural community by CDFW and includes Great Valley oak/oak riparian forest.

Upland Scrub

Upland scrub habitat in the survey area consists of areas dominated by native and non-native shrubs that have no tree cover and contain the common herbaceous species described above for California annual grassland. Common native shrub species observed are coyote brush, blue elderberry, California rose, California blackberry, western redbud (*Cercis occidentalis*). California grape (*Vitis californica*), a vine, also commonly occurs.

Wildlife Habitat Relationships with Mixed Oak Woodland and Upland Scrub

Animals within oak woodland habitat in the survey area include those heavily reliant on acorns, such as the acorn disseminators California scrub jay (*Aphelocoma californica*), acorn woodpecker (*Melanerpes formicivorus*), and western gray squirrel (*Sciurus griseus*). Wild turkey (*Meleagris gallopavo*), California quail, and black-tailed deer use acorns as a major food source. Deer also use the foliage of several hardwoods.

Oak titmouse (*Baeolophus inornatus*), dark-eyed junco (*Junco hyemalis*), ash-throated flycatcher (*Myiarchus tuberculifer*), northern flicker (*Colaptes auratus*), lesser goldfinch (*Carduelis psaltria*), and great horned owl (*Bubo virginianus*) nest in woodland habitat. Cavity nesters include western bluebird, and ash-throated flycatcher. Special-status birds such as Cooper's hawk (*Accipiter cooperii*) and sharp-shinned hawk (*A. striatus*) are known to nest in these woodlands. The pallid bat, also a special-status species, may inhabit these woodlands as well.

Amphibians and reptiles can be found on the forest floor where moisture is retained under fallen wood and in tree crevices; among these species are California toad (*Anaxyrus boreas halophilus*) and Sierran treefrog (*Pseudacris sierra*). Reptiles include western fence lizard, southern alligator

lizard (*Elgaria multicarinata multicarinata*), ringneck snake (*Diadophis punctatus*), gopher snake, western rattlesnake (*Crotalus viridis helleri*), and California king snake (*Lampropeltis zonata*). Many of these species will also use adjacent upland scrub areas for foraging or cover.

3.1.3 Valley Foothill Riparian

Riparian Scrub

Riparian scrub habitat in the survey area consists of shrub-dominated areas that are subject to hydrologic influence from the LAR. These areas are dominated by sandbar willow (*Salix exigua*), arroyo willow (*S. lasiolepis*), common button bush (*Cephalanthus occidentalis*), California rose, California blackberry, California wild grape, blue elderberry, and Himalayan blackberry. Areas that experience high flows typically do not support herb species and cobbles tend to be the dominant ground cover. Areas that experience slower flows support a variety of herb species including mugwort (*Artemisia douglasiana*), marsh brittlegrass (*Setaria parviflora*), Santa Barbara sedge (*Carex barbarae*), and beardless wild rye.

Riparian Woodland

Riparian woodlands in the survey area are tree-dominated areas that are subject to frequent hydrologic influence from the LAR. These areas are dominated by Fremont cottonwood (*Populus fremontii*), Goodding's willow (*Salix gooddingii*), box elder (*Acer negundo*), and California and non-native sycamore (*Platanus racemosa*; *Platanus* sp.). Oregon ash (*Fraxinus latifolia*), valley and live oak, and black locust as less frequent contributors to the tree canopy. Riparian woodlands support a variety of shrubs and herbs similar to those described above for the riparian scrub community.

Wildlife Habitat Relationships with Valley Foothill Riparian

Many wildlife species are dependent on riparian habitats for water, food, and cover. Several species of raptors—red-shouldered hawk, Cooper's hawk, great horned owl, and the State-listed Swainson's hawk—build their nests in the crowns of cottonwood, valley oak, and other large trees that grow on the landside and waterside of the levees in the survey area. Natural cavities and woodpecker holes provide nesting sites for cavity-nesting species, including wood duck (*Aix sponsa*), common merganser (*Mergus merganser*), American kestrel, tree swallow (*Tachycineta bicolor*), western bluebird, and western screech owl (*Megascops kennicottii*).

Riparian scrub supports large numbers of insects and attracts passerine birds, including several species of flycatchers, warblers, and hummingbirds. In addition, a number of Federally listed species rely on riparian corridors, including VELB and the western yellow-billed cuckoo. Riparian habitat is listed as a sensitive natural community by the CNDDB (CDFW 2021) and includes Great Valley cottonwood riparian forest and Northern California black walnut.

3.1.4 Fresh Emergent Wetland

Emergent wetland is dominated by perennial aquatic emergent vegetation and annual hydrophytic forbs. Areas of emergent wetland in Contract 4A are fed by either flooding from the American River, or from runoff from surrounding uplands for the small emergent wetlands amongst the mine tailings. Vegetation is typically dominated by spikerush (*Eleocharis macrostachya*), rushes (*Juncus* spp.), or vervain (*Verbena bonariensis*).

Wildlife Habitat Relationships with Fresh Emergent Wetland

Fresh emergent wetlands provide food, cover, and water for numerous birds, amphibians, reptiles and mammals and is one of the most productive wildlife habitats in California. Common bird species that feed in fresh emergent wetlands include various ducks, geese, and wading birds including mallards, Canada geese, herons and egrets, forage in the water and along the shallow edges. Many flycatchers, such as black phoebes (*Sayornis nigricans*), swallows, and other insectivores also utilize fresh emergent wetlands to forage on insects attracted to the water. Several birds, such as the red-winged blackbird (*Agelaius phoeniceus*), make use of the tall aquatic vegetation to hide their nests over the water, which protects them from ground predators. Larger emergent wetlands provide safety for resting waterfowl.

In addition to birds, amphibians, such as the Sierran tree frog and reptiles like the western pond turtle, a species of special concern, live within and around the margins of wetlands, which provide moist habitat, food, and cover. Deer, coyote, and various smaller mammals access emergent wetlands for a year-round water source.

3.1.5 Riverine

Riverine habitat includes inundated areas including the LAR. Areas in Contract 3A did not support much submerged aquatic vegetation, but water fern (*Azolla fillicoloides*) was observed.

Shaded Riverine Aquatic Habitat

Shaded riverine aquatic habitat is defined as the nearshore aquatic area located at the interface between a river and adjacent woody riparian habitat. This valuable cover type has two principal attributes: (1) The adjacent bank is composed of natural, eroding substrates supporting riparian vegetation that either overhangs or protrudes into the water; and (2) the water contains variable amounts of woody debris, such as leaves, logs, branches, and roots, as well as variable depths, velocities, and currents. Shaded riverine aquatic habitat is present throughout the C3A survey area along the riverbank and is contained within the other identified habitat types in these areas.

Wildlife Habitat Relationships with Riverine

Many bird species use open waters for resting, hunting, and escape cover. Common species include gulls, and waterfowl. Shorelines provide hunting grounds for wading birds such as herons and egrets, and for kingfisher, waterfowl, and shorebirds. Flycatchers, swallows, and other insectivorous birds catch their prey over water. Mammal species that occur in this habitat type include river otter (*Lontra canadensis*) and beaver (*Castor canadensis*).

3.1.6 Disturbed/Developed

The levee system has substantially altered the habitat within the LAR parkway and surrounding areas are urbanized. In addition to the levee system, existing facilities in the survey area include bike paths, bridges and railways (Figure 3a and b). Staging and access areas are located mostly in existing parking areas, open parks, and on existing gravel or paved roads and paths. Disturbed portions of the survey area include bare ground or manicured areas that are subject to continued disturbance.

Invasive Plant Species

In the survey area, invasive non-native plant species occur in all plant communities, but most commonly with and adjacent to annual grasslands. Areas dominated by non-native vegetation are generally associated with recent human disturbance and include dredged mine tailings, maintained levee slopes, landscaped areas, and areas subject to frequent flood inundation or scour. Non-native weeds dominate some areas, especially along the side slopes of the levees. To a lesser degree, invasive plants are also found in other plant communities such as riparian and oak woodland.

Non-native Woodland

Several locations in the survey area are dominated by non-native trees. These single-species tree stands typically consist of black locust (*Robinia pseudoacacia*) but can include tree of heaven (*Ailanthus altissima*), American elm (*Ulmus americana*), and blue gum (*Eucalyptus globulus*). With the exception of black locust stands, non-native woodlands in the survey area typically do not support a shrub understory and are dominated by the common herbaceous species described above for California annual grassland. Some black locust stands support blue elderberry shrubs in the understory.

Wildlife Habitat Relationships with Disturbed/Developed

The survey area outside of the LAR parkway combines urban residential zones featuring lawns, shade trees, and ornamental plants with areas of mature vegetation as encountered in the parks and in residential back yards along the bike paths. Although these areas are disturbed, they can still support wildlife, and the more mature areas can sometimes approximate the natural environment. Bird species that may use these habitat types include scrub jay, Northern mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), California quail, and western bluebird. Common mammals include black-tailed deer, raccoon (*Procyon lotor*), and opossum (*Didelphis virginiana*). Gopher snake and western fence lizard also occur in this habitat type.

Wildlife also use manmade structures such as the railroad bridges in both survey areas, the Capital City Freeway (Interstate 80) bridge in C3A, and Highway 160 bridge in C4A, which had remnant of swallow nests. These all could be used for a day roost for unidentified bat species (such as pallid bat and/or myotis bats [*Myotis* sp.]), but no signs were observed during field surveys. The potential also exists for nesting birds to occur in the trees located in the parking lots that would be used for staging areas.

3.2 Special-Status Species

Several wildlife species known to occur in or in the vicinity of the survey area are protected under Federal and/or State endangered species laws or have been designated as species of special concern by CDFW. **Table 1** provides a comprehensive list of special-status wildlife species that were considered in the analysis. See **Figure 4** for a map of CNDDDB special-status species occurrences within five miles of the survey area.

The analysis below includes consideration of special-status species categorized as present, or with a medium or high potential to occur.

3.2.1 Federally Listed and State-Listed Wildlife Species

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle is listed as threatened and critical habitat was designated on August 8, 1980. Suitable habitat for the VELB is typically defined as live elderberry (*Sambucus* spp.) stems measuring at least one inch in diameter at ground level. Recently, the range of VELB was reduced from 3000 feet in elevation as stated in the 1999 Guidelines down to 500 feet in the 2017 Framework. This reduction was due to the realization that the female VELB is indistinguishable from the California elderberry longhorn beetle in the field, as are the exit holes of the two species, and the protocol now only relies on visual verification of the male VELB to verify sightings. Only 10 records in three locations (Merced, Yolo, and Sacramento Counties) were known at the time of listing. However, after further investigation, VELB was found to have a range that extended from Shasta County to Fresno County.

VELB is completely dependent on its host plant, the elderberry, which is a common component of the riparian forests and adjacent upland habitats of California's Central Valley and foothills. Live stems support the life cycle of the beetle for both food and cover. Elderberry shrubs are generally found along waterways and in floodplains that support remnant stands of riparian vegetation but are not inundated for long periods of time (Talley 2005). Although VELB occurs in both riparian and upland woodland and scrub habitats, VELB occupancy tends to be higher in riparian areas versus upland elderberry locations (USFWS 1999 2017). In addition to VELB's dependency on elderberry shrubs, they also rely on the surrounding riparian and upland habitat to disperse between shrubs. Thus, contiguous intact riparian systems are essential to dispersal and migration of VELB and are the essential habitat for VELB (USFWS 2017).

Because VELB have limited flight range, they are reliant on contiguous habitat. Fragmentation of habitat leads to loss of subpopulations and decreases the likelihood of colonization of unoccupied habitats. The average distance between shrubs with exit holes is 65–165 feet with up to a half mile between occupied clumps. In managed areas, such as rivers with a levee system and modified floodplain, the USFWS considers riparian habitat and upland woodland and scrub habitat as associated elderberry habitat if it occurs in the floodplain of the waterway (USFWS 2017). Although upland woodland and scrub require different hydrologic regimes, they provide similar connectivity to other riparian habitat in these manipulated systems and are believed to maintain connectivity between occupied and unoccupied habitats.

TABLE 1
SPECIAL-STATUS ANIMAL SPECIES CONSIDERED IN THE SURVEY AREA

Listing Status	Type	Common Name Scientific Name	Fed Status	State Status	Habitat	Potential to Occur
Listed Species	Invertebrates	Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT	–	Mature elderberry shrubs.	High. Elderberry plants are present in the survey area. Exit holes observed. Adults previously documented in both C3A and C4A survey areas from 1984.
	Reptiles	Giant garter snake <i>Thamnophis gigas</i>	FT	CT	Permanent or semipermanent water and dense emergent vegetation; freshwater marshes, streams, and canals with permanent water.	Low. The American River lacks suitable habitat (USFWS AFRC BO 2014-F-0518).
	Birds	Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FT	CE	In California, western cuckoos are largely restricted to river valleys in the north-central (e.g., Sacramento River) and southwestern (e.g., Kern River) regions. Western cuckoos prefer to nest in willow (<i>Salix</i> spp.), cottonwood (<i>Populus</i> spp.), and mesquite (<i>Prosopis</i> spp.), but they will also use orchards.	Moderate. Vocalization documented in 2020 approximately four miles upstream on a densely forested island in the American River. Submarginal nesting habitat occurs in the survey area, but it may be used by transient birds.
		Tricolored blackbird <i>Agelaius tricolor</i>	–	CT	Breeds near freshwater in dense emergent vegetation or dense brush.	Low. Marginal nesting habitat in the willow riparian area. Closest known occurrence is greater than five miles away.
		Swainson's hawk <i>Buteo swainsoni</i>	–	CT	Often nests near riparian systems but will also use lone trees in agricultural fields or pastures and roadside trees when available and adjacent to suitable foraging habitat.	High. Known to nest within and adjacent to the survey area.
		Bank swallow (nesting) <i>Riparia</i>	–	CT	Colonial nester mostly along coastal areas and rivers in Northern and Central California. Nesting restricted to vertical banks or bluffs with friable soils suitable for burrowing. Vegetation is varied; nesting sites are selected mostly based on the suitability of the nesting bank.	Moderate. Historic population occurred in the C3A survey area. Last observed in 1986 prior to the site being riprapped. No bank nesting habitat observed within the survey area but may use the C3A survey area for foraging. Three other populations recorded 8-10 miles upstream on LAR as recently as 2002.
Nonlisted Special-Status Species	Invertebrates	Crotch bumble bee <i>Bombus crotchii</i>	–	–	Open grasslands and scrub habitat in California with available underground nesting habitat in fossorial animal burrows.	Moderate. Annual grassland and scrub habitats are available and several commonly visited flower species may occur in the survey area. The closest sighting was 12 miles to the east, just east of Mather Air Force Base, in 2020 (CNDDDB 2021).

TABLE 1 (CONTINUED)
SPECIAL-STATUS ANIMAL SPECIES CONSIDERED IN THE SURVEY AREA

Listing Status	Type	Common Name Scientific Name	Fed Status	State Status	Habitat	Potential to Occur
Nonlisted Special-Status Species (cont.)	Invertebrates (cont.)	Western bumble bee <i>Bombus occidentalis occidentalis</i>	–	–	Nests, forages, and overwinters in meadows and grasslands with abundant floral resources and available underground nesting habitat in fossorial animal burrows. Range is throughout California, but more common in the Sierra Nevada and Coast Ranges than in the Central Valley.	Low. Grassland habitat is available, but the western bumble bee is uncommon in the Central Valley.
	Reptiles	Western pond turtle <i>Actinemys marmorata</i>	–	CSC	Variety of aquatic habitats, both permanent and intermittent, with suitable aerial and aquatic basking sites. Needs upland habitats for nesting, overwintering, and aestivating.	High. Observed in the Contract 2 survey area approximately 1.5 miles upstream of C3A during 2018 surveys (ESA 2018).
	Birds	Cooper's hawk <i>Accipiter cooperii</i>	–	WL	A common migrant and winter resident. Nests and forages in a wide variety of forest and woodland habitats.	High. Known to occur within 0.5 miles of the C4A survey area and approximately 1.5 miles of the C3A survey area.
		Great egret <i>Ardea alba</i>	MBTA	–	Colonial nester in large trees. Rookery sites located near marshes, tide flats, irrigated pastures, and margins of rivers and lakes.	Moderate. Potential nesting habitat in the survey area. There is a documented egret rookery approximately 0.5 miles downstream and another approximately 6 miles upstream of the survey areas on the American River.
		Great blue heron (rookery site) <i>Ardea herodias</i>	MBTA	–	Variety of habitats near sources of water. Nests commonly high in the tops of secluded large snags or live trees.	Moderate. Potential nesting habitat in the survey area. There is a documented heron rookery approximately 0.5 miles downstream and another approximately 6 miles upstream of the survey areas on the American River.
		Burrowing owl <i>Athene cunicularia</i>	–	CSC	Nests and roosts in burrows, usually of ground squirrels, in grasslands and ruderal habitats.	Moderate. Historic nesting sites within 0.5 miles of site C3A, which was destroyed due to construction in 1974. Several ground squirrel burrows observed along the levee corridor could provide habitat.
		White-tailed kite (nesting) <i>Elanus leucurus</i>	–	FP	Savanna, open woodland, marshes, partially cleared lands and cultivated fields, mostly in lowland habitats. Nests in trees, often near marshes.	High. CNDDDB records within 0.5 miles of the survey areas documented as recently as 2009.
		Purple martin <i>Progne subis</i>	–	CSC	Nests mostly in old woodpecker cavities; also nests in human-made structures. Nest is often located in tall, isolated trees/snags.	Moderate. Potential nesting habitat in the survey area. Known to occur on bridge and overpass structures within one mile of the survey area.

TABLE 1 (CONTINUED)
SPECIAL-STATUS ANIMAL SPECIES CONSIDERED IN THE SURVEY AREA

Listing Status	Type	Common Name Scientific Name	Fed Status	State Status	Habitat	Potential to Occur
Nonlisted Special-Status Species (cont.)	Birds (cont.)	Yellow warbler <i>Setophaga petechial</i> (migrating)			Nests in riparian scrub and woodland habitat in the coastal and Sierra Nevada Mountain ranges typically in heavy brush.	Present/Low. Migrant bird observed foraging in riparian scrub during winter surveys at Site C4A. Yellow warblers are not known to nest in the valley.
	Mammals	Pallid bat <i>Antrozous pallidus</i>	–	CSC	Arid deserts and grasslands of low elevations in California; often near rocky outcrops and water. Usually roosts in rock crevices or buildings, less often in caves, tree hollows, mines, etc. Prefers narrow crevices in caves as hibernation sites.	High. This species may roost in buildings and bridges in the survey area; however, roosting is not reported by the CNDDDB within five miles of the survey area or within the nine-quadrangle area that includes the survey area.
		Western red bat <i>Lasiurus blossevillei</i>	–	CSC	Associated with riparian habitat. Roosts primarily in the foliage of trees or shrubs but may also occasionally use caves. Day roosts commonly in edge habitats.	High. This species may roost in mixed oak woodland habitat in the survey area; however, roosting is not reported by the CNDDDB within five miles of the survey area or within the nine-quadrangle area that includes the survey area.
		American badger <i>Taxidea taxus</i>	–	CSC	Requires sufficient food, friable soils to excavate dens and pursue prey, and relatively open, uncultivated ground.	Moderate. The potential exists for this species to use the parkway. Although no signs of presence were observed, there were small fossorial mammal burrows and ground squirrel activity. There are two historic occurrences within five miles; the most recent sighting was from 1991.

NOTES:

CNDDDB = California Natural Diversity Database

Federal

FC: Federal candidate for listing

FE: Federally listed as endangered

FT: Federally listed as threatened

FD: Federally delisted

MMPA: Marine Mammal Protection Act

MBTA: Migratory Bird Treaty Act

State

CE: State listed as endangered

CT: State listed as threatened

CD: State delisted

CP: State proposed for listing

State

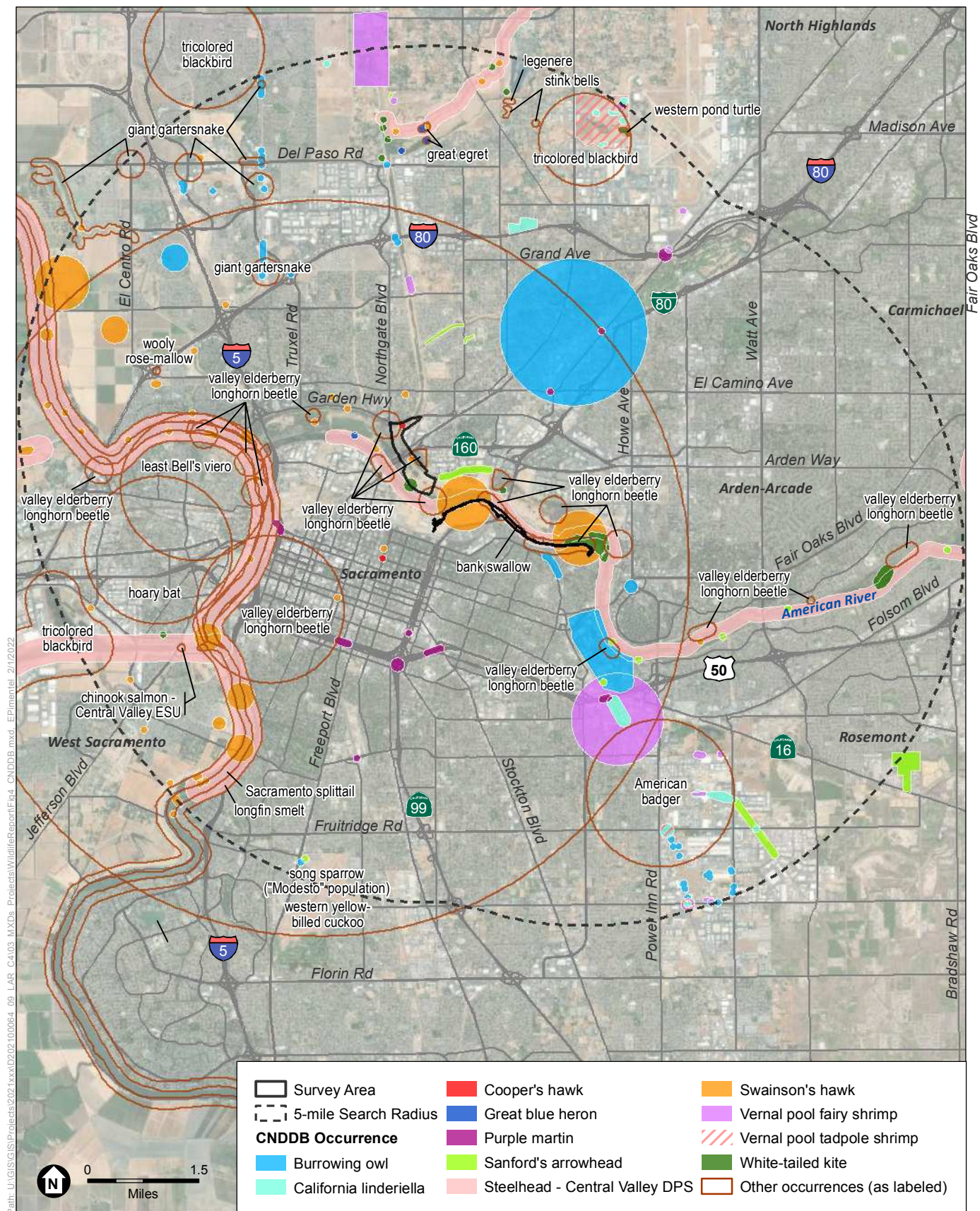
FP: California fully protected species

CSC: California species of special concern

*: CDFW protected

WL = CDFW watch list

SOURCES: CDFW, 2021; Jennings and Hayes, 1994; Ron Melcer Jr., Delta Stewardship Council, pers. comm., July 28, 2019; Shuford and Gardali, 2008; USFWS, 2021; WBWG, 2005; Zeiner et al., 1988, 1990a, 1990b.



SOURCE: Esri, 2021; CDFW, 2021; ESA, 2022

American River Common Features Contracts 3A and 4A

Figure 4
Special-status Species Occurrences
within 5 miles of the Survey Area

There are documented occurrences of VELB in the C3A and C4A survey areas from 1984, when adult beetles were captured. Additional beetles were observed in 2013 and fresh exit holes were documented in 2006 (CDFW 2021) and in 2018 (ESA 2018) upstream of the survey area on the lower American River in Subreach 2.

Yellow-billed Cuckoo

The western yellow-billed cuckoo is a subspecies of the yellow-billed cuckoo and has been recognized through designation of a distinct population segment (USFWS 2001). In 1988, the cuckoo was listed by the State as endangered under the California Endangered Species Act (CDFW 2019c). In 2014, the cuckoo was Federally listed as threatened under the Federal Endangered Species Act, and critical habitat was proposed throughout its range, including a 69-mile-long, contiguous segment of the Sacramento River from Red Bluff to Colusa (USFWS 2014a and 2014b). The cuckoo is typically found in riparian forests with dense deciduous trees and shrubs, primarily in riparian forests and associated bottomlands dominated by willow, cottonwood, or mesquite (Gaines and Laymon 1984; Laymon and Halterman 1987; Hughes 1999; Halterman et al. 2001).

This subspecies was once common throughout California (Grinnell and Miller 1944), but the population has declined over the last 100 years following extensive loss of riparian habitat. In California, cuckoos are consistently found in only a few isolated areas: the Sacramento Valley (between Red Bluff and Colusa), the Feather River (between Gridley and Nicolaus), the South Fork of the Kern River, and several Lower Colorado River Multi-Species Conservation Program restoration sites on the California side of the lower Colorado River (Gaines and Laymon 1984; Laymon and Halterman 1989; Laymon 1998; Halterman et al. 2001; Dettling and Seavy 2012).

Until recently, the Upper Sacramento River was believed to have one of the largest cuckoo populations in California. However, surveys have documented a dramatic decline in this population (Halterman et al. 2001; Dettling and Howell 2011; Dettling et al. 2014). Riparian vegetation in this area has increased by almost 5,000 acres since 1996 as a result of restoration efforts (Golet et al. 2008). Gaines and Laymon (1984) suggested, however, that many large patches along the Sacramento River in Tehama County and along the Feather River appeared to be unoccupied even though they apparently represent suitable habitat. Follow-up surveys were conducted in 1987 and 1999, and between one and six individuals were found along the Feather River between Oroville and Nicolaus (Laymon and Halterman 1989; Halterman et al. 2001).

Until very recently, the last documented occurrence in the CNDDDB in the vicinity of the survey area was from the late 1800s. However, on July 27, 2019, a cuckoo vocalization was documented approximately four miles upstream on a heavily forested island in the American River (Ron Melcer Jr., Delta Stewardship Council, pers. comm., July 28, 2019). The bird was not observed, and the nesting status is unknown.

The survey area provides marginal remnant riparian habitat that may be used for foraging or dispersal. However, the riparian habitat in the survey area does not meet the typical size requirements (25 contiguous acres or more) for home ranges of nesting yellow-billed cuckoos (USFWS 2001).

Swainson's Hawk

Swainson's hawk is State listed as threatened. It once occupied large grassland and shrub steppe habitats, as well as canyons, foothills, and smaller interior valleys in otherwise mountainous regions. Currently, the species is most common in the Central Valley and Great Basin. Nesting habitat for Swainson's hawk includes mature trees with relatively dense canopies such as oaks or cottonwoods in or near riparian habitat, agricultural fields, or suburban neighborhoods near suitable foraging habitat. They forage in grasslands, irrigated pastures, and grain fields. In California, Swainson's hawks begin nesting in late March, and the young usually leave the nest (fledge) by August.

Two CNDDDB occurrence of Swainson's hawk occur in the C3A the survey area from 2010 and 2012. In 2017, a nest with two nestlings near Northgate Boulevard was identified in C4A (CDFW 2021) and another nest was identified in 2007 at Camp Pollock. Additionally, there has been a regularly documented nest just upstream of Howe Avenue (Sorgen, K. C. pers. comm. 2019) and a potential nesting pair was observed in May 2019 by a DWR survey team on the river's right bank just downstream of Watt Avenue (Lori Price pers. comm., 2019). The survey area and landscape within 0.5 miles was assessed for potential Swainson's hawk nesting and foraging habitat. The large trees within the riparian corridor and adjacent parks could provide nesting sites and annual grasslands and nearby parks provide suitable foraging habitat.

Bank Swallow

The bank swallow is State listed as threatened. It is a neotropical migrant that arrives in California in May and breeds before returning to South America in late July or August. Swallows primarily inhabit riparian and lowland habitats with vertical banks, bluffs, and cliffs where they dig holes for nesting in sandy or fine-textured soil (CDFG 1999a). The species' range in California is estimated to have been reduced by 50 percent since 1900 (CDFG 1999a). Bank swallow was formerly more common as a breeder in California. Now, only approximately 110–120 colonies remain in the state. Perhaps 75 percent of the current breeding population in California occurs along the banks of the Sacramento and Feather Rivers in the northern Central Valley (CDFG 1999a).

Historically, a population of nesting bank swallows, was documented in the C3A survey area. The most recent record from CNDDDB for this location was from 1986, but CNDDDB noted that the site has since been ripped and habitat no longer exists (CDFW 2021). The closest recent (2017) CNDDDB record is from the vicinity of Knights Landing, which is approximately 15 miles from the survey area. Although nesting habitat in the survey area is limited, as the banks are mostly covered in dense vegetation, there is high-quality foraging habitat that bank swallows may use (CDFW 2021).

3.2.2 Nonlisted Special-Status Wildlife Species

Crotch Bumble Bee

The crotch bumble bee was petitioned to be added to the State endangered species list and was listed as a candidate species by CDFW in June 2019. However, the Sacramento Superior Court

overturned the ruling in November 2020, stating that the California Endangered Species Act does not protect terrestrial invertebrates. This ruling is currently under appeal. Thus, the crotch bumble bee was included in this report, because it may meet the criteria for listing if higher courts determine that invertebrates may qualify for such listing and was considered a special status species in conformance with Section 15380(d) of the CEQA Guidelines.

It inhabits open grassland and scrub habitats throughout California. Crotch bumble bees primarily nest underground in mammal burrows but are occasionally observed in old logs and cavities in trees, among other aboveground locations. They are generalist foragers, with short tongues, and thus prefer foraging on open flowers with short corollas. They overwinter in soft disturbed soil or under leaf litter (CDFW 2019b).

This species was historically common throughout the Central Valley, but now is mostly absent. The closest occurrence documented in the CNDDDB, last recorded in 2020, was just east of Mather Air Force Base approximately 12 miles east of the Project area. Documented occurrences are limited in the Central Valley, but that may partially be due to under reporting. Two other sightings were documented within 20 miles of the Project Area in 2020: one just west of Davis and one in the Consumnes River Preserve. Suitable foraging habitat occurs in the survey area in annual grassland and scrub habitats. The potential for nesting and overwintering within the levees is unknown, due to potential frequent flooding and the limited data available documenting the bee's habits, but sufficient rodent burrows do occur.

Western Pond Turtle

The western pond turtle is a California species of special concern. This moderate-sized aquatic turtle is commonly found in ponds, lakes, marshes, rivers, streams, and irrigation ditches with rocky or muddy substrates. Its habitat often exhibits shoreline basking areas that may or may not be bordered by aquatic vegetation. Aquatic sites are often within woodlands, grasslands, and open forests, between sea level and 6,000 feet in elevation. Pond turtles bask on logs or other objects when water temperatures are lower than air temperatures. Their nests are created in upland areas with friable soils, often up to 0.25 miles from an aquatic site (Jennings and Hayes 1994; Stebbins, 2003; Zeiner et al. 1988).

Western pond turtles are discontinuously distributed throughout California west of the Cascade-Sierran crest (Jennings and Hayes 1994). They were documented by the CNDDDB within the nine-quadrangle area and were observed just upstream of the Campus Commons Golf Course, on river right, basking on a log in the water (ESA 2019).

Cooper's Hawk

The Cooper's hawk is a CDFW watch list species. This medium-sized accipiter is a resident of wooded areas throughout California, with breeding described throughout the Coast Ranges and Sierra Nevada foothills. The Cooper's hawk forages mostly on small birds and mammals, although it will also take reptiles and amphibians. The species' peak nesting season is May through July, although nesting may occur any time from March to August (Zeiner et al. 1990a).

A Cooper's hawk nest was recorded by the CNDDDB within 0.5 miles of the survey area in 2007 and 2008 (CDFW 2021). Woodland habitat in and near the survey area provides potential nesting opportunities for this species.

Western Burrowing Owl

Western burrowing owls are California species of special concern. They inhabit grassland, desert, and open shrub habitats throughout the state from sea level to approximately 5,300 feet (CDFG 1999b). Unlike many sensitive species, burrowing owls persist and even thrive in some landscapes that are highly altered by human activity. The characteristics of suitable habitat are burrows for roosting and nesting, and relatively short vegetation with only sparse shrubs and taller vegetation. Individuals in agricultural environments nest along roadsides and water conveyance structures. Breeding occurs February through August (CDFG 2012).

The closest CNDDDB occurrence of burrowing owl is just east of Site 2-1 on the university campus and approximately two miles east of the survey area. The levee and bike paths along the survey area corridors in the survey areas consists of disturbed grasslands with small mammal burrows and ground squirrel activity. This area provides potential nesting and foraging habitat for burrowing owl. During reconnaissance-level surveys, no burrowing owls or signs of occupied burrows were found.

White-Tailed Kite

The white-tailed kite is a fully protected species under the California Fish and Game Code. This species nests primarily in riparian and lowland habitats often associated with agricultural areas throughout cismontane California. White-tailed kites typically nest in dense vegetation at the tops of oaks, willows, or other native trees. They prey primarily on voles and other diurnal mammals (CDFG 2005). Their numbers and range have increased in the past few decades (CDFG 2005).

There are two known CNDDDB occurrences of white-tailed kite within 0.5 mile of the survey area, the most recent documented in 2009 (CDFW 2021). The survey area provides trees suitable for nesting and potential foraging habitat is available along the levees and in nearby parks and open grasslands. White-tailed kites were not observed during the surveys.

Other Breeding and Migratory Birds

The Federal Migratory Bird Treaty Act and California Fish and Game Code protect raptors, most native migratory birds, and breeding birds that could be present in the survey area. The LAR Parkway corridor provides high-quality foraging and nesting opportunities for a variety of resident and migratory birds. Common raptor species that may nest in the mature trees of the parkway could include red-tailed hawk, red-shouldered hawk, and great horned owl. Wading birds such as the great egret and the great blue heron are known to nest upstream and downstream of the survey area and have been observed foraging in the survey area. Among the many bird species observed in the survey area with the potential to nest are western scrub jay, western kingbird, yellow-rumped warbler, acorn woodpecker, northern mockingbird, American crow, Canada goose, and gulls. Remnant swallow nests were observed under the Highway 160 Bridge.

Purple martin, a California species of special concern, is also known to occur in the area and has the potential to nest in the survey area. A full list of species observed in the survey area is provided in Appendix B, Table B-1.

Pallid Bat

The pallid bat, a California species of special concern, occurs throughout California except in parts of the high Sierra and the northwestern corner of the state (Zeiner et al. 1990b). The pallid bat inhabits a variety of habitats, such as grasslands, shrublands, woodlands, and forests; however, it is most abundant in open, dry habitats with rocky areas for roosting. Pallid bats roost alone, in small groups, or gregariously (WBWG 2005). Roosts include caves, crevices in rocky outcrops and cliffs, mines, trees, and various manmade structures (e.g., bridges, barns, porches); they generally have unobstructed entrances/exits and are high above the ground, warm, and inaccessible to terrestrial predators. Year-to-year and night-to-night roost reuse is common; however, bats may switch day roosts on a daily and seasonal basis (WBWG 2005).

The pallid bat is common throughout the lower elevations in California. No occurrences are reported within five miles of the survey area, or within the nine-quadrangle area that includes the survey area. The bridges in the survey area may provide suitable roosting habitat for this species.

Western Red Bat

The western red bat is a California species of special concern. This is a riparian obligate species (i.e., dependent on riparian habitat) that is ubiquitous throughout California except the northern Great Basin region. Western red bats roost individually in dense clumps of tree foliage in riparian areas, orchards, and suburban areas. They are primarily moth specialists but will forage for a variety of other insects. Individuals have been observed foraging around streetlamps and floodlights in suburban areas (WBWG 2005).

Based on its tendency to roost within tree foliage, this species may be intermittently present in the riparian and woodland habitat in the survey area; however, roosting occurrences are not reported by the CNDDB within five miles of the survey area or within the nine-quadrangle area that includes the survey area.

American Badger

The American badger is a California species of special concern. This species prefers open grasslands and riparian habitat within the valley areas, although it occurs throughout multiple habitat types in California. The principal requirements seem to be sufficient food, friable soils to excavate dens and pursue prey, and relatively open, uncultivated ground. In California, badgers range throughout the state, except for the humid coastal forests of northwestern California in Del Norte County and the northwestern portion of Humboldt County (Williams 1986).

Reconnaissance-level wildlife surveys of the survey area in fall did not detect any badger excavations or other signs of species presence. This species was previously observed in the

vicinity of the survey area, but the observation is 30 years old (CDFW 2021). Nonetheless, suitable habitat occurs in the survey area in annual grasslands.

Critical Habitat for Listed Wildlife Species

USFWS defines the term “critical habitat” in the Federal Endangered Species Act as a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The survey area is not within designated critical habitat for any listed terrestrial wildlife species.

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CHAPTER 4

References and Report Preparation

4.1 References

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4.2 Document Preparation

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Appendix A

Natural Communities Crosswalk

TABLE A-1
CROSSWALK TABLE OF NATURAL COMMUNITIES

Natural Community	CWHR	Manual of California Vegetation Alliance
Annual grassland	Annual grassland	Annual brome grassland
		Yellow star-thistle fields
		California annual grasslands
		Western ragweed meadow
		Wild oats grassland
		Poison hemlock or fennel patch
Oak woodland	Coastal oak woodland	Coast live oak woodland
	Valley oak woodland	Valley oak woodland
		Hind's walnut and related stand
	Montane hardwood	Interior live oak woodland
Upland scrub	Coastal scrub	Coyote brush scrub
	Valley foothill riparian	California rose briar patch
		Coastal bramble
		Blue elderberry stand
Non-native woodland	Eucalyptus	Eucalyptus–tree of heaven–black locust grove
Riparian woodland	Valley foothill riparian	Fremont cottonwood forest
		Box-elder forest
		Red willow thicket
		Black willow thicket
		White alder grove
		Valley oak woodland
		California sycamore woodland
		Oregon ash grove
Riparian scrub	Valley foothill riparian	Sandbar willow thicket
		Arroyo willow thicket
		Pacific willow thicket
		Button willow thicket
		Blue elderberry stand
		California rose briar patch
Emergent Wetland	Fresh Emergent Wetland	Tule-cattail
		Non-native/invasive forb
		Water hyacinth wetlands

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Appendix B

Wildlife and Plant Species Observed during Reconnaissance Surveys

TABLE B-1
WILDLIFE SPECIES OBSERVED IN THE C3A AND C4A SURVEY AREAS

Type	Common Name	Scientific Name
Reptiles	red-eared slider	<i>Trachemys scripta elegans</i>
Birds	mallard	<i>Anas platyrhynchos</i>
	California scrub-jay	<i>Aphelocoma californica</i>
	Oak titmouse	<i>Baeolophus inornatus</i>
	Canada goose	<i>Branta canadensis</i>
	California quail	<i>Callipepla californica</i>
	northern flicker	<i>Colaptes auratus</i>
	American crow	<i>Corvus brachyrhynchos</i>
	dark-eyed junco	<i>Junco hyemalis</i>
	gull	<i>Larus sp.</i>
	belted kingfisher	<i>Megasceryle alcyon</i>
	acorn woodpecker	<i>Melanerpes formicivorus</i>
	wild turkey	<i>Meleagris gallopavo</i>
	song sparrow	<i>Melospiza melodia</i>
	California towhee	<i>Melospiza crissalis</i>
	northern mockingbird	<i>Mimus polyglottos</i>
	ash-throated flycatcher	<i>Myiarchus cinerascens</i>
	spotted towhee	<i>Pipilo maculatus</i>
	bushtit	<i>Psaltirparus minimus</i>
	black phoebe	<i>Sayornis nigricans</i>
	Yellow-rumped warbler	<i>Setophaga coronata</i>
	Yellow warbler (migrating)	<i>Setophaga petechial</i>
	European starling	<i>Sturnus vulgaris</i>
	American robin	<i>Turdus migratorius</i>
	western kingbird	<i>Tyrannus verticalis</i>
	mourning dove	<i>Zenaida macroura</i>
	White-crowned sparrow	<i>Zonotrichia leucophrys</i>
Mammals	black-tailed jackrabbit	<i>Lepus californicus</i>
	western gray squirrel	<i>Sciurus griseus</i>
	California ground squirrel	<i>Spermophilus beecheyi</i>

TABLE B-2
PLANT SPECIES OBSERVED IN THE C3A AND C4A SURVEY AREAS

Family	Scientific Name	Common Name
Azollaceae	<i>Azolla filiculoides</i>	Water fern
Adoxaceae	<i>Sambucus nigra</i> ssp. <i>caerulea</i>	Blue elderberry
Anacardiaceae	<i>Toxicodendron diversilobum</i>	Western poison oak
Apiaceae	<i>Conium maculatum</i>	Poison hemlock
	<i>Foeniculum vulgare</i>	Fennel
	<i>Torilis arvensis</i>	Hedge parsley
Apocynaceae	<i>Apocynum cannabinum</i>	Indian Hemp
	<i>Vinca major</i>	Greater periwinkle
Asteraceae	<i>Artemisia douglasiana</i>	Mugwort
	<i>Baccharis pilularis</i> ssp. <i>consanguinea</i>	Coyote brush
	<i>Carduus pycnocephalus</i> ssp. <i>pycnocephalus</i>	Italian thistle
	<i>Centaurea solstitialis</i>	Yellow star-thistle
	<i>Cichorium intybus</i>	Common chicory
	<i>Cirsium vulgare</i>	Bull thistle
	<i>Erigeron canadensis</i>	Horseweed
	<i>Helianthus annuus</i>	Common sunflower
	<i>Lactuca serriola</i>	Prickly lettuce
	<i>Xanthium strumarium</i>	Cocklebur
Boraginaceae	<i>Heliotropium curassavicum</i>	Salt Heliotrope
Brassicaceae	<i>Lepidium latifolium</i>	Perennial pepperweed
	<i>Raphanus raphanistrum</i>	Wild radish
Chenopodiaceae	<i>Chenopodium album</i>	White Goosefoot
Convolvulaceae	<i>Convolvulus arvensis</i>	Bindweed
Fabaceae	<i>Melilotus albus</i>	White sweetclover
	<i>Robinia pseudoacacia</i>	Black locust
	<i>Trifolium hirtum</i>	Rose clover
	<i>Vicia sativa</i> ssp. <i>sativa</i>	Spring vetch
Fagaceae	<i>Quercus agrifolia</i> var. <i>agrifolia</i>	Coast live oak
	<i>Quercus lobata</i>	Valley Oak
Geraniaceae	<i>Geranium dissectum</i>	Cranesbill
Juglandaceae	<i>Carya illinoensis</i>	Pecan
	<i>Juglans hindsii</i>	Northern CA black walnut
Malvaceae	<i>Malvella leprosa</i>	Alkali-mallow
Oleaceae	<i>Fraxinus latifolia</i>	Oregon ash
Onagraceae	<i>Epilobium ciliatum</i>	Fringed willowherb
Platanaceae	<i>Platanus racemosa</i>	Western sycamore

Family	Scientific Name	Common Name
Plantaginaceae	<i>Plantago lanceolata</i>	English plantain
Polygonaceae	<i>Rumex crispus</i>	Curly dock
Rosaceae	<i>Heteromeles arbutifolia</i>	Toyon
	<i>Rosa californica</i>	California wild rose
	<i>Rubus armeniacus</i>	Himalayan blackberry
	<i>Rubus ursinus</i>	California blackberry
Rubiaceae	<i>Galium aparine</i>	Goose grass
Salicaceae	<i>Populus fremontii</i>	Fremont's cottonwood
	<i>Salix exigua</i>	Sandbar willow
	<i>Salix gooddingii</i>	Goodding's willow
	<i>Salix lasiolepis</i>	Arroyo willow
Sapindaceae	<i>Acer negundo</i>	Box elder
Verbenaceae	<i>Verbena litoralis</i>	Seashore vervain
Vitaceae	<i>Vitis californica</i>	California grape
Cyperaceae	<i>Carex barbarae</i>	Santa Barbara sedge
Poaceae	<i>Avena sp.</i>	Wild oat
	<i>Bromus diandrus</i>	Ripgut grass
	<i>Bromus hordeaceus</i>	Soft chess
	<i>Cynodon dactylon</i>	Bermuda grass
	<i>Elymus triticoides</i>	Beardless wild rye
	<i>Festuca perennis</i>	Rye grass
	<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Foxtail barley
	<i>Setaria parviflora</i>	Marsh bristlegass
	<i>Sorghum halepense</i>	Johnson grass
	<i>Stipa miliacea</i>	Smilo grass

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Appendix B

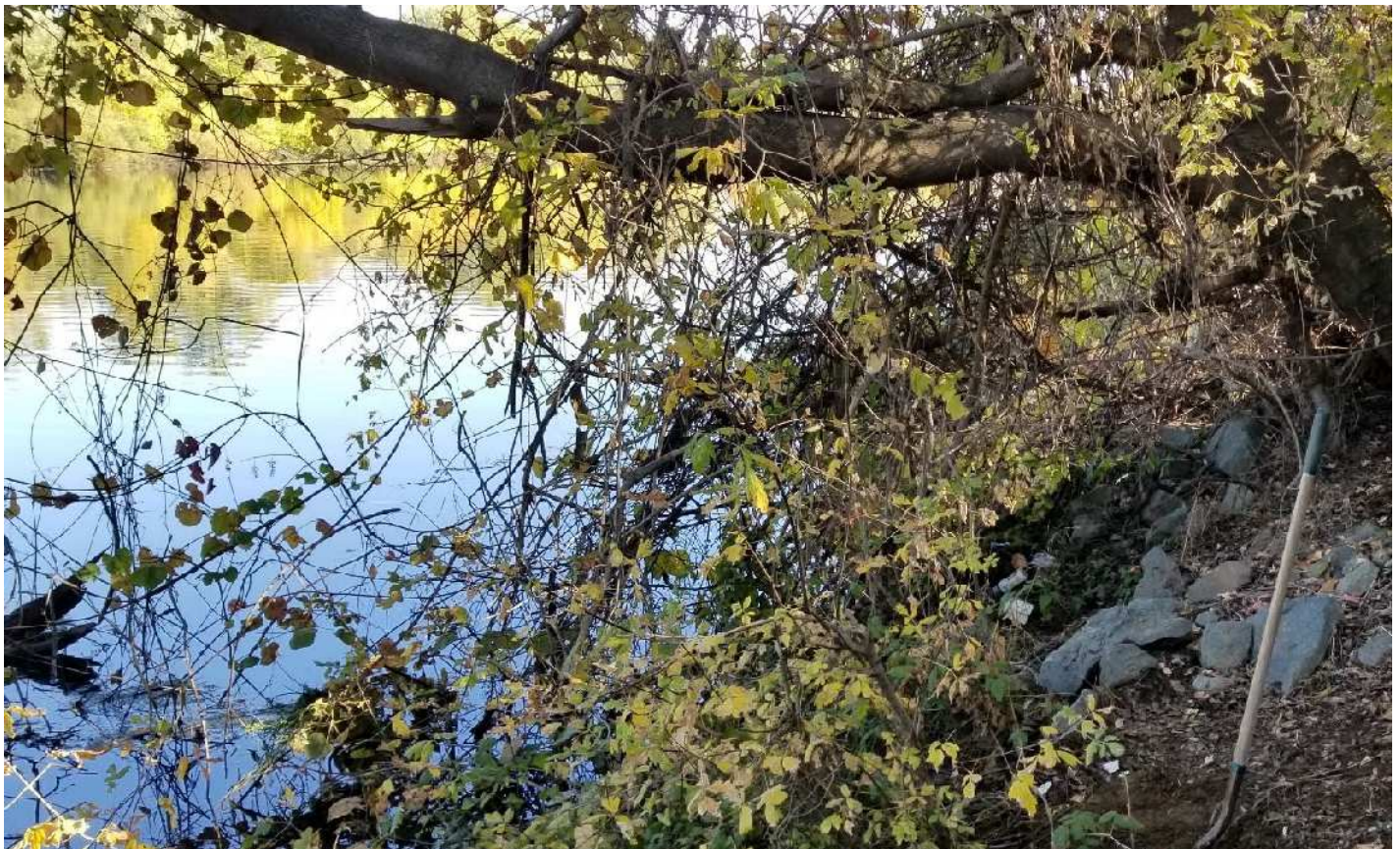
American River Watershed Common Features 2016 Project, American River Contract 3A Aquatic Resource Delineation Report

AMERICAN RIVER WATERSHED COMMON FEATURES 2016 PROJECT AMERICAN RIVER CONTRACT 3A

Aquatic Resources Delineation Report

Prepared for
Sacramento Area Flood Control Agency

February 2022



AMERICAN RIVER WATERSHED COMMON FEATURES 2016 PROJECT AMERICAN RIVER CONTRACT 3A

Aquatic Resources Delineation Report

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CHAPTER 1

Introduction

This report documents the results and conclusions of an aquatic resources delineation conducted for the American River Watershed Common Features (ARCF), Lower American River Contract 3A (Project) area. The Project is located in Sacramento County along the American River (**Figure 1-1**). The Project area encompasses portions of the river, the levee and surrounding areas, and access routes along the levees, nearby roads, and bike trails (**Figure 1-2**). The delineation was conducted on behalf of the U.S. Army Corps of Engineers (USACE), Central Valley Flood Protection Board, and Sacramento Area Flood Control Agency (SAFCA) (Project Partners).

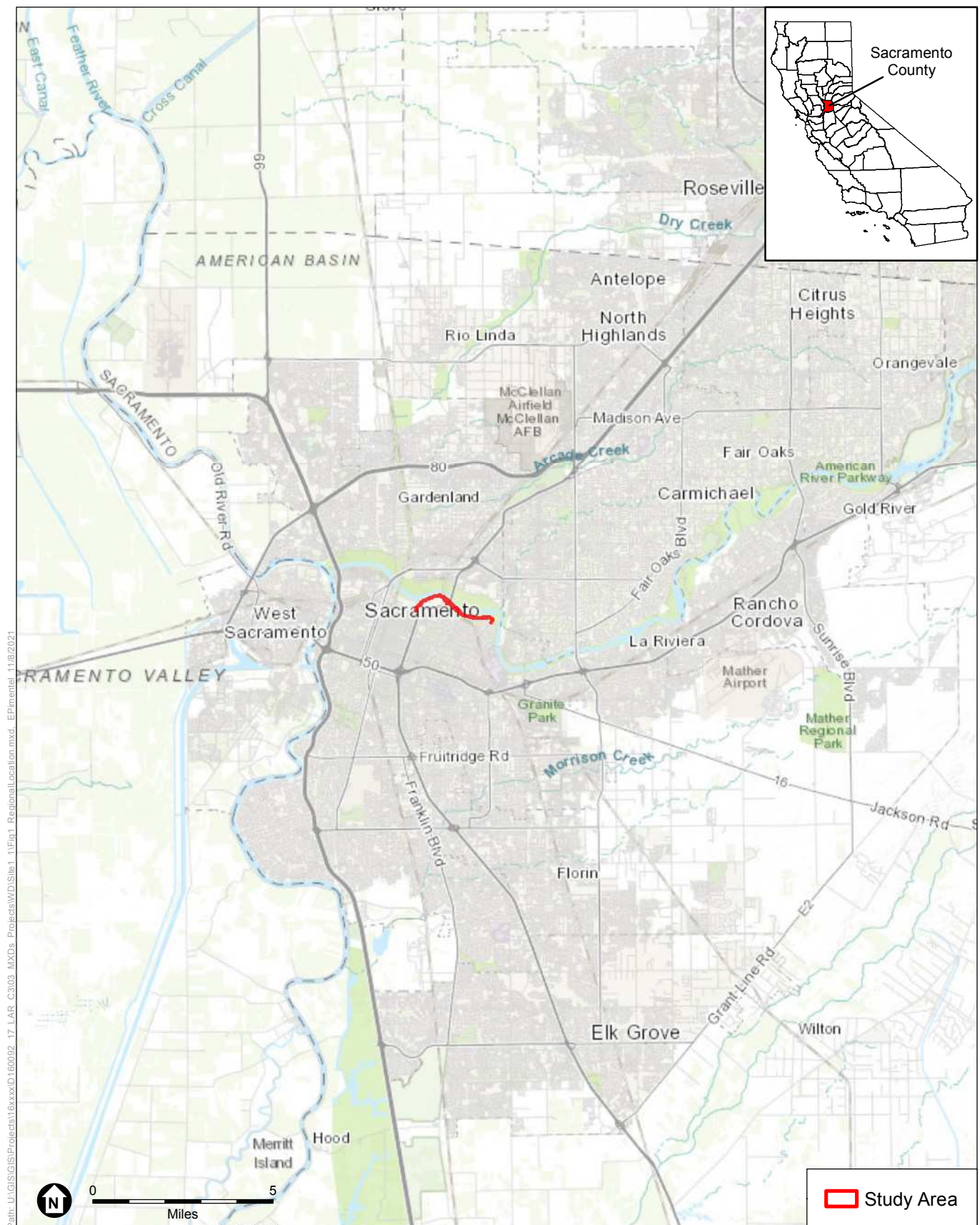
1.1 Purpose

The purpose of this investigation is to describe and delineate all aquatic resources, including wetlands, within the Project area and document sufficient information for the USACE to determine which features qualify as waters of the U.S. that are subject to regulation under Section 404 of the Clean Water Act (CWA). The boundaries of the aquatic features mapped in this report were delineated based on field and other data and reflect the best professional judgment of investigators. All conclusions presented should be considered preliminary and subject to change pending review and verification by the USACE.

1.2 Location

The Project area comprises approximately 30.5 acres in Sacramento County, California. The Project area extends along a reach of the American River from the north end of 28th Street at Sutter's Landing Regional Park at approximately river mile 3, upstream to the parking lot of Glenn Hall Park at approximately river mile 5.5. The Project area includes existing roads for access to both the upstream and downstream ends. An aerial photograph of the Project area is provided in Figure 1-2.

The Project area is in sections 32 and 33 (township 9 north, range 5 east) and sections 3 and 4 (township 8 north, range 5 east) of the Sacramento East, California U.S. Geological Survey (USGS) 7.5-minute series quadrangle. The approximate centroid of the Project area is 38.585977° North, 121.446432° West. Elevation ranges from approximately 10 to 45 feet above mean sea level. Much of the Project area is in the floodplain of the American River (FEMA, 2021). The American River is a regulated stream of the Central Valley Flood Protection Board (DWR, 2021). The water side of the levee in the Project area is in the Lower American USGS Hydrologic Unit (18020111). The land side of the levee in the Project area is in the Lower Sacramento USGS Hydrologic Unit (18020163).



SOURCE: Esri, 2021; ESA, 2021

American River Common Features Contract 3A

Figure 1-1
Regional Location



SOURCE: Esri, 2021; USDA, 2018; ESA, 2022

American River Common Features Contract 3A



Figure 1-2
Study Area

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1.3 Responsible Parties

The Project owner is:

U.S. Army Corps of Engineers, Sacramento District
1325 J Street
Sacramento, California 95814-2922

The ESA point of contact for the Project is:

Mr. David Beauchamp, Project Manager
Environmental Science Associates
2600 Capitol Avenue, Suite 200
Sacramento, CA 95816
(916) 564-4500
dbeauchamp@esassoc.com

1.4 Directions to Site

To access the Contract 3A site from downtown Sacramento:

- Take J Street towards 21st Street.
- Turn left onto 21st Street.
- Turn right onto E Street, staying straight at the traffic circle to stay on E Street.
- Turn left to 28th Street.
- Continue onto 28th Street until you reach Sutter's Landing Parking Lot. The Contract 3A site begins at the corner of McKinley Village Way and 28th Street.

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CHAPTER 2

Methods

2.1 Pre-field Review

Prior to conducting fieldwork, the following background tasks were performed:

- Review of current and historical U.S. Geologic Survey (USGS) topographic maps (USGS, 2021);
- Review of current and historical aerial photography (Google, Inc., 2021, UCSB, 2021);
- Review of the online soil survey (NRCS, 2021a) for information about soils and geomorphology;
- Review of the National Hydric Soils List (NRCS, 2021b) to determine if any soil mapping unit components are considered hydric;
- Review of the National Wetlands Inventory (U.S Fish and Wildlife Service [USFWS], 2021);
- Review of the Sacramento USACE District Navigable Waterways (USACE, 2021); and
- Review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) (FEMA, 2021).

2.2 Field Survey Methods

Field investigations were conducted by Environmental Science Associates (ESA) biologists Chuck Hughes and Amanda Segura-Moon on October 28, 2021. The delineation used the “Routine Determination Method” as described in the *1987 Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987), hereafter called the “1987 Manual.” The 1987 Manual was used in conjunction with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE, 2008a), hereafter called the “Arid West Supplement.” For areas where the 1987 Manual and the Arid West Supplement differ, the Arid West Supplement was followed.

The Arid West Supplement is applicable for use because the Project area experiences hot, dry summers typical of a Mediterranean climate, and the surrounding landscape in the bottom of the Sacramento Valley is dominated by oaks (USACE, 2008a). The Arid West Supplement was used for this delineation based on landscape, site conditions, vegetation, and climate.

ESA assessed presence or absence of positive indicators for wetland vegetation, soils, and hydrology per the 1987 Manual and Arid West Supplement. Data points were recorded on Arid West wetland determination data forms (**Appendix A**).

At each data point, a visual assessment of the plant cover by species was made. Dominant species were assessed using the “50/20” rule per the Arid West Supplement. Plants were identified to species using *The Jepson Manual: Vascular Plants of California, second edition* (Baldwin et al., 2012). The *National Wetland Plant List* (USACE, 2018) was used to determine the wetland indicator status of all plants. Soils at each data point were characterized by color, texture, organic matter accumulation, and the presence or absence of hydric soil indicators. Color was described using the *Munsell Soil Color Book* (Kollmorgen Instruments Corporation, 1990). Presence of wetland hydrology was determined at each data point by presence of one or more of the primary and/or secondary indicators, per the Arid West Supplement.

2.3 Mapping and Acreage Calculations

Data points and boundaries of wetlands above the ordinary high water mark (OHWM) were recorded using a Global Positioning System (GPS) with real-time differential correction and an instrument-rated mapping accuracy of +/- 1 meter. Field indicators of the OHWM as described by the USACE (2008b; 2014) matched reasonably well with the water elevation at an American River flow of 18,500 cubic feet per second (cfs; see Appendix D, photo 7). The 18,500 cfs flow elevation was also used in previous work (ESA, 2019). The 18,500 cubic feet per second (cfs) elevation (approximately 25-foot elevation [NAVD88] in the Project area) is the water surface elevation of the approximate 2-year flood event and was used for the OHWM throughout the Project area. The 18,500 cfs elevation was based on hydraulic modeling and provided digitally by Northwest Hydraulic Consultants in 2018.

Areas below the OHWM with at least 5 percent vegetation cover were identified based on aerial photography and mapped as wetlands. GPS and aerial photograph information were combined in ArcGIS. Acreage of wetlands and waters, and the length of linear features were determined using ArcGIS.

CHAPTER 3

Regulatory Framework

3.1 Waters of the U.S.

The CWA establishes the basic structure for regulating discharges of pollutants into waters of the U.S. and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. The CWA is the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands.

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the U.S. Applicants must obtain a permit from the USACE for discharges of dredged or fill material into waters of the U.S., including wetlands, for non-exempt activities before proceeding. Waters of the U.S. are under the jurisdiction of USACE and USEPA.

Some features require a significant nexus test to determine if they are waters of the U.S. The significant nexus test includes consideration of hydrologic and ecologic factors. The significant nexus test takes into account physical indicators of flow (evidence of an OHWM), if a hydrologic connection to a TNW exists, and if the aquatic functions of the water body have a significant effect (more than speculative or insubstantial) on the chemical, physical, and biological integrity of a TNW. A significant nexus test includes similarly situated waters in the watershed. The Corps and EPA apply the significant nexus standard to assess the flow characteristics and functions of a potential water of the U.S. to determine if it significantly affects the chemical, physical, and biological integrity of the downstream TNW.

Traditional Navigable Water

Navigable waters of the United States are defined in 33 CFR § 329.4 as "...those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigable capacity." Traditional navigable waters include all of the "navigable waters of the United States" as defined in 33 CFR § Part 329.4 as well as by numerous decision of the federal courts; those water bodies the Corps has determined are a navigable water of the U.S. pursuant to 33 CFR § 329.14; plus all other waters that are navigable-in-fact.

Ephemeral, Intermittent, and Perennial Streams

An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream, and runoff from rainfall is the primary source of water for stream flow. An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow. A perennial stream has flowing water year-round during a typical year (82 Federal Register 1860).

Wetlands

Wetlands include those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Vernal pools and seasonal wetlands are other examples. As noted previously, three positive parameters must normally be present for an area to be considered a wetland: (1) a dominance of wetland vegetation, (2) presence of hydric soils, and (3) presence of wetland hydrology.

CHAPTER 4

Setting

4.1 Project Area

The Project area is in the Sacramento Valley in an urbanized region. The Project area follows the left levee of the American River. At the upstream and downstream ends of the Project are access roads on the top or land-sides of the levee, that connect to the public road network. The center of the Project area contains the area where levee improvements will occur on the water-side of the levee, access roads on the levee, and a staging area on the land-side of the levee.

The climate in the region consists of cool, wet winters and hot, dry summers. The mean annual precipitation in Sacramento is 20.27 inches and temperatures range from a mean annual maximum of 73.1 degrees Fahrenheit to an average minimum temperature of 49.8 degrees Fahrenheit (Western Regional Climate Center; 2021, NWSFO, 2021). Precipitation from July 1, 2020 through June 30, 2021 (precipitation year) totaled 7.75 inches, which is 38% of the average accumulated precipitation for that period (NWSFO, 2021).

The Project area received an unusually large amount of rainfall in October 2021. From October 20–25, 2021 downtown Sacramento recorded 6.7 inches of precipitation. Normal precipitation for October is 0.93 inch. As a result of the large precipitation event a few days before the fieldwork, soils in the Project area were moist and water in the American River was higher than it would typically be in autumn. The results of the USACE antecedent precipitation tool for October 27, 2021 are in **Appendix B**. The antecedent precipitation tool returned “wetter than normal” conditions as a result of the large precipitation event but noted a drought index of “extreme drought”. The drought index considers a longer time period. On the data forms in Appendix A, climatic conditions are marked as not typical because the previous wet season had a severe drought, and fieldwork was conducted very early in the 2021–2022 wet season.

4.2 Soils

A custom soil resource report was generated (**Appendix C**). Although portions of the Project area are in the floodplain of the American River, soils are well-drained sandy loams or other recent alluvial soils without restrictive horizons.

A brief description of the primary soils within each soil map unit is provided below (NRCS, 1993; 2021a). Soil texture, pH, color, and redoximorphic features are summarized for the primary rooting zone. All colors refer to moist soil. Two of the map units consist of urban land complexes.

Urban land consists of areas covered by impervious surfaces, where the substrate is similar to the mapped soils, but may have been altered.

Columbia sandy loam, drained, 0–2% slopes, Columbia-Urban land complex, drained, 0–2% slopes: Columbia soils formed in alluvium from mixed rocks and occur on floodplains and natural levees. They are very deep and moderately well-drained. Native vegetation is typically dense oak or riparian woodland near channels, becoming more open with distance from a channel. Although Columbia soils would naturally be flooded or saturated for several months annually, in the study area they are mapped as “drained” indicating the natural flood regime is altered by flood control structures (Folsom Dam). The major component, and three minor components, constituting about 95% of this map unit are listed as hydric on the national hydric soils list where the necessary landform occurs (flood plains; NRCS, 2021b). A typical profile of Columbia fine sandy loam has:

0–16 inches	Brown (10YR 4/3) slightly acidic fine sandy loam.
16–23 inches	Brown (10YR 4/3) slightly acidic fine sandy loam with strong brown (7.5YR 5/6) redoximorphic concentrations.

Riverwash: This soil has a variable typical profile, with a 0 to 2 percent slope and gravelly alluvium parent material. The water table has an average depth of 0 inches. About 90% of this map unit is listed as hydric on the national hydric soils list where the necessary landform occurs (flood plains; NRCS, 2021b).

Rossmoor-Urban land complex, 0–2% slopes: Rossmoor soils formed in alluvium from mixed rocks and occur on high floodplains. They are very deep and well-drained. Native vegetation is typically valley oaks with annual grasses and forbs. Flooding is rare due to protection from levees and upstream dams. One minor component (Columbia soils), constituting about 6% of this map unit is listed as hydric on the national hydric soils list where the necessary landform occurs (flood plains; NRCS, 2021b). A typical profile of Rossmoor fine sandy loam has:

0–29 inches	Dark brown (10YR 3/3) neutral fine sandy loam.
29–62 inches	Dark yellowish brown (10YR 3/4) neutral fine sandy loam.

4.3 Hydrology

The water side of the levee in the Project area is in the Lower American River USGS Hydrologic Unit (18020111) and is located within the mapped floodplain of the American River. The water side of the levee experiences flooding during times of high water. FEMA (2021) base flood elevations (1% annual chance flood) have been determined to be approximately 41–42 feet for the portion of the Project area that includes the American River. The Lower American River in the project area is a traditional navigable water (USACE, 2021).

Portions of the project area on the land side of the levees drain to municipal storm drain systems. The land side of the levee in the Project area is mapped in the Lower Sacramento USGS Hydrologic Unit (18020163).

4.4 Vegetation

Plant communities are assemblages of plant species that occur together in the same area and are defined by species composition and relative abundance. Most of the natural vegetation in the Project area is a strip of riparian forest between the American River and the levee. Higher on the banks of the river this vegetation is dominated by native oaks (*Quercus lobata*, *Q. agrifolia*) with an understory of blackberry (*Rubus armeniacus*, *R. ursinus*) brambles or California wild grape (*Vitis californica*). Lower on the banks the trees are more dominated by box elder (*Acer negundo*), Fremont cottonwood (*Populus fremontii* ssp. *fremontii*), willows (*Salix* spp.), and both native and introduced sycamores (*Platanus* spp.).

The levee consists mostly of highly managed vegetation on the levee slopes with gravel roads on the top. Vegetation is kept free of trees and shrubs, so that only low herbaceous vegetation is present. Vegetation on the levee is regularly mown. Photographs are in Appendix D. A list of plants observed at data points is in **Appendix E**.

Parts of the Project area on the land-side of the levee consist mostly of urban development. The west end of the Project area contains the end of 28th Street through Sutter Landing Regional Park and an adjacent parking lot. The east end includes the parking lot at Glenn Hall Park. A grassy field on the land side of the levee is included near the center of the Project area.

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CHAPTER 5

Results

5.1 Aquatic Resources

The aquatic resources delineation identified approximately 8.20 acres of aquatic resources in the Project area. Aquatic resources were classified using the *Classification of Wetlands and Deepwater Habitats of the United States* (“Cowardin Classification”) (FGDC, 2013). Details are provided in **Table 1** and described below. **Figure 3** shows the location and extent of the aquatic resources. The Aquatic Resources Spreadsheet is in **Appendix F**.

TABLE 1
AQUATIC RESOURCES

Aquatic Resource (Map ID)	Cowardin Classification	Acres (linear feet)
Waters		
American River	Main Channel: (Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded, R2UBH)	4.68 (2,615)
Waters Total:		4.68 (2,615)
Wetlands		
Forested Wetland	Palustrine, Forested, Seasonally Flooded (PFOC)	2.33
Scrub-shrub Wetland	Palustrine, Scrub-shrub, Seasonally Flooded (PSSC)	1.19
Wetlands Total:		3.52
Grand Total:		8.20 (2,615)

SOURCE: ESA 2021

Waters

American River

The American River is a perennial watercourse. The bed in the Project area consists of substrate ranging in size from mud to cobble. OHWM indicators in the field approximately matched the location of the 18,500 cfs flow elevation (**Appendix D**, photo 7), and that elevation was used to delineate the OHWM boundary (see Chapter 2.3).

Most of the river is unvegetated, or has sparse submerged or aquatic floating vegetation along the margins. Areas below the 18,500 cfs OHWM elevation with at least 5 percent vegetation cover are identified as wetlands below the OHWM and are discussed below.

Wetlands

Forested Wetland

Vegetated areas dominated by mature trees below the OHWM of the American River are mapped as forested wetland. Some of the forested wetland is on a level bench and some is on the sloped banks of the river. Much of the soil in the forested wetland is underlain by rip-rap installed by a flood protection project in the past. Soils consist of relatively recently-deposited alluvial silt loams, with redoximorphic concentrations beginning about 3–6 inches below the surface. At data points 5 and 7 either the concentrations were not abundant enough, or the matrix was not depleted enough, to meet the typical hydric soil indicators. Recently developed wetlands are a known problematic hydric soil (USACE, 2008a) and hydric soils were concluded based on 1) observations of redoximorphic concentrations, 2) location below the approximate minimum 2-year recurrence flood plain of the river, and 3) presence of both hydric vegetation and signs of wetland hydrology.

The forested wetland has a plant community dominated by riparian trees including Fremont cottonwood (FAC), box elder (FACW), western sycamore (FAC; *Platanus racemosa*), Oregon ash (FACW; *Fraxinus latifolia*), and arroyo willow (FACW; *Salix lasiolepis*). Much of the forested wetland has a well-developed understory/shrub layer dominated by both native and introduced blackberry (FAC) and California grape (FACU; *Vitis californica*). Whiteroot sedge (FAC; *Carex barbarae*) and beardless wild-rye (FAC; *Elymus triticoides*) are common in the herb layer. Hydrology indicators were the FAC-neutral test, riverine drift deposits, and the data indicating the area below the 18,500 cfs elevation floods at least every two years on average.

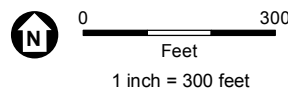
Scrub-Shrub Wetland

The scrub-shrub wetland is in a similar landscape position as the forested wetland but has more exposed rip-rap at the surface and no level benches. Woody vegetation has at least approximately 30% cover but is mostly less than 20 feet tall, the standard used in the Cowardin system (FGDC, 2013). Trees are sparser and smaller than in the forested wetland and sandbar willow (FACW; *Salix exigua*), a species more tolerant of poor soil conditions, is more common. Other woody and herbaceous vegetation common in the forested wetland is also present, but at less cover, and there is greater cover of ruderal herbaceous species.



SOURCE: USDA Imagery, 2018; ESA, 2022

Coordinate System: North American Datum 1983
Projection: Lambert Conformal Conic
Datum: California State Plane Zone II, US Feet



- Study Area (30.52 ac)
- OHWM (18,500cfs WSE)
- + Reference Points

- Sampling Points**
- Upland
 - ◆ Wetland

- Aquatic Features**
- Forested Wetland (2.33 ac; 101,595 sq ft)
 - Scrub-shrub Wetland (1.19 ac; 51,888 sq ft)
 - Lower American River (4.68 ac; 203,769 sq ft; 2,615 linear ft)



American River Common Features Contract 3A

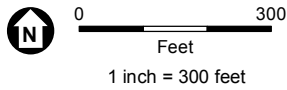
Figure 3a Aquatic Resources Delineation

Delineated by: Chuck Hughes & Amanda Segura-Moon
Mapping by: Eryn Pimentel
Created on: January 31, 2022



SOURCE: USDA Imagery, 2018; ESA, 2022

Coordinate System: North American Datum 1983
Projection: Lambert Conformal Conic
Datum: California State Plane Zone II, US Feet



- Study Area (30.52 ac)
- OHWM (18,500cfs WSE)
- Reference Points

- Sampling Points**
- Upland
 - Wetland

- Aquatic Features**
- Forested Wetland (2.33 ac; 101,595 sq ft)
 - Scrub-shrub Wetland (1.19 ac; 51,888 sq ft)
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American River Common Features Contract 3A

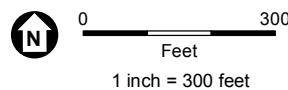
Figure 3b
Aquatic Resources Delineation

Delineated by: Chuck Hughes & Amanda Segura-Moon
Mapping by: Eryn Pimentel
Created on: January 31, 2022



SOURCE: USDA Imagery, 2018; ESA, 2022

Coordinate System: North American Datum 1983
Projection: Lambert Conformal Conic
Datum: California State Plane Zone II, US Feet



- Study Area (30.52 ac)
- OHWM (18,500cfs WSE)
- Reference Points

- Sampling Points**
- Upland
 - Wetland

- Aquatic Features**
- Forested Wetland (2.33 ac; 101,595 sq ft)
 - Scrub-shrub Wetland (1.19 ac; 51,888 sq ft)
 - Lower American River (4.68 ac; 203,769 sq ft; 2,615 linear ft)



American River Common Features Contract 3A

Figure 3c Aquatic Resources Delineation

Delineated by: Chuck Hughes & Amanda Segura-Moon
Mapping by: Eryn Pimentel
Created on: January 31, 2022

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5.2 Regulatory Analysis

Waters of the U.S.

After the aquatic resources were delineated, all features were evaluated to determine whether they may be regulated under the CWA, using the parameters set forth under the current regulations defining waters of the U.S. **Table 2** summarizes the results of this assessment for all aquatic resources in the Project area.

TABLE 2
APPLICATION OF THE “WATERS OF THE UNITED STATES” DEFINITION TO AQUATIC RESOURCES

Aquatic Resource	Waters of the U.S. (acres)	Excluded (acres)	Rationale
Waters			
American River	4.68	—	Determined by the Sacramento District of the USACE (2021) to be a navigable water (33 CFR [2014 edition] 328.3(a)(1)).
Wetlands			
Forested Wetland	2.33	—	Adjacent wetland, bordering a navigable water (33 CFR [2014 edition] 328.3(a)(7)).
Scrub-Shrub Wetland	1.19	—	Adjacent wetland, bordering a navigable water (33 CFR [2014 edition] 328.3(a)(7)).
Total:	8.20	—	

American River

The American River in the Project area is defined as a navigable water by the Sacramento District of the USACE (2021). The approximate upper limit of navigability is near Bradshaw Road, several miles upstream. Navigable waterways that were, are, or may be used in interstate or foreign commerce are waters of the U.S. (33 CFR 328.3(a)(1)).

Forested Wetland, Scrub-Shrub Wetland

These wetlands are below the OHWM of the American River. The wetlands border the American River, and therefore meet the definition of adjacent wetlands (33 CFR 328.3(c)). Adjacent wetlands are waters of the U.S. (33 CFR 328.3(a)(7)).

Waters of the State

Aquatic resources that qualify as waters of U.S also qualify as waters of the state, therefore all of the aquatic resources in the Project area are waters of the state.

5.3 Conclusions

In total, 8.20 acres of aquatic resources are present in the Project area. All of the aquatic resources meet criteria as both waters of the U.S. and waters of the state.

This report documents the delineation of the boundaries of aquatic resources in the Project area, based on the best professional judgment of ESA investigators. All conclusions presented should be considered preliminary and subject to change pending review by the USACE and/or State of California.

CHAPTER 6

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Appendix A

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Routine Wetland Determination

(September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: Contract 3A City/County: Sacramento County Sampling Date: October 28, 2021
 Applicant/Owner: SAFCA State: CA Sampling Point: 1
 Investigator(s): Chuck Hughes and Amanda Segura-Moon Section, Township, Range: See Report
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex-linear Slope (%): 0
 Subregion (LRR): C Lat: See Report Long: _____ Datum: _____
 Soil Map Unit Name: Columbia sandy loam, drained, 0–2% slopes NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of the year? Yes ☐ No ☒ (If no, explain in remarks.)

Are Vegetation ☐ Soil ☐ Or Hydrology ☐ significantly disturbed?

Are “Normal Circumstances” present? Yes ☒ No ☐

Are Vegetation ☐ Soil ☐ Or Hydrology ☐ Naturally problematic?

(If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Previous wet season was much drier than normal, but over six inches of precipitation recorded in the week prior to fieldwork.			

VEGETATION

Tree Stratum: (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum: (Plot size: <u>6 ft radius</u>)				Prevalence Index worksheet:
1. <u>Sambucus caerulea</u>	<u>7</u>	<u>D</u>	<u>FACU</u>	Total % Cover of: _____ Multiply by: _____
2. <u>Rosa californica</u>	<u>1</u>		<u>FAC</u>	OBL Species: _____ x 1 = _____
3. _____	_____	_____	_____	FACW Species _____ x 2 = _____
4. _____	_____	_____	_____	FAC Species _____ x 3 = _____
5. _____	_____	_____	_____	FACU Species _____ x 4 = _____
Total Cover: <u>8</u>				UPL Species _____ x 5 = _____
Herb Stratum: (Plot size: <u>6 ft radius</u>)				Column Totals: _____ (A) _____ (B)
1. <u>Bromus diandrus</u>	<u>60</u>	<u>D</u>	<u>UPL</u>	Prevalence Index = B/A = _____
2. <u>Elymus triticoides</u>	<u>5</u>		<u>FAC</u>	Hydrophytic Vegetation Indicators:
3. <u>Galium aparine</u>	<u>5</u>		<u>FACU</u>	<input type="checkbox"/> Dominance Test is >50%
4. <u>Raphanus rahanistrum</u>	<u>3</u>		<u>UPL</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
5. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
6. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>73</u>				
Woody Vine Stratum: (Plot size: _____)				¹ Indicators of Hydric soil and wetland hydrology must be present.
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>30%</u>	% Cover of Biotic Crust <u>0%</u>			
Remarks:				

Profile Description: (Describe the depth needed to document the Indicator or confirm the absence of Indicators.)								
Depth Inches	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/3	100					Sandy loam	
4-16	10YR 3/4	100					Sandy loam	

¹Type : C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
--	---	--

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	---

Remarks:

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2or more required)		
<input type="checkbox"/> Surface water (A1) <input type="checkbox"/> High water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible-Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral test (D5)			

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, if available):

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Routine Wetland Determination

(September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: Contract 3A City/County: Sacramento County Sampling Date: October 28, 2021
 Applicant/Owner: SAFCA State: CA Sampling Point: 2
 Investigator(s): Chuck Hughes and Amanda Segura-Moon Section, Township, Range: See Report
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave-linear Slope (%): 0
 Subregion (LRR): C Lat: See Report Long: _____ Datum: _____
 Soil Map Unit Name: Columbia sandy loam, drained, 0–2% slopes NWI classification: PFOC

Are climatic/hydrologic conditions on the site typical for this time of the year? Yes ☐ No ☒ (If no, explain in remarks.)Are Vegetation ☐ Soil ☐, Or Hydrology ☐ significantly disturbed?Are “Normal Circumstances” present? Yes ☒ No ☐Are Vegetation ☐ Soil ☐, Or Hydrology ☐ Naturally problematic?

(If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Previous wet season was much drier than normal, but over six inches of precipitation recorded in the week prior to fieldwork.			

VEGETATION

Tree Stratum: ((Plot size: 6 ft radius))	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Populus fremontii</u>	20	D	FAC	Number of Dominant Species That Are OBL, FACW or FAC:	<u>3</u> (A)
2. <u>Platanus racemosa</u>	20	D	FAC	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. <u>Acer negundo</u>	25	D	FACW	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100%</u> (A/B)
4. <u>Fraxinus latifolia</u>	5		FACW		
Total Cover:	<u>70</u>				
Sapling/Shrub Stratum: (Plot size:)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL Species:	_____ x 1 = _____
3. _____	_____	_____	_____	FACW Species	_____ x 2 = _____
4. _____	_____	_____	_____	FAC Species	_____ x 3 = _____
5. _____	_____	_____	_____	FACU Species	_____ x 4 = _____
Total Cover:	_____			UPL Species	_____ x 5 = _____
Herb Stratum: (Plot size: 6 ft radius)				Column Totals:	_____ (A) _____ (B)
1. <u>Carex barbarae</u>	2		FAC	Prevalence Index = B/A =	
2. <u>Galium aparine</u>	1		FACU	Hydrophytic Vegetation Indicators:	
3. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%	
4. _____	_____	_____	_____	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
5. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover:	<u>3</u>			¹ Indicators of Hydric soil and wetland hydrology must be present.	
Woody Vine Stratum: (Plot size:)				Hydrophytic Vegetation Present?	
1. _____	_____	_____	_____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2. _____	_____	_____	_____		
Total Cover:	_____				
% Bare Ground in Herb Stratum	97%	% Cover of Biotic Crust	0%		
Remarks:					

Profile Description: (Describe the depth needed to document the Indicator or confirm the absence of Indicators.)								
Depth Inches	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/3	100					Silt loam	
3-10	10YR 4/2	90	10YR 4/6	10	C	M/ PL	Silt loam	
10-16	10YR 4/4	100					Sandy clay loam	
¹ Type : C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Location: PL=Pore Lining, M=Matrix								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) </div> <div style="width: 48%;"> <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input checked="" type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9) </div> </div>								
Indicators for Problematic Hydric Soils³:								
<input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)								
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Could be buried soil at 10 inches.								

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2or more required)	
<input type="checkbox"/> Surface water (A1) <input type="checkbox"/> High water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input checked="" type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible-Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral test (D5)	
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, if available):			
Remarks: American River water surface about 18 inches in elevation below this data point during fieldwork. Data point is below OHWM of river, mapped at the 18,500 cfs elevation where river is known to reach about at least every other year on average.			

WETLAND DETERMINATION DATA FORM – Arid West Region

Routine Wetland Determination

(September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: Contract 3A City/County: Sacramento County Sampling Date: October 28, 2021
 Applicant/Owner: SAFCA State: CA Sampling Point: 3
 Investigator(s): Chuck Hughes and Amanda Segura-Moon Section, Township, Range: See Report
 Landform (hillslope, terrace, etc.): Field Local relief (concave, convex, none): linear-linear Slope (%): 3
 Subregion (LRR): C Lat: See Report Long: _____ Datum: _____
 Soil Map Unit Name: Columbia sandy loam, drained, 0–2% slopes NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of the year? Yes ☐ No ☒ (If no, explain in remarks.)

Are Vegetation ☐ Soil ☐ Or Hydrology ☐ significantly disturbed?

Are “Normal Circumstances” present? Yes ☒ No ☐

Are Vegetation ☐ Soil ☐ Or Hydrology ☐ Naturally problematic?

(If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Previous wet season was much drier than normal, but over six inches of precipitation recorded in the week prior to fieldwork.			

VEGETATION

Tree Stratum: (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum: (Plot size: _____)				Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL Species: _____ x 1 = _____
3. _____	_____	_____	_____	FACW Species _____ x 2 = _____
4. _____	_____	_____	_____	FAC Species _____ x 3 = _____
5. _____	_____	_____	_____	FACU Species _____ x 4 = _____
Total Cover: _____				UPL Species _____ x 5 = _____
Herb Stratum: (Plot size: <u>6 ft radius</u> _____)				Column Totals: _____ (A) _____ (B)
1. <i>Centaurea solstitialis</i>	10		UPL	Prevalence Index = B/A = _____
2. <i>Bromus hordeaceus</i>	40	D	FACU	Hydrophytic Vegetation Indicators:
3. <i>Avena sp.</i>	40	D	UPL	<input type="checkbox"/> Dominance Test is >50%
4. <i>Trifolium hirtum</i>	10		UPL	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
5. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
6. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>100</u>				¹ Indicators of Hydric soil and wetland hydrology must be present.
Woody Vine Stratum: (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>5%</u>	% Cover of Biotic Crust <u>0%</u>			
Remarks:				

Profile Description: (Describe the depth needed to document the Indicator or confirm the absence of Indicators.)								
Depth Inches	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 4/2	100					Clay loam	
4-10	10YR 4/4	97	10YR 4/6	3	C	M	Clay loam	

¹Type : C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks: Geotextile encountered at 10 inches. It was likely installed when the nearby shrubs were planted. This area was used for construction staging in the past based on aerial photographs. Soil horizons above geotextile have some mixed textures and do not appear natural.

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2or more required)		
<input type="checkbox"/> Surface water (A1) <input type="checkbox"/> High water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible-Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral test (D5)			

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, if available):

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Routine Wetland Determination

(September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: Contract 3A City/County: Sacramento County Sampling Date: October 28, 2021
 Applicant/Owner: SAFCA State: CA Sampling Point: 4
 Investigator(s): Chuck Hughes and Amanda Segura-Moon Section, Township, Range: See Report
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex-linear Slope (%): 10
 Subregion (LRR): C Lat: See Report Long: _____ Datum: _____
 Soil Map Unit Name: Columbia-Urban land complex, drained, 0–2% slopes NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of the year? Yes ☐ No ☒ (If no, explain in remarks.)Are Vegetation ☐ Soil ☐ Or Hydrology ☐ significantly disturbed?Are “Normal Circumstances” present? Yes ☒ No ☐Are Vegetation ☐ Soil ☐ Or Hydrology ☐ Naturally problematic?

(If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Previous wet season was much drier than normal, but over six inches of precipitation recorded in the week prior to fieldwork.			

VEGETATION

Tree Stratum: ((Plot size: <u>6</u> ft radius _____))	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Robinia pseudoacacia</u>	<u>30</u>	<u>D</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW or FAC:	<u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0%</u> (A/B)
4. _____	_____	_____	_____		
Total Cover:	<u>30</u>				
Sapling/Shrub Stratum: (Plot size: <u>6</u> ft radius _____)				Prevalence Index worksheet:	
1. <u>Sambucus caerulea</u>	<u>1</u>	_____	<u>FACU</u>	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL Species:	_____ x 1 = _____
3. _____	_____	_____	_____	FACW Species	_____ x 2 = _____
4. _____	_____	_____	_____	FAC Species	_____ x 3 = _____
5. _____	_____	_____	_____	FACU Species	_____ x 4 = _____
Total Cover:	<u>1</u>			UPL Species	_____ x 5 = _____
Herb Stratum: (Plot size: <u>6</u> ft radius _____)				Column Totals:	_____ (A) _____ (B)
1. <u>Bromus diandrus</u>	<u>40</u>	<u>D</u>	<u>UPL</u>	Prevalence Index = B/A = _____	
2. <u>Hordeum murinum ssp. leporinum</u>	<u>60</u>	<u>D</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators:	
3. _____	_____	_____	_____	<input type="checkbox"/> Dominance Test is >50%	
4. _____	_____	_____	_____	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
5. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover:	<u>100</u>			¹ Indicators of Hydric soil and wetland hydrology must be present.	
Woody Vine Stratum: (Plot size: _____)				Hydrophytic Vegetation Present?	
1. _____	_____	_____	_____	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
2. _____	_____	_____	_____		
Total Cover:	_____				
% Bare Ground in Herb Stratum	<u>10%</u>	% Cover of Biotic Crust	<u>0%</u>		
Remarks:					

Profile Description: (Describe the depth needed to document the Indicator or confirm the absence of Indicators.)								
Depth Inches	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	--							Undecomposed organic matter
3-14	10YR 3/3	100					Fine sandy loam	
¹ Type : C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Location: PL=Pore Lining, M=Matrix								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) </div> <div style="width: 45%;"> <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9) </div> </div>								
Indicators for Problematic Hydric Soils³: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks) </div> <div style="width: 45%;"> ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. </div> </div>								
Restrictive Layer (if present): Type: _____ Depth (inches): _____							Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Hay may have placed on the surface in the past.								

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2or more required)	
<input type="checkbox"/> Surface water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)	
<input type="checkbox"/> High water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)	
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible-Aerial Imagery (C9)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral test (D5)	
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, if available):			
Remarks:			

WETLAND DETERMINATION DATA FORM – Arid West Region

Routine Wetland Determination

(September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: Contract 3A City/County: Sacramento County Sampling Date: October 28, 2021
 Applicant/Owner: SAFCA State: CA Sampling Point: 5
 Investigator(s): Chuck Hughes and Amanda Segura-Moon Section, Township, Range: See Report
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): concave-linear Slope (%): 7
 Subregion (LRR): C Lat: See Report Long: _____ Datum: _____
 Soil Map Unit Name: Columbia sandy loam, drained, 0–2% slopes NWI classification: PFOC

Are climatic/hydrologic conditions on the site typical for this time of the year? Yes ☐ No ☒ (If no, explain in remarks.)Are Vegetation ☐ Soil ☐ Or Hydrology ☐ significantly disturbed?Are “Normal Circumstances” present? Yes ☒ No ☐Are Vegetation ☐ Soil ☐ Or Hydrology ☐ Naturally problematic?

(If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Previous wet season was much drier than normal, but over six inches of precipitation recorded in the week prior to fieldwork.			

VEGETATION

Tree Stratum: ((Plot size: _____))	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW or FAC: <u>3</u> (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
4. _____	_____	_____	_____		
Total Cover: _____	_____				
Sapling/Shrub Stratum: (Plot size: <u>6 ft radius</u> _____)				Prevalence Index worksheet:	
1. <u>Acer negundo</u>	<u>15</u>	<u>D</u>	<u>FACW</u>	Total % Cover of: _____ Multiply by: _____	
2. _____	_____	_____	_____	OBL Species: _____ x 1 = _____	
3. _____	_____	_____	_____	FACW Species _____ x 2 = _____	
4. _____	_____	_____	_____	FAC Species _____ x 3 = _____	
5. _____	_____	_____	_____	FACU Species _____ x 4 = _____	
Total Cover: <u>15</u>				UPL Species _____ x 5 = _____	
Herb Stratum: (Plot size: <u>6 ft radius</u> _____)				Column Totals: _____ (A) _____ (B)	
1. <u>Rubus ursinus</u>	<u>7</u>	<u>D</u>	<u>FAC</u>	Prevalence Index = B/A = _____	
2. <u>Carex barbarae</u>	<u>2</u>		<u>FAC</u>	Hydrophytic Vegetation Indicators:	
3. <u>Bromus diandrus</u>	<u>1</u>		<u>UPL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
4. <u>Carduus pycnocephalus</u>	<u>1</u>		<u>UPL</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
5. <u>Azolla filiculoides</u>	<u>3</u>	<u>D</u>	<u>OBL</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover: <u>14</u>					
Woody Vine Stratum: (Plot size: _____)				¹ Indicators of Hydric soil and wetland hydrology must be present.	
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2. _____	_____	_____	_____		
Total Cover: _____	_____				
% Bare Ground in Herb Stratum <u>95%</u>	% Cover of Biotic Crust <u>0%</u>				
Remarks:					

Profile Description: (Describe the depth needed to document the Indicator or confirm the absence of Indicators.)								
Depth Inches	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/3	100					Loamy sand	
3-10	10YR 4/3	95	10YR 2/2	5	C	M	Loamy sand	

¹Type : C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks: Rip-rap below 10 inches. Soil is recent alluvium and may not have had time for hydric soil indicators to develop.

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2or more required)		
<input type="checkbox"/> Surface water (A1) <input type="checkbox"/> High water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input checked="" type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input checked="" type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible-Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral test (D5)			

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, if available):

Remarks: American River water surface about 24 inches in elevation below this data point during fieldwork. Data point is below OHWM of river, mapped at the 18,500 cfs elevation where river is known to reach about at least every other year on average. Small woody debris arranged into drift deposits by recent high water event that reached this data point.

WETLAND DETERMINATION DATA FORM – Arid West Region

Routine Wetland Determination

(September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: Contract 3A City/County: Sacramento County Sampling Date: October 28, 2021
 Applicant/Owner: SAFCA State: CA Sampling Point: 6
 Investigator(s): Chuck Hughes and Amanda Segura-Moon Section, Township, Range: See Report
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex-linear Slope (%): 2
 Subregion (LRR): C Lat: See Report Long: _____ Datum: _____
 Soil Map Unit Name: Rossmoor-Urban land complex, 0–2% slopes NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of the year? Yes ☐ No ☒ (If no, explain in remarks.)Are Vegetation ☐ Soil ☐, Or Hydrology ☐ significantly disturbed? Are “Normal Circumstances” present? Yes ☒ No ☐Are Vegetation ☐ Soil ☐, Or Hydrology ☐ Naturally problematic? (If needed, explain any answers in remarks.)**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Previous wet season was much drier than normal, but over six inches of precipitation recorded in the week prior to fieldwork.			

VEGETATION

Tree Stratum: ((Plot size: <u>12</u> ft radius _____))	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Quercus lobata</u>	<u>35</u>	<u>D</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW or FAC:	<u>0</u> (A)
2. <u>Robinia pseudoacacia</u>	<u>20</u>	<u>D</u>	<u>FACU</u>	Total Number of Dominant Species Across All Strata:	<u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0%</u> (A/B)
4. _____	_____	_____	_____		
Total Cover:	<u>55</u>				
Sapling/Shrub Stratum: (Plot size: _____)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL Species:	_____ x 1 = _____
3. _____	_____	_____	_____	FACW Species	_____ x 2 = _____
4. _____	_____	_____	_____	FAC Species	_____ x 3 = _____
5. _____	_____	_____	_____	FACU Species	_____ x 4 = _____
Total Cover:	_____			UPL Species	_____ x 5 = _____
Herb Stratum: (Plot size: <u>6</u> ft radius _____)				Column Totals:	_____ (A) _____ (B)
1. <u>Bromus diandrus</u>	<u>30</u>	<u>D</u>	<u>UPL</u>	Prevalence Index = B/A = _____	
2. <u>Rubus ursinus</u>	<u>5</u>		<u>FAC</u>	Hydrophytic Vegetation Indicators:	
3. <u>Rubus armeniacus</u>	<u>12</u>		<u>FAC</u>	<input type="checkbox"/> Dominance Test is >50%	
4. <u>Hordeum murinum ssp. leporinum</u>	<u>40</u>	<u>D</u>	<u>UPL</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
5. <u>Cynodon dactylon</u>	<u>1</u>		<u>FACU</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
6. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
Total Cover:	<u>88</u>			¹ Indicators of Hydric soil and wetland hydrology must be present.	
Woody Vine Stratum: (Plot size: _____)				Hydrophytic Vegetation Present?	
1. _____	_____	_____	_____	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
2. _____	_____	_____	_____		
Total Cover:	_____				
% Bare Ground in Herb Stratum	<u>35%</u>	% Cover of Biotic Crust	<u>0%</u>		
Remarks:					

Profile Description: (Describe the depth needed to document the Indicator or confirm the absence of Indicators.)								
Depth Inches	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/2	100					Clay loam	
6-12	10YR 4/3	100					Fine sandy clay loam	

¹Type : C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2 or more required)		
<input type="checkbox"/> Surface water (A1) <input type="checkbox"/> High water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible-Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral test (D5)			

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, if available):

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Routine Wetland Determination

(September 2008 V2.0 COE Arid West Wetlands Delineation Manual)

Project/Site: Contract 3A City/County: Sacramento County Sampling Date: October 28, 2021
 Applicant/Owner: SAFCA State: CA Sampling Point: 7
 Investigator(s): Chuck Hughes and Amanda Segura-Moon Section, Township, Range: See Report
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): concave-linear Slope (%): 2
 Subregion (LRR): C Lat: See Report Long: _____ Datum: _____
 Soil Map Unit Name: Rossmoor-Urban land complex, 0–2% slopes NWI classification: PFOC

Are climatic/hydrologic conditions on the site typical for this time of the year? Yes ☐ No ☒ (If no, explain in remarks.)Are Vegetation ☐ Soil ☐ Or Hydrology ☐ significantly disturbed?Are “Normal Circumstances” present? Yes ☒ No ☐Are Vegetation ☐ Soil ☐ Or Hydrology ☐ Naturally problematic?

(If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Previous wet season was much drier than normal, but over six inches of precipitation recorded in the week prior to fieldwork.			

VEGETATION

Tree Stratum: (Plot size: <u>6</u> ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix lasiolepis</u>	<u>3</u>		<u>FACW</u>	Number of Dominant Species That Are OBL, FACW or FAC: <u>3</u> (A)
2. _____	_____		_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____		_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)
4. _____	_____		_____	
Total Cover: <u>3</u>				
Sapling/Shrub Stratum: (Plot size: <u>6</u> ft radius)				Prevalence Index worksheet:
1. <u>Fraxinus latifolia</u>	<u>3</u>	<u>D</u>	<u>FACW</u>	Total % Cover of: _____ Multiply by: _____
2. <u>Acer negundo</u>	<u>2</u>	<u>D</u>	<u>FACW</u>	OBL Species: _____ x 1 = _____
3. _____	_____	_____	_____	FACW Species _____ x 2 = _____
4. _____	_____	_____	_____	FAC Species _____ x 3 = _____
5. _____	_____	_____	_____	FACU Species _____ x 4 = _____
Total Cover: <u>5</u>				UPL Species _____ x 5 = _____
Herb Stratum: (Plot size: <u>6</u> ft radius)				Column Totals: _____ (A) _____ (B)
1. <u>Rumex crispus</u>	<u>3</u>		<u>FAC</u>	Prevalence Index = B/A = _____
2. <u>Artemisia douglasiana</u>	<u>5</u>		<u>FAC</u>	Hydrophytic Vegetation Indicators:
3. <u>Verbena litoralis</u>	<u>3</u>		<u>UPL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
4. <u>Carex barbarae</u>	<u>15</u>		<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
5. <u>Elymus triticoides</u>	<u>45</u>	<u>D</u>	<u>FAC</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
6. <u>Rubus armeniacus</u>	<u>5</u>		<u>FAC</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
7. <u>Cynodon dactylon</u>	<u>10</u>		<u>FACU</u>	
8. _____	_____	_____	_____	
Total Cover: <u>86</u>				
Woody Vine Stratum: (Plot size: <u>6</u> ft radius)				¹ Indicators of Hydric soil and wetland hydrology must be present.
1. <u>Vitis californica</u>	<u>30</u>	<u>D</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>25%</u>	% Cover of Biotic Crust <u>0%</u>			Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:				

Profile Description: (Describe the depth needed to document the Indicator or confirm the absence of Indicators.)								
Depth Inches	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/3	100					Sandy loam	
6-13	10YR 4/3	98	7.5YR 3/2	2	C	M	Clay loam	

¹Type : C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)
--	---	---

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

Remarks: Recent alluvium, hydric indicators may not have had time to form.

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2or more required)		
<input type="checkbox"/> Surface water (A1) <input type="checkbox"/> High water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input checked="" type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible-Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral test (D5)			

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

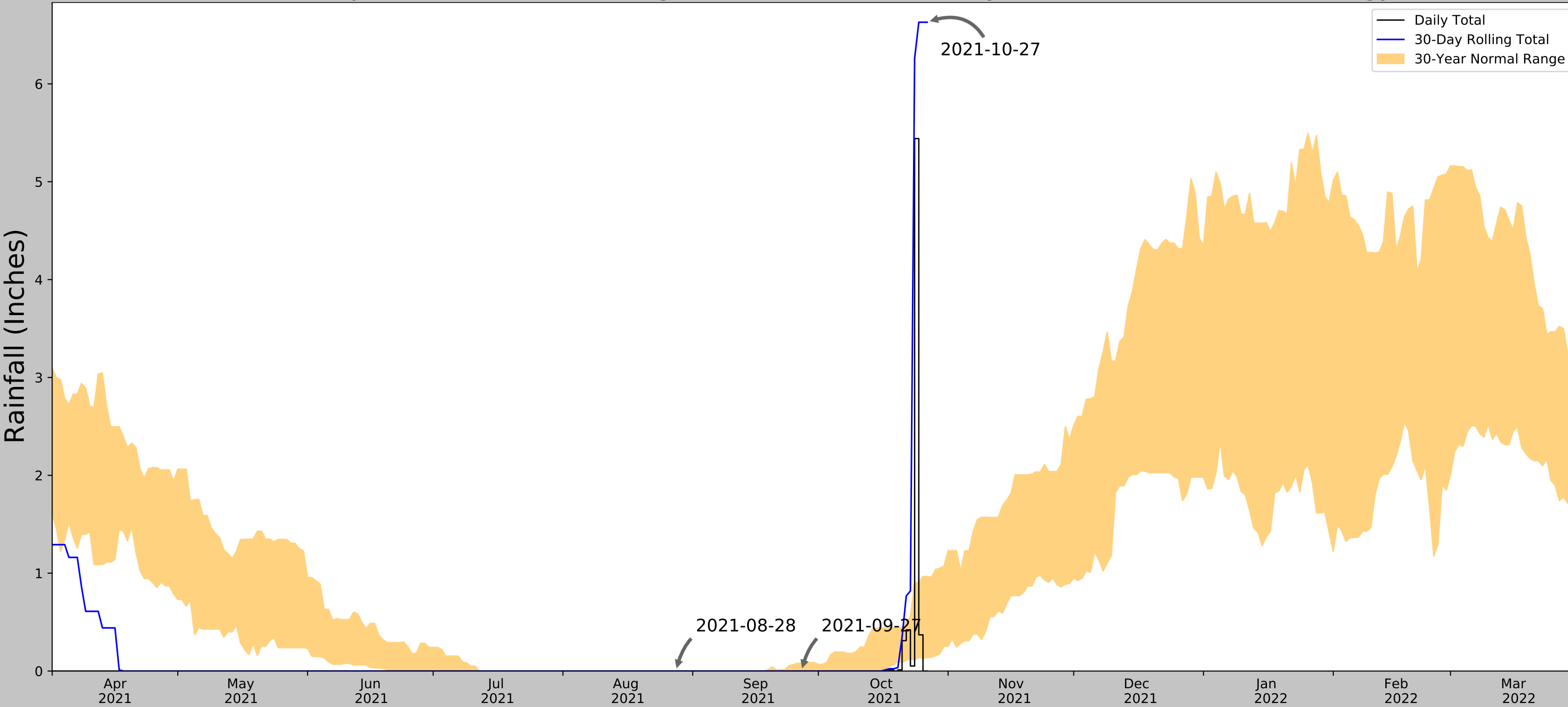
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections, if available):

Remarks: Data point is below OHWM of river, mapped at the 18,500 cfs elevation where river is known to reach about at least every other year on average.

Appendix B

Antecedent Precipitation Tool Output

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	38.584665, -121.445025
Observation Date	2021-10-27
Elevation (ft)	39.77
Drought Index (PDSI)	Extreme drought (2021-09)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-10-27	0.138189	0.966535	6.629921	Wet	3	3	9
2021-09-27	0.0	0.079134	0.0	Normal	2	2	4
2021-08-28	0.0	0.0	0.0	Normal	2	1	2
Result							Wetter than Normal - 15




Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
SACRAMENTO 5 ESE	38.5556, -121.4169	38.058	2.518	1.712	1.137	11352	89
SACRAMENTO 2.0 SE	38.5499, -121.4374	34.121	2.437	5.649	1.11	1	1

Appendix C

Soil Resource Report



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Sacramento County, California**



October 29, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

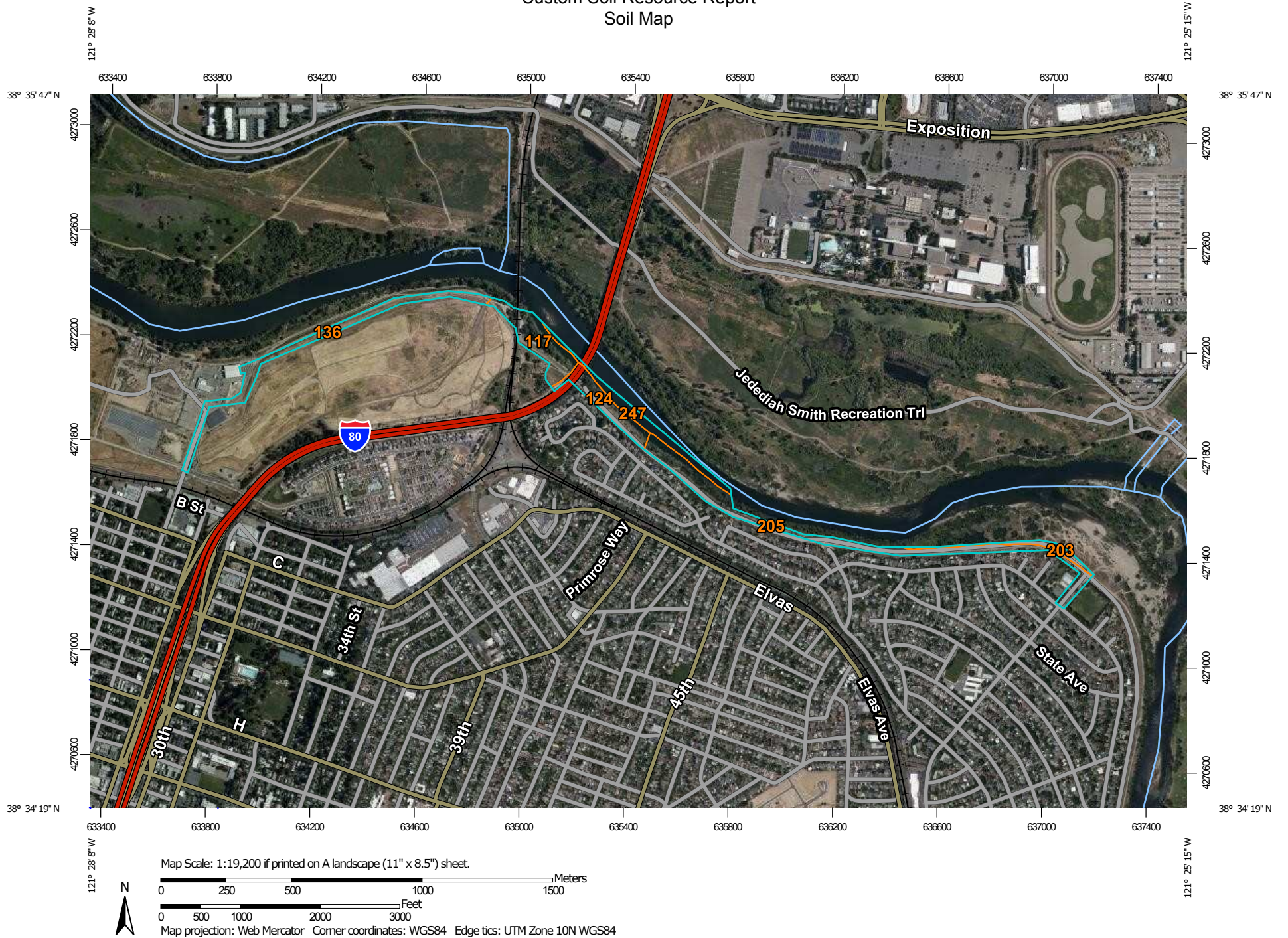
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.


Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)


Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit


 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot


 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole

 Slide or Slip


 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sacramento County, California

Survey Area Data: Version 20, Sep 3, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 8, 2019—Jun 1, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
117	Columbia sandy loam, drained, 0 to 2 percent slopes	8.9	17.8%
124	Columbia-Urban land complex, drained, 0 to 2 percent slopes	6.3	12.6%
136	Dumps	10.1	20.2%
203	Riverwash	2.1	4.2%
205	Rossmoor-Urban land complex, 0 to 2 percent slopes	17.1	34.1%
247	Water	5.6	11.1%
Totals for Area of Interest		50.2	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

Custom Soil Resource Report

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Sacramento County, California

117—Columbia sandy loam, drained, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hhlr
Elevation: 10 to 150 feet
Mean annual precipitation: 12 to 25 inches
Mean annual air temperature: 57 to 63 degrees F
Frost-free period: 230 to 340 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Columbia and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Columbia

Setting

Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

H1 - 0 to 11 inches: sandy loam
H2 - 11 to 60 inches: stratified loamy sand to silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Hydric soil rating: Yes

Minor Components

Columbia, clay substratum

Percent of map unit: 10 percent
Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread

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Hydric soil rating: Yes

Cosumnes

Percent of map unit: 5 percent

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Hydric soil rating: Yes

Sailboat

Percent of map unit: 5 percent

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Hydric soil rating: Yes

Vina

Percent of map unit: 4 percent

Hydric soil rating: No

Unnamed, occasional flooded

Percent of map unit: 1 percent

Hydric soil rating: No

124—Columbia-Urban land complex, drained, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hhlz

Elevation: 150 feet

Mean annual precipitation: 12 to 25 inches

Mean annual air temperature: 63 degrees F

Frost-free period: 230 to 340 days

Farmland classification: Not prime farmland

Map Unit Composition

Columbia and similar soils: 60 percent

Urban land: 30 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Columbia

Setting

Landform: Flood plains, natural levees

Landform position (two-dimensional): Toeslope, summit

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Alluvium

Typical profile

H1 - 0 to 11 inches: sandy loam

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H2 - 11 to 43 inches: stratified loamy sand to silt loam

H3 - 43 to 64 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: Rare

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A/D

Hydric soil rating: Yes

Description of Urban Land

Typical profile

H1 - 0 to 6 inches: variable

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydric soil rating: No

Minor Components

Cosumnes

Percent of map unit: 3 percent

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Hydric soil rating: Yes

Rossmoor

Percent of map unit: 3 percent

Hydric soil rating: No

Sailboat

Percent of map unit: 3 percent

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Hydric soil rating: Yes

Unnamed, unburied surface

Percent of map unit: 1 percent

Hydric soil rating: No

136—Dumps

Map Unit Composition

Dumps: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dumps

Setting

Down-slope shape: Linear

Across-slope shape: Linear

Typical profile

H1 - 0 to 60 inches: variable

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydric soil rating: No

203—Riverwash

Map Unit Setting

National map unit symbol: hhpj

Elevation: 20 to 280 feet

Mean annual precipitation: 18 to 22 inches

Mean annual air temperature: 61 to 63 degrees F

Frost-free period: 250 to 345 days

Farmland classification: Not prime farmland

Map Unit Composition

Riverwash: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Riverwash

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Gravelly alluvium

Typical profile

H1 - 0 to 60 inches: variable

Properties and qualities

Slope: 0 to 2 percent

Runoff class: Negligible

Depth to water table: About 0 inches

Frequency of flooding: FrequentNone

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8w

Ecological site: R017XY903CA - Stream Channels and Floodplains

Hydric soil rating: Yes

Minor Components

Xerofluvents

Percent of map unit: 10 percent

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

205—Rossmoor-Urban land complex, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hhpl

Elevation: 30 to 110 feet

Mean annual precipitation: 20 inches

Mean annual air temperature: 61 degrees F

Frost-free period: 275 to 300 days

Farmland classification: Not prime farmland

Map Unit Composition

Rossmoor and similar soils: 55 percent

Urban land: 30 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rossmoor

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Custom Soil Resource Report

Parent material: Alluvium

Typical profile

H1 - 0 to 6 inches: fine sandy loam

H2 - 6 to 62 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: Rare

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3c

Hydrologic Soil Group: A

Hydric soil rating: No

Description of Urban Land

Typical profile

H1 - 0 to 6 inches: variable

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydric soil rating: No

Minor Components

Columbia

Percent of map unit: 6 percent

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Hydric soil rating: Yes

Americanos

Percent of map unit: 5 percent

Hydric soil rating: No

Unnamed, gravelly substratum

Percent of map unit: 2 percent

Hydric soil rating: No

Unnamed, unloamy sandamed

Percent of map unit: 2 percent

Hydric soil rating: No

247—Water

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

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Appendix D

Photographs



Photograph 1

View looking upstream along the toe of the levee. The shovel is at data point 6.



Photograph 2

View looking downhill from the toe of the levee. The shovel is at data point 6. The American River is in the background.



Photograph 3

View looking downstream in forested wetland. The shovel is at data point 7.



Photograph 4

View looking downhill from the upper bank of the American River. The shovel is at data point 1. The trees in the background are on a steep slope down to the river that begins a few feet past the data point.



Photograph 5

The shovel is at data point 2, on a low bench of forested wetland. The surface of the American River is visible in the background through the vegetation. The elevation of the water was about 18 inches below data point 2 during the fieldwork.



Photograph 5

The shovel is at data point 3. This gently sloped field on the land side of the levee may be used for staging. The levee is visible in the background.



Photograph 6

The shovel is at data point 4, on a high bench. Just past the data point there is a very steep slope of about 10 vertical feet. The 18,500 cfs flow elevation and OHWM of the American River is on the steep slope.



Photograph 7

View looking downstream of the steep slope below Photograph 6. The shovel is placed at the 18,500 cfs flow elevation, which was used as the OHWM of the American River and matches well with physical indicators such as a change in soil/sediment characteristics, break in slope, and destruction of terrestrial vegetation visible to the right of the shovel.

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Appendix E

Plants Observed at Data Points

PLANTS OBSERVED

Family	Scientific Name	Common Name	Native/ Introduced	Wetland Indicator
FERNS				
Azollaceae	<i>Azolla filiculoides</i>	Water fern	N	OBL
EUDICOTS				
Adoxaceae	<i>Sambucus nigra</i> ssp. <i>caerulea</i>	Blue elderberry	N	FACU
Asteraceae	<i>Artemisia douglasiana</i>	Mugwort	N	FAC
	<i>Carduus pycnocephalus</i> ssp. <i>pycnocephalus</i>	Italian thistle	I	UPL
	<i>Centaurea solstitialis</i>	Yellow star-thistle	I	UPL
Brassicaceae	<i>Raphanus raphanistrum</i>	Wild radish	I	UPL
Fabaceae	<i>Trifolium hirtum</i>	Rose clover	I	UPL
	<i>Robinia pseudoacacia</i>	Black locust	I	FACU
Fagaceae	<i>Quercus lobata</i>	Valley Oak	N	FACU
Oleaceae	<i>Fraxinus latifolia</i>	Oregon ash	N	FACW
Platanaceae	<i>Platanus racemosa</i>	Western sycamore	N	FAC
Polygonaceae	<i>Rumex crispus</i>	Curly dock	I	FAC
Rosaceae	<i>Rosa californica</i>	California wild rose	N	FAC
	<i>Rubus armeniacus</i>	Himalayan blackberry	I	FAC
	<i>Rubus ursinus</i>	California blackberry	N	FAC
Rubiaceae	<i>Galium aparine</i>	Goose grass	N	FACU
Salicaceae	<i>Populus fremontii</i>	Fremont's cottonwood	N	FAC
	<i>Salix lasiolepis</i>	Arroyo willow	N	FACW
Sapindaceae	<i>Acer negundo</i>	Box elder	N	FACW
Vitaceae	<i>Vitis californica</i>	California grape	N	FACU
MONOCOTS				
Cyperaceae	<i>Carex barbarae</i>	Whiteroot sedge	N	FAC
Poaceae	<i>Avena</i> sp.	Wild oat	I	UPL
	<i>Bromus diandrus</i>	Ripgut grass	I	UPL
	<i>Bromus hordeaceus</i>	Soft chess	I	FACU
	<i>Cynodon dactylon</i>	Bermuda grass	I	FACU
	<i>Elymus triticoides</i>	Beardless wild rye	N	FACU
	<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Foxtail barley	I	FACU

Appendix F

Aquatic Resources Spreadsheet

Waters_Name	State	Cowardin_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude
American River	CALIFORNIA	R2UB	Area	4.68	ACRE	TNW	38.58603595880	-121.44599675500
Forested Wetland 1	CALIFORNIA	PFO	Area	0.84	ACRE	TNWW	38.58787792280	-121.44877805600
Forested Wetland 2	CALIFORNIA	PFO	Area	0.51	ACRE	TNWW	38.58650258250	-121.44697179400
Forested Wetland 3	CALIFORNIA	PFO	Area	0.98	ACRE	TNWW	38.58371713490	-121.44306446700
Scrub-Shrub Wetland 1	CALIFORNIA	PSS	Area	0.09	ACRE	TNWW	38.58701086460	-121.44756743000
Scrub-Shrub Wetland 2	CALIFORNIA	PSS	Area	1.1	ACRE	TNWW	38.58523008590	-121.44530687500

Appendix C

American River Watershed Common Features 2016 Project, American River Contract 3A Standard Assessment Methodology Analysis



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memorandum

date January 21, 2022

to Nate Martin and Bailey Hunter, USACE

cc Dan Mielke, USACE; Bailey Hunter, USACE; Guy Romine, USACE; David Moldoff, DWR; Miles Claret, DWR; Dan Tibbitts, SAFCA; Melanie Saucier, SAFCA

from Dave Beauchamp and Taylor Spaulding

subject **American River Common Features (ARCF) 2016 Contract 3A: Draft Standard Assessment Methodology (SAM) Analysis**

Introduction

When the NMFS Biological Opinion (BO) for the ARCF General Reevaluation Report (GRR) was issued, September 15, 2015, specific project designs were not yet developed. Consequently, impacts to relevant fish taxa were analyzed at a feasibility level of design using “reasonable worst-case” parameters for SAM analysis (NMFS 2015, p. 174). The plan was to conduct project-specific SAM analyses once project designs were completed, to better evaluate impacts and use SAM results in the negotiation of appropriate mitigation for project actions (NMFS 2015, p. 180). The consultation for the ARCF GRR was reinitiated in 2020, and a new BO was issued by NMFS (2021). Because limitation in the SAM approach for assessing impacts became clear during the 2015 consultation and the 2020/2021 reinitiated consultation, NMFS will determine habitat impacts using a method that combines the SAM model and expected construction and mitigation footprints, as follows.

“Once site-specific designs are completed, the SAM analysis will be run. The planned project footprint and scale of on-site mitigation will then be compared against the SAM analysis to determine accuracy of the analysis. In instances where on-site mitigation and impacts are determined by NMFS to not be represented properly by the SAM analysis, impacts will be calculated by projects footprints and impacts will be agreed upon between NMFS and the Corps.” (NMFS 2021, p. 40).

Therefore, as part of this approach to assess project impacts, NMFS will assess SRA habitat values according to the SAM method of analysis and compare them to on-site compensation values based on project designs (NMFS, 2021, p. 56). The SAM model is also used by USACE to guide design of project elements that provide SRA habitat values, such as planting benches and instream woody material and to update the O&M Manual to ensure that the mitigation elements are meeting the criteria established in the Habitat Mitigation and Monitoring Plan (HMMP) with the goal of meeting SAM values by USACE (NMFS 2021, p. 108). USACE may revise the SAM model with involvement of the NMFS Central Valley Office (NMFS 2021, p. 111).

With the completion of 65% designs for American River Contract 3A, at the Lower American River (LAR), impacts can be analyzed using SAM parameters measured from the specific draft project design. Results of this updated SAM analysis are provided in the SAM Results section below.

The updated SAM analysis was conducted following the same methods as were described in the original NMFS BO (NMFS 2015), with a few small updates made in coordination with NMFS biologists during the analysis for LAR Contract 1. These updates are described in the Methods section below.

Methods

The first update was the inclusion of Winter-run Chinook salmon. Recent research indicates that some juvenile Winter-run Chinook salmon use the LAR for non-natal rearing habitat (Phillis et al. 2018). Little information exists about the seasonal timing of this habitat use and the default SAM life-history timing table for Winter-run Chinook salmon in the LAR shows no occurrence of any life stage. Consequently, the default SAM life-history timing table for Winter-run Chinook salmon in the section of the Sacramento River that includes the American River confluence (**Figure 1**) was used for this analysis. For all other Evolutionarily Significant Units (ESUs) their default SAM life-history timing tables for the LAR were used (Figure 1).

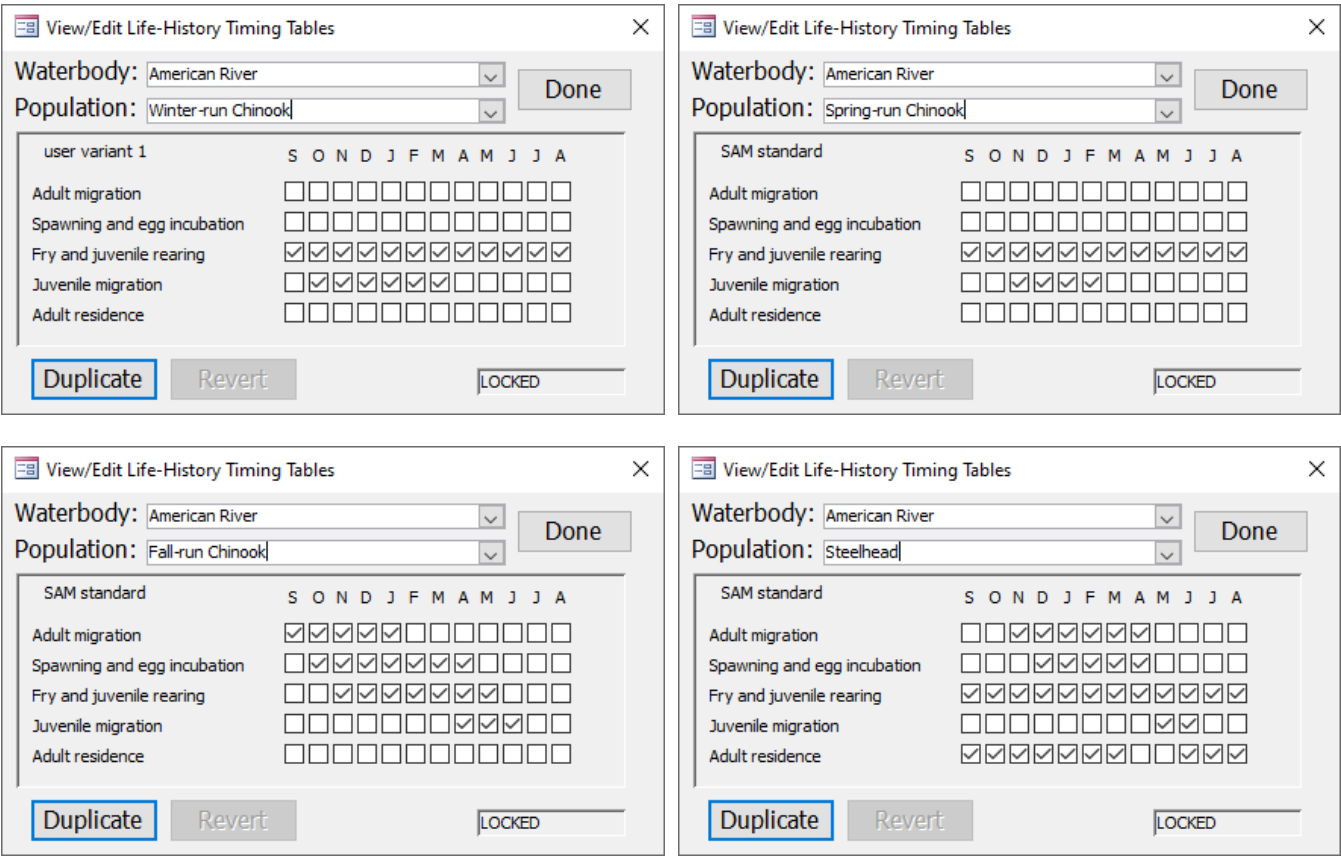


Figure 1
SAM Life-History Timing Tables Used in this Analysis

The second update was the addition of temporal change (decay) for Instream Structure in both existing and 65% design conditions. Decay of instream structure was estimated using the data compiled in Roni et al. (2015), with a logistic regression used to fit the data and produce estimates of remaining structure at years 0, 1, 5, 15, 25, and 50 (**Table 1**). These estimates were used to scale down the measured values of instream structure shoreline coverage (Tables 7 and 8) over time.

TABLE 1
ESTIMATES OF REMAINING INSTREAM STRUCTURE OVER THE 50-YEAR SAM MODELING PERIOD

Year	Percentage of Maximum Instream Structure Shoreline Coverage
0	100%
1	95%
5	90%
15	85%
25	80%
50	48%

Temporal change in the SAM variables Overhanging Shade and Aquatic Vegetation followed the same methods as described in the original NMFS BO, namely use of previous growth models for shade and vegetation in the 65% design condition only (NMFS 2015). Consistent with the original NMFS BO, existing conditions of shade and vegetation were assumed to stay constant for 50 years.

For Overhanging Shade, a botanist determined that the Contract 3A overstory planting designs were reasonably approximated by the Undulating Riparian Bench generalized overstory planting plan (USACE 2009, Table 3). Consequently, the Undulating Riparian Bench generalized overstory planting plan's shade evolution model (USACE 2009, Table 4f) was applied for the Contract 3A SAM analysis, as shown in **Table 2**.

TABLE 2
ESTIMATES OF GROWTH IN OVERHANGING SHADE OVER THE 50-YEAR SAM MODELING PERIOD

Year	Percentage of Maximum Planted Overhanging Shade Shoreline Coverage			
	Fall	Winter	Spring	Summer
0	0%	1%	2%	0%
1	0%	1%	4%	0%
5	0%	16%	49%	0%
15	100%	25%	75%	100%
25	100%	25%	75%	100%
50	100%	25%	75%	100%

For Aquatic Vegetation, temporal change followed the approach used in the original NMFS BO, as shown in **Table 3**.

TABLE 3
ESTIMATES OF GROWTH IN AQUATIC VEGETATION OVER THE 50-YEAR SAM MODELING PERIOD

Year	Percentage of Maximum Planted Aquatic Vegetation Shoreline Coverage			
	Fall	Winter	Spring	Summer
0	0%	0%	0%	0%
1	10%	25%	50%	50%
5	100%	100%	100%	100%
15	100%	100%	100%	100%
25	100%	100%	100%	100%
50	100%	100%	100%	100%

SAM Measurements

Tables 4 and 5 show the measured values of the SAM variables at existing and 65% design conditions for Contract 3A (Site 1-1). **Tables 6 and 7** show the values of the SAM variables in the format used for input to the SAM Electronic Calculation Tool (ECT) model.

TABLE 4
EXISTING CONDITION (2019, 2020) MEASUREMENTS OF THE SAM VARIABLES FOR SITE 1-1

	Site 1-1	
	S/F	W/S
Shoreline Length (ft.)	3,344	3,329
Bank Slope (run/rise)	2.38	2.17
Floodplain Area (sq. ft.)	--	610,735
Substrate Size (D ₅₀ , in.)	20	19
Instream Structure (ft.)	388	367
Aquatic Vegetation (ft.)	485	1,118
Overhanging Shade (ft.)	3,196	801 / 2,403

TABLE 5
65% DESIGN CONDITION MEASUREMENTS OF THE SAM VARIABLES FOR SITE 1-1

	Site 1-1	
	S/F	W/S
Shoreline Length (ft.)	3,462	3,374
Bank Slope (run/rise)	5.3	3.1
Floodplain Area (sq. ft.)	--	660,758
Substrate Size (D ₅₀ , in.)	9.90	0.01
Instream Structure (ft.)	1,752	1,694
Aquatic Vegetation (ft.)	2,100	2,205
Overhanging Shade (ft.)	2,321	648 / 1,944

TABLE 6
EXISTING CONDITION (2019, 2020) MODEL INPUT VALUES OF THE SAM VARIABLES FOR SITE 1-1

	Site 1-1	
	S/F	W/S
Shoreline Length (ft.)	3,344	3,329
Bank Slope (run/rise)	2.38	2.17
Floodplain Area ratio (AQ ₂ :AQ _{avg})	--	1.3
Substrate Size (D ₅₀ , in.)	20	19
Instream Structure coverage (%)	12%	11%
Aquatic Vegetation coverage (%)	15%	33%
Overhanging Shade coverage (%)	96%	24% / 72%

TABLE 7
65% DESIGN CONDITION MODEL INPUT VALUES OF THE SAM VARIABLES FOR SITE 1-1

	Site 1-1	
	S/F	W/S
Shoreline Length (ft.)	4,099	4,033
Bank Slope (run/rise)	5.3	8.3
Floodplain Area ratio (AQ ₂ :AQ _{avg})	1.00	1.25
Substrate Size (D ₅₀ , in.)	9.90	0.01
Instream Structure coverage (%)	51%	50%
Aquatic Vegetation coverage (%)	61%	65%
Overhanging Shade coverage (%)	67%	19% / 58%

SAM Results

As described in the original NMFS BO (NMFS 2015, pp. 25-26), SAM results are weighted relative response index (WRI) values that represent the difference between modeled fish response to existing (without-project) and designed (with-project) conditions. Negative WRI values indicate that existing conditions are better for fish and positive WRI values indicate that designed conditions are better for fish. Consistent with the original NMFS BO, WRI values are weighted by shoreline length. Results are presented as the sum of WRI values for Site 1-1.

WRI values do not directly represent actual lengths but NMFS has used WRI values in the 2015 BO as proxies to determine mitigation (NMFS 2015, p. 177), although the current NMFS approach also takes construction footprints into account (NMFS 2021, p. 40). Appropriate mitigation is typically determined by identifying the maximum negative WRI for critical life stages (NMFS 2015, p. 118). By mitigating for the maximum negative WRI, lesser impacts are expected to be appropriately mitigated (NMFS 2015, p. 181).

This analysis focuses primarily on the fry, juvenile rearing, and juvenile migration lifestages as these lifestages are the most common lifestages that may be found within the project area and are the lifestages which have the potential to show the greatest impacts using SAM analyses given their relatively strict habitat requirements. Although adult migration of fall-run Chinook salmon and steelhead is likely to occur in the area, this lifestage is

the least likely to be impacted by the project due to their temporary presence within the project area and have the least potential to show impacts using SAM analyses given their relatively lenient habitat requirements. Spawning and egg incubation, though possible for both species, is likely rare within the project area, given the lack of suitable spawning habitat within the general area for both species. Although these other lifestages are not focused on within the analysis, they have been included within the analysis for completeness.

The yearly WRI values are shown in **Figures 2-5** for any life stage that had any negative WRI values. Life stages with exclusively positive WRI values were not plotted, but are included in the summary of maximum WRI values (negative and positive) in **Table 8**. The maximum negative WRI for Spring-run Chinook salmon was -282. The maximum negative WRI for Winter-run Chinook salmon was -282. The maximum negative WRI for Fall-run Chinook salmon was -282. The maximum negative WRI for steelhead was -228. For the SAM-modeled 50-year period, WRI values were predominantly positive and the longest duration of a WRI deficit was 29 years. WRI values during the winter and spring seasons for all species' juvenile lifestages never show a deficit; habitat values are immediately improved upon completion of the project and continue to improve over time.

For fry and juvenile rearing of all runs of Chinook salmon, SAM predicts that it will take approximately 15 years after project initiation for the fall and summer habitat value to exceed existing conditions. Although habitat value decreases in the first year during construction, it is predicted to increase gradually after the first year, eventually reaching a higher habitat value than existing conditions.

For juvenile migration of all runs of Chinook salmon, the SAM model predicts that it will take approximately 8 years after project initiation for the fall and summer habitat values to exceed existing conditions. Like fry and juvenile rearing of Chinook salmon, initial habitat values decrease during the first year of construction, but gradually increase, providing higher habitat values than existing conditions in the future.

For fry and juvenile rearing of steelhead, SAM predicts that it will take approximately 12 years after project initiation for the fall and summer habitat value to exceed existing conditions. Steelhead WRIs follow those seen for Chinook salmon, with an initial decrease during project construction, followed by a gradual increase which eventually provides higher habitat value than existing conditions in the future.

For juvenile migration of steelhead, SAM predicts that it will take approximately 7 years after project initiation for the fall and summer habitat value to exceed existing conditions. However, as with all other species and lifestages, following this initial deficit, habitat values gradually increase, eventually exceeding existing condition values.

In conclusion, the SAM model predicts that fry and juvenile rearing and juvenile migration habitat values will be improved for Chinook salmon and steelhead compared to existing conditions. Although a deficit of summer and fall habitat values is predicted for the first 7–15 years after construction, depending on which life stage and species is being considered, habitat values over time exceed existing conditions for all species and lifestages.

TABLE 8
MAXIMUM SAM-MODELED WRI DEFICITS AND BENEFITS

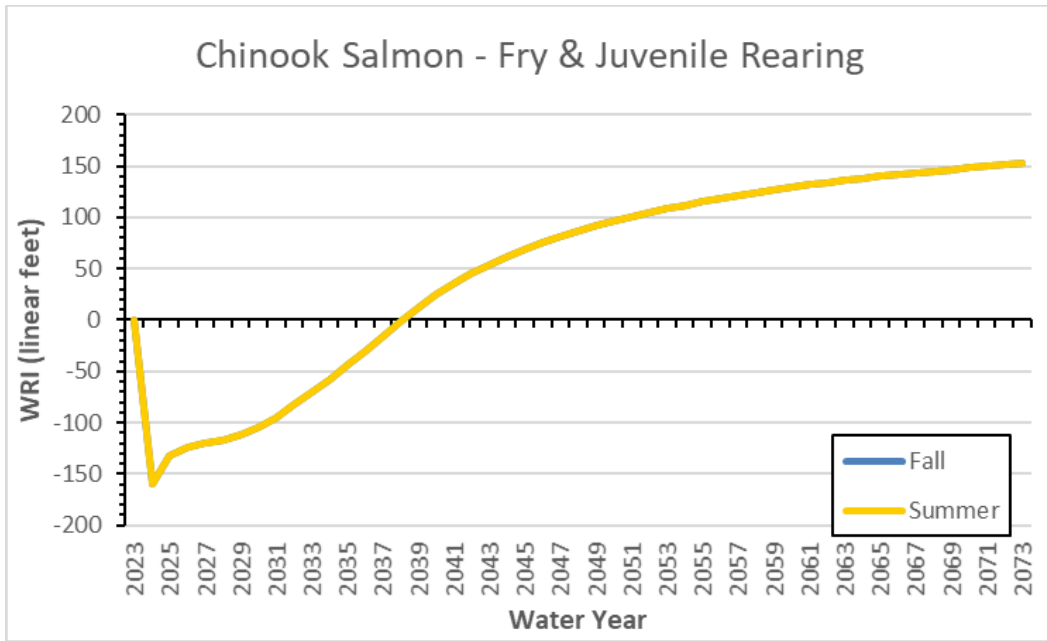
Season	Life Stage	Maximum WRI Deficit (feet)	Deficit Duration (years)	Maximum WRI Benefit (feet)	Benefit Duration (years)
Spring-Run Chinook salmon					
Fall	Adult Migration ¹	na	na	na	na
	Spawning & Egg Incubation ¹	na	na	na	na
	Fry & Juvenile Rearing	-160	15	152	35
	Juvenile Migration	-282	8	339	42
Winter	Adult Migration ¹	na	na	na	na
	Spawning & Egg Incubation ¹	na	na	na	na
	Fry & Juvenile Rearing	none	none	263	50
	Juvenile Migration	none	none	505	50
Spring	Adult Migration ¹	na	na	na	na
	Spawning & Egg Incubation ¹	na	na	na	na
	Fry & Juvenile Rearing	none	none	271	50
	Juvenile Migration	na	na	na	na
Summer	Adult Migration ¹	na	na	na	na
	Spawning & Egg Incubation ¹	na	na	na	na
	Fry & Juvenile Rearing	-160	14	152	36
	Juvenile Migration ²	na	na	na	na
Winter-Run Chinook salmon					
Fall	Adult Migration ¹	na	na	na	na
	Spawning & Egg Incubation ¹	na	na	na	na
	Fry & Juvenile Rearing	-160	15	152	35
	Juvenile Migration	-282	8	339	42
Winter	Adult Migration ¹	na	na	na	na
	Spawning & Egg Incubation ¹	na	na	na	na
	Fry & Juvenile Rearing	0	0	263	50
	Juvenile Migration	0	0	505	50
Spring	Adult Migration ¹	na	na	na	na
	Spawning & Egg Incubation ¹	na	na	na	na
	Fry & Juvenile Rearing	0	0	271	50
	Juvenile Migration	0	0	509	50
Summer	Adult Migration ¹	na	na	na	na
	Spawning & Egg Incubation ¹	na	na	na	na
	Fry & Juvenile Rearing	-160	15	152	35
	Juvenile Migration ²	na	na	na	na
Fall-Run Chinook salmon					
Fall	Adult Migration	-90	17	76	43
	Spawning & Egg Incubation	none	none	118	50
	Fry & Juvenile Rearing	-160	15	152	35
	Juvenile Migration ³	na	na	na	na

TABLE 8
MAXIMUM SAM-MODELED WRI DEFICITS AND BENEFITS

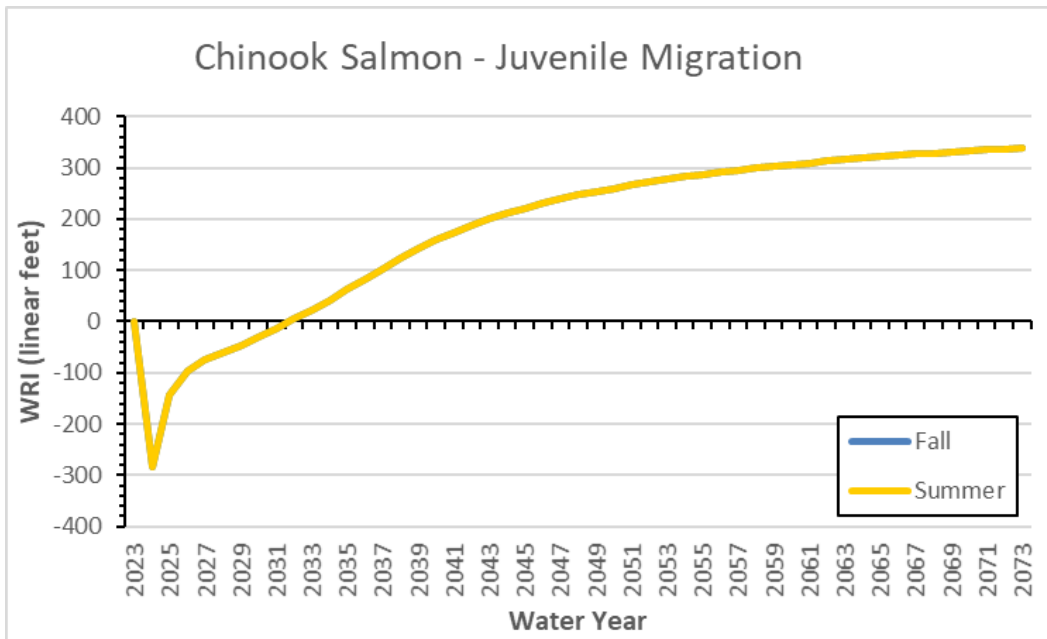
Season	Life Stage	Maximum WRI Deficit (feet)	Deficit Duration (years)	Maximum WRI Benefit (feet)	Benefit Duration (years)
Winter	Adult Migration	-58	6	39	44
	Spawning & Egg Incubation	none	none	45	50
	Fry & Juvenile Rearing	none	none	263	50
	Juvenile Migration	na	na	na	na
Spring	Adult Migration ⁴	na	na	na	na
	Spawning & Egg Incubation ⁴	none	none	45	50
	Fry & Juvenile Rearing	none	none	271	50
	Juvenile Migration	none	none	509	50
Summer	Adult Migration ⁴	na	na	na	na
	Spawning & Egg Incubation ⁴	na	na	na	na
	Fry & Juvenile Rearing	na	na	na	na
	Juvenile Migration	-282	8	339	42
Steelhead					
Fall	Adult Migration	-228	29	49	21
	Spawning & Egg Incubation ⁵	na	na	na	na
	Fry & Juvenile Rearing	-181	12	263	49
	Juvenile Migration ⁶	na	na	na	na
	Adult Residence	-228	29	49	21
Winter	Adult Migration	-91	8	37	42
	Spawning & Egg Incubation	none	none	45	50
	Fry & Juvenile Rearing	none	none	340	50
	Juvenile Migration ⁶	na	na	na	na
	Adult Residence	-91	8	37	42
Spring	Adult Migration	none	none	45	50
	Spawning & Egg Incubation	none	none	45	50
	Fry & Juvenile Rearing	none	none	350	50
	Juvenile Migration	none	none	346	50
	Adult Residence	none	none	45	50
Summer	Adult Migration ⁷	na	na	na	na
	Spawning & Egg Incubation ⁷	na	na	na	na
	Fry & Juvenile Rearing	-181	11	263	39
	Juvenile Migration	-202	7	295	43
	Adult Residence	-228	29	49	21

Table footnotes:

1. Not applicable, adult Spring- and Winter-run Chinook salmon are unlikely to occur in the American River.
2. Not applicable, emigrating juvenile Spring- and Winter-run Chinook salmon are unlikely to occur in the American River during summer months.
3. Not applicable, emigrating juvenile Fall-run Chinook salmon are unlikely to occur in the American River during fall months.
4. Not applicable, adult Fall-run Chinook salmon are unlikely to occur in the American River in spring or summer months.
5. Not applicable, steelhead spawning is unlikely to occur in the American River during fall months.
6. Not applicable, emigrating juvenile steelhead are unlikely to occur in the American River during fall or winter months.
7. Not applicable, adult steelhead are unlikely to occur in the American River during summer months.

**Figure 2**

Yearly SAM-modeled WRI values for Chinook salmon rearing in each season. Values apply to any Chinook salmon ESU that occurs in the American River Contract 3A area (Summer and Fall are overlapping)

**Figure 3**

Yearly SAM-modeled WRI values for Chinook salmon juvenile migration in each season. Values apply to any Chinook salmon ESU that occurs in the American River Contract 3 area (Summer and Fall are overlapping)

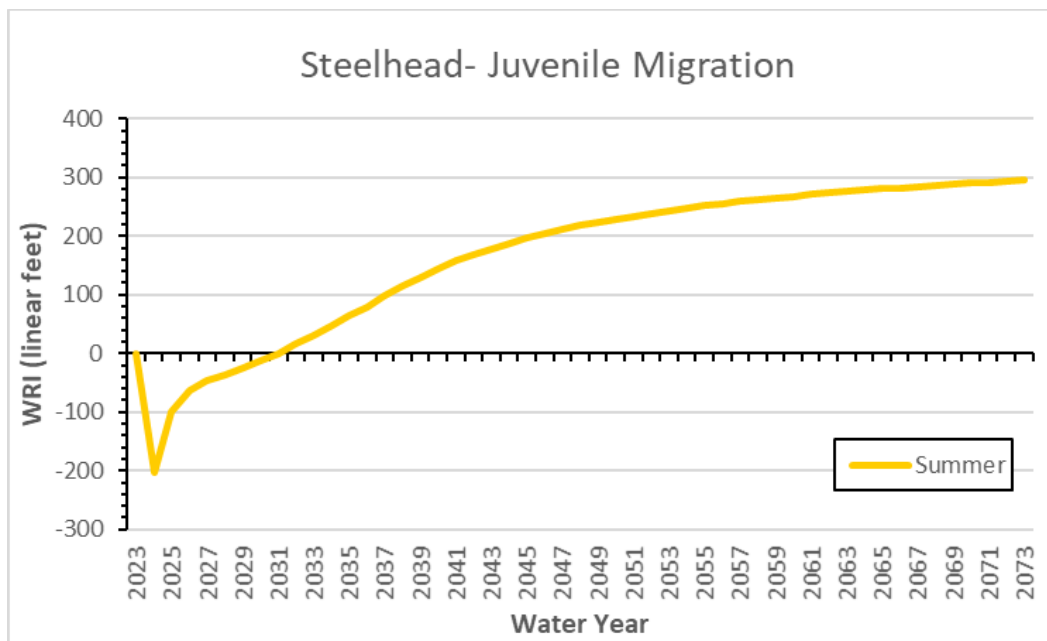


Figure 4

Yearly SAM-modeled WRI values for steelhead rearing in each season. Values apply to any steelhead ESU that occurs in the American River Contract 3A area (Summer and Fall are overlapping)

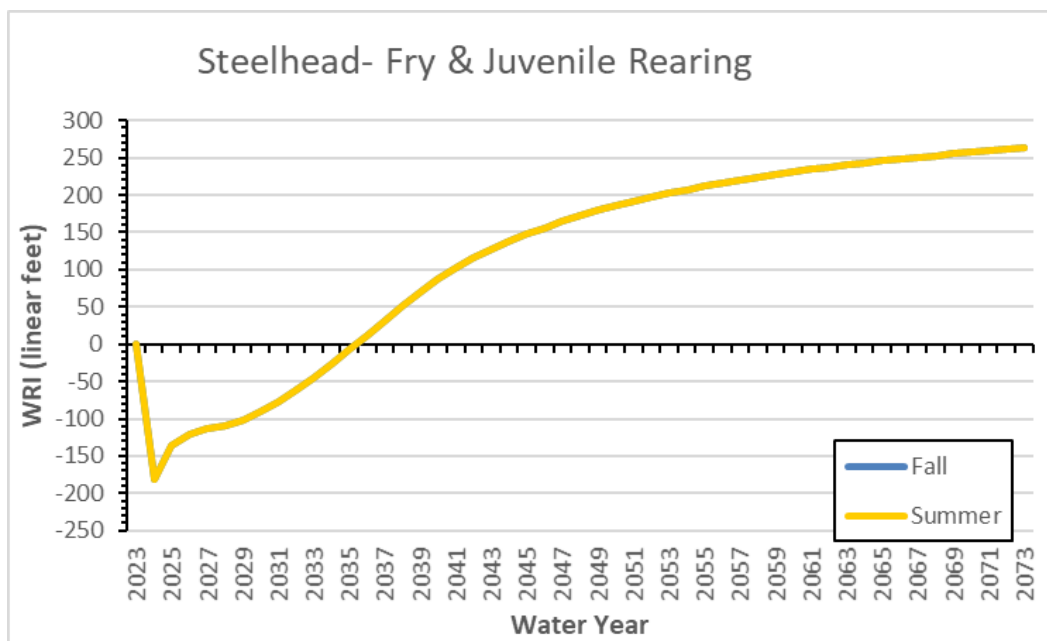


Figure 5

Yearly SAM-modeled WRI values for steelhead juvenile migration in each season. Values apply to any steelhead ESU that occurs in the American River Contract 3A rea

References

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Appendix D

Air Quality/Greenhouse Gas Emissions/Health Risk Assessment Modeling Data

Appendix D

- ▶ *Air Quality, GHG, and Energy Mass Emissions Calculations*
- ▶ *Health Risk Assessment Inputs and Outputs*
 - Scenario 1: Haul Route North
 - Scenario 2: Haul Route South

Air Quality, GHG, and Energy Mass Emissions Calculations

Month	2022-2023 Construction Season Forecast
	Site 1-1
November	1. Tree removal and pruning (Preferable to do in November/December before migration period)
December	
January	
February	
March	No activity
April	
May	2. Site Preparation (Temporary BMPs, access roads, staging areas, and pedestrian trail reroutes) 3. Excavation 4. Bedding 5. Riprap installation 6. Soil-Filled Riprap 7. Planting Bench Soil 8. IWM anchorages
June	
July	
August	
September	
October	
November	
December	9. Install rock (Aggregate Base) 10. Fine grading 11. Planting; Monitoring/Maintenance
January	
February	
March	
April	
May	
June	
July	
August	
September	

Construction Schedule

Site 1-1							
Activity Number	Start Date	End Date	Total Days	Equipment Used	Material Moved (cy)	One-Mile Dump Truck Trips - 10 CY	Activity
1	11/1/2022	12/31/2022					Tree Removal
2	5/1/2023	10/31/2023					Site Preparation
3	5/1/2023	10/31/2023	12	2 excavator, 4 dump truck, 2 dose, 2 skid steer, 1 roller or grader, 5 pickup trucks	3500	29	Excavation
4	5/1/2023	10/31/2023	12	12 dump truck, 1 excavator, 1 doser, 3 skid steer, 3 sheepsfoot roller, 4 pickup truck	7520	63	Bedding
5	5/1/2023	10/31/2023	34	15 dump truck, 2 excavator, 1 doser, 2 skid steer, 1 grader, 1 55-ton crane, 4 pickup truck	23400	69	Riprap
6	5/1/2023	10/31/2023	14	9 dump truck, 1 excavator, 1 doser, 2 skid steer, 3 sheepsfoot roller, 4 pickup truck	10000	71	Soil-filled riprap
7	5/1/2023	10/31/2023	26	12 dump truck, 2 excavator, 1 doser, 2 skid steer, 3 pickup truck	21000	81	Planting bench fill
8	5/1/2023	10/31/2023	10	6 dump truck, 1 flatbed truck	160 trees	4	IWM anchorages
9	11/1/2023	11/31/2023	9	1 dump truck, 1 excavator, 1 doser, 1 skid steer, 1 flatbed truck, 2 pickup truck	4100	46	Aggregate base
10	11/1/2023	11/31/2023					Fine grading
11	12/1/2023	9/30/2024					Planting; Monitoring/Maintenance

Construction-Related Energy Consumption

Site 1-1

Heavy-Duty Equipment

Equipment Type	Total Usage Hours	HP	LF
Grader	257.4	187	0.41
Dozer	1178.1	247	0.4
Skid Steer Loader	2504.7	65	0.37
Excavator	1574.1	158	0.38
Rollers	455.4	80	0.38
Total			

Haul Truck Trips

Vehicle Type	Total VMT	Gallons of Diesel
Dump Trucks (10 CY)	61,900	10,555
Pick-Up Truck	7,072	189

Worker Commute Trips

Vehicle Type	Total VMT	Gallons of Gasoline
Mixed LDA/LDT	54,780	1,916

Site Total

Gallons of Diesel	Gallons of Gasoline
193,578	1,916

Average Daily Factor	Diesel Fuel Usage (Gallons)
0.6	11,841
0.6	69,838
0.6	36,143
0.6	56,705
0.6	8,306
	182,833

Maximum Daily Emissions (with Tier 4 Equipments)

Site 1-1

Date Range	Activity Number	ROG (lb/day)	CO (lb/day)	NOx (lb/day)	PM10 Exhaust (lb/day)	PM10 Fugitive (lb/day)	PM10 Total (lb/day)	PM2.5 Exhaust (lb/day)	PM2.5 Fugitive (lb/day)	PM2.5 Total (lb/day)
November-Feb	1	0.0233	0.19627	0.01507	0.00032	0.02804	0.02836	0.00029	0.00280	0.00310
May-October	6	4.1	19.8	175.5	0.2	46.5	46.7	1.1	4.6	5.7
November	10	0.0	0.00294	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Annual Total Emissions

Site 1-1 (2022 & 2023)

Year	ROG (tons/year)	CO (tons/year)	NOx (tons/year)	PM10 (tons/year)	PM2.5 (tons/year)	CO2 (MT/year)	CH4 (MT/year)	N2O (MT/year)	MTCO2e/year
2022	0.00322	0.02709	0.00208	0.00005	0.00004	6.38476	0.00025	0.00021	6
2023	0.2685	3.2218	9.7596	0.0755380	0.0657154	3,535.580	0.077345	0.481309	3,536

Date Range	Activity Number	Equipment Type	Total Equipment Number	HP	LF	Hours/Day	Total Days	ROG (g/hr-hr)	ROG (lb/day)	ROG (lbm/yr)	CO (lb/hr-hr)	CO (lbm/yr)	NOx (g/hr-hr)	NOx (lb/day)	NOx (lbm/yr)	Exhaust										Fugitive Dust ¹										CO2 (lb/hr-hr)	CO2 (lb/day)	CO2 (lbm/yr)	CH ₄ (g/hr-hr)	CH ₄ (lb/day)	CH ₄ (lbm/yr)	N2O (g/hr-hr)	N2O (lb/day)	N2O (lbm/yr)
																PM10 (lb/ton-yr)	PM10 (lb/ton-yr)	PM10 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM10 (lb/ton-yr)	PM10 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM10 (lb/ton-yr)	PM10 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM2.5 (lb/ton-yr)	CO2 (lbm/yr)	CO2 (lbm/yr)	CO2 (lbm/yr)	CH ₄ (lbm/yr)	CH ₄ (lbm/yr)	CH ₄ (lbm/yr)	N2O (lbm/yr)	N2O (lbm/yr)	N2O (lbm/yr)			
May - October	3	Grader	0.5	187	0.41	11	12	0.135	0.25	0.00	2.60	4.35	0.00	0.30	0.50	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	474.338	793.983	7.22673125	0.5334	0.25687	0.0033073	0.00477392	0.007151	3.8036-05										
	3	Dozer	1.0	247	0.44	11	12	0.135	0.63	0.00	2.60	11.21	0.07	0.30	1.23	0.01	0.02	0.06	0.01	0.01	0.00	0.00	0.00	0.00	0.00	474.6166	2046.914	48.05106893	0.5335	0.642011	0.008084	0.00497392	0.018413	0.0001003										
	3	Excavator	1.0	150	0.39	11	12	0.135	0.39	0.00	3.70	9.70	0.06	0.30	0.79	0.00	0.00	0.04	0.00	0.01	0.04	0.00	0.00	0.00	0.00	472.1971	1237.159	17.65411311	0.5327	0.400329	0.001793	0.00477392	0.011201	0.007076										
	4	Excavator	0.0	150	0.39	11	34	0.135	0.20	0.00	3.70	4.85	0.00	0.30	0.39	0.01	0.02	0.02	0.00	0.01	0.02	0.00	0.00	0.00	0.00	472.1971	618.7094	12.50499912	0.5327	0.202301	0.001006	0.00477392	0.005603	0.00176										
	4	Dozer	0.0	247	0.44	11	34	0.135	0.12	0.00	2.60	5.61	0.10	0.30	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	474.6166	1021.407	18.00477392	0.5328	0.110001	0.0003048	0.00497392	0.000010	0.000141										
	4	Skid Steer Loader	2.2	60	0.17	11	34	0.137	0.29	0.11	3.70	5.81	0.10	0.13	1.14	0.01	0.00	0.03	0.00	0.02	0.03	0.00	0.00	0.00	0.00	472.1971	743.1740	18.00477392	0.5327	0.246661	0.001704	0.00477392	0.00671	0.0001039										
	4	Roller	0.0	80	0.38	11	34	0.135	0.30	0.00	3.70	2.61	0.04	0.30	0.30	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	472.1971	111.301	3.20089666	0.5327	0.101174	0.0001301	0.00477392	0.001018	0.00176										
	5	Excavator	1.0	150	0.38	11	34	0.135	0.39	0.00	3.70	9.70	0.07	0.30	0.79	0.01	0.00	0.04	0.00	0.01	0.04	0.00	0.00	0.00	0.00	472.1971	1237.159	20.19664774	0.5327	0.400329	0.0010141	0.00497392	0.011201	7.1138-04										
	5	Dozer	0.0	247	0.44	11	34	0.135	0.12	0.00	2.60	5.61	0.04	0.30	0.05	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.00	0.00	472.1971	1018.278	11.9419003	0.5327	0.10008	0.000091	0.00477392	0.000116	1.8018-05										
	5	Skid Steer Loader	2.2	60	0.17	11	34	0.137	0.29	0.11	3.70	5.81	0.04	0.13	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	472.1971	743.1740	7.43777394	0.5327	0.246661	0.00117	0.00477392	0.00671	4.7746-05										
	5	Grader	0.0	187	0.41	11	12	0.135	0.25	0.00	2.60	4.35	0.03	0.30	0.50	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	472.1971	790.1374	8.395277708	0.5327	0.232326	0.0010222	0.00497392	0.007151	4.5424-05										
	6	Excavator	0.0	150	0.38	11	12	0.135	0.20	0.00	3.70	4.85	0.00	0.30	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	472.1971	618.7094	4.415348801	0.5327	0.202301	0.0003048	0.00497392	0.001018	3.0486-05										
	6	Dozer	0.0	247	0.44	11	12	0.135	0.12	0.00	2.60	5.61	0.03	0.30	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	472.1971	1018.278	11.95139388	0.5327	0.10008	0.001793	0.00477392	0.000116	5.0346-05										
	6	Skid Steer Loader	1.0	60	0.17	11	12	0.135	0.20	0.00	3.70	3.88	0.00	0.13	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	472.1971	495.7261	2.83661666	0.5327	0.10008	0.0001301	0.00477392	0.000116	4.4056-05										
	6	Roller	0.0	80	0.38	11	12	0.135	0.30	0.00	3.70	2.65	0.03	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	472.1971	111.301	1.114097319	0.5327	0.101017	0.000515	0.00497392	0.000181	1.5446-05										
	7	Excavator	1.0	150	0.38	11	26	0.135	0.39	0.15	3.70	9.70	0.13	0.30	0.79	0.01	0.00	0.04	0.00	0.01	0.04	0.00	0.00	0.00	0.00	472.1971	1237.159	38.25058095	0.5327	0.400329	0.0047237	0.00497392	0.011201	0.0001137										
	7	Dozer	0.0	247	0.44	11	26	0.135	0.12	0.00	2.60	5.61	0.07	0.30	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	472.1971	1018.278	23.9466842	0.5327	0.10008	0.0008101	0.00497392	0.000218	0.0001007										
	7	Skid Steer Loader	1.0	60	0.17	11	26	0.137	0.20	0.00	3.70	3.88	0.05	0.13	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	472.1971	495.7261	6.147549428	0.5327	0.10008	0.000806	0.00497392	0.000488	3.2926-05										
	9	Excavator	0.0	150	0.38	11	9	0.135	0.20	0.00	3.70	4.85	0.00	0.30	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	472.1971	618.7094	0.310146051	0.5327	0.202301	0.000000	0.00497392	0.000001	2.2865-05										
November	9	Dozer	0.0	247	0.44	11	9	0.135	0.12	0.00	2.60	5.61	0.00	0.30	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	472.1971	1018.278	8.963149913	0.5327	0.10008	0.0013442	0.00497392	0.000116	3.7632-05										
	9	Skid Steer Loader	0.0	60	0.17	11	9	0.137	0.10	0.00	3.70	3.96	0.00	0.13	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	472.1971	247.8062	0.511147138	0.5327	0.10008	0.000077	0.00497392	0.000241	0.000241	0.000000									

Date Range	Activity Number	Equipment Type	Equipment Number	HP	LF	Hours/Day	Total Days	ROG (g/hr-hr)	ROG (lb/day)	ROG (lbm/yr)	CO (lb/hr-hr)	CO (lbm/yr)	NOx (g/hr-hr)	NOx (lb/day)	NOx (lbm/yr)	Exhaust										Fugitive Dust ¹										CO2 (lb/hr-hr)	CO2 (lb/day)	CO2 (lbm/yr)	CH ₄ (g/hr-hr)	CH ₄ (lb/day)	CH ₄ (lbm/yr)	N2O (g/hr-hr)	N2O (lb/day)	N2O (lbm/yr)
																PM10 (lb/ton-yr)	PM10 (lb/ton-yr)	PM10 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM10 (lb/ton-yr)	PM10 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM10 (lb/ton-yr)	PM10 (lb/ton-yr)	PM2.5 (lb/ton-yr)	PM2.5 (lb/ton-yr)	CO2 (lbm/yr)	CO2 (lbm/yr)	CO2 (lbm/yr)	CH ₄ (lbm/yr)	CH ₄ (lbm/yr)	CH ₄ (lbm/yr)	N2O (lbm/yr)	N2O (lbm/yr)	N2O (lbm/yr)			
May - October	3	Grader	0.20	187	0.41	11	12	0.3600	0.06	0.00	0.7325	0.3610888	0.001420444	0.8881	0.12191914	0.004837615	0.113472	0.02299571	0.000138	0.121386	0.00139994	0.000138	0.000138	0.000138	0.000138	474.1708	68.77033	0.479595705	0.5334	0.0382021	0.0001532	0.00497392	0.000794	4.9156-06										
	3	Dozer	0.20	247	0.44	11	12	0.4800	0.23	0.00	2.016	0.98023004	0.000910360	1.044	0.241825894	0.004150917	0.240	0.114747172	0.00068661	0.2320	0.105412001	0.00043034	0.00043034	0.00043034	0.00043034	0.00043034	474.6166	227.4340	1.23791977	0.5334	0.0733577	0.0004004	0.00497392	0.001048	1.1154-05									
	3	Skid Steer Loader	0.20	60	0.17	11	12	0.1604	0.02	0.00	3.770	0.38177701	0.001008886	1.044	0.253021241	0.00151119	0.000100000	0.000100000	0.000100000	0.000100000	0.000100000	0.000100000	0.000100000	0.000100000	0.000100000	472.1971	418.7094	1.23791977	0.5327	0.0382021	0.0001532	0.00497392	0.000794	1.1154-05										
	4	Excavator	0.20	150	0.38	11	12	0.1501	0.00	0.00	0.070	0.895162411	0.000170910	1.078	0.448001915	0.002913018	0.0																											

Health Risk Assessment Scenario 1: Haul Route North

Haul trucks would travel along the top of the levee crossing the paved bicycle path adjacent to the 28th and B Street Skate Park. Bicycle traffic would be controlled by a dedicated flagger during construction to prevent collisions from occurring. Haul trucks would enter the main ingress point and deliver their loads along Site 1-1 and then continue along the top of the levee east to exit at Glenn Hall Park and continue on Carlson Drive to H Street. Haul trucks would travel north along Howe Avenue to I-80. This emissions scenario included 100 percent of the haul truck trips traveling north on Howe Avenue to I-80.

Control Pathway

AERMOD

Dispersion Options

Titles C:\Users\shaurya.johari\OneDrive - Ascent Environmental\Desktop\Proj	
Dispersion Options <input checked="" type="checkbox"/> Regulatory Default <input type="checkbox"/> Non-Default Options	Dispersion Coefficient Urban Population: Name (Optional): Roughness Length:
	Output Type <input checked="" type="checkbox"/> Concentration <input type="checkbox"/> Total Deposition (Dry & Wet) <input type="checkbox"/> Dry Deposition <input type="checkbox"/> Wet Deposition
	Plume Depletion <input type="checkbox"/> Dry Removal <input type="checkbox"/> Wet Removal
	Output Warnings <input type="checkbox"/> No Output Warnings <input type="checkbox"/> Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type PM10	Exponential Decay <input checked="" type="checkbox"/> Half-life of 4 hrs will be used
Averaging Time Options Hours <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input type="checkbox"/> 8 <input type="checkbox"/> 12 <input type="checkbox"/> 24 <input type="checkbox"/> Month <input checked="" type="checkbox"/> Period <input type="checkbox"/> Annual	Terrain Height Options <input type="checkbox"/> Flat <input checked="" type="checkbox"/> Elevated SO: Meters RE: Meters TG: Meters
Flagpole Receptors <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Default Height = 0.00 m	

Optional Files



Re-Start File



Init File



Multi-Year Analyses



Event Input File



Error Listing File

Detailed Error Listing File

Filename: Scenario1N.err

Source Pathway - Source Inputs

AERMOD

Source Pathway - Source Inputs

AERMOD

Volume Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL3673	634994.79	4272245.06	8.21	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3674	635004.79	4272245.06	7.93	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3675	635014.79	4272245.06	6.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3676	635024.79	4272245.06	5.62	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3874	634994.79	4272235.06	8.41	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3875	635004.79	4272235.06	8.07	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3876	635014.79	4272235.06	7.39	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3877	635024.79	4272235.06	6.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3878	635034.79	4272235.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3879	635044.79	4272235.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3880	635054.79	4272235.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4075	634994.79	4272225.06	8.60	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4076	635004.79	4272225.06	8.21	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL4077	635014.79	4272225.06	8.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4078	635024.79	4272225.06	7.79	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4079	635034.79	4272225.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4080	635044.79	4272225.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4081	635054.79	4272225.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4082	635064.79	4272225.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4083	635074.79	4272225.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4276	634994.79	4272215.06	8.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4277	635004.79	4272215.06	8.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4278	635014.79	4272215.06	8.37	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4279	635024.79	4272215.06	8.14	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4280	635034.79	4272215.06	7.83	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4281	635044.79	4272215.06	6.74	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

										AERMOD
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL4282	635054.79	4272215.06	5.65	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4283	635064.79	4272215.06	4.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4284	635074.79	4272215.06	4.07	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4285	635084.79	4272215.06	3.54	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4286	635094.79	4272215.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4478	635004.79	4272205.06	9.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4479	635014.79	4272205.06	8.74	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4480	635024.79	4272205.06	8.47	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4481	635034.79	4272205.06	8.17	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4482	635044.79	4272205.06	7.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4483	635054.79	4272205.06	6.87	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4484	635064.79	4272205.06	6.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4485	635074.79	4272205.06	5.11	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL4486	635084.79	4272205.06	4.04	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4487	635094.79	4272205.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4488	635104.79	4272205.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4680	635014.79	4272195.06	9.11	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4681	635024.79	4272195.06	8.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4682	635034.79	4272195.06	8.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4683	635044.79	4272195.06	8.30	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4684	635054.79	4272195.06	8.10	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4685	635064.79	4272195.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4686	635074.79	4272195.06	6.15	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4687	635084.79	4272195.06	4.53	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4688	635094.79	4272195.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4689	635104.79	4272195.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL4690	635114.79	4272195.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4882	635024.79	4272185.06	9.12	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4883	635034.79	4272185.06	8.82	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4884	635044.79	4272185.06	8.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4885	635054.79	4272185.06	8.34	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4886	635064.79	4272185.06	8.03	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4887	635074.79	4272185.06	6.87	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4888	635084.79	4272185.06	5.72	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4889	635094.79	4272185.06	4.65	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4890	635104.79	4272185.06	4.62	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4891	635114.79	4272185.06	4.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4892	635124.79	4272185.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5085	635044.79	4272175.06	8.85	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL5086	635054.79	4272175.06	8.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5087	635064.79	4272175.06	8.27	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5088	635074.79	4272175.06	7.59	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5089	635084.79	4272175.06	6.91	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5090	635094.79	4272175.06	6.27	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5091	635104.79	4272175.06	6.20	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5092	635114.79	4272175.06	6.14	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5093	635124.79	4272175.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5094	635134.79	4272175.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5287	635054.79	4272165.06	8.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5288	635064.79	4272165.06	8.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5289	635074.79	4272165.06	8.31	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5290	635084.79	4272165.06	8.10	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

										AERMOD
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL5291	635094.79	4272165.06	7.90	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5292	635104.79	4272165.06	7.79	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5293	635114.79	4272165.06	7.69	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5294	635124.79	4272165.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5295	635134.79	4272165.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5296	635144.79	4272165.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5297	635154.79	4272165.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5490	635074.79	4272155.06	8.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5491	635084.79	4272155.06	8.24	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5492	635094.79	4272155.06	8.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5493	635104.79	4272155.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5494	635114.79	4272155.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5495	635124.79	4272155.06	7.63	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL5496	635134.79	4272155.06	6.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5497	635144.79	4272155.06	5.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5498	635154.79	4272155.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5499	635164.79	4272155.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5693	635094.79	4272145.06	8.12	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5694	635104.79	4272145.06	8.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5695	635114.79	4272145.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5696	635124.79	4272145.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5697	635134.79	4272145.06	7.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5698	635144.79	4272145.06	6.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5699	635154.79	4272145.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5700	635164.79	4272145.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5701	635174.79	4272145.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL5895	635104.79	4272135.06	8.12	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5896	635114.79	4272135.06	8.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5897	635124.79	4272135.06	7.91	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5898	635134.79	4272135.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5899	635144.79	4272135.06	7.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5900	635154.79	4272135.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5901	635164.79	4272135.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5902	635174.79	4272135.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5903	635184.79	4272135.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6097	635114.79	4272125.06	8.22	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6098	635124.79	4272125.06	8.11	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6099	635134.79	4272125.06	7.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6100	635144.79	4272125.06	7.84	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL6101	635154.79	4272125.06	7.63	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6102	635164.79	4272125.06	6.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6103	635174.79	4272125.06	5.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6104	635184.79	4272125.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6105	635194.79	4272125.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6298	635114.79	4272115.06	8.42	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6299	635124.79	4272115.06	8.31	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6300	635134.79	4272115.06	8.15	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6301	635144.79	4272115.06	7.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6302	635154.79	4272115.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6303	635164.79	4272115.06	7.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6304	635174.79	4272115.06	6.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6305	635184.79	4272115.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

										AERMOD
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL6306	635194.79	4272115.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6307	635204.79	4272115.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6498	635104.79	4272105.06	8.73	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6499	635114.79	4272105.06	8.63	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6500	635124.79	4272105.06	8.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6501	635134.79	4272105.06	8.31	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6502	635144.79	4272105.06	8.11	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6503	635154.79	4272105.06	7.91	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6504	635164.79	4272105.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6505	635174.79	4272105.06	7.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6506	635184.79	4272105.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6507	635194.79	4272105.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6508	635204.79	4272105.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

										AERMOD
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL6509	635214.79	4272105.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6699	635104.79	4272095.06	8.89	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6700	635114.79	4272095.06	8.76	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6701	635124.79	4272095.06	8.62	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6702	635134.79	4272095.06	8.41	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6703	635144.79	4272095.06	8.21	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6704	635154.79	4272095.06	8.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6705	635164.79	4272095.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6706	635174.79	4272095.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6707	635184.79	4272095.06	7.63	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6708	635194.79	4272095.06	6.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6709	635204.79	4272095.06	5.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6710	635214.79	4272095.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL6711	635224.79	4272095.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6900	635104.79	4272085.06	9.06	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6901	635114.79	4272085.06	8.89	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6902	635124.79	4272085.06	8.72	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6903	635134.79	4272085.06	8.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6907	635174.79	4272085.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6908	635184.79	4272085.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6909	635194.79	4272085.06	7.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6910	635204.79	4272085.06	6.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6911	635214.79	4272085.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6912	635224.79	4272085.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6913	635234.79	4272085.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7101	635104.79	4272075.06	9.23	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL7102	635114.79	4272075.06	9.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7103	635124.79	4272075.06	8.82	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7109	635184.79	4272075.06	7.91	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7110	635194.79	4272075.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7111	635204.79	4272075.06	7.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7112	635214.79	4272075.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7113	635224.79	4272075.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7114	635234.79	4272075.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7115	635244.79	4272075.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7302	635104.79	4272065.06	9.29	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7303	635114.79	4272065.06	9.06	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7311	635194.79	4272065.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7312	635204.79	4272065.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL7313	635214.79	4272065.06	7.63	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7314	635224.79	4272065.06	6.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7315	635234.79	4272065.06	5.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7316	635244.79	4272065.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7317	635254.79	4272065.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7513	635204.79	4272055.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7514	635214.79	4272055.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7515	635224.79	4272055.06	7.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7516	635234.79	4272055.06	6.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7517	635244.79	4272055.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7518	635254.79	4272055.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7519	635264.79	4272055.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7716	635224.79	4272045.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL7717	635234.79	4272045.06	7.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7718	635244.79	4272045.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7719	635254.79	4272045.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7720	635264.79	4272045.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7721	635274.79	4272045.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7918	635234.79	4272035.06	7.84	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7919	635244.79	4272035.06	7.63	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7920	635254.79	4272035.06	6.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7921	635264.79	4272035.06	5.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7922	635274.79	4272035.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7923	635284.79	4272035.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8120	635244.79	4272025.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8121	635254.79	4272025.06	7.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL8122	635264.79	4272025.06	6.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8123	635274.79	4272025.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8124	635284.79	4272025.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8125	635294.79	4272025.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8322	635254.79	4272015.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8323	635264.79	4272015.06	7.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8324	635274.79	4272015.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8325	635284.79	4272015.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8326	635294.79	4272015.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8327	635304.79	4272015.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8524	635264.79	4272005.06	7.94	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8525	635274.79	4272005.06	7.73	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8526	635284.79	4272005.06	6.64	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

										AERMOD
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL8527	635294.79	4272005.06	5.55	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8528	635304.79	4272005.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8529	635314.79	4272005.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8726	635274.79	4271995.06	7.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8727	635284.79	4271995.06	7.32	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8728	635294.79	4271995.06	6.67	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8729	635304.79	4271995.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8730	635314.79	4271995.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8731	635324.79	4271995.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8928	635284.79	4271985.06	8.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8929	635294.79	4271985.06	7.79	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8930	635304.79	4271985.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8931	635314.79	4271985.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL8932	635324.79	4271985.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8933	635334.79	4271985.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9130	635294.79	4271975.06	8.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9131	635304.79	4271975.06	7.73	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9132	635314.79	4271975.06	6.68	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9133	635324.79	4271975.06	5.62	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9134	635334.79	4271975.06	4.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9135	635344.79	4271975.06	4.07	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9332	635304.79	4271965.06	7.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9333	635314.79	4271965.06	7.39	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9334	635324.79	4271965.06	6.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9335	635334.79	4271965.06	6.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9336	635344.79	4271965.06	5.11	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL9337	635354.79	4271965.06	4.04	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9534	635314.79	4271955.06	8.11	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9535	635324.79	4271955.06	8.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9536	635334.79	4271955.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9537	635344.79	4271955.06	6.15	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9538	635354.79	4271955.06	4.53	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9539	635364.79	4271955.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9736	635324.79	4271945.06	8.15	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9737	635334.79	4271945.06	7.93	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9738	635344.79	4271945.06	6.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9739	635354.79	4271945.06	5.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9740	635364.79	4271945.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9741	635374.79	4271945.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

										AERMOD
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL9938	635334.79	4271935.06	8.07	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9939	635344.79	4271935.06	7.39	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9940	635354.79	4271935.06	6.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9941	635364.79	4271935.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9942	635374.79	4271935.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9943	635384.79	4271935.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10140	635344.79	4271925.06	8.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10141	635354.79	4271925.06	7.79	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10142	635364.79	4271925.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10143	635374.79	4271925.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10144	635384.79	4271925.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10145	635394.79	4271925.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10342	635354.79	4271915.06	8.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL10343	635364.79	4271915.06	7.73	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10344	635374.79	4271915.06	6.64	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10345	635384.79	4271915.06	5.55	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10346	635394.79	4271915.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10347	635404.79	4271915.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10544	635364.79	4271905.06	7.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10545	635374.79	4271905.06	7.32	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10546	635384.79	4271905.06	6.67	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10547	635394.79	4271905.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10548	635404.79	4271905.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10549	635414.79	4271905.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10746	635374.79	4271895.06	8.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10747	635384.79	4271895.06	7.79	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL10748	635394.79	4271895.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10749	635404.79	4271895.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10750	635414.79	4271895.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10751	635424.79	4271895.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10948	635384.79	4271885.06	8.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10949	635394.79	4271885.06	7.73	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10950	635404.79	4271885.06	6.64	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10951	635414.79	4271885.06	5.55	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10952	635424.79	4271885.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10953	635434.79	4271885.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11150	635394.79	4271875.06	7.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11151	635404.79	4271875.06	7.32	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11152	635414.79	4271875.06	6.67	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL11153	635424.79	4271875.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11154	635434.79	4271875.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11155	635444.79	4271875.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11352	635404.79	4271865.06	8.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11353	635414.79	4271865.06	7.79	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11354	635424.79	4271865.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11355	635434.79	4271865.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11356	635444.79	4271865.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11357	635454.79	4271865.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11554	635414.79	4271855.06	7.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11555	635424.79	4271855.06	7.63	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11556	635434.79	4271855.06	6.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11557	635444.79	4271855.06	5.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL11558	635454.79	4271855.06	4.55	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11559	635464.79	4271855.06	4.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11756	635424.79	4271845.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11757	635434.79	4271845.06	7.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11758	635444.79	4271845.06	6.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11759	635454.79	4271845.06	6.07	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11760	635464.79	4271845.06	6.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11761	635474.79	4271845.06	5.94	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11958	635434.79	4271835.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11959	635444.79	4271835.06	7.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11960	635454.79	4271835.06	7.59	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11961	635464.79	4271835.06	7.49	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11962	635474.79	4271835.06	7.39	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL11963	635484.79	4271835.06	7.18	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12160	635444.79	4271825.06	7.78	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12161	635454.79	4271825.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12162	635464.79	4271825.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12163	635474.79	4271825.06	7.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12164	635484.79	4271825.06	7.33	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12165	635494.79	4271825.06	6.35	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12362	635454.79	4271815.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12363	635464.79	4271815.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12364	635474.79	4271815.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12365	635484.79	4271815.06	7.47	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12366	635494.79	4271815.06	6.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12367	635504.79	4271815.06	6.38	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

										AERMOD
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL12564	635464.79	4271805.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12565	635474.79	4271805.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12566	635484.79	4271805.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12567	635494.79	4271805.06	7.50	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12568	635504.79	4271805.06	7.39	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12569	635514.79	4271805.06	7.29	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12766	635474.79	4271795.06	7.78	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12767	635484.79	4271795.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12768	635494.79	4271795.06	7.65	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12769	635504.79	4271795.06	7.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12770	635514.79	4271795.06	7.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12771	635524.79	4271795.06	7.41	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12772	635534.79	4271795.06	7.30	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL12969	635494.79	4271785.06	7.78	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12970	635504.79	4271785.06	7.75	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12971	635514.79	4271785.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12972	635524.79	4271785.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12973	635534.79	4271785.06	7.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12974	635544.79	4271785.06	7.37	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13171	635504.79	4271775.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13172	635514.79	4271775.06	7.91	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13173	635524.79	4271775.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13174	635534.79	4271775.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13175	635544.79	4271775.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13176	635554.79	4271775.06	7.50	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13177	635564.79	4271775.06	7.39	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL13373	635514.79	4271765.06	8.11	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13374	635524.79	4271765.06	7.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13375	635534.79	4271765.06	7.84	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13376	635544.79	4271765.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13377	635554.79	4271765.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13378	635564.79	4271765.06	7.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13379	635574.79	4271765.06	7.34	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13380	635584.79	4271765.06	6.38	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13576	635534.79	4271755.06	7.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13577	635544.79	4271755.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13578	635554.79	4271755.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13579	635564.79	4271755.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13580	635574.79	4271755.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL13581	635584.79	4271755.06	7.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13582	635594.79	4271755.06	6.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13778	635544.79	4271745.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13779	635554.79	4271745.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13780	635564.79	4271745.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13781	635574.79	4271745.06	7.62	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13782	635584.79	4271745.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13783	635594.79	4271745.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13980	635554.79	4271735.06	8.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13981	635564.79	4271735.06	7.91	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13982	635574.79	4271735.06	7.82	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13983	635584.79	4271735.06	7.78	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13984	635594.79	4271735.06	7.75	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL14183	635574.79	4271725.06	8.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL14184	635584.79	4271725.06	7.95	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL14185	635594.79	4271725.06	7.88	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL14385	635584.79	4271715.06	8.12	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL14386	635594.79	4271715.06	8.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD

Line Volume Sources

Source Type: LINE VOLUME

Source: SLINE1

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.44	1.00000	Surface-Based	635627.22	4271668.87	8.03	0.00
			635678.48	4271627.41	7.93	0.00
			635713.15	4271598.81	8.05	0.00
			635786.46	4271555.07	7.97	0.00
			635900.70	4271508.53	7.94	0.00
			635992.20	4271481.05	7.94	0.00
			636109.63	4271456.57	7.95	0.00
			636163.79	4271449.98	7.95	0.00
			636275.46	4271432.82	7.92	0.00
			636374.42	4271416.33	7.95	0.00
			636417.88	4271413.69	7.93	0.00
			636492.77	4271413.03	8.01	0.00
			636656.59	4271426.88	9.14	0.00
			636871.89	4271447.34	9.14	0.00
			636954.81	4271453.27	9.44	0.00
			636990.25	4271447.34	9.76	0.00
			637018.75	4271437.79	9.79	0.00
			637061.55	4271420.63	10.36	0.00
			637136.44	4271361.25	9.75	0.00
			637160.51	4271342.78	9.78	0.00
			637028.78	4271181.79	9.28	0.00
			636849.57	4270963.98	9.45	0.00
			636746.21	4270837.25	9.16	0.00
			636625.64	4270690.52	9.14	0.00
			636594.21	4270647.63	9.33	0.00
			636572.81	4270590.87	10.51	0.00
			636564.11	4270547.98	10.37	0.00
			636560.77	4270509.70	10.37	0.00
			636576.32	4270399.54	10.67	0.00
			636598.10	4270344.74	10.67	0.00

Source Pathway - Source Inputs

AERMOD

Source Type: LINE VOLUME

Source: SLINE1

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.44	1.00000	Surface-Based	636620.98	4270312.50	10.67	0.00
			636691.26	4270254.85	10.68	0.00
			636730.47	4270232.29	10.67	0.00
			636755.52	4270216.17	10.67	0.00
			636780.57	4270187.15	10.67	0.00
			636807.80	4270149.54	10.67	0.00
			636850.74	4269993.51	10.85	0.00
			636868.83	4269925.08	11.42	0.00
			636920.08	4269843.28	12.13	0.00
			636974.55	4269921.97	11.98	0.00
			637102.48	4270032.12	10.05	0.00
			637212.53	4270075.31	8.89	0.00
			637394.93	4270112.50	4.80	0.00
			637565.28	4270158.61	9.97	0.00
			637616.57	4270188.32	10.67	0.00
			637687.62	4270268.52	10.28	0.00
			637756.97	4270371.19	10.02	0.00
			637878.13	4270572.07	10.67	0.00
			637957.65	4270668.25	10.65	0.00
			638019.11	4270707.53	10.67	0.00

Source Pathway - Source Inputs

AERMOD

Source Type: LINE VOLUME

Source: SLINE4

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.44	1.00000	Surface-Based	634976.01	4272290.84	7.94	0.00
			634931.09	4272334.03	7.68	0.00
			634891.35	4272344.40	7.91	0.00
			634858.53	4272358.22	7.98	0.00
			634817.06	4272382.41	7.93	0.00
			634749.67	4272392.78	7.68	0.00
			634557.89	4272370.32	7.93	0.00
			634258.98	4272251.10	7.92	0.00
			634060.29	4272161.26	8.14	0.00
			634003.27	4272131.88	8.86	0.00
			633960.08	4272097.33	9.81	0.00
			633942.80	4272067.96	10.05	0.00
			633923.79	4271986.75	7.89	0.00
			633887.51	4271953.92	6.27	0.00
			633858.14	4271943.56	7.21	0.00
			633808.03	4271936.64	7.32	0.00
			633783.84	4271917.64	7.32	0.00
			633692.27	4271672.29	10.51	0.00
			633544.70	4271212.56	7.32	0.00
			633720.57	4271149.54	7.62	0.00
			633847.18	4271475.92	7.63	0.00
			633965.35	4271613.78	6.88	0.00
			634111.66	4271746.02	7.61	0.00
			634294.54	4271813.55	6.69	0.00
			634508.37	4271852.94	7.64	0.00
			634964.17	4271923.28	7.75	0.00
			635054.20	4271954.23	8.87	0.00
			635172.38	4272047.08	8.38	0.00
			635238.09	4272141.44	3.05	0.00
			635268.93	4272217.82	3.13	0.00
			635551.90	4273200.88	7.83	0.00

Source Pathway - Source Inputs

AERMOD

Source Type: LINE VOLUME

Source: SLINE4

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.44	1.00000	Surface-Based	635551.56	4273300.41	8.54	0.00
			635506.87	4273347.82	8.81	0.00
			635455.50	4273332.65	8.84	0.00
			635439.49	4273303.60	8.47	0.00
			635438.85	4273260.82	7.85	0.00
			635475.75	4273226.23	7.69	0.00
			635541.07	4273195.39	7.90	0.00

Source Type: LINE VOLUME

Source: SLINE5

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
7.50	1.00000	Surface-Based	635557.13	4273191.99	7.83	0.00
			635636.74	4273164.09	8.26	0.00
			635751.75	4273125.98	8.82	0.00
			635898.40	4273081.67	7.84	0.00
			636264.39	4273052.96	8.81	0.00
			636833.72	4273017.08	8.84	0.00
			637387.60	4273088.91	12.82	0.00
			637477.19	4273108.38	11.88	0.00
			637547.30	4273057.75	10.63	0.00
			637594.04	4272979.84	9.79	0.00
			637597.94	4272461.78	9.14	0.00
			637597.94	4272356.61	9.37	0.00
			638010.83	4272364.40	12.23	0.00
			638038.95	4270753.29	10.67	0.00

Source Pathway - Source Inputs

AERMOD

Source Type: LINE VOLUME

Source: SLINE6

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.44	1.00000	Surface-Based	633693.06	4271142.88	7.62	1.70
			633499.88	4270557.50	7.62	1.70
			633540.86	4270548.72	7.61	1.70
			633719.40	4271139.95	7.62	1.70

Source Pathway - Source Inputs

AERMOD

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000001	635630.50	4271666.22	7.95	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000002	635637.06	4271660.91	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000003	635643.62	4271655.60	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000004	635650.19	4271650.30	7.95	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000005	635656.75	4271644.99	7.95	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000006	635663.31	4271639.68	7.93	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000007	635669.87	4271634.37	7.91	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000008	635676.43	4271629.06	7.91	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000009	635682.96	4271623.71	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000010	635689.47	4271618.34	8.00	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000011	635695.98	4271612.97	8.03	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000012	635702.49	4271607.60	8.01	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000013	635709.00	4271602.23	8.00	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000014	635715.78	4271597.24	7.98	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000015	635723.03	4271592.92	7.95	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000016	635730.28	4271588.59	7.99	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000017	635737.53	4271584.27	8.03	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000018	635744.77	4271579.94	8.08	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000019	635752.02	4271575.62	8.12	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000020	635759.27	4271571.29	8.11	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000021	635766.52	4271566.97	8.08	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000022	635773.77	4271562.65	8.04	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000023	635781.02	4271558.32	8.02	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000024	635788.40	4271554.28	7.99	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000025	635796.22	4271551.10	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000026	635804.04	4271547.91	7.89	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000027	635811.85	4271544.73	7.85	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000028	635819.67	4271541.54	7.86	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000029	635827.49	4271538.36	7.89	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000030	635835.30	4271535.17	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000031	635843.12	4271531.99	7.95	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000032	635850.93	4271528.80	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000033	635858.75	4271525.62	7.87	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000034	635866.57	4271522.43	7.82	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000035	635874.38	4271519.25	7.78	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000036	635882.20	4271516.07	7.81	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000037	635890.01	4271512.88	7.84	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000038	635897.83	4271509.70	7.88	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000039	635905.82	4271506.99	7.90	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000040	635913.90	4271504.56	7.93	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000041	635921.98	4271502.14	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000042	635930.07	4271499.71	7.93	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000043	635938.15	4271497.28	7.89	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000044	635946.23	4271494.85	7.84	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000045	635954.32	4271492.43	7.80	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000046	635962.40	4271490.00	7.78	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000047	635970.48	4271487.57	7.80	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000048	635978.57	4271485.14	7.82	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000049	635986.65	4271482.72	7.85	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000050	635994.79	4271480.51	7.87	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000051	636003.05	4271478.79	7.89	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000052	636011.31	4271477.07	7.90	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000053	636019.58	4271475.34	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000054	636027.84	4271473.62	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000055	636036.10	4271471.90	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000056	636044.36	4271470.18	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000057	636052.63	4271468.46	7.93	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000058	636060.89	4271466.73	7.87	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000059	636069.15	4271465.01	7.82	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000060	636077.41	4271463.29	7.78	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000061	636085.68	4271461.57	7.76	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000062	636093.94	4271459.84	7.77	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000063	636102.20	4271458.12	7.79	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000064	636110.47	4271456.47	7.81	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000065	636118.85	4271455.45	7.82	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000066	636127.23	4271454.43	7.83	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000067	636135.61	4271453.41	7.84	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000068	636143.99	4271452.39	7.85	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000069	636152.37	4271451.37	7.58	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000070	636160.74	4271450.35	7.41	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000071	636169.10	4271449.16	7.34	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000072	636177.44	4271447.88	7.50	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000073	636185.78	4271446.60	7.75	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000074	636194.12	4271445.32	7.90	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000075	636202.47	4271444.04	7.93	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000076	636210.81	4271442.75	7.95	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000077	636219.15	4271441.47	7.96	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000078	636227.49	4271440.19	7.97	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000079	636235.84	4271438.91	7.98	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000080	636244.18	4271437.63	7.97	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000081	636252.52	4271436.35	7.96	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000082	636260.86	4271435.06	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000083	636269.20	4271433.78	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000084	636277.54	4271432.48	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000085	636285.87	4271431.09	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000086	636294.19	4271429.70	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000087	636302.52	4271428.31	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000088	636310.84	4271426.93	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000089	636319.17	4271425.54	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000090	636327.49	4271424.15	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000091	636335.82	4271422.76	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000092	636344.14	4271421.37	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000093	636352.47	4271419.99	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000094	636360.79	4271418.60	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000095	636369.12	4271417.21	7.91	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000096	636377.48	4271416.14	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000097	636385.90	4271415.63	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000098	636394.33	4271415.12	7.92	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000099	636402.75	4271414.61	7.93	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000100	636411.18	4271414.10	7.93	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000101	636419.61	4271413.67	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000102	636428.05	4271413.60	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000103	636436.48	4271413.53	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000104	636444.92	4271413.45	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000105	636453.36	4271413.38	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000106	636461.80	4271413.30	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000107	636470.24	4271413.23	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000108	636478.68	4271413.15	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000109	636487.12	4271413.08	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000110	636495.55	4271413.27	7.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000111	636503.96	4271413.98	7.93	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000112	636512.37	4271414.69	8.27	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000113	636520.78	4271415.40	8.61	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000114	636529.19	4271416.11	8.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000115	636537.60	4271416.82	9.13	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000116	636546.01	4271417.53	9.13	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000117	636554.42	4271418.24	9.13	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000118	636562.83	4271418.96	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000119	636571.24	4271419.67	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000120	636579.65	4271420.38	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000121	636588.06	4271421.09	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000122	636596.47	4271421.80	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000123	636604.88	4271422.51	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000124	636613.29	4271423.22	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000125	636621.70	4271423.93	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000126	636630.11	4271424.65	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000127	636638.52	4271425.36	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000128	636646.93	4271426.07	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000129	636655.34	4271426.78	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000130	636663.75	4271427.56	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000131	636672.15	4271428.36	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000132	636680.55	4271429.16	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000133	636688.95	4271429.96	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000134	636697.35	4271430.76	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000135	636705.76	4271431.56	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000136	636714.16	4271432.35	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000137	636722.56	4271433.15	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000138	636730.96	4271433.95	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000139	636739.37	4271434.75	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000140	636747.77	4271435.55	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000141	636756.17	4271436.34	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000142	636764.57	4271437.14	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000143	636772.97	4271437.94	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000144	636781.38	4271438.74	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000145	636789.78	4271439.54	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000146	636798.18	4271440.33	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000147	636806.58	4271441.13	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000148	636814.98	4271441.93	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000149	636823.39	4271442.73	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000150	636831.79	4271443.53	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000151	636840.19	4271444.33	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000152	636848.59	4271445.12	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000153	636857.00	4271445.92	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000154	636865.40	4271446.72	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000155	636873.80	4271447.47	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000156	636882.22	4271448.08	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000157	636890.64	4271448.68	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000158	636899.06	4271449.28	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000159	636907.48	4271449.89	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000160	636915.90	4271450.49	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000161	636924.31	4271451.09	9.15	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000162	636932.73	4271451.69	9.21	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000163	636941.15	4271452.30	9.28	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000164	636949.57	4271452.90	9.33	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000165	636957.95	4271452.75	9.41	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000166	636966.28	4271451.35	9.51	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000167	636974.60	4271449.96	9.61	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000168	636982.92	4271448.56	9.71	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000169	636991.21	4271447.01	9.74	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000170	636999.21	4271444.33	9.76	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000171	637007.22	4271441.65	9.78	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000172	637015.22	4271438.97	9.83	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000173	637023.13	4271436.03	9.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000174	637030.96	4271432.89	10.05	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000175	637038.79	4271429.75	10.16	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000176	637046.63	4271426.61	10.27	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000177	637054.46	4271423.47	10.34	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000178	637062.18	4271420.13	10.37	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000179	637068.79	4271414.89	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000180	637075.41	4271409.64	10.32	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000181	637082.02	4271404.40	10.31	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000182	637088.63	4271399.16	10.27	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000183	637095.25	4271393.91	10.21	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000184	637101.86	4271388.67	10.13	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000185	637108.47	4271383.42	10.04	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000186	637115.09	4271378.18	9.99	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000187	637121.70	4271372.94	9.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000188	637128.31	4271367.69	9.88	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000189	637134.93	4271362.45	9.82	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000190	637141.61	4271357.29	9.76	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000191	637148.30	4271352.15	9.77	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000192	637155.00	4271347.01	9.81	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000193	637159.57	4271341.63	9.87	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000194	637154.22	4271335.10	9.89	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000195	637148.88	4271328.56	9.89	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000196	637143.53	4271322.03	9.85	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000197	637138.19	4271315.50	9.80	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000198	637132.84	4271308.97	9.75	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000199	637127.50	4271302.44	9.75	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000200	637122.15	4271295.90	9.75	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000201	637116.81	4271289.37	9.75	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000202	637111.46	4271282.84	9.75	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000203	637106.12	4271276.31	9.75	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000204	637100.77	4271269.78	9.73	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000205	637095.43	4271263.24	9.65	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000206	637090.08	4271256.71	9.57	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000207	637084.74	4271250.18	9.50	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000208	637079.39	4271243.65	9.46	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000209	637074.05	4271237.12	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000210	637068.70	4271230.58	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000211	637063.36	4271224.05	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000212	637058.01	4271217.52	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000213	637052.67	4271210.99	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000214	637047.32	4271204.46	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000215	637041.98	4271197.93	9.43	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000216	637036.64	4271191.39	9.37	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000217	637031.29	4271184.86	9.32	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000218	637025.94	4271178.34	9.27	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000219	637020.57	4271171.82	9.21	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000220	637015.21	4271165.30	9.16	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000221	637009.85	4271158.78	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000222	637004.49	4271152.27	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000223	636999.12	4271145.75	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000224	636993.76	4271139.23	9.16	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

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SLINE1	L0000225	636988.40	4271132.71	9.16	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000226	636983.04	4271126.20	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000227	636977.67	4271119.68	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000228	636972.31	4271113.16	9.15	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000229	636966.95	4271106.64	9.18	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000230	636961.59	4271100.13	9.18	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000231	636956.23	4271093.61	9.16	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000232	636950.86	4271087.09	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000233	636945.50	4271080.57	9.19	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000234	636940.14	4271074.06	9.25	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000235	636934.78	4271067.54	9.32	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000236	636929.41	4271061.02	9.39	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000237	636924.05	4271054.50	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000238	636918.69	4271047.99	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000239	636913.33	4271041.47	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000240	636907.96	4271034.95	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000241	636902.60	4271028.43	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000242	636897.24	4271021.92	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000243	636891.88	4271015.40	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000244	636886.51	4271008.88	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000245	636881.15	4271002.36	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000246	636875.79	4270995.84	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000247	636870.43	4270989.33	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000248	636865.07	4270982.81	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000249	636859.70	4270976.29	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

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SLINE1	L0000250	636854.34	4270969.77	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000251	636848.98	4270963.25	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000252	636843.65	4270956.71	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000253	636838.31	4270950.17	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000254	636832.98	4270943.63	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000255	636827.64	4270937.09	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000256	636822.31	4270930.55	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000257	636816.97	4270924.01	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000258	636811.64	4270917.47	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000259	636806.31	4270910.93	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000260	636800.97	4270904.39	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000261	636795.64	4270897.85	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000262	636790.30	4270891.31	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000263	636784.97	4270884.77	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000264	636779.63	4270878.23	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000265	636774.30	4270871.69	9.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000266	636768.96	4270865.15	9.40	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000267	636763.63	4270858.61	9.34	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000268	636758.30	4270852.07	9.29	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000269	636752.96	4270845.53	9.24	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000270	636747.63	4270838.99	9.18	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000271	636742.27	4270832.46	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000272	636736.92	4270825.94	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000273	636731.56	4270819.42	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000274	636726.20	4270812.90	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

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SLINE1	L0000275	636720.84	4270806.38	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000276	636715.48	4270799.86	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000277	636710.13	4270793.33	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000278	636704.77	4270786.81	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000279	636699.41	4270780.29	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000280	636694.05	4270773.77	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000281	636688.69	4270767.25	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000282	636683.33	4270760.73	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000283	636677.98	4270754.21	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000284	636672.62	4270747.69	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000285	636667.26	4270741.17	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000286	636661.90	4270734.65	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000287	636656.54	4270728.13	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000288	636651.18	4270721.60	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000289	636645.83	4270715.08	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000290	636640.47	4270708.56	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000291	636635.11	4270702.04	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000292	636629.75	4270695.52	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000293	636624.48	4270688.93	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000294	636619.49	4270682.12	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000295	636614.50	4270675.32	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000296	636609.51	4270668.51	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000297	636604.52	4270661.70	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000298	636599.53	4270654.89	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000299	636594.55	4270648.09	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000300	636591.43	4270640.26	9.21	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000301	636588.45	4270632.37	9.39	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000302	636585.48	4270624.47	9.69	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000303	636582.50	4270616.57	9.98	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000304	636579.52	4270608.67	10.26	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000305	636576.54	4270600.78	10.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000306	636573.56	4270592.88	10.55	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000307	636571.56	4270584.70	10.62	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000308	636569.88	4270576.43	10.66	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000309	636568.20	4270568.16	10.61	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000310	636566.53	4270559.89	10.53	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000311	636564.85	4270551.62	10.44	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000312	636563.70	4270543.27	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000313	636562.97	4270534.86	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000314	636562.23	4270526.45	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000315	636561.50	4270518.04	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000316	636560.78	4270509.64	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000317	636561.96	4270501.28	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000318	636563.14	4270492.92	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000319	636564.32	4270484.57	10.37	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000320	636565.50	4270476.21	10.38	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000321	636566.68	4270467.85	10.39	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000322	636567.86	4270459.49	10.40	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000323	636569.04	4270451.14	10.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000324	636570.22	4270442.78	10.52	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000325	636571.40	4270434.42	10.60	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000326	636572.58	4270426.07	10.66	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000327	636573.76	4270417.71	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000328	636574.94	4270409.35	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000329	636576.12	4270401.00	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000330	636578.90	4270393.06	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000331	636582.01	4270385.22	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000332	636585.13	4270377.38	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000333	636588.25	4270369.53	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000334	636591.37	4270361.69	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000335	636594.48	4270353.85	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000336	636597.60	4270346.00	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000337	636602.20	4270338.96	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000338	636607.08	4270332.08	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000339	636611.97	4270325.20	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000340	636616.85	4270318.31	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000341	636621.99	4270311.67	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000342	636628.51	4270306.32	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000343	636635.04	4270300.96	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000344	636641.57	4270295.61	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000345	636648.09	4270290.26	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000346	636654.62	4270284.91	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000347	636661.14	4270279.55	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000348	636667.67	4270274.20	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000349	636674.19	4270268.85	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000350	636680.72	4270263.50	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000351	636687.25	4270258.14	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000352	636694.08	4270253.23	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000353	636701.39	4270249.02	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000354	636708.71	4270244.81	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000355	636716.02	4270240.60	10.71	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000356	636723.34	4270236.39	10.73	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000357	636730.64	4270232.17	10.73	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000358	636737.74	4270227.60	10.70	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000359	636744.84	4270223.04	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000360	636751.94	4270218.47	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000361	636758.25	4270213.00	10.68	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000362	636763.77	4270206.61	10.70	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000363	636769.28	4270200.22	10.69	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000364	636774.80	4270193.84	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000365	636780.31	4270187.45	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000366	636785.29	4270180.63	10.70	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000367	636790.24	4270173.79	10.72	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000368	636795.19	4270166.96	10.72	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000369	636800.14	4270160.12	10.70	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000370	636805.09	4270153.28	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000371	636808.81	4270145.86	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000372	636811.05	4270137.72	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000373	636813.29	4270129.59	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000374	636815.53	4270121.45	10.69	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000375	636817.77	4270113.31	10.73	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000376	636820.01	4270105.17	10.76	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000377	636822.25	4270097.04	10.78	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000378	636824.49	4270088.90	10.76	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000379	636826.72	4270080.76	10.74	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000380	636828.96	4270072.62	10.72	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000381	636831.20	4270064.49	10.70	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000382	636833.44	4270056.35	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000383	636835.68	4270048.21	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000384	636837.92	4270040.07	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000385	636840.16	4270031.94	10.69	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000386	636842.40	4270023.80	10.75	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000387	636844.64	4270015.66	10.79	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000388	636846.88	4270007.52	10.83	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000389	636849.12	4269999.39	10.88	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000390	636851.33	4269991.24	10.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000391	636853.49	4269983.08	11.00	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000392	636855.65	4269974.92	11.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000393	636857.81	4269966.76	11.07	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000394	636859.96	4269958.60	11.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000395	636862.12	4269950.44	11.02	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000396	636864.28	4269942.28	11.00	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000397	636866.44	4269934.12	11.11	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000398	636868.59	4269925.96	11.25	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000399	636872.82	4269918.70	11.48	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

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SLINE1	L0000400	636877.30	4269911.55	11.63	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000401	636881.79	4269904.40	11.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000402	636886.27	4269897.25	11.73	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000403	636890.75	4269890.09	11.81	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000404	636895.23	4269882.94	11.90	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000405	636899.71	4269875.79	11.94	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000406	636904.19	4269868.64	12.01	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000407	636908.67	4269861.49	12.09	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000408	636913.15	4269854.33	12.19	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000409	636917.63	4269847.18	12.13	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000410	636922.26	4269846.43	12.11	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000411	636927.06	4269853.37	12.18	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000412	636931.87	4269860.31	12.11	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000413	636936.67	4269867.25	12.05	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000414	636941.47	4269874.19	12.03	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000415	636946.28	4269881.13	12.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000416	636951.08	4269888.07	12.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000417	636955.88	4269895.01	12.19	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000418	636960.69	4269901.95	12.15	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000419	636965.49	4269908.89	12.10	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000420	636970.29	4269915.83	12.02	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000421	636975.28	4269922.60	11.95	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000422	636981.67	4269928.11	11.90	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000423	636988.07	4269933.62	11.82	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000424	636994.47	4269939.12	11.69	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

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SLINE1	L0000425	637000.86	4269944.63	11.55	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000426	637007.26	4269950.14	11.34	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000427	637013.66	4269955.64	11.17	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000428	637020.05	4269961.15	11.05	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000429	637026.45	4269966.66	10.93	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000430	637032.84	4269972.16	10.81	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000431	637039.24	4269977.67	10.69	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000432	637045.64	4269983.18	10.57	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000433	637052.03	4269988.68	10.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000434	637058.43	4269994.19	10.33	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000435	637064.82	4269999.70	10.20	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000436	637071.22	4270005.20	10.09	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000437	637077.62	4270010.71	10.03	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000438	637084.01	4270016.22	9.99	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000439	637090.41	4270021.72	9.98	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000440	637096.81	4270027.23	10.00	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000441	637103.37	4270032.47	10.03	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000442	637111.22	4270035.55	9.98	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000443	637119.08	4270038.63	9.90	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000444	637126.93	4270041.72	9.82	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000445	637134.79	4270044.80	9.75	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000446	637142.65	4270047.88	9.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000447	637150.50	4270050.97	9.59	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000448	637158.36	4270054.05	9.51	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000449	637166.22	4270057.13	9.43	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

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SLINE1	L0000450	637174.07	4270060.22	9.35	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000451	637181.93	4270063.30	9.27	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000452	637189.79	4270066.39	9.19	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000453	637197.64	4270069.47	9.11	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000454	637205.50	4270072.55	9.03	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000455	637213.40	4270075.49	8.95	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000456	637221.67	4270077.18	8.86	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000457	637229.94	4270078.86	8.72	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000458	637238.21	4270080.55	8.55	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000459	637246.48	4270082.23	8.38	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000460	637254.75	4270083.92	8.22	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000461	637263.02	4270085.61	8.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000462	637271.29	4270087.29	8.05	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000463	637279.56	4270088.98	7.97	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000464	637287.83	4270090.66	7.89	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000465	637296.10	4270092.35	7.80	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000466	637304.37	4270094.03	7.72	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000467	637312.64	4270095.72	7.56	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000468	637320.91	4270097.41	6.72	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000469	637329.18	4270099.09	5.86	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000470	637337.45	4270100.78	5.10	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000471	637345.72	4270102.46	4.57	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000472	637353.99	4270104.15	4.57	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000473	637362.26	4270105.84	4.57	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000474	637370.53	4270107.52	4.57	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000475	637378.80	4270109.21	4.57	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000476	637387.07	4270110.89	4.57	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000477	637395.33	4270112.61	4.57	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000478	637403.48	4270114.81	4.57	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000479	637411.63	4270117.02	5.45	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000480	637419.77	4270119.22	6.41	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000481	637427.92	4270121.43	7.41	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000482	637436.07	4270123.63	8.23	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000483	637444.21	4270125.84	8.43	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000484	637452.36	4270128.04	8.58	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000485	637460.51	4270130.25	8.76	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000486	637468.65	4270132.45	8.90	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000487	637476.80	4270134.66	9.01	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000488	637484.95	4270136.86	9.14	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000489	637493.09	4270139.07	9.27	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000490	637501.24	4270141.27	9.27	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000491	637509.39	4270143.48	9.24	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000492	637517.53	4270145.68	9.19	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000493	637525.68	4270147.89	9.18	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000494	637533.83	4270150.09	9.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000495	637541.97	4270152.30	9.53	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000496	637550.12	4270154.50	9.68	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000497	637558.27	4270156.71	9.88	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000498	637566.30	4270159.20	10.13	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000499	637573.60	4270163.43	10.35	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000500	637580.90	4270167.66	10.57	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000501	637588.21	4270171.89	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000502	637595.51	4270176.12	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000503	637602.81	4270180.35	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000504	637610.12	4270184.58	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000505	637617.22	4270189.05	10.63	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000506	637622.82	4270195.37	10.56	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000507	637628.42	4270201.69	10.50	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000508	637634.01	4270208.00	10.43	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000509	637639.61	4270214.32	10.37	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000510	637645.21	4270220.64	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000511	637650.80	4270226.96	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000512	637656.40	4270233.27	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000513	637662.00	4270239.59	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000514	637667.59	4270245.91	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000515	637673.19	4270252.23	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000516	637678.78	4270258.54	10.34	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000517	637684.38	4270264.86	10.29	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000518	637689.61	4270271.46	10.22	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000519	637694.33	4270278.46	10.16	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000520	637699.06	4270285.45	10.11	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000521	637703.78	4270292.45	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000522	637708.51	4270299.44	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000523	637713.23	4270306.44	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000524	637717.95	4270313.43	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000525	637722.68	4270320.42	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000526	637727.40	4270327.42	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000527	637732.13	4270334.41	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000528	637736.85	4270341.41	10.04	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000529	637741.57	4270348.40	10.02	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000530	637746.30	4270355.39	10.02	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000531	637751.02	4270362.39	10.04	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000532	637755.75	4270369.38	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000533	637760.20	4270376.55	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000534	637764.56	4270383.78	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000535	637768.92	4270391.00	10.05	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000536	637773.28	4270398.23	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000537	637777.63	4270405.46	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000538	637781.99	4270412.69	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000539	637786.35	4270419.91	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000540	637790.71	4270427.14	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000541	637795.07	4270434.37	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000542	637799.43	4270441.59	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000543	637803.79	4270448.82	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000544	637808.15	4270456.05	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000545	637812.51	4270463.28	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000546	637816.87	4270470.50	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000547	637821.23	4270477.73	10.06	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000548	637825.59	4270484.96	10.08	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000549	637829.94	4270492.18	10.18	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE1	L0000550	637834.30	4270499.41	10.26	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000551	637838.66	4270506.64	10.32	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000552	637843.02	4270513.87	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000553	637847.38	4270521.09	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000554	637851.74	4270528.32	10.36	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000555	637856.10	4270535.55	10.38	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000556	637860.46	4270542.77	10.42	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000557	637864.82	4270550.00	10.51	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000558	637869.18	4270557.23	10.58	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000559	637873.54	4270564.46	10.63	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000560	637877.89	4270571.68	10.66	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000561	637883.22	4270578.23	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000562	637888.60	4270584.73	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000563	637893.98	4270591.23	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000564	637899.35	4270597.74	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000565	637904.73	4270604.24	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000566	637910.11	4270610.75	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000567	637915.49	4270617.25	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000568	637920.87	4270623.76	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000569	637926.25	4270630.26	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000570	637931.62	4270636.76	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000571	637937.00	4270643.27	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000572	637942.38	4270649.77	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000573	637947.76	4270656.28	10.66	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000574	637953.14	4270662.78	10.66	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000575	637958.79	4270668.97	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000576	637965.90	4270673.52	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000577	637973.02	4270678.06	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000578	637980.13	4270682.61	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000579	637987.24	4270687.16	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000580	637994.35	4270691.70	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000581	638001.46	4270696.25	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000582	638008.57	4270700.79	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93
	L0000583	638015.68	4270705.34	10.67	0.00	0.00172	8.44	Surface-Based	3.93	1.93

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0091831	634972.97	4272293.76	7.93	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091832	634966.89	4272299.61	7.96	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091833	634960.80	4272305.46	7.97	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091834	634954.72	4272311.31	7.95	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091835	634948.64	4272317.16	7.90	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091836	634942.55	4272323.01	7.84	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091837	634936.47	4272328.86	7.78	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091838	634930.14	4272334.28	7.73	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091839	634921.98	4272336.41	7.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091840	634913.81	4272338.54	7.69	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091841	634905.64	4272340.67	7.75	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091842	634897.48	4272342.80	7.81	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091843	634889.41	4272345.22	7.86	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091844	634881.63	4272348.50	7.89	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0091845	634873.85	4272351.77	7.86	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091846	634866.07	4272355.05	7.82	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091847	634858.31	4272358.35	7.79	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091848	634851.02	4272362.60	7.78	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091849	634843.73	4272366.86	7.81	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091850	634836.44	4272371.11	7.84	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091851	634829.15	4272375.36	7.85	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091852	634821.86	4272379.61	7.74	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091853	634814.21	4272382.85	7.68	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091854	634805.86	4272384.13	7.72	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091855	634797.52	4272385.42	7.78	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091856	634789.18	4272386.70	7.81	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091857	634780.84	4272387.98	7.79	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091858	634772.50	4272389.27	7.78	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091859	634764.16	4272390.55	7.77	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091860	634755.81	4272391.83	7.75	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091861	634747.46	4272392.52	7.75	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091862	634739.08	4272391.54	7.76	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091863	634730.70	4272390.56	7.77	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091864	634722.31	4272389.57	7.78	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091865	634713.93	4272388.59	7.79	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091866	634705.55	4272387.61	7.80	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091867	634697.16	4272386.63	7.81	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091868	634688.78	4272385.65	7.82	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091869	634680.40	4272384.67	7.83	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0091870	634672.02	4272383.68	7.84	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091871	634663.63	4272382.70	7.85	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091872	634655.25	4272381.72	7.86	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091873	634646.87	4272380.74	7.87	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091874	634638.49	4272379.76	7.85	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091875	634630.10	4272378.78	7.83	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091876	634621.72	4272377.79	7.83	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091877	634613.34	4272376.81	7.85	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091878	634604.95	4272375.83	7.88	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091879	634596.57	4272374.85	7.93	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091880	634588.19	4272373.87	7.94	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091881	634579.81	4272372.88	7.95	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091882	634571.42	4272371.90	7.96	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091883	634563.04	4272370.92	7.97	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091884	634554.87	4272369.11	7.98	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091885	634547.03	4272365.99	8.02	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091886	634539.19	4272362.86	8.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091887	634531.35	4272359.73	8.08	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091888	634523.51	4272356.61	8.11	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091889	634515.67	4272353.48	8.14	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091890	634507.83	4272350.35	8.17	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091891	634499.99	4272347.23	8.21	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091892	634492.15	4272344.10	8.21	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091893	634484.31	4272340.97	8.14	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091894	634476.47	4272337.85	8.09	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0091895	634468.63	4272334.72	8.06	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091896	634460.79	4272331.59	8.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091897	634452.95	4272328.46	8.03	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091898	634445.12	4272325.34	8.00	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091899	634437.28	4272322.21	7.95	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091900	634429.44	4272319.08	7.92	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091901	634421.60	4272315.96	7.92	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091902	634413.76	4272312.83	7.93	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091903	634405.92	4272309.70	7.93	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091904	634398.08	4272306.58	7.86	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091905	634390.24	4272303.45	7.79	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091906	634382.40	4272300.32	7.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091907	634374.56	4272297.20	7.63	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091908	634366.72	4272294.07	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091909	634358.88	4272290.94	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091910	634351.04	4272287.82	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091911	634343.20	4272284.69	7.64	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091912	634335.36	4272281.56	7.81	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091913	634327.52	4272278.44	7.95	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091914	634319.68	4272275.31	8.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091915	634311.84	4272272.18	8.09	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091916	634304.01	4272269.06	8.02	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091917	634296.17	4272265.93	7.97	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091918	634288.33	4272262.80	7.94	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091919	634280.49	4272259.68	7.91	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0091920	634272.65	4272256.55	7.91	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091921	634264.81	4272253.42	7.92	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091922	634257.01	4272250.21	7.92	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091923	634249.32	4272246.73	7.89	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091924	634241.63	4272243.25	7.85	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091925	634233.94	4272239.77	7.82	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091926	634226.25	4272236.30	7.82	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091927	634218.55	4272232.82	7.80	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091928	634210.86	4272229.34	7.77	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091929	634203.17	4272225.86	7.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091930	634195.48	4272222.39	7.66	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091931	634187.79	4272218.91	7.68	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091932	634180.10	4272215.43	7.72	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091933	634172.41	4272211.96	7.75	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091934	634164.72	4272208.48	7.79	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091935	634157.03	4272205.00	7.87	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091936	634149.34	4272201.52	7.97	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091937	634141.65	4272198.05	8.10	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091938	634133.96	4272194.57	8.23	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091939	634126.27	4272191.09	8.23	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091940	634118.58	4272187.61	8.23	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091941	634110.89	4272184.14	8.23	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091942	634103.20	4272180.66	8.23	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091943	634095.51	4272177.18	8.19	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091944	634087.82	4272173.70	8.18	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

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SLINE4	L0091945	634080.13	4272170.23	8.19	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091946	634072.44	4272166.75	8.20	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091947	634064.75	4272163.27	8.17	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091948	634057.14	4272159.63	8.20	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091949	634049.63	4272155.77	8.24	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091950	634042.13	4272151.90	8.31	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091951	634034.63	4272148.04	8.40	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091952	634027.12	4272144.17	8.51	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091953	634019.62	4272140.31	8.63	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091954	634012.12	4272136.44	8.76	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091955	634004.62	4272132.58	8.86	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091956	633997.86	4272127.56	9.06	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091957	633991.27	4272122.28	9.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091958	633984.68	4272117.01	9.63	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091959	633978.09	4272111.74	9.83	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091960	633971.50	4272106.47	10.02	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091961	633964.91	4272101.19	10.01	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091962	633958.94	4272095.39	10.00	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091963	633954.66	4272088.11	10.10	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091964	633950.38	4272080.84	10.16	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091965	633946.10	4272073.56	10.19	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091966	633942.36	4272066.07	10.12	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091967	633940.44	4272057.85	10.13	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091968	633938.51	4272049.64	10.20	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091969	633936.59	4272041.42	10.16	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

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SLINE4	L0091970	633934.67	4272033.20	9.94	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091971	633932.74	4272024.98	9.73	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091972	633930.82	4272016.76	9.54	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091973	633928.90	4272008.55	9.20	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091974	633926.97	4272000.33	8.79	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091975	633925.05	4271992.11	8.34	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091976	633921.62	4271984.78	7.89	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091977	633915.36	4271979.12	7.50	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091978	633909.10	4271973.46	7.13	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091979	633902.84	4271967.79	6.79	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091980	633896.58	4271962.13	6.47	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091981	633890.32	4271956.47	6.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091982	633883.13	4271952.38	6.52	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091983	633875.17	4271949.57	6.79	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091984	633867.21	4271946.76	7.04	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091985	633859.25	4271943.95	7.19	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091986	633850.95	4271942.56	7.33	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091987	633842.59	4271941.41	7.47	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091988	633834.23	4271940.26	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091989	633825.87	4271939.10	7.64	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091990	633817.51	4271937.95	7.65	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091991	633809.15	4271936.80	7.66	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091992	633802.28	4271932.12	7.53	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091993	633795.64	4271926.91	7.37	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091994	633789.01	4271921.69	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

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SLINE4	L0091995	633783.19	4271915.88	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091996	633780.24	4271907.97	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091997	633777.29	4271900.07	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091998	633774.33	4271892.16	7.29	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0091999	633771.38	4271884.25	7.19	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092000	633768.43	4271876.35	7.10	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092001	633765.48	4271868.44	7.04	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092002	633762.53	4271860.53	6.98	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092003	633759.58	4271852.62	6.95	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092004	633756.63	4271844.72	6.92	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092005	633753.68	4271836.81	6.92	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092006	633750.72	4271828.90	6.94	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092007	633747.77	4271821.00	6.97	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092008	633744.82	4271813.09	7.00	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092009	633741.87	4271805.18	7.01	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092010	633738.92	4271797.27	7.10	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092011	633735.97	4271789.37	7.21	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092012	633733.02	4271781.46	7.34	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092013	633730.07	4271773.55	7.47	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092014	633727.11	4271765.65	7.59	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092015	633724.16	4271757.74	7.75	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092016	633721.21	4271749.83	7.93	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092017	633718.26	4271741.92	8.17	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092018	633715.31	4271734.02	8.50	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092019	633712.36	4271726.11	8.80	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0092020	633709.41	4271718.20	9.07	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092021	633706.46	4271710.30	9.44	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092022	633703.50	4271702.39	9.84	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092023	633700.55	4271694.48	10.23	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092024	633697.60	4271686.57	10.59	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092025	633694.65	4271678.67	10.44	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092026	633691.77	4271670.73	10.13	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092027	633689.19	4271662.70	9.80	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092028	633686.61	4271654.66	9.46	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092029	633684.03	4271646.63	9.11	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092030	633681.45	4271638.59	8.77	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092031	633678.87	4271630.55	8.42	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092032	633676.29	4271622.52	8.11	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092033	633673.71	4271614.48	7.95	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092034	633671.13	4271606.45	7.80	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092035	633668.56	4271598.41	7.67	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092036	633665.98	4271590.37	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092037	633663.40	4271582.34	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092038	633660.82	4271574.30	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092039	633658.24	4271566.26	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092040	633655.66	4271558.23	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092041	633653.08	4271550.19	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092042	633650.50	4271542.16	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092043	633647.92	4271534.12	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092044	633645.34	4271526.08	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0092045	633642.76	4271518.05	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092046	633640.18	4271510.01	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092047	633637.60	4271501.98	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092048	633635.02	4271493.94	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092049	633632.44	4271485.90	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092050	633629.86	4271477.87	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092051	633627.28	4271469.83	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092052	633624.70	4271461.79	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092053	633622.12	4271453.76	7.61	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092054	633619.54	4271445.72	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092055	633616.96	4271437.69	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092056	633614.38	4271429.65	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092057	633611.80	4271421.61	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092058	633609.23	4271413.58	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092059	633606.65	4271405.54	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092060	633604.07	4271397.51	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092061	633601.49	4271389.47	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092062	633598.91	4271381.43	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092063	633596.33	4271373.40	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092064	633593.75	4271365.36	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092065	633591.17	4271357.33	7.59	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092066	633588.59	4271349.29	7.57	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092067	633586.01	4271341.25	7.54	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092068	633583.43	4271333.22	7.51	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092069	633580.85	4271325.18	7.49	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0092070	633578.27	4271317.14	7.46	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092071	633575.69	4271309.11	7.43	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092072	633573.11	4271301.07	7.41	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092073	633570.53	4271293.04	7.38	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092074	633567.95	4271285.00	7.36	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092075	633565.37	4271276.96	7.33	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092076	633562.79	4271268.93	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092077	633560.21	4271260.89	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092078	633557.63	4271252.86	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092079	633555.05	4271244.82	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092080	633552.47	4271236.78	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092081	633549.90	4271228.75	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092082	633547.32	4271220.71	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092083	633544.74	4271212.67	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092084	633552.54	4271209.76	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092085	633560.48	4271206.91	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092086	633568.43	4271204.06	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092087	633576.37	4271201.22	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092088	633584.32	4271198.37	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092089	633592.26	4271195.52	7.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092090	633600.21	4271192.67	7.38	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092091	633608.15	4271189.83	7.46	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092092	633616.10	4271186.98	7.54	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092093	633624.04	4271184.13	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092094	633631.99	4271181.29	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0092095	633639.93	4271178.44	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092096	633647.88	4271175.59	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092097	633655.83	4271172.74	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092098	633663.77	4271169.90	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092099	633671.72	4271167.05	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092100	633679.66	4271164.20	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092101	633687.61	4271161.36	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092102	633695.55	4271158.51	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092103	633703.50	4271155.66	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092104	633711.44	4271152.82	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092105	633719.39	4271149.97	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092106	633723.17	4271156.24	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092107	633726.22	4271164.11	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092108	633729.27	4271171.98	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092109	633732.33	4271179.85	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092110	633735.38	4271187.72	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092111	633738.43	4271195.59	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092112	633741.48	4271203.45	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092113	633744.54	4271211.32	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092114	633747.59	4271219.19	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092115	633750.64	4271227.06	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092116	633753.69	4271234.93	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092117	633756.75	4271242.80	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092118	633759.80	4271250.67	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092119	633762.85	4271258.54	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0092120	633765.90	4271266.40	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092121	633768.96	4271274.27	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092122	633772.01	4271282.14	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092123	633775.06	4271290.01	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092124	633778.11	4271297.88	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092125	633781.17	4271305.75	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092126	633784.22	4271313.62	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092127	633787.27	4271321.48	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092128	633790.32	4271329.35	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092129	633793.38	4271337.22	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092130	633796.43	4271345.09	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092131	633799.48	4271352.96	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092132	633802.53	4271360.83	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092133	633805.59	4271368.70	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092134	633808.64	4271376.57	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092135	633811.69	4271384.43	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092136	633814.74	4271392.30	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092137	633817.80	4271400.17	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092138	633820.85	4271408.04	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092139	633823.90	4271415.91	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092140	633826.95	4271423.78	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092141	633830.01	4271431.65	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092142	633833.06	4271439.51	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092143	633836.11	4271447.38	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092144	633839.16	4271455.25	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0092145	633842.22	4271463.12	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092146	633845.27	4271470.99	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092147	633849.23	4271478.31	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092148	633854.73	4271484.72	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092149	633860.22	4271491.13	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092150	633865.71	4271497.54	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092151	633871.20	4271503.94	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092152	633876.70	4271510.35	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092153	633882.19	4271516.76	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092154	633887.68	4271523.17	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092155	633893.17	4271529.58	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092156	633898.67	4271535.99	7.61	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092157	633904.16	4271542.39	7.57	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092158	633909.65	4271548.80	7.55	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092159	633915.14	4271555.21	7.56	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092160	633920.64	4271561.62	7.59	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092161	633926.13	4271568.03	7.59	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092162	633931.62	4271574.43	7.50	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092163	633937.12	4271580.84	7.39	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092164	633942.61	4271587.25	7.25	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092165	633948.10	4271593.66	7.09	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092166	633953.59	4271600.07	7.01	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092167	633959.09	4271606.47	6.96	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092168	633964.58	4271612.88	6.90	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092169	633970.73	4271618.65	6.84	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0092170	633976.99	4271624.31	6.78	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092171	633983.25	4271629.97	6.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092172	633989.52	4271635.63	6.65	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092173	633995.78	4271641.29	6.59	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092174	634002.04	4271646.94	6.52	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092175	634008.30	4271652.60	6.46	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092176	634014.56	4271658.26	6.40	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092177	634020.82	4271663.92	6.40	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092178	634027.08	4271669.58	6.40	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092179	634033.35	4271675.24	6.40	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092180	634039.61	4271680.90	6.40	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092181	634045.87	4271686.56	6.44	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092182	634052.13	4271692.22	6.58	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092183	634058.39	4271697.88	6.74	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092184	634064.65	4271703.54	6.93	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092185	634070.91	4271709.20	7.14	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092186	634077.18	4271714.86	7.35	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092187	634083.44	4271720.52	7.45	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092188	634089.70	4271726.18	7.53	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092189	634095.96	4271731.83	7.58	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092190	634102.22	4271737.49	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092191	634108.48	4271743.15	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092192	634115.56	4271747.46	7.58	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092193	634123.48	4271750.39	7.60	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092194	634131.40	4271753.31	7.68	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0092195	634139.31	4271756.23	7.73	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092196	634147.23	4271759.16	7.76	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092197	634155.15	4271762.08	7.79	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092198	634163.07	4271765.00	7.82	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092199	634170.98	4271767.93	7.78	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092200	634178.90	4271770.85	7.73	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092201	634186.82	4271773.77	7.68	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092202	634194.74	4271776.70	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092203	634202.65	4271779.62	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092204	634210.57	4271782.54	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092205	634218.49	4271785.47	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092206	634226.41	4271788.39	7.57	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092207	634234.32	4271791.31	7.41	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092208	634242.24	4271794.24	7.25	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092209	634250.16	4271797.16	7.09	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092210	634258.08	4271800.09	6.97	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092211	634265.99	4271803.01	6.89	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092212	634273.91	4271805.93	6.81	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092213	634281.83	4271808.86	6.73	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092214	634289.75	4271811.78	6.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092215	634297.82	4271814.15	6.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092216	634306.12	4271815.68	6.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092217	634314.42	4271817.21	6.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092218	634322.72	4271818.74	6.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092219	634331.02	4271820.27	6.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0092220	634339.32	4271821.80	6.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092221	634347.62	4271823.33	6.73	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092222	634355.92	4271824.85	6.79	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092223	634364.22	4271826.38	6.85	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092224	634372.52	4271827.91	6.93	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092225	634380.82	4271829.44	7.09	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092226	634389.12	4271830.97	7.28	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092227	634397.42	4271832.50	7.46	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092228	634405.72	4271834.03	7.61	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092229	634414.02	4271835.56	7.61	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092230	634422.32	4271837.09	7.60	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092231	634430.62	4271838.62	7.58	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092232	634438.92	4271840.15	7.58	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092233	634447.22	4271841.67	7.58	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092234	634455.52	4271843.20	7.60	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092235	634463.82	4271844.73	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092236	634472.12	4271846.26	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092237	634480.42	4271847.79	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092238	634488.72	4271849.32	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092239	634497.02	4271850.85	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092240	634505.32	4271852.38	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092241	634513.65	4271853.75	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092242	634521.99	4271855.04	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092243	634530.33	4271856.33	7.67	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092244	634538.67	4271857.61	7.73	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

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SLINE4	L0092245	634547.02	4271858.90	7.81	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092246	634555.36	4271860.19	7.86	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092247	634563.70	4271861.48	7.80	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092248	634572.04	4271862.76	7.73	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092249	634580.38	4271864.05	7.66	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092250	634588.72	4271865.34	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092251	634597.06	4271866.63	7.64	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092252	634605.40	4271867.91	7.65	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092253	634613.75	4271869.20	7.66	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092254	634622.09	4271870.49	7.68	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092255	634630.43	4271871.77	7.69	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092256	634638.77	4271873.06	7.70	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092257	634647.11	4271874.35	7.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092258	634655.45	4271875.64	7.69	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092259	634663.79	4271876.92	7.66	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092260	634672.13	4271878.21	7.63	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092261	634680.48	4271879.50	7.59	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092262	634688.82	4271880.79	7.55	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092263	634697.16	4271882.07	7.52	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092264	634705.50	4271883.36	7.50	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092265	634713.84	4271884.65	7.52	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092266	634722.18	4271885.93	7.53	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092267	634730.52	4271887.22	7.54	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092268	634738.86	4271888.51	7.55	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092269	634747.21	4271889.80	7.57	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE4	L0092270	634755.55	4271891.08	7.58	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092271	634763.89	4271892.37	7.59	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092272	634772.23	4271893.66	7.53	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092273	634780.57	4271894.94	7.45	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092274	634788.91	4271896.23	7.38	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092275	634797.25	4271897.52	7.37	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092276	634805.59	4271898.81	7.46	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092277	634813.94	4271900.09	7.54	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092278	634822.28	4271901.38	7.61	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092279	634830.62	4271902.67	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092280	634838.96	4271903.96	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092281	634847.30	4271905.24	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092282	634855.64	4271906.53	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092283	634863.98	4271907.82	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092284	634872.32	4271909.10	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092285	634880.67	4271910.39	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092286	634889.01	4271911.68	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092287	634897.35	4271912.97	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092288	634905.69	4271914.25	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092289	634914.03	4271915.54	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092290	634922.37	4271916.83	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092291	634930.71	4271918.11	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092292	634939.05	4271919.40	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092293	634947.40	4271920.69	7.64	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092294	634955.74	4271921.98	7.68	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

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SLINE4	L0092295	634964.08	4271923.26	7.68	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092296	634972.06	4271925.99	7.65	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092297	634980.05	4271928.73	7.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092298	634988.03	4271931.48	7.73	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092299	634996.01	4271934.22	7.70	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092300	635003.99	4271936.97	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092301	635011.97	4271939.71	7.74	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092302	635019.95	4271942.45	7.90	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092303	635027.93	4271945.20	8.11	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092304	635035.92	4271947.94	8.36	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092305	635043.90	4271950.68	8.59	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092306	635051.88	4271953.43	8.84	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092307	635058.91	4271957.92	9.06	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092308	635065.54	4271963.14	9.14	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092309	635072.18	4271968.35	9.14	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092310	635078.82	4271973.57	9.14	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092311	635085.45	4271978.78	9.14	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092312	635092.09	4271983.99	9.14	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092313	635098.73	4271989.21	9.22	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092314	635105.36	4271994.42	9.26	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092315	635112.00	4271999.64	9.26	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092316	635118.64	4272004.85	9.22	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092317	635125.27	4272010.07	9.13	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092318	635131.91	4272015.28	9.06	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092319	635138.55	4272020.50	8.94	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

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SLINE4	L0092320	635145.18	4272025.71	8.82	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092321	635151.82	4272030.92	8.70	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092322	635158.46	4272036.14	8.59	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092323	635165.09	4272041.35	8.47	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092324	635171.73	4272046.57	8.34	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092325	635176.73	4272053.33	8.22	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092326	635181.55	4272060.25	8.10	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092327	635186.37	4272067.18	7.98	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092328	635191.20	4272074.11	7.86	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092329	635196.02	4272081.03	7.39	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092330	635200.84	4272087.96	6.58	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092331	635205.67	4272094.88	5.45	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092332	635210.49	4272101.81	4.00	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092333	635215.31	4272108.74	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092334	635220.14	4272115.66	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092335	635224.96	4272122.59	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092336	635229.78	4272129.51	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092337	635234.61	4272136.44	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092338	635238.97	4272143.62	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092339	635242.13	4272151.44	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092340	635245.29	4272159.27	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092341	635248.45	4272167.09	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092342	635251.61	4272174.92	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092343	635254.77	4272182.75	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092344	635257.93	4272190.57	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

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SLINE4	L0092345	635261.09	4272198.40	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092346	635264.25	4272206.22	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092347	635267.41	4272214.05	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092348	635270.14	4272222.02	3.05	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092349	635272.48	4272230.13	3.30	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092350	635274.81	4272238.25	3.76	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092351	635277.15	4272246.36	4.21	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092352	635279.48	4272254.47	4.61	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092353	635281.82	4272262.58	4.91	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092354	635284.15	4272270.69	5.21	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092355	635286.49	4272278.80	5.53	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092356	635288.82	4272286.91	5.87	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092357	635291.15	4272295.02	6.25	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092358	635293.49	4272303.13	6.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092359	635295.82	4272311.24	7.00	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092360	635298.16	4272319.35	7.30	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092361	635300.49	4272327.46	7.51	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092362	635302.83	4272335.57	7.72	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092363	635305.16	4272343.68	7.92	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092364	635307.50	4272351.79	8.06	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092365	635309.83	4272359.91	8.17	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092366	635312.17	4272368.02	8.26	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092367	635314.50	4272376.13	8.37	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092368	635316.84	4272384.24	8.60	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092369	635319.17	4272392.35	8.83	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0092370	635321.50	4272400.46	9.03	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092371	635323.84	4272408.57	9.16	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092372	635326.17	4272416.68	9.18	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092373	635328.51	4272424.79	9.18	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092374	635330.84	4272432.90	9.17	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092375	635333.18	4272441.01	9.15	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092376	635335.51	4272449.12	9.14	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092377	635337.85	4272457.23	9.14	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092378	635340.18	4272465.34	9.14	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092379	635342.52	4272473.46	9.14	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092380	635344.85	4272481.57	9.14	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092381	635347.18	4272489.68	9.14	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092382	635349.52	4272497.79	9.13	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092383	635351.85	4272505.90	9.08	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092384	635354.19	4272514.01	9.01	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092385	635356.52	4272522.12	8.94	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092386	635358.86	4272530.23	8.88	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092387	635361.19	4272538.34	8.85	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092388	635363.53	4272546.45	8.84	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092389	635365.86	4272554.56	8.84	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092390	635368.20	4272562.67	8.60	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092391	635370.53	4272570.78	8.36	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092392	635372.87	4272578.89	8.11	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092393	635375.20	4272587.00	7.90	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092394	635377.53	4272595.12	7.82	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0092395	635379.87	4272603.23	7.74	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092396	635382.20	4272611.34	7.66	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092397	635384.54	4272619.45	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092398	635386.87	4272627.56	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092399	635389.21	4272635.67	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092400	635391.54	4272643.78	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092401	635393.88	4272651.89	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092402	635396.21	4272660.00	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092403	635398.55	4272668.11	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092404	635400.88	4272676.22	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092405	635403.21	4272684.33	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092406	635405.55	4272692.44	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092407	635407.88	4272700.55	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092408	635410.22	4272708.67	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092409	635412.55	4272716.78	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092410	635414.89	4272724.89	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092411	635417.22	4272733.00	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092412	635419.56	4272741.11	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092413	635421.89	4272749.22	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092414	635424.23	4272757.33	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092415	635426.56	4272765.44	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092416	635428.90	4272773.55	7.63	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092417	635431.23	4272781.66	7.66	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092418	635433.56	4272789.77	7.70	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092419	635435.90	4272797.88	7.73	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0092420	635438.23	4272805.99	7.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092421	635440.57	4272814.10	7.68	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092422	635442.90	4272822.22	7.64	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092423	635445.24	4272830.33	7.66	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092424	635447.57	4272838.44	7.73	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092425	635449.91	4272846.55	7.81	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092426	635452.24	4272854.66	7.90	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092427	635454.58	4272862.77	7.86	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092428	635456.91	4272870.88	7.87	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092429	635459.24	4272878.99	7.92	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092430	635461.58	4272887.10	7.97	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092431	635463.91	4272895.21	7.92	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092432	635466.25	4272903.32	7.83	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092433	635468.58	4272911.43	7.70	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092434	635470.92	4272919.54	7.87	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092435	635473.25	4272927.65	8.31	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092436	635475.59	4272935.76	8.75	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092437	635477.92	4272943.88	9.21	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092438	635480.26	4272951.99	9.48	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092439	635482.59	4272960.10	9.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092440	635484.93	4272968.21	9.90	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092441	635487.26	4272976.32	9.98	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092442	635489.59	4272984.43	9.90	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092443	635491.93	4272992.54	9.86	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092444	635494.26	4273000.65	9.86	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0092445	635496.60	4273008.76	9.83	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092446	635498.93	4273016.87	9.72	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092447	635501.27	4273024.98	9.61	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092448	635503.60	4273033.09	9.48	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092449	635505.94	4273041.20	9.43	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092450	635508.27	4273049.31	9.42	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092451	635510.61	4273057.43	9.42	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092452	635512.94	4273065.54	9.43	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092453	635515.27	4273073.65	9.35	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092454	635517.61	4273081.76	9.24	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092455	635519.94	4273089.87	9.13	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092456	635522.28	4273097.98	9.00	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092457	635524.61	4273106.09	8.81	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092458	635526.95	4273114.20	8.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092459	635529.28	4273122.31	8.43	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092460	635531.62	4273130.42	8.32	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092461	635533.95	4273138.53	8.24	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092462	635536.29	4273146.64	8.14	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092463	635538.62	4273154.75	8.04	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092464	635540.96	4273162.86	7.97	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092465	635543.29	4273170.97	7.93	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092466	635545.62	4273179.09	7.91	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092467	635547.96	4273187.20	7.88	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092468	635550.29	4273195.31	7.86	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092469	635551.89	4273203.52	7.84	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0092470	635551.86	4273211.96	7.84	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092471	635551.83	4273220.40	7.90	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092472	635551.80	4273228.84	7.99	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092473	635551.77	4273237.28	8.07	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092474	635551.74	4273245.72	8.15	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092475	635551.71	4273254.16	8.20	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092476	635551.69	4273262.60	8.24	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092477	635551.66	4273271.04	8.29	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092478	635551.63	4273279.48	8.34	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092479	635551.60	4273287.92	8.41	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092480	635551.57	4273296.36	8.47	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092481	635548.55	4273303.60	8.52	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092482	635542.76	4273309.75	8.58	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092483	635536.97	4273315.89	8.65	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092484	635531.18	4273322.03	8.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092485	635525.39	4273328.17	8.77	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092486	635519.60	4273334.31	8.83	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092487	635513.81	4273340.45	8.90	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092488	635508.02	4273346.60	8.96	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092489	635500.39	4273345.91	8.95	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092490	635492.29	4273343.52	8.93	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092491	635484.20	4273341.13	8.90	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092492	635476.10	4273338.73	8.88	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092493	635468.01	4273336.34	8.85	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092494	635459.92	4273333.95	8.83	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE4	L0092495	635453.65	4273329.29	8.78	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092496	635449.58	4273321.90	8.71	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092497	635445.50	4273314.50	8.63	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092498	635441.43	4273307.11	8.56	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092499	635439.42	4273299.17	8.42	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092500	635439.30	4273290.73	8.25	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092501	635439.17	4273282.29	8.07	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092502	635439.04	4273273.86	7.91	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092503	635438.92	4273265.42	7.83	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092504	635441.65	4273258.19	7.75	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092505	635447.81	4273252.42	7.70	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092506	635453.97	4273246.65	7.64	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092507	635460.12	4273240.87	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092508	635466.28	4273235.10	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092509	635472.44	4273229.33	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092510	635479.28	4273224.56	7.62	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092511	635486.91	4273220.96	7.63	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092512	635494.54	4273217.36	7.63	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092513	635502.18	4273213.75	7.64	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092514	635509.81	4273210.15	7.68	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092515	635517.44	4273206.55	7.73	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092516	635525.07	4273202.94	7.81	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092517	635532.71	4273199.34	7.87	0.00	0.00145	8.44	Surface-Based	3.93	3.32
	L0092518	635540.34	4273195.74	7.91	0.00	0.00145	8.44	Surface-Based	3.93	3.32

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0092519	635560.67	4273190.75	7.76	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092520	635567.74	4273188.27	7.68	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092521	635574.82	4273185.79	7.62	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092522	635581.90	4273183.31	7.63	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092523	635588.98	4273180.83	7.64	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092524	635596.06	4273178.35	7.64	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092525	635603.13	4273175.87	7.62	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092526	635610.21	4273173.39	7.71	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092527	635617.29	4273170.91	7.82	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092528	635624.37	4273168.43	7.94	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092529	635631.45	4273165.95	8.08	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092530	635638.53	4273163.50	8.23	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092531	635645.65	4273161.14	8.40	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092532	635652.77	4273158.78	8.57	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092533	635659.89	4273156.42	8.74	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092534	635667.01	4273154.06	8.86	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092535	635674.13	4273151.70	8.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092536	635681.25	4273149.34	8.99	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092537	635688.37	4273146.98	9.07	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092538	635695.49	4273144.62	9.15	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092539	635702.61	4273142.27	9.18	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092540	635709.73	4273139.91	9.22	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092541	635716.85	4273137.55	9.28	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092542	635723.97	4273135.19	9.34	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092543	635731.08	4273132.83	9.22	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0092544	635738.20	4273130.47	9.10	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092545	635745.32	4273128.11	8.98	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092546	635752.45	4273125.77	8.86	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092547	635759.63	4273123.60	8.63	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092548	635766.81	4273121.43	8.39	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092549	635773.99	4273119.26	8.17	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092550	635781.17	4273117.09	7.99	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092551	635788.35	4273114.92	7.91	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092552	635795.52	4273112.75	7.88	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092553	635802.70	4273110.58	7.83	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092554	635809.88	4273108.41	7.78	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092555	635817.06	4273106.25	7.75	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092556	635824.24	4273104.08	7.79	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092557	635831.42	4273101.91	7.83	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092558	635838.60	4273099.74	7.88	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092559	635845.78	4273097.57	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092560	635852.96	4273095.40	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092561	635860.14	4273093.23	7.91	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092562	635867.32	4273091.06	7.89	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092563	635874.50	4273088.89	7.86	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092564	635881.68	4273086.72	7.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092565	635888.86	4273084.55	7.82	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092566	635896.04	4273082.38	7.80	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092567	635903.42	4273081.27	7.79	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092568	635910.89	4273080.69	7.81	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

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SLINE5	L0092569	635918.37	4273080.10	7.85	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092570	635925.85	4273079.51	7.88	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092571	635933.32	4273078.93	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092572	635940.80	4273078.34	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092573	635948.28	4273077.76	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092574	635955.75	4273077.17	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092575	635963.23	4273076.58	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092576	635970.71	4273076.00	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092577	635978.19	4273075.41	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092578	635985.66	4273074.82	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092579	635993.14	4273074.24	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092580	636000.62	4273073.65	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092581	636008.09	4273073.06	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092582	636015.57	4273072.48	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092583	636023.05	4273071.89	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092584	636030.52	4273071.30	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092585	636038.00	4273070.72	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092586	636045.48	4273070.13	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092587	636052.96	4273069.55	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092588	636060.43	4273068.96	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092589	636067.91	4273068.37	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092590	636075.39	4273067.79	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092591	636082.86	4273067.20	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092592	636090.34	4273066.61	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092593	636097.82	4273066.03	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

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SLINE5	L0092594	636105.30	4273065.44	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092595	636112.77	4273064.85	7.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092596	636120.25	4273064.27	7.99	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092597	636127.73	4273063.68	8.06	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092598	636135.20	4273063.09	8.13	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092599	636142.68	4273062.51	8.19	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092600	636150.16	4273061.92	8.21	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092601	636157.63	4273061.34	8.21	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092602	636165.11	4273060.75	8.22	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092603	636172.59	4273060.16	8.23	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092604	636180.07	4273059.58	8.29	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092605	636187.54	4273058.99	8.37	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092606	636195.02	4273058.40	8.44	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092607	636202.50	4273057.82	8.52	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092608	636209.97	4273057.23	8.55	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092609	636217.45	4273056.64	8.57	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092610	636224.93	4273056.06	8.60	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092611	636232.40	4273055.47	8.63	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092612	636239.88	4273054.88	8.68	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092613	636247.36	4273054.30	8.73	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092614	636254.84	4273053.71	8.78	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092615	636262.31	4273053.13	8.83	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092616	636269.80	4273052.62	8.86	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092617	636277.28	4273052.15	8.90	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092618	636284.77	4273051.68	8.93	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

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SLINE5	L0092619	636292.25	4273051.21	8.97	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092620	636299.74	4273050.73	8.98	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092621	636307.22	4273050.26	8.99	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092622	636314.71	4273049.79	8.99	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092623	636322.19	4273049.32	9.00	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092624	636329.68	4273048.85	9.00	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092625	636337.16	4273048.38	9.01	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092626	636344.65	4273047.90	9.01	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092627	636352.13	4273047.43	9.02	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092628	636359.62	4273046.96	8.99	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092629	636367.10	4273046.49	8.94	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092630	636374.59	4273046.02	8.90	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092631	636382.07	4273045.55	8.85	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092632	636389.56	4273045.07	8.90	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092633	636397.04	4273044.60	8.97	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092634	636404.53	4273044.13	9.05	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092635	636412.01	4273043.66	9.12	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092636	636419.50	4273043.19	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092637	636426.98	4273042.71	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092638	636434.47	4273042.24	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092639	636441.95	4273041.77	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092640	636449.44	4273041.30	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092641	636456.92	4273040.83	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092642	636464.41	4273040.36	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092643	636471.89	4273039.88	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58

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SLINE5	L0092644	636479.38	4273039.41	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092645	636486.87	4273038.94	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092646	636494.35	4273038.47	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092647	636501.84	4273038.00	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092648	636509.32	4273037.53	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092649	636516.81	4273037.05	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092650	636524.29	4273036.58	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092651	636531.78	4273036.11	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092652	636539.26	4273035.64	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092653	636546.75	4273035.17	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092654	636554.23	4273034.70	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092655	636561.72	4273034.22	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092656	636569.20	4273033.75	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092657	636576.69	4273033.28	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092658	636584.17	4273032.81	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092659	636591.66	4273032.34	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092660	636599.14	4273031.86	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092661	636606.63	4273031.39	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092662	636614.11	4273030.92	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092663	636621.60	4273030.45	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092664	636629.08	4273029.98	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092665	636636.57	4273029.51	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092666	636644.05	4273029.03	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092667	636651.54	4273028.56	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092668	636659.02	4273028.09	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58

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SLINE5	L0092669	636666.51	4273027.62	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092670	636673.99	4273027.15	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092671	636681.48	4273026.68	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092672	636688.96	4273026.20	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092673	636696.45	4273025.73	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092674	636703.93	4273025.26	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092675	636711.42	4273024.79	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092676	636718.90	4273024.32	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092677	636726.39	4273023.84	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092678	636733.88	4273023.37	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092679	636741.36	4273022.90	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092680	636748.85	4273022.43	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092681	636756.33	4273021.96	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092682	636763.82	4273021.49	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092683	636771.30	4273021.01	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092684	636778.79	4273020.54	9.12	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092685	636786.27	4273020.07	9.08	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092686	636793.76	4273019.60	9.04	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092687	636801.24	4273019.13	9.00	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092688	636808.73	4273018.66	8.96	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092689	636816.21	4273018.18	8.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092690	636823.70	4273017.71	8.88	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092691	636831.18	4273017.24	8.85	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092692	636838.64	4273017.72	8.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092693	636846.07	4273018.68	8.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0092694	636853.51	4273019.65	8.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092695	636860.95	4273020.61	8.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092696	636868.39	4273021.58	8.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092697	636875.82	4273022.54	8.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092698	636883.26	4273023.51	8.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092699	636890.70	4273024.47	8.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092700	636898.14	4273025.43	8.85	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092701	636905.58	4273026.40	8.87	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092702	636913.01	4273027.36	8.89	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092703	636920.45	4273028.33	8.90	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092704	636927.89	4273029.29	8.89	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092705	636935.33	4273030.26	8.87	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092706	636942.76	4273031.22	8.85	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092707	636950.20	4273032.19	8.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092708	636957.64	4273033.15	8.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092709	636965.08	4273034.12	8.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092710	636972.51	4273035.08	8.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092711	636979.95	4273036.04	8.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092712	636987.39	4273037.01	8.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092713	636994.83	4273037.97	8.85	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092714	637002.27	4273038.94	8.86	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092715	637009.70	4273039.90	8.88	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092716	637017.14	4273040.87	8.90	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092717	637024.58	4273041.83	8.91	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092718	637032.02	4273042.80	8.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE5	L0092719	637039.45	4273043.76	8.93	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092720	637046.89	4273044.73	8.94	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092721	637054.33	4273045.69	8.95	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092722	637061.77	4273046.65	8.96	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092723	637069.21	4273047.62	8.97	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092724	637076.64	4273048.58	8.98	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092725	637084.08	4273049.55	8.99	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092726	637091.52	4273050.51	9.00	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092727	637098.96	4273051.48	9.01	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092728	637106.39	4273052.44	9.03	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092729	637113.83	4273053.41	9.07	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092730	637121.27	4273054.37	9.10	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092731	637128.71	4273055.33	9.13	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092732	637136.14	4273056.30	9.24	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092733	637143.58	4273057.26	9.58	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092734	637151.02	4273058.23	9.91	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092735	637158.46	4273059.19	10.23	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092736	637165.90	4273060.16	10.53	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092737	637173.33	4273061.12	10.77	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092738	637180.77	4273062.09	11.00	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092739	637188.21	4273063.05	11.20	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092740	637195.65	4273064.02	11.32	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092741	637203.08	4273064.98	11.18	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092742	637210.52	4273065.94	11.09	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092743	637217.96	4273066.91	11.01	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0092744	637225.40	4273067.87	10.97	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092745	637232.84	4273068.84	11.12	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092746	637240.27	4273069.80	11.28	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092747	637247.71	4273070.77	11.44	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092748	637255.15	4273071.73	11.63	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092749	637262.59	4273072.70	11.93	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092750	637270.02	4273073.66	12.21	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092751	637277.46	4273074.63	12.47	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092752	637284.90	4273075.59	12.66	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092753	637292.34	4273076.55	12.56	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092754	637299.77	4273077.52	12.48	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092755	637307.21	4273078.48	12.40	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092756	637314.65	4273079.45	12.37	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092757	637322.09	4273080.41	12.55	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092758	637329.53	4273081.38	12.73	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092759	637336.96	4273082.34	12.92	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092760	637344.40	4273083.31	13.10	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092761	637351.84	4273084.27	13.03	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092762	637359.28	4273085.23	12.95	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092763	637366.71	4273086.20	12.88	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092764	637374.15	4273087.16	12.80	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092765	637381.59	4273088.13	12.83	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092766	637389.01	4273089.21	12.87	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092767	637396.34	4273090.81	12.94	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092768	637403.66	4273092.40	13.03	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0092769	637410.99	4273093.99	13.00	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092770	637418.32	4273095.59	12.95	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092771	637425.65	4273097.18	12.86	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092772	637432.98	4273098.77	12.77	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092773	637440.31	4273100.37	12.68	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092774	637447.64	4273101.96	12.59	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092775	637454.97	4273103.55	12.50	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092776	637462.29	4273105.15	12.41	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092777	637469.62	4273106.74	12.22	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092778	637476.95	4273108.33	12.01	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092779	637483.07	4273104.13	11.81	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092780	637489.15	4273099.74	11.55	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092781	637495.23	4273095.35	11.27	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092782	637501.31	4273090.96	11.13	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092783	637507.39	4273086.57	11.01	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092784	637513.47	4273082.18	10.90	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092785	637519.55	4273077.79	10.82	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092786	637525.63	4273073.40	10.75	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092787	637531.71	4273069.00	10.71	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092788	637537.79	4273064.61	10.66	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092789	637543.87	4273060.22	10.60	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092790	637548.98	4273054.94	10.55	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092791	637552.84	4273048.51	10.50	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092792	637556.70	4273042.08	10.44	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092793	637560.56	4273035.65	10.37	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0092794	637564.42	4273029.22	10.27	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092795	637568.28	4273022.79	10.18	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092796	637572.14	4273016.35	10.10	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092797	637576.00	4273009.92	10.04	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092798	637579.85	4273003.49	10.00	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092799	637583.71	4272997.06	9.98	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092800	637587.57	4272990.63	9.97	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092801	637591.43	4272984.20	9.95	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092802	637594.06	4272977.42	9.89	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092803	637594.12	4272969.92	9.79	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092804	637594.18	4272962.42	9.69	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092805	637594.23	4272954.92	9.59	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092806	637594.29	4272947.42	9.48	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092807	637594.34	4272939.92	9.43	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092808	637594.40	4272932.42	9.41	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092809	637594.46	4272924.92	9.39	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092810	637594.51	4272917.42	9.37	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092811	637594.57	4272909.92	9.34	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092812	637594.63	4272902.42	9.32	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092813	637594.68	4272894.92	9.29	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092814	637594.74	4272887.42	9.26	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092815	637594.80	4272879.93	9.24	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092816	637594.85	4272872.43	9.21	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092817	637594.91	4272864.93	9.18	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092818	637594.97	4272857.43	9.15	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0092819	637595.02	4272849.93	9.16	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092820	637595.08	4272842.43	9.19	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092821	637595.13	4272834.93	9.22	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092822	637595.19	4272827.43	9.25	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092823	637595.25	4272819.93	9.26	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092824	637595.30	4272812.43	9.26	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092825	637595.36	4272804.93	9.26	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092826	637595.42	4272797.43	9.26	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092827	637595.47	4272789.93	9.24	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092828	637595.53	4272782.43	9.21	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092829	637595.59	4272774.93	9.18	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092830	637595.64	4272767.43	9.15	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092831	637595.70	4272759.93	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092832	637595.75	4272752.43	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092833	637595.81	4272744.93	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092834	637595.87	4272737.43	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092835	637595.92	4272729.93	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092836	637595.98	4272722.43	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092837	637596.04	4272714.93	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092838	637596.09	4272707.43	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092839	637596.15	4272699.93	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092840	637596.21	4272692.43	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092841	637596.26	4272684.93	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092842	637596.32	4272677.43	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092843	637596.37	4272669.93	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0092844	637596.43	4272662.43	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092845	637596.49	4272654.93	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092846	637596.54	4272647.43	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092847	637596.60	4272639.93	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092848	637596.66	4272632.43	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092849	637596.71	4272624.93	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092850	637596.77	4272617.43	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092851	637596.83	4272609.93	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092852	637596.88	4272602.43	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092853	637596.94	4272594.93	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092854	637597.00	4272587.43	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092855	637597.05	4272579.93	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092856	637597.11	4272572.43	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092857	637597.16	4272564.93	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092858	637597.22	4272557.43	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092859	637597.28	4272549.93	9.12	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092860	637597.33	4272542.43	9.09	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092861	637597.39	4272534.93	9.05	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092862	637597.45	4272527.44	9.02	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092863	637597.50	4272519.94	9.03	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092864	637597.56	4272512.44	9.06	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092865	637597.62	4272504.94	9.10	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092866	637597.67	4272497.44	9.13	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092867	637597.73	4272489.94	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092868	637597.78	4272482.44	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0092869	637597.84	4272474.94	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092870	637597.90	4272467.44	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092871	637597.94	4272459.94	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092872	637597.94	4272452.44	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092873	637597.94	4272444.94	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092874	637597.94	4272437.44	9.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092875	637597.94	4272429.94	9.21	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092876	637597.94	4272422.44	9.32	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092877	637597.94	4272414.94	9.43	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092878	637597.94	4272407.44	9.53	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092879	637597.94	4272399.94	9.57	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092880	637597.94	4272392.44	9.57	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092881	637597.94	4272384.94	9.57	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092882	637597.94	4272377.44	9.57	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092883	637597.94	4272369.94	9.55	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092884	637597.94	4272362.44	9.51	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092885	637599.61	4272356.64	9.52	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092886	637607.11	4272356.78	9.71	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092887	637614.61	4272356.92	9.88	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092888	637622.11	4272357.06	9.99	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092889	637629.61	4272357.21	10.10	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092890	637637.10	4272357.35	10.21	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092891	637644.60	4272357.49	10.30	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092892	637652.10	4272357.63	10.11	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092893	637659.60	4272357.77	9.93	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0092894	637667.10	4272357.91	9.76	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092895	637674.60	4272358.05	9.56	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092896	637682.10	4272358.20	9.07	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092897	637689.60	4272358.34	8.58	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092898	637697.09	4272358.48	8.08	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092899	637704.59	4272358.62	7.69	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092900	637712.09	4272358.76	8.53	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092901	637719.59	4272358.90	9.36	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092902	637727.09	4272359.05	10.20	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092903	637734.59	4272359.19	10.99	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092904	637742.09	4272359.33	11.26	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092905	637749.58	4272359.47	11.53	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092906	637757.08	4272359.61	11.80	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092907	637764.58	4272359.75	12.05	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092908	637772.08	4272359.89	12.16	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092909	637779.58	4272360.04	12.28	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092910	637787.08	4272360.18	12.39	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092911	637794.58	4272360.32	12.49	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092912	637802.08	4272360.46	12.41	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092913	637809.57	4272360.60	12.34	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092914	637817.07	4272360.74	12.26	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092915	637824.57	4272360.88	12.19	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092916	637832.07	4272361.03	12.19	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092917	637839.57	4272361.17	12.19	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092918	637847.07	4272361.31	12.19	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0092919	637854.57	4272361.45	12.19	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092920	637862.06	4272361.59	12.16	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092921	637869.56	4272361.73	12.12	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092922	637877.06	4272361.87	12.09	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092923	637884.56	4272362.02	12.06	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092924	637892.06	4272362.16	12.02	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092925	637899.56	4272362.30	11.97	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092926	637907.06	4272362.44	11.93	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092927	637914.55	4272362.58	11.89	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092928	637922.05	4272362.72	11.89	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092929	637929.55	4272362.87	11.89	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092930	637937.05	4272363.01	11.89	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092931	637944.55	4272363.15	11.89	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092932	637952.05	4272363.29	11.94	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092933	637959.55	4272363.43	11.98	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092934	637967.05	4272363.57	12.03	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092935	637974.54	4272363.71	12.08	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092936	637982.04	4272363.86	12.11	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092937	637989.54	4272364.00	12.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092938	637997.04	4272364.14	12.17	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092939	638004.54	4272364.28	12.20	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092940	638010.85	4272363.19	12.23	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092941	638010.98	4272355.69	12.22	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092942	638011.11	4272348.20	12.20	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092943	638011.25	4272340.70	12.18	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0092944	638011.38	4272333.20	12.16	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092945	638011.51	4272325.70	12.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092946	638011.64	4272318.20	12.12	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092947	638011.77	4272310.70	12.04	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092948	638011.90	4272303.20	11.91	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092949	638012.03	4272295.70	11.77	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092950	638012.16	4272288.20	11.64	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092951	638012.29	4272280.71	11.54	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092952	638012.42	4272273.21	11.46	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092953	638012.55	4272265.71	11.39	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092954	638012.69	4272258.21	11.31	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092955	638012.82	4272250.71	11.23	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092956	638012.95	4272243.21	11.16	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092957	638013.08	4272235.71	11.08	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092958	638013.21	4272228.21	11.01	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092959	638013.34	4272220.71	10.94	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092960	638013.47	4272213.22	10.89	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092961	638013.60	4272205.72	10.84	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092962	638013.73	4272198.22	10.79	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092963	638013.86	4272190.72	10.75	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092964	638013.99	4272183.22	10.73	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092965	638014.13	4272175.72	10.71	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092966	638014.26	4272168.22	10.68	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092967	638014.39	4272160.72	10.63	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092968	638014.52	4272153.23	10.55	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE5	L0092969	638014.65	4272145.73	10.47	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092970	638014.78	4272138.23	10.40	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092971	638014.91	4272130.73	10.36	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092972	638015.04	4272123.23	10.36	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092973	638015.17	4272115.73	10.36	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092974	638015.30	4272108.23	10.36	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092975	638015.43	4272100.73	10.32	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092976	638015.57	4272093.23	10.24	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092977	638015.70	4272085.74	10.17	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092978	638015.83	4272078.24	10.09	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092979	638015.96	4272070.74	10.02	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092980	638016.09	4272063.24	9.94	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092981	638016.22	4272055.74	9.86	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092982	638016.35	4272048.24	9.79	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092983	638016.48	4272040.74	9.75	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092984	638016.61	4272033.24	9.75	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092985	638016.74	4272025.74	9.75	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092986	638016.87	4272018.25	9.75	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092987	638017.00	4272010.75	9.71	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092988	638017.14	4272003.25	9.64	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092989	638017.27	4271995.75	9.56	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092990	638017.40	4271988.25	9.48	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092991	638017.53	4271980.75	9.45	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092992	638017.66	4271973.25	9.45	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092993	638017.79	4271965.75	9.45	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0092994	638017.92	4271958.25	9.45	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092995	638018.05	4271950.76	9.41	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092996	638018.18	4271943.26	9.33	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092997	638018.31	4271935.76	9.25	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092998	638018.44	4271928.26	9.18	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0092999	638018.58	4271920.76	8.85	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093000	638018.71	4271913.26	8.31	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093001	638018.84	4271905.76	7.78	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093002	638018.97	4271898.26	7.25	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093003	638019.10	4271890.77	7.35	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093004	638019.23	4271883.27	7.96	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093005	638019.36	4271875.77	8.57	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093006	638019.49	4271868.27	9.18	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093007	638019.62	4271860.77	9.45	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093008	638019.75	4271853.27	9.45	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093009	638019.88	4271845.77	9.45	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093010	638020.02	4271838.27	9.45	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093011	638020.15	4271830.77	9.49	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093012	638020.28	4271823.28	9.57	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093013	638020.41	4271815.78	9.64	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093014	638020.54	4271808.28	9.72	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093015	638020.67	4271800.78	9.75	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093016	638020.80	4271793.28	9.75	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093017	638020.93	4271785.78	9.75	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093018	638021.06	4271778.28	9.75	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE5	L0093019	638021.19	4271770.78	9.77	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093020	638021.32	4271763.28	9.80	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093021	638021.46	4271755.79	9.83	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093022	638021.59	4271748.29	9.87	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093023	638021.72	4271740.79	9.90	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093024	638021.85	4271733.29	9.95	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093025	638021.98	4271725.79	9.99	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093026	638022.11	4271718.29	10.04	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093027	638022.24	4271710.79	10.14	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093028	638022.37	4271703.29	10.29	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093029	638022.50	4271695.79	10.45	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093030	638022.63	4271688.30	10.60	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093031	638022.76	4271680.80	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093032	638022.89	4271673.30	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093033	638023.03	4271665.80	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093034	638023.16	4271658.30	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093035	638023.29	4271650.80	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093036	638023.42	4271643.30	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093037	638023.55	4271635.80	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093038	638023.68	4271628.31	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093039	638023.81	4271620.81	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093040	638023.94	4271613.31	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093041	638024.07	4271605.81	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093042	638024.20	4271598.31	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093043	638024.33	4271590.81	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0093044	638024.47	4271583.31	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093045	638024.60	4271575.81	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093046	638024.73	4271568.31	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093047	638024.86	4271560.82	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093048	638024.99	4271553.32	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093049	638025.12	4271545.82	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093050	638025.25	4271538.32	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093051	638025.38	4271530.82	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093052	638025.51	4271523.32	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093053	638025.64	4271515.82	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093054	638025.77	4271508.32	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093055	638025.91	4271500.82	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093056	638026.04	4271493.33	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093057	638026.17	4271485.83	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093058	638026.30	4271478.33	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093059	638026.43	4271470.83	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093060	638026.56	4271463.33	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093061	638026.69	4271455.83	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093062	638026.82	4271448.33	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093063	638026.95	4271440.83	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093064	638027.08	4271433.33	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093065	638027.21	4271425.84	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093066	638027.35	4271418.34	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093067	638027.48	4271410.84	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093068	638027.61	4271403.34	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0093069	638027.74	4271395.84	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093070	638027.87	4271388.34	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093071	638028.00	4271380.84	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093072	638028.13	4271373.34	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093073	638028.26	4271365.85	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093074	638028.39	4271358.35	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093075	638028.52	4271350.85	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093076	638028.65	4271343.35	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093077	638028.79	4271335.85	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093078	638028.92	4271328.35	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093079	638029.05	4271320.85	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093080	638029.18	4271313.35	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093081	638029.31	4271305.85	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093082	638029.44	4271298.36	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093083	638029.57	4271290.86	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093084	638029.70	4271283.36	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093085	638029.83	4271275.86	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093086	638029.96	4271268.36	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093087	638030.09	4271260.86	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093088	638030.22	4271253.36	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093089	638030.36	4271245.86	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093090	638030.49	4271238.36	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093091	638030.62	4271230.87	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093092	638030.75	4271223.37	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093093	638030.88	4271215.87	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE5	L0093094	638031.01	4271208.37	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093095	638031.14	4271200.87	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093096	638031.27	4271193.37	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093097	638031.40	4271185.87	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093098	638031.53	4271178.37	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093099	638031.66	4271170.87	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093100	638031.80	4271163.38	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093101	638031.93	4271155.88	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093102	638032.06	4271148.38	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093103	638032.19	4271140.88	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093104	638032.32	4271133.38	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093105	638032.45	4271125.88	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093106	638032.58	4271118.38	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093107	638032.71	4271110.88	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093108	638032.84	4271103.39	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093109	638032.97	4271095.89	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093110	638033.10	4271088.39	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093111	638033.24	4271080.89	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093112	638033.37	4271073.39	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093113	638033.50	4271065.89	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093114	638033.63	4271058.39	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093115	638033.76	4271050.89	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093116	638033.89	4271043.39	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093117	638034.02	4271035.90	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093118	638034.15	4271028.40	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

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SLINE5	L0093119	638034.28	4271020.90	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093120	638034.41	4271013.40	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093121	638034.54	4271005.90	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093122	638034.68	4270998.40	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093123	638034.81	4270990.90	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093124	638034.94	4270983.40	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093125	638035.07	4270975.90	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093126	638035.20	4270968.41	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093127	638035.33	4270960.91	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093128	638035.46	4270953.41	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093129	638035.59	4270945.91	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093130	638035.72	4270938.41	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093131	638035.85	4270930.91	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093132	638035.98	4270923.41	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093133	638036.11	4270915.91	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093134	638036.25	4270908.41	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093135	638036.38	4270900.92	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093136	638036.51	4270893.42	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093137	638036.64	4270885.92	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093138	638036.77	4270878.42	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093139	638036.90	4270870.92	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093140	638037.03	4270863.42	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093141	638037.16	4270855.92	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093142	638037.29	4270848.42	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093143	638037.42	4270840.93	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE5	L0093144	638037.55	4270833.43	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093145	638037.69	4270825.93	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093146	638037.82	4270818.43	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093147	638037.95	4270810.93	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093148	638038.08	4270803.43	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093149	638038.21	4270795.93	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093150	638038.34	4270788.43	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093151	638038.47	4270780.93	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093152	638038.60	4270773.44	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093153	638038.73	4270765.94	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58
	L0093154	638038.86	4270758.44	10.67	0.00	0.00157	7.50	Surface-Based	3.49	1.58

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE6	L0093155	633691.74	4271138.87	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093156	633689.09	4271130.86	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093157	633686.45	4271122.84	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093158	633683.80	4271114.83	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093159	633681.16	4271106.81	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093160	633678.51	4271098.80	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093161	633675.87	4271090.78	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093162	633673.22	4271082.77	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093163	633670.58	4271074.75	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093164	633667.93	4271066.74	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093165	633665.29	4271058.72	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093166	633662.64	4271050.71	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE6	L0093167	633660.00	4271042.69	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093168	633657.35	4271034.68	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093169	633654.71	4271026.66	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093170	633652.06	4271018.65	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093171	633649.42	4271010.63	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093172	633646.77	4271002.62	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093173	633644.13	4270994.60	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093174	633641.48	4270986.59	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093175	633638.84	4270978.57	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093176	633636.19	4270970.56	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093177	633633.55	4270962.54	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093178	633630.91	4270954.53	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093179	633628.26	4270946.51	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093180	633625.62	4270938.50	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093181	633622.97	4270930.48	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093182	633620.33	4270922.47	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093183	633617.68	4270914.45	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093184	633615.04	4270906.44	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093185	633612.39	4270898.42	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093186	633609.75	4270890.41	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093187	633607.10	4270882.39	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093188	633604.46	4270874.38	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093189	633601.81	4270866.36	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093190	633599.17	4270858.35	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093191	633596.52	4270850.34	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE6	L0093192	633593.88	4270842.32	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093193	633591.23	4270834.31	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093194	633588.59	4270826.29	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093195	633585.94	4270818.28	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093196	633583.30	4270810.26	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093197	633580.65	4270802.25	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093198	633578.01	4270794.23	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093199	633575.36	4270786.22	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093200	633572.72	4270778.20	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093201	633570.07	4270770.19	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093202	633567.43	4270762.17	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093203	633564.78	4270754.16	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093204	633562.14	4270746.14	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093205	633559.49	4270738.13	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093206	633556.85	4270730.11	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093207	633554.20	4270722.10	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093208	633551.56	4270714.08	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093209	633548.91	4270706.07	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093210	633546.27	4270698.05	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093211	633543.62	4270690.04	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093212	633540.98	4270682.02	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093213	633538.33	4270674.01	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093214	633535.69	4270665.99	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093215	633533.04	4270657.98	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093216	633530.40	4270649.96	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE6	L0093217	633527.75	4270641.95	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093218	633525.11	4270633.93	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093219	633522.46	4270625.92	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093220	633519.82	4270617.90	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093221	633517.17	4270609.89	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093222	633514.53	4270601.87	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093223	633511.88	4270593.86	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093224	633509.24	4270585.84	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093225	633506.59	4270577.83	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093226	633503.95	4270569.81	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093227	633501.30	4270561.80	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093228	633503.71	4270556.68	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093229	633511.96	4270554.91	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093230	633520.21	4270553.14	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093231	633528.46	4270551.37	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093232	633536.72	4270549.60	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093233	633542.08	4270552.74	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093234	633544.52	4270560.82	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093235	633546.96	4270568.90	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093236	633549.40	4270576.98	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093237	633551.84	4270585.06	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093238	633554.27	4270593.13	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093239	633556.71	4270601.21	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093240	633559.15	4270609.29	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093241	633561.59	4270617.37	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE6	L0093242	633564.03	4270625.45	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093243	633566.47	4270633.53	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093244	633568.91	4270641.61	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093245	633571.35	4270649.69	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093246	633573.79	4270657.77	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093247	633576.23	4270665.85	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093248	633578.67	4270673.93	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093249	633581.11	4270682.01	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093250	633583.55	4270690.09	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093251	633585.99	4270698.17	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093252	633588.43	4270706.25	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093253	633590.87	4270714.33	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093254	633593.31	4270722.41	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093255	633595.75	4270730.49	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093256	633598.19	4270738.57	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093257	633600.63	4270746.65	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093258	633603.07	4270754.73	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093259	633605.51	4270762.81	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093260	633607.95	4270770.89	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093261	633610.39	4270778.97	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093262	633612.83	4270787.05	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093263	633615.27	4270795.13	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093264	633617.71	4270803.21	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093265	633620.15	4270811.29	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093266	633622.59	4270819.36	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE6	L0093267	633625.03	4270827.44	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093268	633627.47	4270835.52	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093269	633629.91	4270843.60	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093270	633632.35	4270851.68	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093271	633634.79	4270859.76	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093272	633637.23	4270867.84	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093273	633639.67	4270875.92	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093274	633642.11	4270884.00	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093275	633644.55	4270892.08	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093276	633646.99	4270900.16	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093277	633649.43	4270908.24	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093278	633651.87	4270916.32	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093279	633654.31	4270924.40	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093280	633656.75	4270932.48	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093281	633659.19	4270940.56	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093282	633661.63	4270948.64	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093283	633664.07	4270956.72	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093284	633666.51	4270964.80	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093285	633668.95	4270972.88	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093286	633671.39	4270980.96	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093287	633673.83	4270989.04	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093288	633676.27	4270997.12	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093289	633678.71	4271005.20	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093290	633681.15	4271013.28	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093291	633683.59	4271021.36	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
SLINE6	L0093292	633686.03	4271029.44	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093293	633688.47	4271037.51	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093294	633690.91	4271045.59	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093295	633693.35	4271053.67	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093296	633695.79	4271061.75	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093297	633698.23	4271069.83	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093298	633700.67	4271077.91	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093299	633703.11	4271085.99	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093300	633705.55	4271094.07	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093301	633707.99	4271102.15	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093302	633710.43	4271110.23	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093303	633712.87	4271118.31	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093304	633715.31	4271126.39	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93
	L0093305	633717.75	4271134.47	7.62	1.70	0.00662	8.44	Surface-Based	3.93	1.93

Building Downwash Information

Option not in use

Emission Rate Units for Output

For Concentration

Unit Factor:	1E6
Emission Unit Label:	GRAMS/SEC
Concentration Unit Label:	MICROGRAMS/M**3

Source Pathway

AERMOD

Source Groups

Source Group ID: VOL	List of Sources in Group (Source Range or Single Sources)
	VOL3673
	VOL3674
	VOL3675
	VOL3676
	VOL3874
	VOL3875
	VOL3876
	VOL3877
	VOL3878
	VOL3879
	VOL3880
	VOL4075
	VOL4076
	VOL4077
	VOL4078
	VOL4079
	VOL4080
	VOL4081
	VOL4082
	VOL4083
	VOL4276
	VOL4277
	VOL4278
	VOL4279
	VOL4280
	VOL4281
	VOL4282
	VOL4283
	VOL4284
	VOL4285
	VOL4286
	VOL4478
	VOL4479
	VOL4480
	VOL4481
	VOL4482
	VOL4483
	VOL4484
	VOL4485
	VOL4486
	VOL4487
	VOL4488
	VOL4680
	VOL4681

Source Pathway

AERMOD

VOL4682
VOL4683
VOL4684
VOL4685
VOL4686
VOL4687
VOL4688
VOL4689
VOL4690
VOL4882
VOL4883
VOL4884
VOL4885
VOL4886
VOL4887
VOL4888
VOL4889
VOL4890
VOL4891
VOL4892
VOL5085
VOL5086
VOL5087
VOL5088
VOL5089
VOL5090
VOL5091
VOL5092
VOL5093
VOL5094
VOL5287
VOL5288
VOL5289
VOL5290
VOL5291
VOL5292
VOL5293
VOL5294
VOL5295
VOL5296
VOL5297
VOL5490
VOL5491
VOL5492
VOL5493
VOL5494
VOL5495

Source Pathway

AERMOD

VOL5496
VOL5497
VOL5498
VOL5499
VOL5693
VOL5694
VOL5695
VOL5696
VOL5697
VOL5698
VOL5699
VOL5700
VOL5701
VOL5895
VOL5896
VOL5897
VOL5898
VOL5899
VOL5900
VOL5901
VOL5902
VOL5903
VOL6097
VOL6098
VOL6099
VOL6100
VOL6101
VOL6102
VOL6103
VOL6104
VOL6105
VOL6298
VOL6299
VOL6300
VOL6301
VOL6302
VOL6303
VOL6304
VOL6305
VOL6306
VOL6307
VOL6498
VOL6499
VOL6500
VOL6501
VOL6502
VOL6503

Source Pathway

AERMOD

VOL6504
VOL6505
VOL6506
VOL6507
VOL6508
VOL6509
VOL6699
VOL6700
VOL6701
VOL6702
VOL6703
VOL6704
VOL6705
VOL6706
VOL6707
VOL6708
VOL6709
VOL6710
VOL6711
VOL6900
VOL6901
VOL6902
VOL6903
VOL6907
VOL6908
VOL6909
VOL6910
VOL6911
VOL6912
VOL6913
VOL7101
VOL7102
VOL7103
VOL7109
VOL7110
VOL7111
VOL7112
VOL7113
VOL7114
VOL7115
VOL7302
VOL7303
VOL7311
VOL7312
VOL7313
VOL7314
VOL7315

Source Pathway

AERMOD

VOL7316
VOL7317
VOL7513
VOL7514
VOL7515
VOL7516
VOL7517
VOL7518
VOL7519
VOL7716
VOL7717
VOL7718
VOL7719
VOL7720
VOL7721
VOL7918
VOL7919
VOL7920
VOL7921
VOL7922
VOL7923
VOL8120
VOL8121
VOL8122
VOL8123
VOL8124
VOL8125
VOL8322
VOL8323
VOL8324
VOL8325
VOL8326
VOL8327
VOL8524
VOL8525
VOL8526
VOL8527
VOL8528
VOL8529
VOL8726
VOL8727
VOL8728
VOL8729
VOL8730
VOL8731
VOL8928
VOL8929

Source Pathway

AERMOD

VOL8930
VOL8931
VOL8932
VOL8933
VOL9130
VOL9131
VOL9132
VOL9133
VOL9134
VOL9135
VOL9332
VOL9333
VOL9334
VOL9335
VOL9336
VOL9337
VOL9534
VOL9535
VOL9536
VOL9537
VOL9538
VOL9539
VOL9736
VOL9737
VOL9738
VOL9739
VOL9740
VOL9741
VOL9938
VOL9939
VOL9940
VOL9941
VOL9942
VOL9943
VOL10140
VOL10141
VOL10142
VOL10143
VOL10144
VOL10145
VOL10342
VOL10343
VOL10344
VOL10345
VOL10346
VOL10347
VOL10544

Source Pathway

AERMOD

VOL10545
VOL10546
VOL10547
VOL10548
VOL10549
VOL10746
VOL10747
VOL10748
VOL10749
VOL10750
VOL10751
VOL10948
VOL10949
VOL10950
VOL10951
VOL10952
VOL10953
VOL11150
VOL11151
VOL11152
VOL11153
VOL11154
VOL11155
VOL11352
VOL11353
VOL11354
VOL11355
VOL11356
VOL11357
VOL11554
VOL11555
VOL11556
VOL11557
VOL11558
VOL11559
VOL11756
VOL11757
VOL11758
VOL11759
VOL11760
VOL11761
VOL11958
VOL11959
VOL11960
VOL11961
VOL11962
VOL11963

Source Pathway

AERMOD

VOL12160
VOL12161
VOL12162
VOL12163
VOL12164
VOL12165
VOL12362
VOL12363
VOL12364
VOL12365
VOL12366
VOL12367
VOL12564
VOL12565
VOL12566
VOL12567
VOL12568
VOL12569
VOL12766
VOL12767
VOL12768
VOL12769
VOL12770
VOL12771
VOL12772
VOL12969
VOL12970
VOL12971
VOL12972
VOL12973
VOL12974
VOL13171
VOL13172
VOL13173
VOL13174
VOL13175
VOL13176
VOL13177
VOL13373
VOL13374
VOL13375
VOL13376
VOL13377
VOL13378
VOL13379
VOL13380
VOL13576

Source Pathway

AERMOD

VOL13577
VOL13578
VOL13579
VOL13580
VOL13581
VOL13582
VOL13778
VOL13779
VOL13780
VOL13781
VOL13782
VOL13783
VOL13980
VOL13981
VOL13982
VOL13983
VOL13984
VOL14183
VOL14184
VOL14185
VOL14385
VOL14386

Source Group ID: SLINE	List of Sources in Group (Source Range or Single Sources)
	SLINE1 SLINE4 SLINE5 SLINE6
Source Group ID: ALL	List of Sources in Group (Source Range or Single Sources)
	All Sources Included

Variable Emissions

Source Pathway

AERMOD

Hourly Emission Rate Variation

Scenario: SLINE

Source ID: SLINE1							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: SLINE4							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: SLINE5							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: SLINE6							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Scenario: VOL

Source ID: VOL3673							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3674							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3675							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL3676						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3874						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3875						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3876						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3877						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3878						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3879						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3880						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL3880						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4075						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4076						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4077						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4078						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4079						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4080						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4081						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL4082						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4083						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4276						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4277						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4278						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4279						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4280						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4281						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL4281						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4282						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4283						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4284						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4285						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4286						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4478						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4479						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL4479							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4480							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4481							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4482							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4483							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4484							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4485							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4486							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL4487						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4488						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4680						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4681						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4682						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4683						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4684						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4685						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL4685						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4686						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4687						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4688						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4689						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4690						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4882						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4883						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL4884						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4885						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4886						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4887						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4888						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4889						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4890						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4891						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL4891						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4892						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5085						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5086						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5087						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5088						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5089						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5090						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL5090							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5091							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5092							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5093							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5094							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5287							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5288							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5289							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL5290						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5291						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5292						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5293						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5294						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5295						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5296						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5297						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL5297						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5490						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5491						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5492						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5493						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5494						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5495						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5496						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL5497						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5498						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5499						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5693						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5694						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5695						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5696						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5697						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL5697						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5698						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5699						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5700						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5701						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5895						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5896						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5897						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL5897							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5898							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5899							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5900							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5901							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5902							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5903							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6097							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL6098						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6099						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6100						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6101						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6102						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6103						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6104						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6105						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL6105						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6298						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6299						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6300						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6301						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6302						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6303						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6304						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL6305						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6306						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6307						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6498						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6499						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6500						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6501						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6502						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL6502						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6503						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6504						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6505						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6506						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6507						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6508						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6509						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL6509							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6699							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6700							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6701							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6702							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6703							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6704							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6705							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL6706						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6707						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6708						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6709						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6710						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6711						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6900						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6901						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL6901						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6902						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6903						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6907						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6908						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6909						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6910						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6911						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL6912						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6913						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7101						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7102						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7103						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7109						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7110						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7111						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL7111						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7112						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7113						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7114						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7115						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7302						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7303						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7311						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL7311							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7312							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7313							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7314							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7315							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7316							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7317							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7513							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL7514						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7515						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7516						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7517						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7518						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7519						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7716						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7717						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL7717						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7718						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7719						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7720						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7721						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7918						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7919						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7920						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL7921						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7922						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7923						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8120						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8121						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8122						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8123						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8124						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL8124						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8125						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8322						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8323						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8324						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8325						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8326						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8327						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL8327							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8524							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8525							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8526							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8527							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8528							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8529							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8726							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL8727						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8728						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8729						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8730						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8731						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8928						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8929						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8930						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL8930						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8931						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8932						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8933						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9130						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9131						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9132						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9133						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL9134						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9135						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9332						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9333						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9334						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9335						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9336						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9337						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL9337						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9534						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9535						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9536						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9537						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9538						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9539						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9736						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL9736							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9737							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9738							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9739							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9740							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9741							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9938							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9939							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL9940						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9941						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9942						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9943						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10140						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10141						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10142						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10143						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL10143						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10144						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10145						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10342						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10343						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10344						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10345						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10346						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL10347						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10544						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10545						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10546						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10547						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10548						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10549						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10746						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL10746						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10747						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10748						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10749						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10750						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10751						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10948						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10949						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL10949							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10950							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10951							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10952							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10953							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11150							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11151							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11152							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL11153						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11154						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11155						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11352						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11353						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11354						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11355						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11356						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL11356						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11357						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11554						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11555						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11556						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11557						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11558						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11559						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL11756						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11757						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11758						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11759						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11760						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11761						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11958						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11959						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL11959						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11960						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11961						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11962						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11963						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12160						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12161						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12162						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL12162							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12163							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12164							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12165							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12362							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12363							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12364							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12365							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL12366						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12367						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12564						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12565						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12566						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12567						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12568						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12569						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL12569						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12766						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12767						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12768						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12769						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12770						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12771						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12772						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL12969						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12970						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12971						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12972						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12973						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12974						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13171						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13172						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL13172						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13173						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13174						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13175						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13176						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13177						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13373						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13374						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL13374							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13375							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13376							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13377							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13378							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13379							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13380							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13576							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL13577						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13578						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13579						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13580						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13581						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13582						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13778						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13779						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL13779						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13780						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13781						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13782						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13783						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13980						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13981						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13982						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL13983						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13984						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL14183						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL14184						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL14185						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL14385						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL14386						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Receptor Pathway

AERMOD

Receptor Networks

Note: Terrain Elevations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	636726.16	4269592.29	UCART1	10.99	
2	636766.16	4269592.29	UCART1	11.98	
3	637006.16	4269592.29	UCART1	11.05	
4	637046.16	4269592.29	UCART1	10.95	
5	637086.16	4269592.29	UCART1	10.67	
6	637126.16	4269592.29	UCART1	10.44	
7	637166.16	4269592.29	UCART1	10.27	
8	637206.16	4269592.29	UCART1	9.93	
9	637246.16	4269592.29	UCART1	9.53	
10	637286.16	4269592.29	UCART1	9.12	
11	637326.16	4269592.29	UCART1	8.72	
12	636766.16	4269632.29	UCART1	11.89	
13	637006.16	4269632.29	UCART1	11.23	
14	637046.16	4269632.29	UCART1	10.95	
15	637086.16	4269632.29	UCART1	10.67	
16	637126.16	4269632.29	UCART1	10.44	
17	637166.16	4269632.29	UCART1	10.05	
18	637206.16	4269632.29	UCART1	9.76	
19	637246.16	4269632.29	UCART1	9.35	
20	637286.16	4269632.29	UCART1	8.95	
21	637326.16	4269632.29	UCART1	8.54	
22	636686.16	4269672.29	UCART1	11.30	
23	637006.16	4269672.29	UCART1	11.36	
24	637046.16	4269672.29	UCART1	10.97	
25	637086.16	4269672.29	UCART1	10.83	
26	637126.16	4269672.29	UCART1	10.44	
27	637166.16	4269672.29	UCART1	10.04	
28	637206.16	4269672.29	UCART1	9.63	
29	637246.16	4269672.29	UCART1	9.22	
30	637286.16	4269672.29	UCART1	8.82	

Receptor Pathway

AERMOD

31	637326.16	4269672.29	UCART1	8.41
32	636686.16	4269712.29	UCART1	11.58
33	636726.16	4269712.29	UCART1	11.71
34	636766.16	4269712.29	UCART1	11.94
35	637046.16	4269712.29	UCART1	11.26
36	637246.16	4269712.29	UCART1	9.15
37	637286.16	4269712.29	UCART1	8.74
38	637326.16	4269712.29	UCART1	8.37
39	636686.16	4269752.29	UCART1	11.60
40	636726.16	4269752.29	UCART1	11.81
41	636766.16	4269752.29	UCART1	12.11
42	636806.16	4269752.29	UCART1	11.43
43	637006.16	4269752.29	UCART1	11.84
44	637086.16	4269752.29	UCART1	10.85
45	637126.16	4269752.29	UCART1	10.31
46	637166.16	4269752.29	UCART1	9.85
47	637286.16	4269752.29	UCART1	8.51
48	637326.16	4269752.29	UCART1	8.16
49	637646.16	4269752.29	UCART1	8.71
50	637686.16	4269752.29	UCART1	8.83
51	637726.16	4269752.29	UCART1	9.02
52	637766.16	4269752.29	UCART1	9.14
53	637806.16	4269752.29	UCART1	9.22
54	636686.16	4269792.29	UCART1	11.86
55	636726.16	4269792.29	UCART1	11.89
56	636766.16	4269792.29	UCART1	12.11
57	636806.16	4269792.29	UCART1	12.03
58	636846.16	4269792.29	UCART1	11.83
59	637046.16	4269792.29	UCART1	11.26
60	637086.16	4269792.29	UCART1	10.74
61	637126.16	4269792.29	UCART1	10.14
62	637166.16	4269792.29	UCART1	9.73
63	637286.16	4269792.29	UCART1	8.51
64	637326.16	4269792.29	UCART1	8.11
65	637646.16	4269792.29	UCART1	9.14
66	637686.16	4269792.29	UCART1	9.41
67	637726.16	4269792.29	UCART1	9.63
68	637766.16	4269792.29	UCART1	9.42

Receptor Pathway

AERMOD

69	637806.16	4269792.29	UCART1	9.43
70	636526.16	4269832.29	UCART1	10.67
71	636566.16	4269832.29	UCART1	10.78
72	636686.16	4269832.29	UCART1	12.18
73	636726.16	4269832.29	UCART1	11.93
74	636766.16	4269832.29	UCART1	12.06
75	636806.16	4269832.29	UCART1	12.12
76	636846.16	4269832.29	UCART1	11.79
77	636966.16	4269832.29	UCART1	12.10
78	637006.16	4269832.29	UCART1	11.85
79	637046.16	4269832.29	UCART1	11.26
80	637086.16	4269832.29	UCART1	10.72
81	637126.16	4269832.29	UCART1	10.14
82	637166.16	4269832.29	UCART1	9.73
83	637206.16	4269832.29	UCART1	9.32
84	637246.16	4269832.29	UCART1	8.92
85	637286.16	4269832.29	UCART1	8.42
86	637326.16	4269832.29	UCART1	7.89
87	637646.16	4269832.29	UCART1	9.48
88	637686.16	4269832.29	UCART1	10.08
89	637726.16	4269832.29	UCART1	10.27
90	637766.16	4269832.29	UCART1	10.13
91	637806.16	4269832.29	UCART1	10.01
92	636566.16	4269872.29	UCART1	11.00
93	636686.16	4269872.29	UCART1	12.19
94	636726.16	4269872.29	UCART1	12.14
95	636766.16	4269872.29	UCART1	12.06
96	636806.16	4269872.29	UCART1	12.07
97	636846.16	4269872.29	UCART1	11.62
98	637006.16	4269872.29	UCART1	11.87
99	637046.16	4269872.29	UCART1	11.24
100	637086.16	4269872.29	UCART1	10.62
101	637126.16	4269872.29	UCART1	10.14
102	637166.16	4269872.29	UCART1	9.73
103	637206.16	4269872.29	UCART1	9.25
104	637246.16	4269872.29	UCART1	8.74
105	637286.16	4269872.29	UCART1	8.21
106	637646.16	4269872.29	UCART1	9.67

Receptor Pathway

AERMOD

107	637686.16	4269872.29	UCART1	10.41
108	637726.16	4269872.29	UCART1	10.67
109	637766.16	4269872.29	UCART1	10.53
110	637806.16	4269872.29	UCART1	10.31
111	636566.16	4269912.29	UCART1	11.00
112	636646.16	4269912.29	UCART1	11.83
113	636686.16	4269912.29	UCART1	11.93
114	636726.16	4269912.29	UCART1	12.19
115	636766.16	4269912.29	UCART1	12.19
116	636806.16	4269912.29	UCART1	12.19
117	637046.16	4269912.29	UCART1	10.98
118	637086.16	4269912.29	UCART1	10.54
119	637126.16	4269912.29	UCART1	9.93
120	637166.16	4269912.29	UCART1	9.45
121	637206.16	4269912.29	UCART1	9.04
122	637246.16	4269912.29	UCART1	8.61
123	637286.16	4269912.29	UCART1	8.21
124	637606.16	4269912.29	UCART1	9.27
125	637646.16	4269912.29	UCART1	9.80
126	637686.16	4269912.29	UCART1	10.49
127	637726.16	4269912.29	UCART1	10.67
128	637766.16	4269912.29	UCART1	10.67
129	637806.16	4269912.29	UCART1	10.53
130	637086.16	4269952.29	UCART1	10.24
131	637126.16	4269952.29	UCART1	9.83
132	637166.16	4269952.29	UCART1	9.42
133	637206.16	4269952.29	UCART1	8.95
134	637246.16	4269952.29	UCART1	8.54
135	637286.16	4269952.29	UCART1	7.92
136	637606.16	4269952.29	UCART1	9.37
137	637646.16	4269952.29	UCART1	10.08
138	637686.16	4269952.29	UCART1	10.44
139	637726.16	4269952.29	UCART1	10.67
140	637766.16	4269952.29	UCART1	10.66
141	637806.16	4269952.29	UCART1	10.50
142	637846.16	4269952.29	UCART1	10.36
143	636766.16	4269992.29	UCART1	11.76
144	636806.16	4269992.29	UCART1	11.38

Receptor Pathway

AERMOD

145	637086.16	4269992.29	UCART1	10.06
146	637126.16	4269992.29	UCART1	9.79
147	637166.16	4269992.29	UCART1	9.40
148	637206.16	4269992.29	UCART1	8.72
149	637246.16	4269992.29	UCART1	8.31
150	637286.16	4269992.29	UCART1	7.91
151	637606.16	4269992.29	UCART1	9.55
152	637646.16	4269992.29	UCART1	10.06
153	637686.16	4269992.29	UCART1	10.23
154	637766.16	4269992.29	UCART1	10.66
155	637806.16	4269992.29	UCART1	10.54
156	637846.16	4269992.29	UCART1	10.54
157	633686.16	4270032.29	UCART1	7.32
158	633726.16	4270032.29	UCART1	7.32
159	633766.16	4270032.29	UCART1	7.32
160	633806.16	4270032.29	UCART1	7.32
161	633846.16	4270032.29	UCART1	7.34
162	636246.16	4270032.29	UCART1	10.67
163	636286.16	4270032.29	UCART1	10.67
164	636326.16	4270032.29	UCART1	10.65
165	636366.16	4270032.29	UCART1	10.39
166	636406.16	4270032.29	UCART1	10.37
167	636766.16	4270032.29	UCART1	11.38
168	636806.16	4270032.29	UCART1	11.23
169	636886.16	4270032.29	UCART1	10.67
170	636926.16	4270032.29	UCART1	10.67
171	636966.16	4270032.29	UCART1	10.68
172	637166.16	4270032.29	UCART1	9.42
173	637206.16	4270032.29	UCART1	8.88
174	637246.16	4270032.29	UCART1	8.31
175	637566.16	4270032.29	UCART1	9.37
176	637606.16	4270032.29	UCART1	9.75
177	637646.16	4270032.29	UCART1	10.06
178	637686.16	4270032.29	UCART1	10.18
179	637766.16	4270032.29	UCART1	10.67
180	637806.16	4270032.29	UCART1	10.67
181	637846.16	4270032.29	UCART1	10.67
182	633566.16	4270072.29	UCART1	7.25

Receptor Pathway

AERMOD

183	633606.16	4270072.29	UCART1	7.32
184	633646.16	4270072.29	UCART1	7.32
185	633686.16	4270072.29	UCART1	7.32
186	633726.16	4270072.29	UCART1	7.32
187	633766.16	4270072.29	UCART1	7.32
188	633806.16	4270072.29	UCART1	7.32
189	633846.16	4270072.29	UCART1	7.35
190	636246.16	4270072.29	UCART1	10.52
191	636286.16	4270072.29	UCART1	10.35
192	636326.16	4270072.29	UCART1	10.36
193	636366.16	4270072.29	UCART1	10.36
194	636406.16	4270072.29	UCART1	10.36
195	636606.16	4270072.29	UCART1	11.07
196	636646.16	4270072.29	UCART1	11.26
197	636686.16	4270072.29	UCART1	11.51
198	636726.16	4270072.29	UCART1	11.41
199	636766.16	4270072.29	UCART1	11.22
200	636806.16	4270072.29	UCART1	10.95
201	636846.16	4270072.29	UCART1	10.67
202	636886.16	4270072.29	UCART1	10.67
203	636926.16	4270072.29	UCART1	10.67
204	636966.16	4270072.29	UCART1	10.67
205	637006.16	4270072.29	UCART1	10.67
206	637046.16	4270072.29	UCART1	10.35
207	637086.16	4270072.29	UCART1	10.10
208	637246.16	4270072.29	UCART1	8.39
209	637566.16	4270072.29	UCART1	9.82
210	637606.16	4270072.29	UCART1	10.13
211	637646.16	4270072.29	UCART1	10.13
212	637686.16	4270072.29	UCART1	10.15
213	637726.16	4270072.29	UCART1	10.34
214	637806.16	4270072.29	UCART1	10.33
215	637846.16	4270072.29	UCART1	10.29
216	637886.16	4270072.29	UCART1	10.29
217	637926.16	4270072.29	UCART1	10.29
218	637966.16	4270072.29	UCART1	10.06
219	633606.16	4270112.29	UCART1	7.21
220	633646.16	4270112.29	UCART1	7.32

Receptor Pathway

AERMOD

221	633686.16	4270112.29	UCART1	7.32
222	633726.16	4270112.29	UCART1	7.32
223	633766.16	4270112.29	UCART1	7.32
224	633806.16	4270112.29	UCART1	7.32
225	633846.16	4270112.29	UCART1	7.44
226	636246.16	4270112.29	UCART1	9.95
227	636286.16	4270112.29	UCART1	10.06
228	636326.16	4270112.29	UCART1	10.20
229	636406.16	4270112.29	UCART1	10.36
230	636446.16	4270112.29	UCART1	10.67
231	636606.16	4270112.29	UCART1	10.97
232	636646.16	4270112.29	UCART1	11.07
233	636686.16	4270112.29	UCART1	11.28
234	636726.16	4270112.29	UCART1	11.21
235	636766.16	4270112.29	UCART1	11.01
236	636806.16	4270112.29	UCART1	10.79
237	636846.16	4270112.29	UCART1	10.67
238	636886.16	4270112.29	UCART1	10.67
239	636926.16	4270112.29	UCART1	10.67
240	636966.16	4270112.29	UCART1	10.67
241	637006.16	4270112.29	UCART1	10.67
242	637046.16	4270112.29	UCART1	10.54
243	637086.16	4270112.29	UCART1	10.42
244	637126.16	4270112.29	UCART1	10.10
245	637166.16	4270112.29	UCART1	9.72
246	637206.16	4270112.29	UCART1	9.12
247	637246.16	4270112.29	UCART1	8.52
248	637566.16	4270112.29	UCART1	10.25
249	637606.16	4270112.29	UCART1	10.54
250	637646.16	4270112.29	UCART1	10.35
251	637686.16	4270112.29	UCART1	10.23
252	637726.16	4270112.29	UCART1	10.33
253	637806.16	4270112.29	UCART1	10.13
254	637846.16	4270112.29	UCART1	9.93
255	637886.16	4270112.29	UCART1	9.88
256	637926.16	4270112.29	UCART1	9.88
257	637966.16	4270112.29	UCART1	9.66
258	633606.16	4270152.29	UCART1	7.02

Receptor Pathway

AERMOD

259	633646.16	4270152.29	UCART1	7.24
260	633686.16	4270152.29	UCART1	7.32
261	633726.16	4270152.29	UCART1	7.32
262	633766.16	4270152.29	UCART1	7.32
263	633806.16	4270152.29	UCART1	7.32
264	633846.16	4270152.29	UCART1	7.44
265	633886.16	4270152.29	UCART1	7.62
266	636246.16	4270152.29	UCART1	9.76
267	636286.16	4270152.29	UCART1	9.99
268	636326.16	4270152.29	UCART1	10.06
269	636406.16	4270152.29	UCART1	10.36
270	636446.16	4270152.29	UCART1	10.67
271	636606.16	4270152.29	UCART1	10.97
272	636646.16	4270152.29	UCART1	10.97
273	636686.16	4270152.29	UCART1	11.00
274	636726.16	4270152.29	UCART1	10.99
275	636766.16	4270152.29	UCART1	10.97
276	636846.16	4270152.29	UCART1	10.67
277	636886.16	4270152.29	UCART1	10.67
278	636926.16	4270152.29	UCART1	10.67
279	636966.16	4270152.29	UCART1	10.67
280	637006.16	4270152.29	UCART1	10.67
281	637046.16	4270152.29	UCART1	10.67
282	637086.16	4270152.29	UCART1	10.66
283	637126.16	4270152.29	UCART1	10.42
284	637166.16	4270152.29	UCART1	10.01
285	637206.16	4270152.29	UCART1	9.48
286	637246.16	4270152.29	UCART1	8.69
287	637606.16	4270152.29	UCART1	10.67
288	637646.16	4270152.29	UCART1	10.64
289	637686.16	4270152.29	UCART1	10.64
290	637726.16	4270152.29	UCART1	10.64
291	637766.16	4270152.29	UCART1	10.64
292	637846.16	4270152.29	UCART1	9.55
293	637886.16	4270152.29	UCART1	9.48
294	637926.16	4270152.29	UCART1	9.48
295	637966.16	4270152.29	UCART1	9.46
296	638006.16	4270152.29	UCART1	9.19

Receptor Pathway

AERMOD

297	633246.16	4270192.29	UCART1	6.43
298	633286.16	4270192.29	UCART1	6.48
299	633326.16	4270192.29	UCART1	6.71
300	633486.16	4270192.29	UCART1	7.01
301	633526.16	4270192.29	UCART1	7.01
302	633566.16	4270192.29	UCART1	7.01
303	633606.16	4270192.29	UCART1	7.13
304	633646.16	4270192.29	UCART1	7.32
305	633686.16	4270192.29	UCART1	7.32
306	633726.16	4270192.29	UCART1	7.32
307	633766.16	4270192.29	UCART1	7.32
308	633806.16	4270192.29	UCART1	7.32
309	633846.16	4270192.29	UCART1	7.32
310	633886.16	4270192.29	UCART1	7.54
311	636246.16	4270192.29	UCART1	9.57
312	636286.16	4270192.29	UCART1	9.98
313	636326.16	4270192.29	UCART1	10.06
314	636366.16	4270192.29	UCART1	10.23
315	636406.16	4270192.29	UCART1	10.36
316	636446.16	4270192.29	UCART1	10.60
317	636566.16	4270192.29	UCART1	10.68
318	636606.16	4270192.29	UCART1	10.90
319	636646.16	4270192.29	UCART1	10.95
320	636686.16	4270192.29	UCART1	10.97
321	636726.16	4270192.29	UCART1	10.94
322	636806.16	4270192.29	UCART1	10.67
323	636846.16	4270192.29	UCART1	10.67
324	637006.16	4270192.29	UCART1	10.67
325	637046.16	4270192.29	UCART1	10.67
326	637086.16	4270192.29	UCART1	10.67
327	637126.16	4270192.29	UCART1	10.67
328	637166.16	4270192.29	UCART1	10.40
329	637206.16	4270192.29	UCART1	9.78
330	637246.16	4270192.29	UCART1	8.92
331	637566.16	4270192.29	UCART1	10.18
332	637646.16	4270192.29	UCART1	10.59
333	637686.16	4270192.29	UCART1	10.50
334	637726.16	4270192.29	UCART1	10.31

Receptor Pathway

AERMOD

335	637766.16	4270192.29	UCART1	9.94
336	637806.16	4270192.29	UCART1	9.32
337	637886.16	4270192.29	UCART1	9.37
338	637926.16	4270192.29	UCART1	9.28
339	637966.16	4270192.29	UCART1	9.20
340	638006.16	4270192.29	UCART1	9.53
341	633126.16	4270232.29	UCART1	6.22
342	633166.16	4270232.29	UCART1	6.53
343	633206.16	4270232.29	UCART1	6.58
344	633486.16	4270232.29	UCART1	7.01
345	633526.16	4270232.29	UCART1	7.01
346	633566.16	4270232.29	UCART1	7.01
347	633606.16	4270232.29	UCART1	7.13
348	633766.16	4270232.29	UCART1	7.32
349	633806.16	4270232.29	UCART1	7.32
350	636246.16	4270232.29	UCART1	9.57
351	636286.16	4270232.29	UCART1	9.98
352	636326.16	4270232.29	UCART1	10.24
353	636366.16	4270232.29	UCART1	10.36
354	636406.16	4270232.29	UCART1	10.49
355	636446.16	4270232.29	UCART1	10.55
356	636566.16	4270232.29	UCART1	10.67
357	636606.16	4270232.29	UCART1	10.67
358	636646.16	4270232.29	UCART1	10.76
359	636686.16	4270232.29	UCART1	10.80
360	636766.16	4270232.29	UCART1	10.67
361	636806.16	4270232.29	UCART1	10.67
362	636846.16	4270232.29	UCART1	10.67
363	636886.16	4270232.29	UCART1	10.67
364	636926.16	4270232.29	UCART1	10.67
365	636966.16	4270232.29	UCART1	10.67
366	637046.16	4270232.29	UCART1	10.67
367	637086.16	4270232.29	UCART1	10.67
368	637126.16	4270232.29	UCART1	10.67
369	637166.16	4270232.29	UCART1	10.48
370	637206.16	4270232.29	UCART1	10.38
371	637246.16	4270232.29	UCART1	10.00
372	637566.16	4270232.29	UCART1	10.36

Receptor Pathway

AERMOD

373	637606.16	4270232.29	UCART1	10.36
374	637686.16	4270232.29	UCART1	10.36
375	637726.16	4270232.29	UCART1	10.14
376	637766.16	4270232.29	UCART1	9.73
377	637806.16	4270232.29	UCART1	9.40
378	637886.16	4270232.29	UCART1	9.14
379	637926.16	4270232.29	UCART1	9.14
380	637966.16	4270232.29	UCART1	9.37
381	638006.16	4270232.29	UCART1	10.33
382	638046.16	4270232.29	UCART1	10.47
383	633086.16	4270272.29	UCART1	6.37
384	633126.16	4270272.29	UCART1	6.50
385	633166.16	4270272.29	UCART1	6.70
386	633206.16	4270272.29	UCART1	6.71
387	633486.16	4270272.29	UCART1	7.01
388	636286.16	4270272.29	UCART1	10.05
389	636326.16	4270272.29	UCART1	10.36
390	636366.16	4270272.29	UCART1	10.36
391	636406.16	4270272.29	UCART1	10.59
392	636446.16	4270272.29	UCART1	10.67
393	636566.16	4270272.29	UCART1	10.67
394	636606.16	4270272.29	UCART1	10.67
395	636646.16	4270272.29	UCART1	10.67
396	636686.16	4270272.29	UCART1	10.67
397	636766.16	4270272.29	UCART1	10.67
398	636806.16	4270272.29	UCART1	10.67
399	636846.16	4270272.29	UCART1	10.67
400	636886.16	4270272.29	UCART1	10.67
401	636926.16	4270272.29	UCART1	10.67
402	636966.16	4270272.29	UCART1	10.67
403	637046.16	4270272.29	UCART1	10.67
404	637166.16	4270272.29	UCART1	10.32
405	637206.16	4270272.29	UCART1	9.70
406	637246.16	4270272.29	UCART1	9.33
407	637566.16	4270272.29	UCART1	10.53
408	637606.16	4270272.29	UCART1	10.36
409	637646.16	4270272.29	UCART1	10.36
410	637726.16	4270272.29	UCART1	10.07

Receptor Pathway

AERMOD

411	637766.16	4270272.29	UCART1	9.75
412	637806.16	4270272.29	UCART1	9.61
413	637846.16	4270272.29	UCART1	9.43
414	637926.16	4270272.29	UCART1	9.14
415	637966.16	4270272.29	UCART1	9.16
416	638006.16	4270272.29	UCART1	9.82
417	638046.16	4270272.29	UCART1	10.49
418	638086.16	4270272.29	UCART1	11.07
419	638126.16	4270272.29	UCART1	10.93
420	633086.16	4270312.29	UCART1	6.42
421	633126.16	4270312.29	UCART1	6.77
422	633166.16	4270312.29	UCART1	7.03
423	633206.16	4270312.29	UCART1	7.08
424	633246.16	4270312.29	UCART1	6.92
425	636286.16	4270312.29	UCART1	10.28
426	636366.16	4270312.29	UCART1	10.67
427	636446.16	4270312.29	UCART1	10.67
428	636566.16	4270312.29	UCART1	10.67
429	636606.16	4270312.29	UCART1	10.67
430	636646.16	4270312.29	UCART1	10.67
431	636686.16	4270312.29	UCART1	10.67
432	636766.16	4270312.29	UCART1	10.67
433	636806.16	4270312.29	UCART1	10.66
434	636846.16	4270312.29	UCART1	10.59
435	636886.16	4270312.29	UCART1	10.42
436	636926.16	4270312.29	UCART1	10.36
437	637006.16	4270312.29	UCART1	10.59
438	637046.16	4270312.29	UCART1	10.67
439	637086.16	4270312.29	UCART1	10.64
440	637126.16	4270312.29	UCART1	10.37
441	637166.16	4270312.29	UCART1	10.52
442	637566.16	4270312.29	UCART1	10.54
443	637606.16	4270312.29	UCART1	10.42
444	637646.16	4270312.29	UCART1	10.36
445	637686.16	4270312.29	UCART1	10.24
446	637766.16	4270312.29	UCART1	9.75
447	637806.16	4270312.29	UCART1	9.66
448	637846.16	4270312.29	UCART1	9.47

Receptor Pathway

AERMOD

449	637886.16	4270312.29	UCART1	9.43
450	637966.16	4270312.29	UCART1	9.14
451	638006.16	4270312.29	UCART1	9.46
452	638046.16	4270312.29	UCART1	10.79
453	638086.16	4270312.29	UCART1	11.37
454	638126.16	4270312.29	UCART1	11.35
455	638166.16	4270312.29	UCART1	11.23
456	638206.16	4270312.29	UCART1	11.05
457	638246.16	4270312.29	UCART1	11.05
458	633086.16	4270352.29	UCART1	6.44
459	633126.16	4270352.29	UCART1	7.06
460	633166.16	4270352.29	UCART1	7.32
461	633206.16	4270352.29	UCART1	7.47
462	633246.16	4270352.29	UCART1	7.19
463	636286.16	4270352.29	UCART1	10.28
464	636366.16	4270352.29	UCART1	10.67
465	636446.16	4270352.29	UCART1	10.67
466	636566.16	4270352.29	UCART1	10.67
467	636606.16	4270352.29	UCART1	10.67
468	636646.16	4270352.29	UCART1	10.67
469	636686.16	4270352.29	UCART1	10.67
470	636726.16	4270352.29	UCART1	10.67
471	636766.16	4270352.29	UCART1	10.67
472	636846.16	4270352.29	UCART1	10.36
473	636886.16	4270352.29	UCART1	10.36
474	636926.16	4270352.29	UCART1	10.36
475	637006.16	4270352.29	UCART1	10.59
476	637046.16	4270352.29	UCART1	10.67
477	637086.16	4270352.29	UCART1	10.54
478	637126.16	4270352.29	UCART1	10.14
479	637166.16	4270352.29	UCART1	10.07
480	637606.16	4270352.29	UCART1	10.63
481	637646.16	4270352.29	UCART1	10.53
482	637686.16	4270352.29	UCART1	10.31
483	637886.16	4270352.29	UCART1	9.45
484	637926.16	4270352.29	UCART1	9.40
485	638046.16	4270352.29	UCART1	10.10
486	638086.16	4270352.29	UCART1	11.83

Receptor Pathway

AERMOD

487	638126.16	4270352.29	UCART1	11.92
488	638166.16	4270352.29	UCART1	11.71
489	638206.16	4270352.29	UCART1	11.63
490	638246.16	4270352.29	UCART1	11.60
491	633086.16	4270392.29	UCART1	6.47
492	636286.16	4270392.29	UCART1	10.28
493	636366.16	4270392.29	UCART1	10.67
494	636406.16	4270392.29	UCART1	10.67
495	636446.16	4270392.29	UCART1	10.67
496	636526.16	4270392.29	UCART1	10.67
497	636646.16	4270392.29	UCART1	10.67
498	636686.16	4270392.29	UCART1	10.67
499	636726.16	4270392.29	UCART1	10.67
500	636766.16	4270392.29	UCART1	10.67
501	636846.16	4270392.29	UCART1	10.25
502	636886.16	4270392.29	UCART1	10.09
503	636966.16	4270392.29	UCART1	10.48
504	637006.16	4270392.29	UCART1	10.66
505	637046.16	4270392.29	UCART1	10.65
506	637086.16	4270392.29	UCART1	10.38
507	637166.16	4270392.29	UCART1	10.06
508	637206.16	4270392.29	UCART1	10.15
509	637606.16	4270392.29	UCART1	10.67
510	637646.16	4270392.29	UCART1	10.65
511	637686.16	4270392.29	UCART1	10.36
512	637726.16	4270392.29	UCART1	10.14
513	637926.16	4270392.29	UCART1	9.73
514	637966.16	4270392.29	UCART1	9.93
515	638006.16	4270392.29	UCART1	9.98
516	638086.16	4270392.29	UCART1	10.76
517	638126.16	4270392.29	UCART1	11.93
518	638166.16	4270392.29	UCART1	12.17
519	638206.16	4270392.29	UCART1	12.17
520	638246.16	4270392.29	UCART1	11.86
521	633886.16	4270432.29	UCART1	7.01
522	633926.16	4270432.29	UCART1	7.24
523	636286.16	4270432.29	UCART1	10.28
524	636326.16	4270432.29	UCART1	10.67

Receptor Pathway

AERMOD

525	636366.16	4270432.29	UCART1	10.67
526	636406.16	4270432.29	UCART1	10.67
527	636446.16	4270432.29	UCART1	10.65
528	636526.16	4270432.29	UCART1	10.36
529	636606.16	4270432.29	UCART1	10.67
530	636646.16	4270432.29	UCART1	10.67
531	636766.16	4270432.29	UCART1	10.44
532	636846.16	4270432.29	UCART1	10.06
533	636886.16	4270432.29	UCART1	10.06
534	636926.16	4270432.29	UCART1	10.29
535	636966.16	4270432.29	UCART1	10.49
536	637006.16	4270432.29	UCART1	10.67
537	637046.16	4270432.29	UCART1	10.67
538	637126.16	4270432.29	UCART1	10.21
539	637166.16	4270432.29	UCART1	10.37
540	637206.16	4270432.29	UCART1	10.53
541	637606.16	4270432.29	UCART1	10.61
542	637646.16	4270432.29	UCART1	10.58
543	637686.16	4270432.29	UCART1	10.36
544	637726.16	4270432.29	UCART1	10.19
545	637766.16	4270432.29	UCART1	10.06
546	637966.16	4270432.29	UCART1	10.61
547	638006.16	4270432.29	UCART1	10.86
548	638046.16	4270432.29	UCART1	10.53
549	638086.16	4270432.29	UCART1	10.67
550	638166.16	4270432.29	UCART1	11.17
551	638206.16	4270432.29	UCART1	11.84
552	638246.16	4270432.29	UCART1	12.04
553	638286.16	4270432.29	UCART1	11.03
554	633766.16	4270472.29	UCART1	7.04
555	633806.16	4270472.29	UCART1	7.01
556	633846.16	4270472.29	UCART1	7.01
557	633886.16	4270472.29	UCART1	7.01
558	633926.16	4270472.29	UCART1	7.01
559	636206.16	4270472.29	UCART1	9.47
560	636526.16	4270472.29	UCART1	10.36
561	636606.16	4270472.29	UCART1	10.67
562	636646.16	4270472.29	UCART1	10.67

Receptor Pathway

AERMOD

563	636686.16	4270472.29	UCART1	10.67
564	636726.16	4270472.29	UCART1	10.60
565	636766.16	4270472.29	UCART1	10.40
566	636926.16	4270472.29	UCART1	10.24
567	636966.16	4270472.29	UCART1	10.49
568	637006.16	4270472.29	UCART1	10.67
569	637046.16	4270472.29	UCART1	10.67
570	637126.16	4270472.29	UCART1	10.53
571	637166.16	4270472.29	UCART1	10.55
572	637206.16	4270472.29	UCART1	10.67
573	637606.16	4270472.29	UCART1	10.00
574	637646.16	4270472.29	UCART1	10.36
575	637686.16	4270472.29	UCART1	10.36
576	637726.16	4270472.29	UCART1	10.36
577	637766.16	4270472.29	UCART1	10.06
578	637886.16	4270472.29	UCART1	10.26
579	637926.16	4270472.29	UCART1	10.59
580	637966.16	4270472.29	UCART1	10.67
581	638046.16	4270472.29	UCART1	10.67
582	638086.16	4270472.29	UCART1	10.67
583	638126.16	4270472.29	UCART1	10.67
584	638166.16	4270472.29	UCART1	10.72
585	633686.16	4270512.29	UCART1	7.32
586	633726.16	4270512.29	UCART1	7.19
587	633766.16	4270512.29	UCART1	7.01
588	633806.16	4270512.29	UCART1	7.01
589	633846.16	4270512.29	UCART1	7.01
590	633886.16	4270512.29	UCART1	7.01
591	633926.16	4270512.29	UCART1	7.01
592	636206.16	4270512.29	UCART1	9.47
593	636286.16	4270512.29	UCART1	10.58
594	636326.16	4270512.29	UCART1	10.67
595	636366.16	4270512.29	UCART1	10.78
596	636406.16	4270512.29	UCART1	10.74
597	636526.16	4270512.29	UCART1	10.29
598	636566.16	4270512.29	UCART1	10.39
599	636606.16	4270512.29	UCART1	10.67
600	636646.16	4270512.29	UCART1	10.67

Receptor Pathway

AERMOD

601	636686.16	4270512.29	UCART1	10.67
602	636726.16	4270512.29	UCART1	10.54
603	636766.16	4270512.29	UCART1	10.16
604	636806.16	4270512.29	UCART1	10.06
605	636846.16	4270512.29	UCART1	10.06
606	637006.16	4270512.29	UCART1	10.67
607	637046.16	4270512.29	UCART1	10.65
608	637086.16	4270512.29	UCART1	10.49
609	637126.16	4270512.29	UCART1	10.66
610	637166.16	4270512.29	UCART1	10.67
611	637206.16	4270512.29	UCART1	10.67
612	637646.16	4270512.29	UCART1	10.62
613	637686.16	4270512.29	UCART1	10.36
614	637726.16	4270512.29	UCART1	10.36
615	637766.16	4270512.29	UCART1	10.34
616	637806.16	4270512.29	UCART1	10.34
617	637966.16	4270512.29	UCART1	10.67
618	638006.16	4270512.29	UCART1	10.67
619	638046.16	4270512.29	UCART1	10.67
620	638126.16	4270512.29	UCART1	10.67
621	633646.16	4270552.29	UCART1	7.32
622	633686.16	4270552.29	UCART1	7.32
623	633726.16	4270552.29	UCART1	7.22
624	633766.16	4270552.29	UCART1	7.03
625	633806.16	4270552.29	UCART1	7.01
626	633846.16	4270552.29	UCART1	7.01
627	633886.16	4270552.29	UCART1	6.96
628	633926.16	4270552.29	UCART1	6.94
629	636206.16	4270552.29	UCART1	9.56
630	636286.16	4270552.29	UCART1	10.53
631	636326.16	4270552.29	UCART1	10.67
632	636366.16	4270552.29	UCART1	10.70
633	636406.16	4270552.29	UCART1	10.63
634	636526.16	4270552.29	UCART1	10.28
635	636606.16	4270552.29	UCART1	10.64
636	636646.16	4270552.29	UCART1	10.48
637	636686.16	4270552.29	UCART1	10.14
638	636726.16	4270552.29	UCART1	10.12

Receptor Pathway

AERMOD

639	636806.16	4270552.29	UCART1	10.06
640	636846.16	4270552.29	UCART1	10.06
641	636886.16	4270552.29	UCART1	10.23
642	636926.16	4270552.29	UCART1	10.36
643	637086.16	4270552.29	UCART1	10.67
644	637126.16	4270552.29	UCART1	10.67
645	637166.16	4270552.29	UCART1	10.36
646	637206.16	4270552.29	UCART1	10.49
647	637646.16	4270552.29	UCART1	10.60
648	637686.16	4270552.29	UCART1	10.57
649	637726.16	4270552.29	UCART1	10.44
650	637766.16	4270552.29	UCART1	10.44
651	637806.16	4270552.29	UCART1	10.44
652	637846.16	4270552.29	UCART1	10.44
653	638006.16	4270552.29	UCART1	10.67
654	638046.16	4270552.29	UCART1	10.67
655	638086.16	4270552.29	UCART1	10.67
656	633406.16	4270592.29	UCART1	7.32
657	633446.16	4270592.29	UCART1	7.50
658	633646.16	4270592.29	UCART1	7.36
659	633686.16	4270592.29	UCART1	7.32
660	633726.16	4270592.29	UCART1	7.32
661	633766.16	4270592.29	UCART1	7.09
662	633806.16	4270592.29	UCART1	7.01
663	633846.16	4270592.29	UCART1	6.94
664	633886.16	4270592.29	UCART1	6.74
665	633926.16	4270592.29	UCART1	6.71
666	636206.16	4270592.29	UCART1	9.94
667	636286.16	4270592.29	UCART1	10.59
668	636326.16	4270592.29	UCART1	10.67
669	636366.16	4270592.29	UCART1	10.72
670	636406.16	4270592.29	UCART1	10.48
671	636486.16	4270592.29	UCART1	10.13
672	636526.16	4270592.29	UCART1	10.33
673	636606.16	4270592.29	UCART1	10.12
674	636646.16	4270592.29	UCART1	9.51
675	636686.16	4270592.29	UCART1	9.28
676	636766.16	4270592.29	UCART1	9.71

Receptor Pathway

AERMOD

677	636806.16	4270592.29	UCART1	9.89
678	636886.16	4270592.29	UCART1	10.06
679	636966.16	4270592.29	UCART1	10.26
680	637006.16	4270592.29	UCART1	10.36
681	637086.16	4270592.29	UCART1	10.60
682	637166.16	4270592.29	UCART1	10.36
683	637206.16	4270592.29	UCART1	10.49
684	637646.16	4270592.29	UCART1	10.05
685	637686.16	4270592.29	UCART1	10.56
686	637726.16	4270592.29	UCART1	10.67
687	637766.16	4270592.29	UCART1	10.67
688	637806.16	4270592.29	UCART1	10.67
689	637846.16	4270592.29	UCART1	10.67
690	633366.16	4270632.29	UCART1	7.32
691	633406.16	4270632.29	UCART1	7.32
692	633446.16	4270632.29	UCART1	7.36
693	633646.16	4270632.29	UCART1	7.39
694	633686.16	4270632.29	UCART1	7.32
695	633726.16	4270632.29	UCART1	7.20
696	633766.16	4270632.29	UCART1	7.02
697	633806.16	4270632.29	UCART1	6.99
698	633846.16	4270632.29	UCART1	6.72
699	633886.16	4270632.29	UCART1	6.71
700	633926.16	4270632.29	UCART1	6.71
701	636206.16	4270632.29	UCART1	10.08
702	636486.16	4270632.29	UCART1	10.35
703	636526.16	4270632.29	UCART1	10.57
704	636566.16	4270632.29	UCART1	10.05
705	636606.16	4270632.29	UCART1	9.20
706	636646.16	4270632.29	UCART1	9.15
707	636726.16	4270632.29	UCART1	9.15
708	636766.16	4270632.29	UCART1	9.40
709	636846.16	4270632.29	UCART1	9.78
710	636886.16	4270632.29	UCART1	9.78
711	636966.16	4270632.29	UCART1	10.07
712	637046.16	4270632.29	UCART1	10.09
713	637086.16	4270632.29	UCART1	10.10
714	637126.16	4270632.29	UCART1	10.09

Receptor Pathway

AERMOD

715	637166.16	4270632.29	UCART1	10.11
716	637646.16	4270632.29	UCART1	9.50
717	637686.16	4270632.29	UCART1	9.93
718	637726.16	4270632.29	UCART1	10.32
719	637766.16	4270632.29	UCART1	10.39
720	637806.16	4270632.29	UCART1	10.39
721	637846.16	4270632.29	UCART1	10.60
722	637886.16	4270632.29	UCART1	10.67
723	633406.16	4270672.29	UCART1	7.32
724	633446.16	4270672.29	UCART1	7.34
725	633646.16	4270672.29	UCART1	7.39
726	633686.16	4270672.29	UCART1	7.32
727	633726.16	4270672.29	UCART1	7.19
728	633766.16	4270672.29	UCART1	7.01
729	633806.16	4270672.29	UCART1	6.92
730	633846.16	4270672.29	UCART1	6.68
731	633886.16	4270672.29	UCART1	6.63
732	633926.16	4270672.29	UCART1	6.40
733	636206.16	4270672.29	UCART1	10.45
734	636486.16	4270672.29	UCART1	10.18
735	636526.16	4270672.29	UCART1	9.34
736	636566.16	4270672.29	UCART1	9.14
737	636686.16	4270672.29	UCART1	9.14
738	636726.16	4270672.29	UCART1	9.14
739	636806.16	4270672.29	UCART1	9.47
740	636846.16	4270672.29	UCART1	9.71
741	636926.16	4270672.29	UCART1	9.75
742	636966.16	4270672.29	UCART1	9.75
743	637046.16	4270672.29	UCART1	9.75
744	637086.16	4270672.29	UCART1	9.72
745	637126.16	4270672.29	UCART1	9.68
746	637166.16	4270672.29	UCART1	9.70
747	637206.16	4270672.29	UCART1	9.98
748	637246.16	4270672.29	UCART1	10.10
749	637686.16	4270672.29	UCART1	9.57
750	637726.16	4270672.29	UCART1	9.92
751	637766.16	4270672.29	UCART1	10.08
752	637806.16	4270672.29	UCART1	10.32

Receptor Pathway

AERMOD

753	637846.16	4270672.29	UCART1	10.36
754	637886.16	4270672.29	UCART1	10.67
755	637926.16	4270672.29	UCART1	10.67
756	633446.16	4270712.29	UCART1	7.32
757	633486.16	4270712.29	UCART1	7.52
758	633686.16	4270712.29	UCART1	7.32
759	633726.16	4270712.29	UCART1	7.19
760	633766.16	4270712.29	UCART1	6.88
761	633806.16	4270712.29	UCART1	6.69
762	636206.16	4270712.29	UCART1	10.67
763	636486.16	4270712.29	UCART1	9.27
764	636526.16	4270712.29	UCART1	9.18
765	636566.16	4270712.29	UCART1	9.14
766	636606.16	4270712.29	UCART1	9.14
767	636686.16	4270712.29	UCART1	9.14
768	636766.16	4270712.29	UCART1	9.37
769	636806.16	4270712.29	UCART1	9.45
770	636886.16	4270712.29	UCART1	9.58
771	636926.16	4270712.29	UCART1	9.58
772	637006.16	4270712.29	UCART1	9.58
773	637046.16	4270712.29	UCART1	9.58
774	637086.16	4270712.29	UCART1	9.52
775	637126.16	4270712.29	UCART1	9.45
776	637206.16	4270712.29	UCART1	9.40
777	637246.16	4270712.29	UCART1	9.18
778	637686.16	4270712.29	UCART1	9.57
779	637726.16	4270712.29	UCART1	9.75
780	637766.16	4270712.29	UCART1	10.07
781	637806.16	4270712.29	UCART1	10.29
782	637846.16	4270712.29	UCART1	10.36
783	633326.16	4270752.29	UCART1	7.01
784	633366.16	4270752.29	UCART1	7.13
785	633406.16	4270752.29	UCART1	7.32
786	633446.16	4270752.29	UCART1	7.32
787	633486.16	4270752.29	UCART1	7.44
788	633686.16	4270752.29	UCART1	7.32
789	633726.16	4270752.29	UCART1	7.19
790	633766.16	4270752.29	UCART1	6.78

Receptor Pathway

AERMOD

791	636206.16	4270752.29	UCART1	10.39
792	636486.16	4270752.29	UCART1	9.14
793	636526.16	4270752.29	UCART1	9.14
794	636566.16	4270752.29	UCART1	9.14
795	636606.16	4270752.29	UCART1	9.14
796	636646.16	4270752.29	UCART1	9.14
797	636686.16	4270752.29	UCART1	9.14
798	636726.16	4270752.29	UCART1	9.14
799	636766.16	4270752.29	UCART1	9.37
800	636846.16	4270752.29	UCART1	9.45
801	636886.16	4270752.29	UCART1	9.45
802	636966.16	4270752.29	UCART1	9.45
803	637006.16	4270752.29	UCART1	9.45
804	637046.16	4270752.29	UCART1	9.45
805	637086.16	4270752.29	UCART1	9.45
806	637126.16	4270752.29	UCART1	9.45
807	637166.16	4270752.29	UCART1	9.15
808	637246.16	4270752.29	UCART1	8.64
809	637686.16	4270752.29	UCART1	9.57
810	637726.16	4270752.29	UCART1	9.96
811	637766.16	4270752.29	UCART1	10.08
812	633326.16	4270792.29	UCART1	7.01
813	633366.16	4270792.29	UCART1	7.13
814	633406.16	4270792.29	UCART1	7.32
815	633446.16	4270792.29	UCART1	7.32
816	633486.16	4270792.29	UCART1	7.32
817	633526.16	4270792.29	UCART1	7.54
818	633686.16	4270792.29	UCART1	7.30
819	633726.16	4270792.29	UCART1	7.05
820	633766.16	4270792.29	UCART1	6.78
821	636206.16	4270792.29	UCART1	9.61
822	636446.16	4270792.29	UCART1	9.14
823	636486.16	4270792.29	UCART1	9.14
824	636526.16	4270792.29	UCART1	9.14
825	636566.16	4270792.29	UCART1	9.14
826	636606.16	4270792.29	UCART1	9.14
827	636646.16	4270792.29	UCART1	9.14
828	636686.16	4270792.29	UCART1	9.14

Receptor Pathway

AERMOD

829	636726.16	4270792.29	UCART1	9.14
830	636806.16	4270792.29	UCART1	9.45
831	636846.16	4270792.29	UCART1	9.45
832	636926.16	4270792.29	UCART1	9.45
833	636966.16	4270792.29	UCART1	9.45
834	637006.16	4270792.29	UCART1	9.45
835	637046.16	4270792.29	UCART1	9.45
836	637086.16	4270792.29	UCART1	9.45
837	637166.16	4270792.29	UCART1	9.05
838	637246.16	4270792.29	UCART1	8.31
839	637286.16	4270792.29	UCART1	7.92
840	637726.16	4270792.29	UCART1	10.03
841	637766.16	4270792.29	UCART1	10.37
842	638086.16	4270792.29	UCART1	10.67
843	638126.16	4270792.29	UCART1	10.67
844	638206.16	4270792.29	UCART1	10.67
845	638246.16	4270792.29	UCART1	10.67
846	638286.16	4270792.29	UCART1	10.67
847	638326.16	4270792.29	UCART1	10.67
848	638366.16	4270792.29	UCART1	10.67
849	633326.16	4270832.29	UCART1	7.01
850	633366.16	4270832.29	UCART1	7.13
851	633406.16	4270832.29	UCART1	7.32
852	633446.16	4270832.29	UCART1	7.32
853	633486.16	4270832.29	UCART1	7.32
854	633526.16	4270832.29	UCART1	7.54
855	633726.16	4270832.29	UCART1	7.19
856	633766.16	4270832.29	UCART1	6.78
857	636206.16	4270832.29	UCART1	9.15
858	636446.16	4270832.29	UCART1	9.14
859	636486.16	4270832.29	UCART1	9.14
860	636526.16	4270832.29	UCART1	9.14
861	636566.16	4270832.29	UCART1	9.14
862	636606.16	4270832.29	UCART1	9.14
863	636646.16	4270832.29	UCART1	9.14
864	636686.16	4270832.29	UCART1	9.14
865	636766.16	4270832.29	UCART1	9.37
866	636806.16	4270832.29	UCART1	9.45

Receptor Pathway

AERMOD

867	636886.16	4270832.29	UCART1	9.45
868	636926.16	4270832.29	UCART1	9.45
869	636966.16	4270832.29	UCART1	9.45
870	637006.16	4270832.29	UCART1	9.45
871	637046.16	4270832.29	UCART1	9.45
872	637086.16	4270832.29	UCART1	9.38
873	637126.16	4270832.29	UCART1	9.18
874	637166.16	4270832.29	UCART1	8.84
875	637246.16	4270832.29	UCART1	8.31
876	637286.16	4270832.29	UCART1	8.09
877	637726.16	4270832.29	UCART1	10.25
878	637766.16	4270832.29	UCART1	10.55
879	637806.16	4270832.29	UCART1	10.60
880	638086.16	4270832.29	UCART1	10.67
881	638126.16	4270832.29	UCART1	10.67
882	638206.16	4270832.29	UCART1	10.67
883	638246.16	4270832.29	UCART1	10.67
884	638286.16	4270832.29	UCART1	10.67
885	638326.16	4270832.29	UCART1	10.67
886	638366.16	4270832.29	UCART1	10.67
887	633326.16	4270872.29	UCART1	7.01
888	633366.16	4270872.29	UCART1	7.13
889	633406.16	4270872.29	UCART1	7.32
890	633446.16	4270872.29	UCART1	7.32
891	633486.16	4270872.29	UCART1	7.32
892	633526.16	4270872.29	UCART1	7.54
893	633726.16	4270872.29	UCART1	7.19
894	633766.16	4270872.29	UCART1	6.78
895	633806.16	4270872.29	UCART1	6.38
896	636406.16	4270872.29	UCART1	9.28
897	636446.16	4270872.29	UCART1	9.40
898	636486.16	4270872.29	UCART1	9.14
899	636526.16	4270872.29	UCART1	9.14
900	636566.16	4270872.29	UCART1	9.14
901	636606.16	4270872.29	UCART1	9.14
902	636646.16	4270872.29	UCART1	9.14
903	636686.16	4270872.29	UCART1	9.14
904	636726.16	4270872.29	UCART1	9.14

Receptor Pathway

AERMOD

905	636846.16	4270872.29	UCART1	9.45
906	636886.16	4270872.29	UCART1	9.45
907	636926.16	4270872.29	UCART1	9.45
908	636966.16	4270872.29	UCART1	9.45
909	637006.16	4270872.29	UCART1	9.45
910	637046.16	4270872.29	UCART1	9.43
911	637086.16	4270872.29	UCART1	9.16
912	637126.16	4270872.29	UCART1	9.14
913	637166.16	4270872.29	UCART1	8.84
914	637246.16	4270872.29	UCART1	8.51
915	637286.16	4270872.29	UCART1	8.21
916	637726.16	4270872.29	UCART1	10.28
917	637766.16	4270872.29	UCART1	10.65
918	637806.16	4270872.29	UCART1	10.38
919	637966.16	4270872.29	UCART1	10.36
920	638006.16	4270872.29	UCART1	10.67
921	638086.16	4270872.29	UCART1	10.67
922	638126.16	4270872.29	UCART1	10.67
923	638206.16	4270872.29	UCART1	10.67
924	638246.16	4270872.29	UCART1	10.67
925	638286.16	4270872.29	UCART1	10.67
926	638326.16	4270872.29	UCART1	10.67
927	638366.16	4270872.29	UCART1	10.67
928	633366.16	4270912.29	UCART1	7.13
929	633406.16	4270912.29	UCART1	7.32
930	633446.16	4270912.29	UCART1	7.32
931	633486.16	4270912.29	UCART1	7.32
932	633526.16	4270912.29	UCART1	7.32
933	633566.16	4270912.29	UCART1	7.62
934	633726.16	4270912.29	UCART1	7.22
935	633766.16	4270912.29	UCART1	7.03
936	633806.16	4270912.29	UCART1	6.68
937	636206.16	4270912.29	UCART1	7.64
938	636446.16	4270912.29	UCART1	9.36
939	636486.16	4270912.29	UCART1	9.14
940	636526.16	4270912.29	UCART1	9.14
941	636566.16	4270912.29	UCART1	9.14
942	636606.16	4270912.29	UCART1	9.14

Receptor Pathway

AERMOD

943	636646.16	4270912.29	UCART1	9.14
944	636686.16	4270912.29	UCART1	9.14
945	636726.16	4270912.29	UCART1	9.14
946	636766.16	4270912.29	UCART1	9.37
947	636846.16	4270912.29	UCART1	9.45
948	636886.16	4270912.29	UCART1	9.45
949	636926.16	4270912.29	UCART1	9.45
950	636966.16	4270912.29	UCART1	9.45
951	637006.16	4270912.29	UCART1	9.39
952	637046.16	4270912.29	UCART1	9.14
953	637086.16	4270912.29	UCART1	9.14
954	637126.16	4270912.29	UCART1	8.92
955	637206.16	4270912.29	UCART1	8.72
956	637246.16	4270912.29	UCART1	8.53
957	637286.16	4270912.29	UCART1	8.28
958	637726.16	4270912.29	UCART1	10.43
959	637766.16	4270912.29	UCART1	10.27
960	637806.16	4270912.29	UCART1	9.98
961	637846.16	4270912.29	UCART1	10.04
962	637966.16	4270912.29	UCART1	10.36
963	638006.16	4270912.29	UCART1	10.67
964	638086.16	4270912.29	UCART1	10.67
965	638126.16	4270912.29	UCART1	10.67
966	638206.16	4270912.29	UCART1	10.67
967	638246.16	4270912.29	UCART1	10.67
968	638286.16	4270912.29	UCART1	10.67
969	638326.16	4270912.29	UCART1	10.67
970	638366.16	4270912.29	UCART1	10.67
971	633366.16	4270952.29	UCART1	7.24
972	633406.16	4270952.29	UCART1	7.32
973	633446.16	4270952.29	UCART1	7.32
974	633486.16	4270952.29	UCART1	7.32
975	633526.16	4270952.29	UCART1	7.32
976	633566.16	4270952.29	UCART1	7.62
977	633766.16	4270952.29	UCART1	7.09
978	633806.16	4270952.29	UCART1	6.86
979	636206.16	4270952.29	UCART1	7.80
980	636406.16	4270952.29	UCART1	9.45

Receptor Pathway

AERMOD

981	636446.16	4270952.29	UCART1	9.14
982	636486.16	4270952.29	UCART1	9.14
983	636526.16	4270952.29	UCART1	9.14
984	636566.16	4270952.29	UCART1	9.14
985	636606.16	4270952.29	UCART1	9.14
986	636646.16	4270952.29	UCART1	9.14
987	636686.16	4270952.29	UCART1	9.14
988	636726.16	4270952.29	UCART1	9.14
989	636766.16	4270952.29	UCART1	9.37
990	636806.16	4270952.29	UCART1	9.45
991	636886.16	4270952.29	UCART1	9.45
992	636926.16	4270952.29	UCART1	9.45
993	636966.16	4270952.29	UCART1	9.45
994	637006.16	4270952.29	UCART1	9.22
995	637046.16	4270952.29	UCART1	9.14
996	637086.16	4270952.29	UCART1	9.14
997	637126.16	4270952.29	UCART1	9.05
998	637166.16	4270952.29	UCART1	8.84
999	637206.16	4270952.29	UCART1	8.79
1,000	637246.16	4270952.29	UCART1	8.58
1,001	637286.16	4270952.29	UCART1	8.53
1,002	637726.16	4270952.29	UCART1	9.90
1,003	637766.16	4270952.29	UCART1	9.87
1,004	637806.16	4270952.29	UCART1	9.75
1,005	637846.16	4270952.29	UCART1	9.85
1,006	637966.16	4270952.29	UCART1	10.36
1,007	638006.16	4270952.29	UCART1	10.67
1,008	638086.16	4270952.29	UCART1	10.67
1,009	638126.16	4270952.29	UCART1	10.67
1,010	638166.16	4270952.29	UCART1	10.67
1,011	638206.16	4270952.29	UCART1	10.67
1,012	638246.16	4270952.29	UCART1	10.67
1,013	638326.16	4270952.29	UCART1	10.67
1,014	638366.16	4270952.29	UCART1	10.67
1,015	633366.16	4270992.29	UCART1	7.32
1,016	633406.16	4270992.29	UCART1	7.32
1,017	633446.16	4270992.29	UCART1	7.32
1,018	633486.16	4270992.29	UCART1	7.32

Receptor Pathway

AERMOD

1,019	633526.16	4270992.29	UCART1	7.32
1,020	633566.16	4270992.29	UCART1	7.62
1,021	633766.16	4270992.29	UCART1	7.30
1,022	633806.16	4270992.29	UCART1	7.01
1,023	633846.16	4270992.29	UCART1	6.87
1,024	634246.16	4270992.29	UCART1	6.38
1,025	634286.16	4270992.29	UCART1	6.37
1,026	634326.16	4270992.29	UCART1	6.38
1,027	634366.16	4270992.29	UCART1	6.40
1,028	634446.16	4270992.29	UCART1	6.12
1,029	634486.16	4270992.29	UCART1	6.10
1,030	634526.16	4270992.29	UCART1	6.10
1,031	634566.16	4270992.29	UCART1	6.12
1,032	634606.16	4270992.29	UCART1	6.33
1,033	634646.16	4270992.29	UCART1	6.40
1,034	634686.16	4270992.29	UCART1	6.52
1,035	634726.16	4270992.29	UCART1	6.71
1,036	634806.16	4270992.29	UCART1	7.01
1,037	634846.16	4270992.29	UCART1	7.01
1,038	634886.16	4270992.29	UCART1	7.01
1,039	634926.16	4270992.29	UCART1	7.15
1,040	634966.16	4270992.29	UCART1	7.32
1,041	636206.16	4270992.29	UCART1	8.22
1,042	636246.16	4270992.29	UCART1	8.60
1,043	636366.16	4270992.29	UCART1	9.28
1,044	636406.16	4270992.29	UCART1	9.45
1,045	636446.16	4270992.29	UCART1	9.14
1,046	636486.16	4270992.29	UCART1	9.14
1,047	636526.16	4270992.29	UCART1	9.14
1,048	636566.16	4270992.29	UCART1	9.14
1,049	636606.16	4270992.29	UCART1	9.14
1,050	636646.16	4270992.29	UCART1	9.14
1,051	636686.16	4270992.29	UCART1	9.14
1,052	636726.16	4270992.29	UCART1	9.26
1,053	636766.16	4270992.29	UCART1	9.44
1,054	636806.16	4270992.29	UCART1	9.45
1,055	636846.16	4270992.29	UCART1	9.45
1,056	636886.16	4270992.29	UCART1	9.45

Receptor Pathway

AERMOD

1,057	636926.16	4270992.29	UCART1	9.45
1,058	636966.16	4270992.29	UCART1	9.45
1,059	637006.16	4270992.29	UCART1	9.43
1,060	637046.16	4270992.29	UCART1	9.14
1,061	637086.16	4270992.29	UCART1	9.14
1,062	637126.16	4270992.29	UCART1	9.14
1,063	637166.16	4270992.29	UCART1	9.10
1,064	637206.16	4270992.29	UCART1	8.84
1,065	637246.16	4270992.29	UCART1	8.82
1,066	637286.16	4270992.29	UCART1	8.79
1,067	637726.16	4270992.29	UCART1	9.26
1,068	637766.16	4270992.29	UCART1	9.48
1,069	637806.16	4270992.29	UCART1	9.48
1,070	637846.16	4270992.29	UCART1	9.68
1,071	637886.16	4270992.29	UCART1	9.80
1,072	637966.16	4270992.29	UCART1	10.36
1,073	638086.16	4270992.29	UCART1	10.67
1,074	638126.16	4270992.29	UCART1	10.67
1,075	638166.16	4270992.29	UCART1	10.67
1,076	638206.16	4270992.29	UCART1	10.67
1,077	638246.16	4270992.29	UCART1	10.67
1,078	638326.16	4270992.29	UCART1	10.67
1,079	638366.16	4270992.29	UCART1	10.67
1,080	633406.16	4271032.29	UCART1	7.32
1,081	633446.16	4271032.29	UCART1	7.32
1,082	633486.16	4271032.29	UCART1	7.32
1,083	633526.16	4271032.29	UCART1	7.32
1,084	633566.16	4271032.29	UCART1	7.55
1,085	633606.16	4271032.29	UCART1	7.62
1,086	633766.16	4271032.29	UCART1	7.33
1,087	633806.16	4271032.29	UCART1	7.08
1,088	633846.16	4271032.29	UCART1	7.01
1,089	634126.16	4271032.29	UCART1	6.78
1,090	634166.16	4271032.29	UCART1	6.78
1,091	634206.16	4271032.29	UCART1	6.78
1,092	634246.16	4271032.29	UCART1	6.78
1,093	634286.16	4271032.29	UCART1	6.69
1,094	634366.16	4271032.29	UCART1	6.25

Receptor Pathway

AERMOD

1,095	634406.16	4271032.29	UCART1	6.10
1,096	634446.16	4271032.29	UCART1	6.10
1,097	634486.16	4271032.29	UCART1	6.10
1,098	634566.16	4271032.29	UCART1	6.10
1,099	634606.16	4271032.29	UCART1	6.10
1,100	634646.16	4271032.29	UCART1	6.19
1,101	634726.16	4271032.29	UCART1	6.65
1,102	634766.16	4271032.29	UCART1	6.71
1,103	634806.16	4271032.29	UCART1	6.87
1,104	634846.16	4271032.29	UCART1	7.01
1,105	634886.16	4271032.29	UCART1	7.01
1,106	634926.16	4271032.29	UCART1	7.01
1,107	634966.16	4271032.29	UCART1	7.01
1,108	635046.16	4271032.29	UCART1	7.01
1,109	635086.16	4271032.29	UCART1	7.01
1,110	635686.16	4271032.29	UCART1	7.62
1,111	635726.16	4271032.29	UCART1	7.62
1,112	635766.16	4271032.29	UCART1	7.71
1,113	635806.16	4271032.29	UCART1	7.85
1,114	635846.16	4271032.29	UCART1	7.62
1,115	635886.16	4271032.29	UCART1	7.74
1,116	635926.16	4271032.29	UCART1	8.09
1,117	635966.16	4271032.29	UCART1	8.25
1,118	636006.16	4271032.29	UCART1	8.46
1,119	636046.16	4271032.29	UCART1	8.51
1,120	636086.16	4271032.29	UCART1	8.53
1,121	636126.16	4271032.29	UCART1	8.56
1,122	636166.16	4271032.29	UCART1	8.61
1,123	636206.16	4271032.29	UCART1	8.63
1,124	636366.16	4271032.29	UCART1	9.45
1,125	636406.16	4271032.29	UCART1	9.45
1,126	636446.16	4271032.29	UCART1	9.14
1,127	636486.16	4271032.29	UCART1	9.14
1,128	636526.16	4271032.29	UCART1	9.14
1,129	636566.16	4271032.29	UCART1	9.14
1,130	636606.16	4271032.29	UCART1	9.14
1,131	636646.16	4271032.29	UCART1	9.14
1,132	636686.16	4271032.29	UCART1	9.38

Receptor Pathway

AERMOD

1,133	636726.16	4271032.29	UCART1	9.45
1,134	636766.16	4271032.29	UCART1	9.45
1,135	636806.16	4271032.29	UCART1	9.45
1,136	636846.16	4271032.29	UCART1	9.45
1,137	636886.16	4271032.29	UCART1	9.45
1,138	636926.16	4271032.29	UCART1	9.45
1,139	636966.16	4271032.29	UCART1	9.45
1,140	637046.16	4271032.29	UCART1	9.43
1,141	637086.16	4271032.29	UCART1	9.19
1,142	637126.16	4271032.29	UCART1	9.14
1,143	637166.16	4271032.29	UCART1	9.14
1,144	637206.16	4271032.29	UCART1	9.05
1,145	637246.16	4271032.29	UCART1	8.91
1,146	637766.16	4271032.29	UCART1	8.79
1,147	637806.16	4271032.29	UCART1	9.19
1,148	637846.16	4271032.29	UCART1	9.60
1,149	637886.16	4271032.29	UCART1	9.77
1,150	637926.16	4271032.29	UCART1	10.01
1,151	637966.16	4271032.29	UCART1	10.28
1,152	638086.16	4271032.29	UCART1	10.72
1,153	638126.16	4271032.29	UCART1	10.97
1,154	638166.16	4271032.29	UCART1	10.97
1,155	638206.16	4271032.29	UCART1	10.92
1,156	638246.16	4271032.29	UCART1	10.67
1,157	638326.16	4271032.29	UCART1	10.59
1,158	638366.16	4271032.29	UCART1	10.57
1,159	633406.16	4271072.29	UCART1	7.32
1,160	633446.16	4271072.29	UCART1	7.32
1,161	633486.16	4271072.29	UCART1	7.32
1,162	633526.16	4271072.29	UCART1	7.32
1,163	633566.16	4271072.29	UCART1	7.34
1,164	633606.16	4271072.29	UCART1	7.62
1,165	633806.16	4271072.29	UCART1	7.29
1,166	633846.16	4271072.29	UCART1	7.01
1,167	634006.16	4271072.29	UCART1	7.01
1,168	634046.16	4271072.29	UCART1	7.01
1,169	634086.16	4271072.29	UCART1	7.01
1,170	634126.16	4271072.29	UCART1	7.01

Receptor Pathway

AERMOD

1,171	634166.16	4271072.29	UCART1	7.01
1,172	634206.16	4271072.29	UCART1	7.01
1,173	634246.16	4271072.29	UCART1	7.01
1,174	634286.16	4271072.29	UCART1	6.88
1,175	634326.16	4271072.29	UCART1	6.81
1,176	634366.16	4271072.29	UCART1	6.61
1,177	634406.16	4271072.29	UCART1	6.27
1,178	634446.16	4271072.29	UCART1	6.27
1,179	634486.16	4271072.29	UCART1	6.27
1,180	634526.16	4271072.29	UCART1	6.10
1,181	634566.16	4271072.29	UCART1	6.10
1,182	634606.16	4271072.29	UCART1	6.23
1,183	634646.16	4271072.29	UCART1	6.41
1,184	634686.16	4271072.29	UCART1	6.63
1,185	634726.16	4271072.29	UCART1	6.71
1,186	634766.16	4271072.29	UCART1	6.89
1,187	634806.16	4271072.29	UCART1	7.01
1,188	634846.16	4271072.29	UCART1	7.01
1,189	634886.16	4271072.29	UCART1	7.01
1,190	634926.16	4271072.29	UCART1	7.01
1,191	634966.16	4271072.29	UCART1	7.01
1,192	635006.16	4271072.29	UCART1	7.01
1,193	635046.16	4271072.29	UCART1	7.01
1,194	635086.16	4271072.29	UCART1	7.01
1,195	635126.16	4271072.29	UCART1	7.01
1,196	635686.16	4271072.29	UCART1	7.62
1,197	635726.16	4271072.29	UCART1	7.62
1,198	635766.16	4271072.29	UCART1	7.62
1,199	635806.16	4271072.29	UCART1	7.62
1,200	635846.16	4271072.29	UCART1	7.62
1,201	635886.16	4271072.29	UCART1	7.74
1,202	635926.16	4271072.29	UCART1	7.92
1,203	635966.16	4271072.29	UCART1	8.23
1,204	636006.16	4271072.29	UCART1	8.23
1,205	636046.16	4271072.29	UCART1	8.46
1,206	636086.16	4271072.29	UCART1	8.55
1,207	636126.16	4271072.29	UCART1	8.76
1,208	636166.16	4271072.29	UCART1	8.84

Receptor Pathway

AERMOD

1,209	636326.16	4271072.29	UCART1	9.45
1,210	636366.16	4271072.29	UCART1	9.45
1,211	636406.16	4271072.29	UCART1	9.45
1,212	636446.16	4271072.29	UCART1	9.14
1,213	636486.16	4271072.29	UCART1	9.14
1,214	636526.16	4271072.29	UCART1	9.14
1,215	636566.16	4271072.29	UCART1	9.14
1,216	636606.16	4271072.29	UCART1	9.14
1,217	636646.16	4271072.29	UCART1	9.14
1,218	636726.16	4271072.29	UCART1	9.34
1,219	636766.16	4271072.29	UCART1	9.45
1,220	636806.16	4271072.29	UCART1	9.45
1,221	636846.16	4271072.29	UCART1	9.45
1,222	636886.16	4271072.29	UCART1	9.32
1,223	637006.16	4271072.29	UCART1	9.45
1,224	637046.16	4271072.29	UCART1	9.45
1,225	637086.16	4271072.29	UCART1	9.40
1,226	637126.16	4271072.29	UCART1	9.19
1,227	637166.16	4271072.29	UCART1	9.14
1,228	637206.16	4271072.29	UCART1	9.14
1,229	637766.16	4271072.29	UCART1	8.39
1,230	637806.16	4271072.29	UCART1	8.96
1,231	637846.16	4271072.29	UCART1	9.37
1,232	637886.16	4271072.29	UCART1	9.59
1,233	637926.16	4271072.29	UCART1	9.88
1,234	637966.16	4271072.29	UCART1	10.28
1,235	638086.16	4271072.29	UCART1	10.76
1,236	638126.16	4271072.29	UCART1	10.80
1,237	638166.16	4271072.29	UCART1	10.80
1,238	638206.16	4271072.29	UCART1	10.70
1,239	638246.16	4271072.29	UCART1	10.66
1,240	638326.16	4271072.29	UCART1	10.23
1,241	638366.16	4271072.29	UCART1	10.14
1,242	633406.16	4271112.29	UCART1	7.32
1,243	633446.16	4271112.29	UCART1	7.32
1,244	633486.16	4271112.29	UCART1	7.32
1,245	633526.16	4271112.29	UCART1	7.32
1,246	633566.16	4271112.29	UCART1	7.34

Receptor Pathway

AERMOD

1,247	633606.16	4271112.29	UCART1	7.62
1,248	633806.16	4271112.29	UCART1	7.31
1,249	633886.16	4271112.29	UCART1	7.01
1,250	633926.16	4271112.29	UCART1	7.01
1,251	633966.16	4271112.29	UCART1	7.01
1,252	634006.16	4271112.29	UCART1	7.01
1,253	634046.16	4271112.29	UCART1	7.03
1,254	634126.16	4271112.29	UCART1	7.29
1,255	634166.16	4271112.29	UCART1	7.29
1,256	634206.16	4271112.29	UCART1	7.29
1,257	634286.16	4271112.29	UCART1	7.27
1,258	634326.16	4271112.29	UCART1	7.00
1,259	634366.16	4271112.29	UCART1	6.98
1,260	634406.16	4271112.29	UCART1	6.68
1,261	634486.16	4271112.29	UCART1	6.68
1,262	634566.16	4271112.29	UCART1	6.37
1,263	634606.16	4271112.29	UCART1	6.39
1,264	634646.16	4271112.29	UCART1	6.68
1,265	634686.16	4271112.29	UCART1	6.71
1,266	634726.16	4271112.29	UCART1	6.91
1,267	634766.16	4271112.29	UCART1	7.01
1,268	634846.16	4271112.29	UCART1	7.01
1,269	634886.16	4271112.29	UCART1	7.01
1,270	634926.16	4271112.29	UCART1	7.01
1,271	634966.16	4271112.29	UCART1	7.01
1,272	635006.16	4271112.29	UCART1	7.01
1,273	635046.16	4271112.29	UCART1	7.01
1,274	635086.16	4271112.29	UCART1	7.01
1,275	635126.16	4271112.29	UCART1	7.01
1,276	635166.16	4271112.29	UCART1	7.01
1,277	635686.16	4271112.29	UCART1	7.62
1,278	635726.16	4271112.29	UCART1	7.62
1,279	635766.16	4271112.29	UCART1	7.62
1,280	635806.16	4271112.29	UCART1	7.62
1,281	635846.16	4271112.29	UCART1	7.64
1,282	635886.16	4271112.29	UCART1	7.91
1,283	635926.16	4271112.29	UCART1	7.92
1,284	635966.16	4271112.29	UCART1	7.95

Receptor Pathway

AERMOD

1,285	636006.16	4271112.29	UCART1	8.06
1,286	636046.16	4271112.29	UCART1	8.46
1,287	636086.16	4271112.29	UCART1	8.81
1,288	636126.16	4271112.29	UCART1	8.84
1,289	636286.16	4271112.29	UCART1	9.14
1,290	636326.16	4271112.29	UCART1	9.45
1,291	636366.16	4271112.29	UCART1	9.45
1,292	636406.16	4271112.29	UCART1	9.45
1,293	636446.16	4271112.29	UCART1	9.14
1,294	636486.16	4271112.29	UCART1	9.14
1,295	636526.16	4271112.29	UCART1	9.14
1,296	636566.16	4271112.29	UCART1	9.14
1,297	636646.16	4271112.29	UCART1	9.14
1,298	636686.16	4271112.29	UCART1	9.14
1,299	636726.16	4271112.29	UCART1	9.15
1,300	636766.16	4271112.29	UCART1	9.38
1,301	636806.16	4271112.29	UCART1	9.45
1,302	636846.16	4271112.29	UCART1	9.34
1,303	636886.16	4271112.29	UCART1	9.15
1,304	636926.16	4271112.29	UCART1	9.14
1,305	637006.16	4271112.29	UCART1	9.38
1,306	637046.16	4271112.29	UCART1	9.45
1,307	637086.16	4271112.29	UCART1	9.45
1,308	637126.16	4271112.29	UCART1	9.43
1,309	637166.16	4271112.29	UCART1	9.40
1,310	637766.16	4271112.29	UCART1	8.25
1,311	637806.16	4271112.29	UCART1	8.68
1,312	637846.16	4271112.29	UCART1	9.09
1,313	637886.16	4271112.29	UCART1	9.47
1,314	637926.16	4271112.29	UCART1	9.88
1,315	637966.16	4271112.29	UCART1	10.28
1,316	638086.16	4271112.29	UCART1	10.67
1,317	638126.16	4271112.29	UCART1	10.67
1,318	638166.16	4271112.29	UCART1	10.67
1,319	638206.16	4271112.29	UCART1	10.67
1,320	638246.16	4271112.29	UCART1	10.39
1,321	638326.16	4271112.29	UCART1	10.14
1,322	638366.16	4271112.29	UCART1	9.50

Receptor Pathway

AERMOD

1,323	633326.16	4271152.29	UCART1	7.32
1,324	633366.16	4271152.29	UCART1	7.32
1,325	633406.16	4271152.29	UCART1	7.32
1,326	633446.16	4271152.29	UCART1	7.32
1,327	633486.16	4271152.29	UCART1	7.32
1,328	633526.16	4271152.29	UCART1	7.32
1,329	633566.16	4271152.29	UCART1	7.33
1,330	633606.16	4271152.29	UCART1	7.58
1,331	633806.16	4271152.29	UCART1	7.32
1,332	633846.16	4271152.29	UCART1	7.32
1,333	633886.16	4271152.29	UCART1	7.14
1,334	633926.16	4271152.29	UCART1	7.09
1,335	633966.16	4271152.29	UCART1	7.18
1,336	634006.16	4271152.29	UCART1	7.32
1,337	634046.16	4271152.29	UCART1	7.32
1,338	634086.16	4271152.29	UCART1	7.32
1,339	634126.16	4271152.29	UCART1	7.54
1,340	634166.16	4271152.29	UCART1	7.62
1,341	634206.16	4271152.29	UCART1	7.62
1,342	634246.16	4271152.29	UCART1	7.62
1,343	634286.16	4271152.29	UCART1	7.32
1,344	634326.16	4271152.29	UCART1	7.32
1,345	634406.16	4271152.29	UCART1	7.09
1,346	634486.16	4271152.29	UCART1	7.09
1,347	634526.16	4271152.29	UCART1	7.06
1,348	634566.16	4271152.29	UCART1	6.78
1,349	634606.16	4271152.29	UCART1	6.78
1,350	634646.16	4271152.29	UCART1	6.80
1,351	634726.16	4271152.29	UCART1	7.01
1,352	634766.16	4271152.29	UCART1	7.01
1,353	634806.16	4271152.29	UCART1	7.01
1,354	634886.16	4271152.29	UCART1	7.01
1,355	634966.16	4271152.29	UCART1	7.01
1,356	635006.16	4271152.29	UCART1	7.01
1,357	635046.16	4271152.29	UCART1	7.01
1,358	635086.16	4271152.29	UCART1	7.01
1,359	635166.16	4271152.29	UCART1	7.18
1,360	635686.16	4271152.29	UCART1	7.62

Receptor Pathway

AERMOD

1,361	635726.16	4271152.29	UCART1	7.62
1,362	635766.16	4271152.29	UCART1	7.62
1,363	635806.16	4271152.29	UCART1	7.68
1,364	635846.16	4271152.29	UCART1	7.92
1,365	635886.16	4271152.29	UCART1	7.92
1,366	635926.16	4271152.29	UCART1	7.92
1,367	635966.16	4271152.29	UCART1	7.92
1,368	636006.16	4271152.29	UCART1	7.85
1,369	636046.16	4271152.29	UCART1	8.36
1,370	636086.16	4271152.29	UCART1	8.93
1,371	636206.16	4271152.29	UCART1	9.14
1,372	636286.16	4271152.29	UCART1	9.14
1,373	636326.16	4271152.29	UCART1	9.45
1,374	636366.16	4271152.29	UCART1	9.42
1,375	636566.16	4271152.29	UCART1	9.14
1,376	636606.16	4271152.29	UCART1	9.14
1,377	636646.16	4271152.29	UCART1	9.14
1,378	636686.16	4271152.29	UCART1	9.14
1,379	636766.16	4271152.29	UCART1	9.37
1,380	636806.16	4271152.29	UCART1	9.45
1,381	636846.16	4271152.29	UCART1	9.36
1,382	636886.16	4271152.29	UCART1	9.16
1,383	636926.16	4271152.29	UCART1	9.14
1,384	636966.16	4271152.29	UCART1	9.14
1,385	637046.16	4271152.29	UCART1	9.45
1,386	637086.16	4271152.29	UCART1	9.45
1,387	637126.16	4271152.29	UCART1	9.45
1,388	637766.16	4271152.29	UCART1	8.18
1,389	637806.16	4271152.29	UCART1	8.61
1,390	637846.16	4271152.29	UCART1	9.06
1,391	637886.16	4271152.29	UCART1	9.47
1,392	637926.16	4271152.29	UCART1	9.88
1,393	637966.16	4271152.29	UCART1	10.28
1,394	633326.16	4271192.29	UCART1	7.32
1,395	633366.16	4271192.29	UCART1	7.32
1,396	633406.16	4271192.29	UCART1	7.32
1,397	633446.16	4271192.29	UCART1	7.32
1,398	633486.16	4271192.29	UCART1	7.32

Receptor Pathway

AERMOD

1,399	633846.16	4271192.29	UCART1	7.32
1,400	633886.16	4271192.29	UCART1	7.32
1,401	633966.16	4271192.29	UCART1	7.39
1,402	634006.16	4271192.29	UCART1	7.49
1,403	634046.16	4271192.29	UCART1	7.49
1,404	634086.16	4271192.29	UCART1	7.42
1,405	634126.16	4271192.29	UCART1	7.54
1,406	634166.16	4271192.29	UCART1	7.62
1,407	634206.16	4271192.29	UCART1	7.62
1,408	634246.16	4271192.29	UCART1	7.62
1,409	634286.16	4271192.29	UCART1	7.32
1,410	634326.16	4271192.29	UCART1	7.39
1,411	634366.16	4271192.29	UCART1	7.49
1,412	634566.16	4271192.29	UCART1	7.19
1,413	634606.16	4271192.29	UCART1	7.19
1,414	634686.16	4271192.29	UCART1	7.01
1,415	634726.16	4271192.29	UCART1	7.01
1,416	634766.16	4271192.29	UCART1	7.01
1,417	634806.16	4271192.29	UCART1	7.01
1,418	634846.16	4271192.29	UCART1	7.01
1,419	634966.16	4271192.29	UCART1	7.01
1,420	635006.16	4271192.29	UCART1	7.01
1,421	635046.16	4271192.29	UCART1	7.08
1,422	635086.16	4271192.29	UCART1	7.19
1,423	635126.16	4271192.29	UCART1	7.32
1,424	635166.16	4271192.29	UCART1	7.32
1,425	635246.16	4271192.29	UCART1	7.32
1,426	635326.16	4271192.29	UCART1	7.54
1,427	635366.16	4271192.29	UCART1	7.62
1,428	635406.16	4271192.29	UCART1	7.69
1,429	635446.16	4271192.29	UCART1	7.80
1,430	635686.16	4271192.29	UCART1	7.62
1,431	635726.16	4271192.29	UCART1	7.62
1,432	635766.16	4271192.29	UCART1	7.62
1,433	635806.16	4271192.29	UCART1	7.71
1,434	635846.16	4271192.29	UCART1	7.76
1,435	635886.16	4271192.29	UCART1	7.85
1,436	635926.16	4271192.29	UCART1	7.75

Receptor Pathway

AERMOD

1,437	635966.16	4271192.29	UCART1	7.74
1,438	636006.16	4271192.29	UCART1	7.62
1,439	636166.16	4271192.29	UCART1	9.14
1,440	636246.16	4271192.29	UCART1	9.14
1,441	636286.16	4271192.29	UCART1	9.14
1,442	636326.16	4271192.29	UCART1	9.27
1,443	636366.16	4271192.29	UCART1	9.22
1,444	636406.16	4271192.29	UCART1	9.14
1,445	636446.16	4271192.29	UCART1	9.14
1,446	636486.16	4271192.29	UCART1	9.14
1,447	636526.16	4271192.29	UCART1	9.14
1,448	636566.16	4271192.29	UCART1	9.14
1,449	636606.16	4271192.29	UCART1	9.14
1,450	636646.16	4271192.29	UCART1	9.14
1,451	636686.16	4271192.29	UCART1	9.14
1,452	636726.16	4271192.29	UCART1	9.14
1,453	636766.16	4271192.29	UCART1	9.24
1,454	636806.16	4271192.29	UCART1	9.45
1,455	636846.16	4271192.29	UCART1	9.45
1,456	636886.16	4271192.29	UCART1	9.35
1,457	636926.16	4271192.29	UCART1	9.14
1,458	636966.16	4271192.29	UCART1	9.14
1,459	637006.16	4271192.29	UCART1	9.14
1,460	637046.16	4271192.29	UCART1	9.45
1,461	637806.16	4271192.29	UCART1	8.48
1,462	637846.16	4271192.29	UCART1	9.06
1,463	637886.16	4271192.29	UCART1	9.47
1,464	637926.16	4271192.29	UCART1	9.88
1,465	637966.16	4271192.29	UCART1	10.28
1,466	638086.16	4271192.29	UCART1	10.44
1,467	638126.16	4271192.29	UCART1	10.36
1,468	638166.16	4271192.29	UCART1	10.36
1,469	638206.16	4271192.29	UCART1	10.36
1,470	638246.16	4271192.29	UCART1	10.18
1,471	638286.16	4271192.29	UCART1	9.99
1,472	638326.16	4271192.29	UCART1	9.79
1,473	638366.16	4271192.29	UCART1	9.45
1,474	633326.16	4271232.29	UCART1	7.32

Receptor Pathway

AERMOD

1,475	633366.16	4271232.29	UCART1	7.32
1,476	633406.16	4271232.29	UCART1	7.32
1,477	633446.16	4271232.29	UCART1	7.32
1,478	633486.16	4271232.29	UCART1	7.32
1,479	633526.16	4271232.29	UCART1	7.32
1,480	633846.16	4271232.29	UCART1	7.48
1,481	633886.16	4271232.29	UCART1	7.32
1,482	633926.16	4271232.29	UCART1	7.32
1,483	633966.16	4271232.29	UCART1	7.44
1,484	634006.16	4271232.29	UCART1	7.62
1,485	634046.16	4271232.29	UCART1	7.62
1,486	634086.16	4271232.29	UCART1	7.61
1,487	634166.16	4271232.29	UCART1	7.62
1,488	634206.16	4271232.29	UCART1	7.62
1,489	634246.16	4271232.29	UCART1	7.62
1,490	634646.16	4271232.29	UCART1	7.31
1,491	634686.16	4271232.29	UCART1	7.29
1,492	634726.16	4271232.29	UCART1	7.08
1,493	634766.16	4271232.29	UCART1	7.01
1,494	634806.16	4271232.29	UCART1	7.12
1,495	634846.16	4271232.29	UCART1	7.29
1,496	634886.16	4271232.29	UCART1	7.29
1,497	634926.16	4271232.29	UCART1	7.29
1,498	635006.16	4271232.29	UCART1	7.29
1,499	635046.16	4271232.29	UCART1	7.30
1,500	635086.16	4271232.29	UCART1	7.32
1,501	635126.16	4271232.29	UCART1	7.32
1,502	635166.16	4271232.29	UCART1	7.32
1,503	635206.16	4271232.29	UCART1	7.32
1,504	635246.16	4271232.29	UCART1	7.32
1,505	635286.16	4271232.29	UCART1	7.43
1,506	635326.16	4271232.29	UCART1	7.61
1,507	635366.16	4271232.29	UCART1	7.64
1,508	635406.16	4271232.29	UCART1	7.91
1,509	635446.16	4271232.29	UCART1	7.92
1,510	635486.16	4271232.29	UCART1	7.92
1,511	635526.16	4271232.29	UCART1	7.91
1,512	635566.16	4271232.29	UCART1	7.90

Receptor Pathway

AERMOD

1,513	635606.16	4271232.29	UCART1	7.62
1,514	635646.16	4271232.29	UCART1	7.62
1,515	635686.16	4271232.29	UCART1	7.62
1,516	635726.16	4271232.29	UCART1	7.62
1,517	635766.16	4271232.29	UCART1	7.62
1,518	635806.16	4271232.29	UCART1	7.62
1,519	635846.16	4271232.29	UCART1	7.62
1,520	635886.16	4271232.29	UCART1	7.64
1,521	635926.16	4271232.29	UCART1	7.62
1,522	636086.16	4271232.29	UCART1	9.12
1,523	636126.16	4271232.29	UCART1	9.14
1,524	636206.16	4271232.29	UCART1	9.14
1,525	636246.16	4271232.29	UCART1	9.14
1,526	636286.16	4271232.29	UCART1	9.14
1,527	636326.16	4271232.29	UCART1	9.14
1,528	636366.16	4271232.29	UCART1	9.14
1,529	636406.16	4271232.29	UCART1	9.14
1,530	636446.16	4271232.29	UCART1	9.14
1,531	636486.16	4271232.29	UCART1	9.14
1,532	636526.16	4271232.29	UCART1	9.14
1,533	636566.16	4271232.29	UCART1	9.14
1,534	636606.16	4271232.29	UCART1	9.14
1,535	636646.16	4271232.29	UCART1	9.14
1,536	636686.16	4271232.29	UCART1	9.14
1,537	636726.16	4271232.29	UCART1	9.14
1,538	636766.16	4271232.29	UCART1	9.14
1,539	636806.16	4271232.29	UCART1	9.45
1,540	636846.16	4271232.29	UCART1	9.45
1,541	636886.16	4271232.29	UCART1	9.45
1,542	636926.16	4271232.29	UCART1	9.42
1,543	636966.16	4271232.29	UCART1	9.42
1,544	637006.16	4271232.29	UCART1	9.42
1,545	637806.16	4271232.29	UCART1	8.59
1,546	637846.16	4271232.29	UCART1	9.34
1,547	637886.16	4271232.29	UCART1	9.47
1,548	637926.16	4271232.29	UCART1	9.88
1,549	637966.16	4271232.29	UCART1	10.28
1,550	638086.16	4271232.29	UCART1	10.44

Receptor Pathway

AERMOD

1,551	638126.16	4271232.29	UCART1	10.36
1,552	638166.16	4271232.29	UCART1	10.36
1,553	638206.16	4271232.29	UCART1	10.16
1,554	638246.16	4271232.29	UCART1	10.04
1,555	638286.16	4271232.29	UCART1	9.77
1,556	638326.16	4271232.29	UCART1	9.75
1,557	638366.16	4271232.29	UCART1	9.45
1,558	633326.16	4271272.29	UCART1	7.32
1,559	633366.16	4271272.29	UCART1	7.32
1,560	633406.16	4271272.29	UCART1	7.32
1,561	633446.16	4271272.29	UCART1	7.32
1,562	633486.16	4271272.29	UCART1	7.32
1,563	633526.16	4271272.29	UCART1	7.32
1,564	633606.16	4271272.29	UCART1	7.62
1,565	633646.16	4271272.29	UCART1	7.62
1,566	633686.16	4271272.29	UCART1	7.62
1,567	633846.16	4271272.29	UCART1	7.53
1,568	633886.16	4271272.29	UCART1	7.33
1,569	633926.16	4271272.29	UCART1	7.34
1,570	633966.16	4271272.29	UCART1	7.62
1,571	634006.16	4271272.29	UCART1	7.62
1,572	634046.16	4271272.29	UCART1	7.62
1,573	634086.16	4271272.29	UCART1	7.62
1,574	634246.16	4271272.29	UCART1	7.68
1,575	634286.16	4271272.29	UCART1	7.62
1,576	634686.16	4271272.29	UCART1	7.36
1,577	634726.16	4271272.29	UCART1	7.32
1,578	634766.16	4271272.29	UCART1	7.32
1,579	634806.16	4271272.29	UCART1	7.32
1,580	634846.16	4271272.29	UCART1	7.32
1,581	634886.16	4271272.29	UCART1	7.32
1,582	634926.16	4271272.29	UCART1	7.32
1,583	634966.16	4271272.29	UCART1	7.32
1,584	635006.16	4271272.29	UCART1	7.32
1,585	635086.16	4271272.29	UCART1	7.32
1,586	635126.16	4271272.29	UCART1	7.32
1,587	635166.16	4271272.29	UCART1	7.32
1,588	635206.16	4271272.29	UCART1	7.32

Receptor Pathway

AERMOD

1,589	635246.16	4271272.29	UCART1	7.32
1,590	635286.16	4271272.29	UCART1	7.44
1,591	635326.16	4271272.29	UCART1	7.62
1,592	635366.16	4271272.29	UCART1	7.71
1,593	635406.16	4271272.29	UCART1	7.92
1,594	635446.16	4271272.29	UCART1	7.98
1,595	635486.16	4271272.29	UCART1	7.92
1,596	635526.16	4271272.29	UCART1	7.92
1,597	635566.16	4271272.29	UCART1	7.92
1,598	635606.16	4271272.29	UCART1	7.90
1,599	635646.16	4271272.29	UCART1	7.62
1,600	635686.16	4271272.29	UCART1	7.62
1,601	635726.16	4271272.29	UCART1	7.62
1,602	635766.16	4271272.29	UCART1	7.62
1,603	635806.16	4271272.29	UCART1	7.62
1,604	635846.16	4271272.29	UCART1	7.69
1,605	636046.16	4271272.29	UCART1	9.20
1,606	636086.16	4271272.29	UCART1	9.14
1,607	636166.16	4271272.29	UCART1	9.09
1,608	636206.16	4271272.29	UCART1	9.07
1,609	636246.16	4271272.29	UCART1	9.07
1,610	636286.16	4271272.29	UCART1	8.90
1,611	636326.16	4271272.29	UCART1	9.07
1,612	636366.16	4271272.29	UCART1	9.14
1,613	636406.16	4271272.29	UCART1	9.14
1,614	636446.16	4271272.29	UCART1	9.14
1,615	636486.16	4271272.29	UCART1	9.14
1,616	636526.16	4271272.29	UCART1	9.14
1,617	636566.16	4271272.29	UCART1	9.07
1,618	636606.16	4271272.29	UCART1	9.14
1,619	636646.16	4271272.29	UCART1	9.14
1,620	636686.16	4271272.29	UCART1	9.14
1,621	636726.16	4271272.29	UCART1	9.14
1,622	636766.16	4271272.29	UCART1	9.14
1,623	636806.16	4271272.29	UCART1	9.38
1,624	636846.16	4271272.29	UCART1	9.45
1,625	636886.16	4271272.29	UCART1	9.45
1,626	636926.16	4271272.29	UCART1	9.45

Receptor Pathway

AERMOD

1,627	636966.16	4271272.29	UCART1	9.45
1,628	637006.16	4271272.29	UCART1	9.45
1,629	637046.16	4271272.29	UCART1	9.45
1,630	638086.16	4271272.29	UCART1	10.44
1,631	638126.16	4271272.29	UCART1	10.36
1,632	638166.16	4271272.29	UCART1	10.24
1,633	638206.16	4271272.29	UCART1	10.06
1,634	638246.16	4271272.29	UCART1	10.04
1,635	638286.16	4271272.29	UCART1	9.75
1,636	638326.16	4271272.29	UCART1	9.53
1,637	638366.16	4271272.29	UCART1	9.43
1,638	633366.16	4271312.29	UCART1	7.32
1,639	633406.16	4271312.29	UCART1	7.32
1,640	633446.16	4271312.29	UCART1	7.32
1,641	633486.16	4271312.29	UCART1	7.32
1,642	633526.16	4271312.29	UCART1	7.32
1,643	633606.16	4271312.29	UCART1	7.62
1,644	633646.16	4271312.29	UCART1	7.62
1,645	633686.16	4271312.29	UCART1	7.62
1,646	633846.16	4271312.29	UCART1	7.62
1,647	633886.16	4271312.29	UCART1	7.39
1,648	633926.16	4271312.29	UCART1	7.50
1,649	634006.16	4271312.29	UCART1	7.62
1,650	634126.16	4271312.29	UCART1	7.62
1,651	634166.16	4271312.29	UCART1	7.63
1,652	634206.16	4271312.29	UCART1	7.80
1,653	634246.16	4271312.29	UCART1	7.89
1,654	634726.16	4271312.29	UCART1	7.36
1,655	634766.16	4271312.29	UCART1	7.32
1,656	634846.16	4271312.29	UCART1	7.32
1,657	634886.16	4271312.29	UCART1	7.33
1,658	634926.16	4271312.29	UCART1	7.49
1,659	634966.16	4271312.29	UCART1	7.49
1,660	635046.16	4271312.29	UCART1	7.42
1,661	635086.16	4271312.29	UCART1	7.32
1,662	635166.16	4271312.29	UCART1	7.32
1,663	635206.16	4271312.29	UCART1	7.32
1,664	635246.16	4271312.29	UCART1	7.33

Receptor Pathway

AERMOD

1,665	635286.16	4271312.29	UCART1	7.54
1,666	635326.16	4271312.29	UCART1	7.62
1,667	635406.16	4271312.29	UCART1	8.00
1,668	635446.16	4271312.29	UCART1	8.20
1,669	635486.16	4271312.29	UCART1	8.09
1,670	635526.16	4271312.29	UCART1	7.92
1,671	635566.16	4271312.29	UCART1	7.92
1,672	635606.16	4271312.29	UCART1	7.90
1,673	635646.16	4271312.29	UCART1	7.62
1,674	635686.16	4271312.29	UCART1	7.62
1,675	635726.16	4271312.29	UCART1	7.62
1,676	635766.16	4271312.29	UCART1	7.69
1,677	635926.16	4271312.29	UCART1	8.99
1,678	635966.16	4271312.29	UCART1	9.26
1,679	636006.16	4271312.29	UCART1	9.14
1,680	636126.16	4271312.29	UCART1	8.97
1,681	636166.16	4271312.29	UCART1	8.87
1,682	636206.16	4271312.29	UCART1	8.83
1,683	636246.16	4271312.29	UCART1	8.66
1,684	636286.16	4271312.29	UCART1	8.66
1,685	636326.16	4271312.29	UCART1	8.85
1,686	636366.16	4271312.29	UCART1	8.97
1,687	636406.16	4271312.29	UCART1	8.97
1,688	636446.16	4271312.29	UCART1	8.97
1,689	636486.16	4271312.29	UCART1	8.97
1,690	636526.16	4271312.29	UCART1	8.97
1,691	636566.16	4271312.29	UCART1	8.85
1,692	636606.16	4271312.29	UCART1	9.04
1,693	636646.16	4271312.29	UCART1	9.14
1,694	636686.16	4271312.29	UCART1	9.14
1,695	636726.16	4271312.29	UCART1	9.14
1,696	636766.16	4271312.29	UCART1	9.14
1,697	636806.16	4271312.29	UCART1	9.17
1,698	636846.16	4271312.29	UCART1	9.45
1,699	636886.16	4271312.29	UCART1	9.45
1,700	636926.16	4271312.29	UCART1	9.45
1,701	636966.16	4271312.29	UCART1	9.52
1,702	637006.16	4271312.29	UCART1	9.63

Receptor Pathway

AERMOD

1,703	637046.16	4271312.29	UCART1	9.63
1,704	637086.16	4271312.29	UCART1	9.75
1,705	637846.16	4271312.29	UCART1	9.11
1,706	637886.16	4271312.29	UCART1	9.47
1,707	637966.16	4271312.29	UCART1	10.28
1,708	638086.16	4271312.29	UCART1	10.44
1,709	638126.16	4271312.29	UCART1	10.35
1,710	638166.16	4271312.29	UCART1	10.13
1,711	638206.16	4271312.29	UCART1	10.06
1,712	638246.16	4271312.29	UCART1	9.87
1,713	638286.16	4271312.29	UCART1	9.75
1,714	638326.16	4271312.29	UCART1	9.53
1,715	638366.16	4271312.29	UCART1	9.43
1,716	633366.16	4271352.29	UCART1	7.32
1,717	633406.16	4271352.29	UCART1	7.32
1,718	633446.16	4271352.29	UCART1	7.32
1,719	633486.16	4271352.29	UCART1	7.32
1,720	633526.16	4271352.29	UCART1	7.32
1,721	633566.16	4271352.29	UCART1	7.34
1,722	633606.16	4271352.29	UCART1	7.62
1,723	633646.16	4271352.29	UCART1	7.62
1,724	633686.16	4271352.29	UCART1	7.62
1,725	633726.16	4271352.29	UCART1	7.62
1,726	633886.16	4271352.29	UCART1	7.60
1,727	634006.16	4271352.29	UCART1	7.62
1,728	634046.16	4271352.29	UCART1	7.64
1,729	634086.16	4271352.29	UCART1	7.90
1,730	634126.16	4271352.29	UCART1	7.69
1,731	634806.16	4271352.29	UCART1	7.32
1,732	634846.16	4271352.29	UCART1	7.32
1,733	634886.16	4271352.29	UCART1	7.34
1,734	634926.16	4271352.29	UCART1	7.62
1,735	634966.16	4271352.29	UCART1	7.62
1,736	635006.16	4271352.29	UCART1	7.62
1,737	635046.16	4271352.29	UCART1	7.61
1,738	635126.16	4271352.29	UCART1	7.59
1,739	635206.16	4271352.29	UCART1	7.59
1,740	635246.16	4271352.29	UCART1	7.60

Receptor Pathway

AERMOD

1,741	635326.16	4271352.29	UCART1	7.62
1,742	635366.16	4271352.29	UCART1	7.92
1,743	635406.16	4271352.29	UCART1	8.05
1,744	635446.16	4271352.29	UCART1	8.23
1,745	635486.16	4271352.29	UCART1	8.21
1,746	635526.16	4271352.29	UCART1	7.92
1,747	635566.16	4271352.29	UCART1	7.72
1,748	635606.16	4271352.29	UCART1	7.90
1,749	635646.16	4271352.29	UCART1	7.73
1,750	635686.16	4271352.29	UCART1	7.90
1,751	635846.16	4271352.29	UCART1	9.33
1,752	635886.16	4271352.29	UCART1	9.15
1,753	636006.16	4271352.29	UCART1	8.87
1,754	636046.16	4271352.29	UCART1	8.87
1,755	636086.16	4271352.29	UCART1	8.82
1,756	636126.16	4271352.29	UCART1	8.56
1,757	636166.16	4271352.29	UCART1	8.56
1,758	636206.16	4271352.29	UCART1	8.56
1,759	636246.16	4271352.29	UCART1	8.53
1,760	636286.16	4271352.29	UCART1	8.53
1,761	636326.16	4271352.29	UCART1	8.56
1,762	636366.16	4271352.29	UCART1	8.56
1,763	636406.16	4271352.29	UCART1	8.56
1,764	636606.16	4271352.29	UCART1	9.13
1,765	636646.16	4271352.29	UCART1	9.14
1,766	636686.16	4271352.29	UCART1	9.14
1,767	636726.16	4271352.29	UCART1	9.14
1,768	636766.16	4271352.29	UCART1	9.14
1,769	636806.16	4271352.29	UCART1	9.15
1,770	636846.16	4271352.29	UCART1	9.17
1,771	636886.16	4271352.29	UCART1	9.38
1,772	636926.16	4271352.29	UCART1	9.45
1,773	636966.16	4271352.29	UCART1	9.57
1,774	637006.16	4271352.29	UCART1	9.75
1,775	637046.16	4271352.29	UCART1	9.77
1,776	637086.16	4271352.29	UCART1	9.92
1,777	637846.16	4271352.29	UCART1	9.14
1,778	637886.16	4271352.29	UCART1	9.47

Receptor Pathway

AERMOD

1,779	637966.16	4271352.29	UCART1	10.28
1,780	638086.16	4271352.29	UCART1	10.44
1,781	638126.16	4271352.29	UCART1	10.34
1,782	638166.16	4271352.29	UCART1	10.06
1,783	638206.16	4271352.29	UCART1	10.06
1,784	638246.16	4271352.29	UCART1	9.75
1,785	638286.16	4271352.29	UCART1	9.75
1,786	638326.16	4271352.29	UCART1	9.53
1,787	638366.16	4271352.29	UCART1	9.43
1,788	633366.16	4271392.29	UCART1	7.32
1,789	633406.16	4271392.29	UCART1	7.32
1,790	633446.16	4271392.29	UCART1	7.32
1,791	633486.16	4271392.29	UCART1	7.32
1,792	633526.16	4271392.29	UCART1	7.32
1,793	633566.16	4271392.29	UCART1	7.34
1,794	633646.16	4271392.29	UCART1	7.62
1,795	633686.16	4271392.29	UCART1	7.62
1,796	633726.16	4271392.29	UCART1	7.62
1,797	633886.16	4271392.29	UCART1	7.62
1,798	633926.16	4271392.29	UCART1	7.62
1,799	633966.16	4271392.29	UCART1	7.62
1,800	634006.16	4271392.29	UCART1	7.85
1,801	634046.16	4271392.29	UCART1	8.24
1,802	634086.16	4271392.29	UCART1	8.30
1,803	634126.16	4271392.29	UCART1	8.30
1,804	634166.16	4271392.29	UCART1	8.31
1,805	634246.16	4271392.29	UCART1	8.61
1,806	634286.16	4271392.29	UCART1	8.61
1,807	634846.16	4271392.29	UCART1	7.45
1,808	634886.16	4271392.29	UCART1	7.62
1,809	634926.16	4271392.29	UCART1	7.65
1,810	634966.16	4271392.29	UCART1	7.86
1,811	635006.16	4271392.29	UCART1	7.69
1,812	635126.16	4271392.29	UCART1	7.62
1,813	635166.16	4271392.29	UCART1	7.62
1,814	635246.16	4271392.29	UCART1	7.62
1,815	635286.16	4271392.29	UCART1	7.62
1,816	635326.16	4271392.29	UCART1	7.68

Receptor Pathway

AERMOD

1,817	635366.16	4271392.29	UCART1	7.95
1,818	635406.16	4271392.29	UCART1	8.26
1,819	635446.16	4271392.29	UCART1	8.25
1,820	635486.16	4271392.29	UCART1	8.21
1,821	635526.16	4271392.29	UCART1	7.80
1,822	635566.16	4271392.29	UCART1	7.68
1,823	635606.16	4271392.29	UCART1	7.83
1,824	635766.16	4271392.29	UCART1	9.14
1,825	635806.16	4271392.29	UCART1	9.14
1,826	635886.16	4271392.29	UCART1	9.07
1,827	635926.16	4271392.29	UCART1	8.84
1,828	635966.16	4271392.29	UCART1	8.76
1,829	636006.16	4271392.29	UCART1	8.64
1,830	636046.16	4271392.29	UCART1	8.46
1,831	636086.16	4271392.29	UCART1	8.46
1,832	636126.16	4271392.29	UCART1	8.37
1,833	636166.16	4271392.29	UCART1	8.23
1,834	636206.16	4271392.29	UCART1	8.23
1,835	636246.16	4271392.29	UCART1	8.20
1,836	636286.16	4271392.29	UCART1	8.15
1,837	636326.16	4271392.29	UCART1	8.15
1,838	636366.16	4271392.29	UCART1	8.15
1,839	636406.16	4271392.29	UCART1	8.15
1,840	636446.16	4271392.29	UCART1	8.15
1,841	636486.16	4271392.29	UCART1	8.15
1,842	636526.16	4271392.29	UCART1	8.55
1,843	636566.16	4271392.29	UCART1	8.93
1,844	636606.16	4271392.29	UCART1	9.14
1,845	636646.16	4271392.29	UCART1	9.14
1,846	636686.16	4271392.29	UCART1	9.14
1,847	636726.16	4271392.29	UCART1	9.14
1,848	636766.16	4271392.29	UCART1	9.14
1,849	636806.16	4271392.29	UCART1	9.14
1,850	636846.16	4271392.29	UCART1	9.14
1,851	636886.16	4271392.29	UCART1	9.14
1,852	636926.16	4271392.29	UCART1	9.38
1,853	636966.16	4271392.29	UCART1	9.57
1,854	637006.16	4271392.29	UCART1	9.81

Receptor Pathway

AERMOD

1,855	637046.16	4271392.29	UCART1	10.13
1,856	637846.16	4271392.29	UCART1	9.14
1,857	637886.16	4271392.29	UCART1	9.47
1,858	637966.16	4271392.29	UCART1	10.28
1,859	638086.16	4271392.29	UCART1	10.44
1,860	638126.16	4271392.29	UCART1	10.34
1,861	638166.16	4271392.29	UCART1	10.06
1,862	638206.16	4271392.29	UCART1	10.00
1,863	638246.16	4271392.29	UCART1	9.75
1,864	638286.16	4271392.29	UCART1	9.72
1,865	638326.16	4271392.29	UCART1	9.51
1,866	638366.16	4271392.29	UCART1	9.43
1,867	633406.16	4271432.29	UCART1	7.32
1,868	633446.16	4271432.29	UCART1	7.32
1,869	633486.16	4271432.29	UCART1	7.32
1,870	633526.16	4271432.29	UCART1	7.32
1,871	633566.16	4271432.29	UCART1	7.34
1,872	633646.16	4271432.29	UCART1	7.62
1,873	633766.16	4271432.29	UCART1	7.62
1,874	633926.16	4271432.29	UCART1	7.63
1,875	633966.16	4271432.29	UCART1	7.87
1,876	634006.16	4271432.29	UCART1	8.20
1,877	634046.16	4271432.29	UCART1	8.43
1,878	634086.16	4271432.29	UCART1	8.71
1,879	634126.16	4271432.29	UCART1	8.84
1,880	634166.16	4271432.29	UCART1	8.90
1,881	634966.16	4271432.29	UCART1	7.88
1,882	635006.16	4271432.29	UCART1	7.92
1,883	635046.16	4271432.29	UCART1	7.80
1,884	635086.16	4271432.29	UCART1	7.80
1,885	635166.16	4271432.29	UCART1	7.80
1,886	635206.16	4271432.29	UCART1	7.89
1,887	635246.16	4271432.29	UCART1	7.80
1,888	635286.16	4271432.29	UCART1	7.80
1,889	635326.16	4271432.29	UCART1	8.02
1,890	635366.16	4271432.29	UCART1	8.12
1,891	635406.16	4271432.29	UCART1	8.46
1,892	635486.16	4271432.29	UCART1	8.04

Receptor Pathway

AERMOD

1,893	635526.16	4271432.29	UCART1	7.87
1,894	635686.16	4271432.29	UCART1	9.12
1,895	635726.16	4271432.29	UCART1	9.14
1,896	635806.16	4271432.29	UCART1	8.97
1,897	635846.16	4271432.29	UCART1	8.66
1,898	635886.16	4271432.29	UCART1	8.66
1,899	635926.16	4271432.29	UCART1	8.44
1,900	636006.16	4271432.29	UCART1	8.31
1,901	636046.16	4271432.29	UCART1	8.10
1,902	636086.16	4271432.29	UCART1	8.05
1,903	636126.16	4271432.29	UCART1	8.05
1,904	637846.16	4271432.29	UCART1	9.10
1,905	637886.16	4271432.29	UCART1	9.47
1,906	637966.16	4271432.29	UCART1	10.28
1,907	638086.16	4271432.29	UCART1	10.44
1,908	638126.16	4271432.29	UCART1	10.34
1,909	638166.16	4271432.29	UCART1	10.06
1,910	638206.16	4271432.29	UCART1	9.83
1,911	638246.16	4271432.29	UCART1	9.75
1,912	638366.16	4271432.29	UCART1	9.43
1,913	633406.16	4271472.29	UCART1	7.32
1,914	633446.16	4271472.29	UCART1	7.32
1,915	633486.16	4271472.29	UCART1	7.32
1,916	633526.16	4271472.29	UCART1	7.32
1,917	633766.16	4271472.29	UCART1	7.62
1,918	633806.16	4271472.29	UCART1	7.62
1,919	633886.16	4271472.29	UCART1	7.83
1,920	633926.16	4271472.29	UCART1	8.20
1,921	633966.16	4271472.29	UCART1	8.49
1,922	634006.16	4271472.29	UCART1	8.73
1,923	634046.16	4271472.29	UCART1	9.09
1,924	634966.16	4271472.29	UCART1	7.92
1,925	635006.16	4271472.29	UCART1	7.92
1,926	635126.16	4271472.29	UCART1	7.95
1,927	635166.16	4271472.29	UCART1	8.20
1,928	635206.16	4271472.29	UCART1	8.20
1,929	635246.16	4271472.29	UCART1	8.20
1,930	635286.16	4271472.29	UCART1	8.20

Receptor Pathway

AERMOD

1,931	635326.16	4271472.29	UCART1	8.43
1,932	635406.16	4271472.29	UCART1	8.81
1,933	635446.16	4271472.29	UCART1	8.83
1,934	635606.16	4271472.29	UCART1	9.35
1,935	635646.16	4271472.29	UCART1	9.15
1,936	635686.16	4271472.29	UCART1	9.15
1,937	635726.16	4271472.29	UCART1	8.87
1,938	635766.16	4271472.29	UCART1	8.86
1,939	635806.16	4271472.29	UCART1	8.63
1,940	635846.16	4271472.29	UCART1	8.51
1,941	635886.16	4271472.29	UCART1	8.26
1,942	635926.16	4271472.29	UCART1	8.03
1,943	637846.16	4271472.29	UCART1	9.06
1,944	637886.16	4271472.29	UCART1	9.47
1,945	637966.16	4271472.29	UCART1	10.28
1,946	638086.16	4271472.29	UCART1	10.37
1,947	638126.16	4271472.29	UCART1	10.34
1,948	638166.16	4271472.29	UCART1	9.95
1,949	638206.16	4271472.29	UCART1	9.76
1,950	638326.16	4271472.29	UCART1	9.45
1,951	638366.16	4271472.29	UCART1	9.45
1,952	633406.16	4271512.29	UCART1	7.56
1,953	633446.16	4271512.29	UCART1	7.62
1,954	633486.16	4271512.29	UCART1	7.62
1,955	633806.16	4271512.29	UCART1	7.62
1,956	633926.16	4271512.29	UCART1	8.13
1,957	633966.16	4271512.29	UCART1	8.80
1,958	634126.16	4271512.29	UCART1	7.30
1,959	634166.16	4271512.29	UCART1	7.13
1,960	634206.16	4271512.29	UCART1	6.15
1,961	634246.16	4271512.29	UCART1	5.17
1,962	634286.16	4271512.29	UCART1	6.44
1,963	634326.16	4271512.29	UCART1	6.98
1,964	634366.16	4271512.29	UCART1	7.17
1,965	634406.16	4271512.29	UCART1	7.16
1,966	634446.16	4271512.29	UCART1	6.72
1,967	635006.16	4271512.29	UCART1	8.23
1,968	635166.16	4271512.29	UCART1	8.30

Receptor Pathway

AERMOD

1,969	635206.16	4271512.29	UCART1	8.47
1,970	635246.16	4271512.29	UCART1	8.61
1,971	635326.16	4271512.29	UCART1	8.78
1,972	635366.16	4271512.29	UCART1	8.91
1,973	635526.16	4271512.29	UCART1	9.07
1,974	635566.16	4271512.29	UCART1	9.29
1,975	635606.16	4271512.29	UCART1	9.36
1,976	635646.16	4271512.29	UCART1	9.14
1,977	635686.16	4271512.29	UCART1	9.09
1,978	635726.16	4271512.29	UCART1	8.74
1,979	635766.16	4271512.29	UCART1	8.46
1,980	635806.16	4271512.29	UCART1	8.23
1,981	635846.16	4271512.29	UCART1	8.13
1,982	637846.16	4271512.29	UCART1	8.99
1,983	637886.16	4271512.29	UCART1	9.47
1,984	637966.16	4271512.29	UCART1	10.28
1,985	638086.16	4271512.29	UCART1	10.38
1,986	638126.16	4271512.29	UCART1	10.05
1,987	638166.16	4271512.29	UCART1	9.89
1,988	638206.16	4271512.29	UCART1	9.70
1,989	638286.16	4271512.29	UCART1	9.37
1,990	638326.16	4271512.29	UCART1	9.37
1,991	638366.16	4271512.29	UCART1	9.36
1,992	633406.16	4271552.29	UCART1	7.62
1,993	633446.16	4271552.29	UCART1	7.62
1,994	633486.16	4271552.29	UCART1	7.62
1,995	633526.16	4271552.29	UCART1	7.62
1,996	633766.16	4271552.29	UCART1	7.62
1,997	633806.16	4271552.29	UCART1	7.62
1,998	633846.16	4271552.29	UCART1	7.62
1,999	634086.16	4271552.29	UCART1	6.55
2,000	634126.16	4271552.29	UCART1	6.66
2,001	634166.16	4271552.29	UCART1	6.14
2,002	634206.16	4271552.29	UCART1	5.31
2,003	634246.16	4271552.29	UCART1	4.88
2,004	634286.16	4271552.29	UCART1	5.36
2,005	634326.16	4271552.29	UCART1	6.17
2,006	634366.16	4271552.29	UCART1	6.35

Receptor Pathway

AERMOD

2,007	634406.16	4271552.29	UCART1	6.30
2,008	634446.16	4271552.29	UCART1	5.45
2,009	634486.16	4271552.29	UCART1	5.93
2,010	634526.16	4271552.29	UCART1	7.00
2,011	634566.16	4271552.29	UCART1	7.50
2,012	635446.16	4271552.29	UCART1	9.01
2,013	635486.16	4271552.29	UCART1	8.96
2,014	635526.16	4271552.29	UCART1	8.84
2,015	635566.16	4271552.29	UCART1	9.06
2,016	635606.16	4271552.29	UCART1	8.97
2,017	635646.16	4271552.29	UCART1	8.97
2,018	635686.16	4271552.29	UCART1	8.74
2,019	635726.16	4271552.29	UCART1	8.35
2,020	635766.16	4271552.29	UCART1	8.16
2,021	633446.16	4271592.29	UCART1	7.62
2,022	633486.16	4271592.29	UCART1	7.62
2,023	633526.16	4271592.29	UCART1	7.62
2,024	633646.16	4271592.29	UCART1	7.62
2,025	633686.16	4271592.29	UCART1	7.62
2,026	633726.16	4271592.29	UCART1	7.62
2,027	633766.16	4271592.29	UCART1	7.83
2,028	633806.16	4271592.29	UCART1	8.14
2,029	634046.16	4271592.29	UCART1	6.12
2,030	634086.16	4271592.29	UCART1	6.22
2,031	634126.16	4271592.29	UCART1	6.20
2,032	634166.16	4271592.29	UCART1	5.75
2,033	634206.16	4271592.29	UCART1	4.96
2,034	634246.16	4271592.29	UCART1	4.80
2,035	634286.16	4271592.29	UCART1	5.21
2,036	634326.16	4271592.29	UCART1	5.52
2,037	634366.16	4271592.29	UCART1	5.54
2,038	634406.16	4271592.29	UCART1	5.00
2,039	634446.16	4271592.29	UCART1	5.31
2,040	634486.16	4271592.29	UCART1	5.94
2,041	634526.16	4271592.29	UCART1	6.47
2,042	634566.16	4271592.29	UCART1	7.04
2,043	634606.16	4271592.29	UCART1	7.26
2,044	634646.16	4271592.29	UCART1	7.35

Receptor Pathway

AERMOD

2,045	635086.16	4271592.29	UCART1	8.74
2,046	635126.16	4271592.29	UCART1	8.81
2,047	635166.16	4271592.29	UCART1	8.84
2,048	635206.16	4271592.29	UCART1	9.04
2,049	635366.16	4271592.29	UCART1	9.12
2,050	635406.16	4271592.29	UCART1	8.87
2,051	635446.16	4271592.29	UCART1	8.85
2,052	635486.16	4271592.29	UCART1	8.84
2,053	635526.16	4271592.29	UCART1	8.84
2,054	635566.16	4271592.29	UCART1	8.86
2,055	635606.16	4271592.29	UCART1	8.82
2,056	635646.16	4271592.29	UCART1	8.56
2,057	635686.16	4271592.29	UCART1	8.34
2,058	638046.16	4271592.29	UCART1	10.55
2,059	638086.16	4271592.29	UCART1	10.37
2,060	638126.16	4271592.29	UCART1	10.04
2,061	638166.16	4271592.29	UCART1	9.63
2,062	638206.16	4271592.29	UCART1	9.24
2,063	638246.16	4271592.29	UCART1	9.14
2,064	638286.16	4271592.29	UCART1	9.14
2,065	638326.16	4271592.29	UCART1	9.14
2,066	638366.16	4271592.29	UCART1	9.14
2,067	633446.16	4271632.29	UCART1	7.63
2,068	633486.16	4271632.29	UCART1	7.69
2,069	633526.16	4271632.29	UCART1	7.75
2,070	633566.16	4271632.29	UCART1	7.85
2,071	633606.16	4271632.29	UCART1	7.92
2,072	633646.16	4271632.29	UCART1	8.20
2,073	634046.16	4271632.29	UCART1	6.17
2,074	634086.16	4271632.29	UCART1	6.10
2,075	634126.16	4271632.29	UCART1	6.10
2,076	634166.16	4271632.29	UCART1	6.06
2,077	634206.16	4271632.29	UCART1	5.26
2,078	634246.16	4271632.29	UCART1	4.84
2,079	634286.16	4271632.29	UCART1	5.11
2,080	634326.16	4271632.29	UCART1	5.08
2,081	634366.16	4271632.29	UCART1	4.92
2,082	634406.16	4271632.29	UCART1	4.79

Receptor Pathway

AERMOD

2,083	634446.16	4271632.29	UCART1	4.86
2,084	634486.16	4271632.29	UCART1	5.86
2,085	634526.16	4271632.29	UCART1	6.40
2,086	634566.16	4271632.29	UCART1	6.40
2,087	634606.16	4271632.29	UCART1	6.57
2,088	634646.16	4271632.29	UCART1	6.86
2,089	634686.16	4271632.29	UCART1	6.95
2,090	635086.16	4271632.29	UCART1	8.89
2,091	635126.16	4271632.29	UCART1	8.93
2,092	635166.16	4271632.29	UCART1	9.14
2,093	635286.16	4271632.29	UCART1	9.07
2,094	635326.16	4271632.29	UCART1	8.90
2,095	635366.16	4271632.29	UCART1	8.84
2,096	635406.16	4271632.29	UCART1	8.84
2,097	635446.16	4271632.29	UCART1	8.84
2,098	635486.16	4271632.29	UCART1	8.84
2,099	635526.16	4271632.29	UCART1	8.88
2,100	635566.16	4271632.29	UCART1	8.61
2,101	635606.16	4271632.29	UCART1	8.44
2,102	635646.16	4271632.29	UCART1	8.06
2,103	638046.16	4271632.29	UCART1	10.54
2,104	638086.16	4271632.29	UCART1	10.14
2,105	638126.16	4271632.29	UCART1	9.97
2,106	638166.16	4271632.29	UCART1	9.63
2,107	638206.16	4271632.29	UCART1	9.22
2,108	638246.16	4271632.29	UCART1	9.15
2,109	638286.16	4271632.29	UCART1	9.31
2,110	638326.16	4271632.29	UCART1	9.45
2,111	638366.16	4271632.29	UCART1	9.45
2,112	634126.16	4271672.29	UCART1	6.49
2,113	634166.16	4271672.29	UCART1	6.44
2,114	634206.16	4271672.29	UCART1	6.12
2,115	634246.16	4271672.29	UCART1	5.66
2,116	634286.16	4271672.29	UCART1	5.03
2,117	634326.16	4271672.29	UCART1	4.65
2,118	634366.16	4271672.29	UCART1	4.67
2,119	634406.16	4271672.29	UCART1	4.61
2,120	634446.16	4271672.29	UCART1	5.25

Receptor Pathway

AERMOD

2,121	634486.16	4271672.29	UCART1	5.95
2,122	634526.16	4271672.29	UCART1	6.22
2,123	634566.16	4271672.29	UCART1	6.22
2,124	634606.16	4271672.29	UCART1	6.22
2,125	634646.16	4271672.29	UCART1	6.22
2,126	634686.16	4271672.29	UCART1	6.22
2,127	634726.16	4271672.29	UCART1	6.22
2,128	635206.16	4271672.29	UCART1	9.14
2,129	635246.16	4271672.29	UCART1	8.96
2,130	635286.16	4271672.29	UCART1	8.84
2,131	635326.16	4271672.29	UCART1	8.84
2,132	635366.16	4271672.29	UCART1	8.66
2,133	635406.16	4271672.29	UCART1	8.66
2,134	635446.16	4271672.29	UCART1	8.79
2,135	635486.16	4271672.29	UCART1	8.86
2,136	635526.16	4271672.29	UCART1	9.02
2,137	635566.16	4271672.29	UCART1	8.48
2,138	638046.16	4271672.29	UCART1	10.54
2,139	638086.16	4271672.29	UCART1	10.14
2,140	638126.16	4271672.29	UCART1	9.75
2,141	638166.16	4271672.29	UCART1	9.63
2,142	638206.16	4271672.29	UCART1	8.83
2,143	638246.16	4271672.29	UCART1	9.17
2,144	638286.16	4271672.29	UCART1	9.45
2,145	638326.16	4271672.29	UCART1	9.45
2,146	638366.16	4271672.29	UCART1	9.63
2,147	634166.16	4271712.29	UCART1	6.98
2,148	634206.16	4271712.29	UCART1	6.84
2,149	634246.16	4271712.29	UCART1	6.45
2,150	634286.16	4271712.29	UCART1	6.27
2,151	634326.16	4271712.29	UCART1	5.85
2,152	634366.16	4271712.29	UCART1	5.07
2,153	634406.16	4271712.29	UCART1	5.19
2,154	634446.16	4271712.29	UCART1	6.04
2,155	634486.16	4271712.29	UCART1	6.09
2,156	634526.16	4271712.29	UCART1	6.12
2,157	634566.16	4271712.29	UCART1	6.37
2,158	634606.16	4271712.29	UCART1	6.37

Receptor Pathway

AERMOD

2,159	634646.16	4271712.29	UCART1	6.37
2,160	634686.16	4271712.29	UCART1	6.37
2,161	634726.16	4271712.29	UCART1	6.37
2,162	634766.16	4271712.29	UCART1	7.29
2,163	635166.16	4271712.29	UCART1	9.14
2,164	635206.16	4271712.29	UCART1	8.94
2,165	635246.16	4271712.29	UCART1	8.84
2,166	635286.16	4271712.29	UCART1	8.84
2,167	635326.16	4271712.29	UCART1	8.84
2,168	635366.16	4271712.29	UCART1	8.53
2,169	635406.16	4271712.29	UCART1	8.53
2,170	635446.16	4271712.29	UCART1	8.55
2,171	635486.16	4271712.29	UCART1	8.86
2,172	635526.16	4271712.29	UCART1	8.91
2,173	638046.16	4271712.29	UCART1	10.10
2,174	638086.16	4271712.29	UCART1	9.86
2,175	638126.16	4271712.29	UCART1	9.73
2,176	638166.16	4271712.29	UCART1	9.46
2,177	638206.16	4271712.29	UCART1	7.93
2,178	638326.16	4271712.29	UCART1	9.65
2,179	638366.16	4271712.29	UCART1	9.77
2,180	634246.16	4271752.29	UCART1	6.94
2,181	634286.16	4271752.29	UCART1	6.47
2,182	634326.16	4271752.29	UCART1	6.31
2,183	634366.16	4271752.29	UCART1	6.17
2,184	634406.16	4271752.29	UCART1	6.20
2,185	634446.16	4271752.29	UCART1	6.55
2,186	634486.16	4271752.29	UCART1	6.55
2,187	634526.16	4271752.29	UCART1	6.78
2,188	634566.16	4271752.29	UCART1	6.78
2,189	634606.16	4271752.29	UCART1	6.78
2,190	634646.16	4271752.29	UCART1	6.76
2,191	634686.16	4271752.29	UCART1	6.48
2,192	634726.16	4271752.29	UCART1	6.48
2,193	634766.16	4271752.29	UCART1	7.05
2,194	634806.16	4271752.29	UCART1	7.45
2,195	635166.16	4271752.29	UCART1	8.84
2,196	635206.16	4271752.29	UCART1	8.84

Receptor Pathway

AERMOD

2,197	635246.16	4271752.29	UCART1	8.84
2,198	635286.16	4271752.29	UCART1	8.84
2,199	635326.16	4271752.29	UCART1	8.61
2,200	635366.16	4271752.29	UCART1	8.53
2,201	635406.16	4271752.29	UCART1	8.37
2,202	635446.16	4271752.29	UCART1	8.17
2,203	638046.16	4271752.29	UCART1	9.75
2,204	638086.16	4271752.29	UCART1	9.75
2,205	638126.16	4271752.29	UCART1	9.73
2,206	638166.16	4271752.29	UCART1	8.93
2,207	633726.16	4271792.29	UCART1	7.22
2,208	634406.16	4271792.29	UCART1	6.95
2,209	634446.16	4271792.29	UCART1	7.19
2,210	634486.16	4271792.29	UCART1	7.19
2,211	634526.16	4271792.29	UCART1	7.19
2,212	634566.16	4271792.29	UCART1	7.19
2,213	634606.16	4271792.29	UCART1	7.19
2,214	634646.16	4271792.29	UCART1	7.18
2,215	634686.16	4271792.29	UCART1	6.99
2,216	634726.16	4271792.29	UCART1	6.88
2,217	634766.16	4271792.29	UCART1	7.03
2,218	634806.16	4271792.29	UCART1	7.32
2,219	634846.16	4271792.29	UCART1	7.54
2,220	635046.16	4271792.29	UCART1	9.07
2,221	635086.16	4271792.29	UCART1	9.00
2,222	635206.16	4271792.29	UCART1	9.02
2,223	635246.16	4271792.29	UCART1	9.02
2,224	635286.16	4271792.29	UCART1	8.94
2,225	635326.16	4271792.29	UCART1	8.74
2,226	635366.16	4271792.29	UCART1	8.69
2,227	635406.16	4271792.29	UCART1	8.26
2,228	638046.16	4271792.29	UCART1	9.68
2,229	638086.16	4271792.29	UCART1	9.58
2,230	638126.16	4271792.29	UCART1	9.72
2,231	638166.16	4271792.29	UCART1	8.78
2,232	638206.16	4271792.29	UCART1	8.99
2,233	638246.16	4271792.29	UCART1	9.46
2,234	638286.16	4271792.29	UCART1	9.68

Receptor Pathway

AERMOD

2,235	638326.16	4271792.29	UCART1	9.88
2,236	638366.16	4271792.29	UCART1	10.08
2,237	634686.16	4271832.29	UCART1	7.47
2,238	634726.16	4271832.29	UCART1	7.29
2,239	634766.16	4271832.29	UCART1	7.29
2,240	634806.16	4271832.29	UCART1	7.32
2,241	634846.16	4271832.29	UCART1	7.34
2,242	635006.16	4271832.29	UCART1	9.16
2,243	635046.16	4271832.29	UCART1	9.30
2,244	635126.16	4271832.29	UCART1	9.42
2,245	635166.16	4271832.29	UCART1	9.42
2,246	635206.16	4271832.29	UCART1	9.42
2,247	635246.16	4271832.29	UCART1	9.42
2,248	635286.16	4271832.29	UCART1	9.30
2,249	635326.16	4271832.29	UCART1	9.12
2,250	635366.16	4271832.29	UCART1	9.12
2,251	638126.16	4271832.29	UCART1	9.05
2,252	638166.16	4271832.29	UCART1	7.98
2,253	638206.16	4271832.29	UCART1	9.36
2,254	638246.16	4271832.29	UCART1	9.47
2,255	638286.16	4271832.29	UCART1	9.87
2,256	638326.16	4271832.29	UCART1	10.05
2,257	638366.16	4271832.29	UCART1	10.34
2,258	635006.16	4271872.29	UCART1	8.60
2,259	635046.16	4271872.29	UCART1	8.54
2,260	635086.16	4271872.29	UCART1	8.99
2,261	635126.16	4271872.29	UCART1	9.47
2,262	635166.16	4271872.29	UCART1	9.68
2,263	635206.16	4271872.29	UCART1	9.68
2,264	635246.16	4271872.29	UCART1	9.45
2,265	635286.16	4271872.29	UCART1	9.32
2,266	635326.16	4271872.29	UCART1	9.09
2,267	638126.16	4271872.29	UCART1	8.05
2,268	638166.16	4271872.29	UCART1	8.90
2,269	638206.16	4271872.29	UCART1	9.39
2,270	638246.16	4271872.29	UCART1	9.76
2,271	638286.16	4271872.29	UCART1	9.92
2,272	638326.16	4271872.29	UCART1	10.11

Receptor Pathway

AERMOD

2,273	638366.16	4271872.29	UCART1	10.39
2,274	635046.16	4271912.29	UCART1	7.92
2,275	635086.16	4271912.29	UCART1	8.67
2,276	635126.16	4271912.29	UCART1	9.27
2,277	635166.16	4271912.29	UCART1	9.27
2,278	635206.16	4271912.29	UCART1	9.27
2,279	635246.16	4271912.29	UCART1	9.11
2,280	635286.16	4271912.29	UCART1	9.15
2,281	638126.16	4271912.29	UCART1	9.32
2,282	638166.16	4271912.29	UCART1	9.37
2,283	638206.16	4271912.29	UCART1	9.58
2,284	638246.16	4271912.29	UCART1	9.78
2,285	638286.16	4271912.29	UCART1	10.06
2,286	638326.16	4271912.29	UCART1	10.28
2,287	638366.16	4271912.29	UCART1	10.55
2,288	635126.16	4271952.29	UCART1	9.14
2,289	635166.16	4271952.29	UCART1	9.14
2,290	635206.16	4271952.29	UCART1	9.14
2,291	635246.16	4271952.29	UCART1	8.84
2,292	638206.16	4271952.29	UCART1	9.75
2,293	638246.16	4271952.29	UCART1	10.03
2,294	638286.16	4271952.29	UCART1	10.17
2,295	638326.16	4271952.29	UCART1	10.36
2,296	638366.16	4271952.29	UCART1	10.67
2,297	635166.16	4271992.29	UCART1	9.07
2,298	635206.16	4271992.29	UCART1	9.01
2,299	638046.16	4271992.29	UCART1	9.52
2,300	638086.16	4271992.29	UCART1	9.52
2,301	638126.16	4271992.29	UCART1	9.75
2,302	638166.16	4271992.29	UCART1	9.78
2,303	638206.16	4271992.29	UCART1	9.83
2,304	638246.16	4271992.29	UCART1	10.06
2,305	638286.16	4271992.29	UCART1	10.18
2,306	638326.16	4271992.29	UCART1	10.36
2,307	638366.16	4271992.29	UCART1	10.69
2,308	638046.16	4272032.29	UCART1	9.83
2,309	638086.16	4272032.29	UCART1	9.93
2,310	638126.16	4272032.29	UCART1	9.93

Receptor Pathway

AERMOD

2,311	638166.16	4272032.29	UCART1	9.98
2,312	638206.16	4272032.29	UCART1	10.06
2,313	638246.16	4272032.29	UCART1	10.07
2,314	638286.16	4272032.29	UCART1	10.29
2,315	638326.16	4272032.29	UCART1	10.36
2,316	638366.16	4272032.29	UCART1	10.69
2,317	638046.16	4272072.29	UCART1	10.04
2,318	638086.16	4272072.29	UCART1	10.06
2,319	638126.16	4272072.29	UCART1	10.06
2,320	638166.16	4272072.29	UCART1	10.06
2,321	638206.16	4272072.29	UCART1	10.06
2,322	638246.16	4272072.29	UCART1	10.34
2,323	638286.16	4272072.29	UCART1	10.36
2,324	638326.16	4272072.29	UCART1	10.57
2,325	638366.16	4272072.29	UCART1	10.69
2,326	633966.16	4272112.29	UCART1	9.55
2,327	638046.16	4272112.29	UCART1	10.36
2,328	638086.16	4272112.29	UCART1	10.36
2,329	638126.16	4272112.29	UCART1	10.36
2,330	638286.16	4272112.29	UCART1	10.36
2,331	638326.16	4272112.29	UCART1	10.36
2,332	638366.16	4272112.29	UCART1	10.67
2,333	638286.16	4272152.29	UCART1	10.36
2,334	638326.16	4272152.29	UCART1	10.36
2,335	638366.16	4272152.29	UCART1	10.67
2,336	638286.16	4272192.29	UCART1	10.36
2,337	638326.16	4272192.29	UCART1	10.36
2,338	638366.16	4272192.29	UCART1	10.67
2,339	634966.16	4272232.29	UCART1	9.39
2,340	638286.16	4272232.29	UCART1	10.67
2,341	638326.16	4272232.29	UCART1	10.67
2,342	638366.16	4272232.29	UCART1	10.67
2,343	634966.16	4272272.29	UCART1	8.10
2,344	638286.16	4272272.29	UCART1	10.67
2,345	638326.16	4272272.29	UCART1	10.67
2,346	638366.16	4272272.29	UCART1	10.67
2,347	634926.16	4272312.29	UCART1	7.97
2,348	634966.16	4272312.29	UCART1	7.93

Receptor Pathway

AERMOD

2,349	638286.16	4272312.29	UCART1	10.67
2,350	638326.16	4272312.29	UCART1	10.87
2,351	638366.16	4272312.29	UCART1	10.95
2,352	638126.16	4272392.29	UCART1	12.06
2,353	638166.16	4272392.29	UCART1	12.06
2,354	638206.16	4272392.29	UCART1	12.06
2,355	638246.16	4272392.29	UCART1	12.04
2,356	638286.16	4272392.29	UCART1	11.76
2,357	638326.16	4272392.29	UCART1	11.89
2,358	638366.16	4272392.29	UCART1	11.92
2,359	638126.16	4272432.29	UCART1	12.47
2,360	638166.16	4272432.29	UCART1	12.36
2,361	638206.16	4272432.29	UCART1	12.19
2,362	638246.16	4272432.29	UCART1	12.19
2,363	638286.16	4272432.29	UCART1	12.17
2,364	638326.16	4272432.29	UCART1	12.19
2,365	638366.16	4272432.29	UCART1	12.19
2,366	638126.16	4272472.29	UCART1	12.50
2,367	638166.16	4272472.29	UCART1	12.50
2,368	638206.16	4272472.29	UCART1	12.50
2,369	638246.16	4272472.29	UCART1	12.43
2,370	638286.16	4272472.29	UCART1	12.50
2,371	638326.16	4272472.29	UCART1	12.50
2,372	638366.16	4272472.29	UCART1	12.26
2,373	638126.16	4272512.29	UCART1	12.66
2,374	638166.16	4272512.29	UCART1	12.57
2,375	638206.16	4272512.29	UCART1	12.41
2,376	638246.16	4272512.29	UCART1	12.04
2,377	638286.16	4272512.29	UCART1	12.32
2,378	638326.16	4272512.29	UCART1	12.45
2,379	638366.16	4272512.29	UCART1	12.49
2,380	638126.16	4272552.29	UCART1	12.78
2,381	638166.16	4272552.29	UCART1	12.39
2,382	638206.16	4272552.29	UCART1	11.59
2,383	638246.16	4272552.29	UCART1	11.14
2,384	638326.16	4272552.29	UCART1	12.49
2,385	638366.16	4272552.29	UCART1	12.50
2,386	638046.16	4272592.29	UCART1	10.25

Receptor Pathway

AERMOD

2,387	638086.16	4272592.29	UCART1	11.08
2,388	638126.16	4272592.29	UCART1	11.12
2,389	638166.16	4272592.29	UCART1	10.87
2,390	638206.16	4272592.29	UCART1	10.65
2,391	638246.16	4272592.29	UCART1	11.06
2,392	638326.16	4272592.29	UCART1	12.48
2,393	638366.16	4272592.29	UCART1	12.50
2,394	638046.16	4272632.29	UCART1	9.11
2,395	638086.16	4272632.29	UCART1	9.83
2,396	638126.16	4272632.29	UCART1	10.66
2,397	638166.16	4272632.29	UCART1	10.47
2,398	638206.16	4272632.29	UCART1	10.59
2,399	638246.16	4272632.29	UCART1	11.04
2,400	638326.16	4272632.29	UCART1	12.42
2,401	638366.16	4272632.29	UCART1	12.68
2,402	638046.16	4272672.29	UCART1	9.87
2,403	638086.16	4272672.29	UCART1	10.79
2,404	638126.16	4272672.29	UCART1	10.95
2,405	638166.16	4272672.29	UCART1	10.82
2,406	638206.16	4272672.29	UCART1	10.46
2,407	638246.16	4272672.29	UCART1	10.70
2,408	638326.16	4272672.29	UCART1	11.99
2,409	638366.16	4272672.29	UCART1	12.54
2,410	638046.16	4272712.29	UCART1	10.76
2,411	638086.16	4272712.29	UCART1	11.52
2,412	638126.16	4272712.29	UCART1	11.64
2,413	638166.16	4272712.29	UCART1	11.21
2,414	638206.16	4272712.29	UCART1	10.67
2,415	638246.16	4272712.29	UCART1	10.74
2,416	638326.16	4272712.29	UCART1	11.18
2,417	638366.16	4272712.29	UCART1	12.21
2,418	638046.16	4272752.29	UCART1	11.78
2,419	638086.16	4272752.29	UCART1	12.03
2,420	638126.16	4272752.29	UCART1	12.06
2,421	638166.16	4272752.29	UCART1	12.01
2,422	638206.16	4272752.29	UCART1	11.84
2,423	638246.16	4272752.29	UCART1	11.49
2,424	638326.16	4272752.29	UCART1	10.76

Receptor Pathway

AERMOD

2,425	638366.16	4272752.29	UCART1	12.04
2,426	638206.16	4272792.29	UCART1	12.26
2,427	638246.16	4272792.29	UCART1	12.16
2,428	638326.16	4272792.29	UCART1	11.38
2,429	638366.16	4272792.29	UCART1	11.91
2,430	638206.16	4272832.29	UCART1	12.42
2,431	638246.16	4272832.29	UCART1	12.50
2,432	638326.16	4272832.29	UCART1	12.10
2,433	638366.16	4272832.29	UCART1	11.98
2,434	638246.16	4272872.29	UCART1	12.50
2,435	638326.16	4272872.29	UCART1	12.40
2,436	638366.16	4272872.29	UCART1	12.37
2,437	638246.16	4272912.29	UCART1	12.50
2,438	638326.16	4272912.29	UCART1	12.70
2,439	638366.16	4272912.29	UCART1	12.78
2,440	638246.16	4272952.29	UCART1	12.43
2,441	638326.16	4272952.29	UCART1	12.80
2,442	638366.16	4272952.29	UCART1	12.89
2,443	638126.16	4272992.29	UCART1	11.15
2,444	638166.16	4272992.29	UCART1	10.71
2,445	638206.16	4272992.29	UCART1	10.99
2,446	638246.16	4272992.29	UCART1	12.21
2,447	638326.16	4272992.29	UCART1	12.80
2,448	638366.16	4272992.29	UCART1	13.11
2,449	638046.16	4273032.29	UCART1	10.40
2,450	638086.16	4273032.29	UCART1	11.63
2,451	638126.16	4273032.29	UCART1	12.55
2,452	638166.16	4273032.29	UCART1	12.08
2,453	638206.16	4273032.29	UCART1	11.20
2,454	638246.16	4273032.29	UCART1	12.21
2,455	638326.16	4273032.29	UCART1	12.52
2,456	638366.16	4273032.29	UCART1	12.85
2,457	638046.16	4273072.29	UCART1	10.39
2,458	638086.16	4273072.29	UCART1	10.84
2,459	638126.16	4273072.29	UCART1	11.59
2,460	638166.16	4273072.29	UCART1	11.31
2,461	638206.16	4273072.29	UCART1	10.90
2,462	638246.16	4273072.29	UCART1	12.06

Receptor Pathway

AERMOD

2,463	638326.16	4273072.29	UCART1	12.18
2,464	638366.16	4273072.29	UCART1	12.47
2,465	635886.16	4273112.29	UCART1	7.92
2,466	635926.16	4273112.29	UCART1	8.06
2,467	635966.16	4273112.29	UCART1	8.10
2,468	636006.16	4273112.29	UCART1	8.10
2,469	636046.16	4273112.29	UCART1	8.10
2,470	636086.16	4273112.29	UCART1	8.10
2,471	636126.16	4273112.29	UCART1	8.15
2,472	636166.16	4273112.29	UCART1	8.23
2,473	636206.16	4273112.29	UCART1	8.53
2,474	636246.16	4273112.29	UCART1	8.66
2,475	636286.16	4273112.29	UCART1	8.84
2,476	636326.16	4273112.29	UCART1	8.84
2,477	637366.16	4273112.29	UCART1	12.79
2,478	638046.16	4273112.29	UCART1	10.84
2,479	638086.16	4273112.29	UCART1	10.71
2,480	638126.16	4273112.29	UCART1	10.29
2,481	638166.16	4273112.29	UCART1	9.67
2,482	638206.16	4273112.29	UCART1	9.91
2,483	638246.16	4273112.29	UCART1	11.25
2,484	638326.16	4273112.29	UCART1	11.66
2,485	638366.16	4273112.29	UCART1	12.08
2,486	635806.16	4273152.29	UCART1	8.20
2,487	635846.16	4273152.29	UCART1	8.20
2,488	635886.16	4273152.29	UCART1	8.20
2,489	635926.16	4273152.29	UCART1	8.22
2,490	635966.16	4273152.29	UCART1	8.23
2,491	636006.16	4273152.29	UCART1	8.23
2,492	636046.16	4273152.29	UCART1	8.23
2,493	636086.16	4273152.29	UCART1	8.23
2,494	636126.16	4273152.29	UCART1	8.23
2,495	636166.16	4273152.29	UCART1	8.23
2,496	636206.16	4273152.29	UCART1	8.53
2,497	636246.16	4273152.29	UCART1	8.66
2,498	636286.16	4273152.29	UCART1	8.84
2,499	636326.16	4273152.29	UCART1	8.84
2,500	635726.16	4273192.29	UCART1	9.07

Receptor Pathway

AERMOD

2,501	635766.16	4273192.29	UCART1	8.88
2,502	635806.16	4273192.29	UCART1	8.38
2,503	635846.16	4273192.29	UCART1	8.30
2,504	635886.16	4273192.29	UCART1	8.30
2,505	635926.16	4273192.29	UCART1	8.47
2,506	635966.16	4273192.29	UCART1	8.53
2,507	636006.16	4273192.29	UCART1	8.44
2,508	636046.16	4273192.29	UCART1	8.25
2,509	636086.16	4273192.29	UCART1	8.23
2,510	636126.16	4273192.29	UCART1	8.23
2,511	636166.16	4273192.29	UCART1	8.28
2,512	636206.16	4273192.29	UCART1	8.56
2,513	636246.16	4273192.29	UCART1	8.84
2,514	636286.16	4273192.29	UCART1	8.89
2,515	636326.16	4273192.29	UCART1	8.91
2,516	635606.16	4273232.29	UCART1	8.15
2,517	635646.16	4273232.29	UCART1	8.89
2,518	635686.16	4273232.29	UCART1	8.92
2,519	635726.16	4273232.29	UCART1	8.84
2,520	635766.16	4273232.29	UCART1	8.84
2,521	635806.16	4273232.29	UCART1	8.61
2,522	635846.16	4273232.29	UCART1	8.53
2,523	635886.16	4273232.29	UCART1	8.53
2,524	635926.16	4273232.29	UCART1	8.53
2,525	635966.16	4273232.29	UCART1	8.70
2,526	636006.16	4273232.29	UCART1	8.53
2,527	636046.16	4273232.29	UCART1	8.44
2,528	636086.16	4273232.29	UCART1	8.23
2,529	636126.16	4273232.29	UCART1	8.30
2,530	636166.16	4273232.29	UCART1	8.50
2,531	636206.16	4273232.29	UCART1	8.56
2,532	636246.16	4273232.29	UCART1	8.91
2,533	636286.16	4273232.29	UCART1	9.11
2,534	636326.16	4273232.29	UCART1	9.14
2,535	636366.16	4273232.29	UCART1	9.02
2,536	635606.16	4273272.29	UCART1	8.53
2,537	635646.16	4273272.29	UCART1	8.96
2,538	635686.16	4273272.29	UCART1	8.92

Receptor Pathway

AERMOD

2,539	635726.16	4273272.29	UCART1	8.84
2,540	635766.16	4273272.29	UCART1	8.84
2,541	635806.16	4273272.29	UCART1	8.82
2,542	635846.16	4273272.29	UCART1	8.81
2,543	635886.16	4273272.29	UCART1	8.81
2,544	635926.16	4273272.29	UCART1	8.81
2,545	635966.16	4273272.29	UCART1	8.84
2,546	636006.16	4273272.29	UCART1	8.70
2,547	636046.16	4273272.29	UCART1	8.53
2,548	636086.16	4273272.29	UCART1	8.23
2,549	636126.16	4273272.29	UCART1	8.24
2,550	636166.16	4273272.29	UCART1	8.46
2,551	636206.16	4273272.29	UCART1	8.81
2,552	636246.16	4273272.29	UCART1	8.96
2,553	636286.16	4273272.29	UCART1	9.14
2,554	636326.16	4273272.29	UCART1	9.14
2,555	636366.16	4273272.29	UCART1	9.02
2,556	636406.16	4273272.29	UCART1	8.84
2,557	635646.16	4273312.29	UCART1	9.14
2,558	635686.16	4273312.29	UCART1	8.97
2,559	635726.16	4273312.29	UCART1	8.84
2,560	635766.16	4273312.29	UCART1	8.84
2,561	635806.16	4273312.29	UCART1	8.84
2,562	635846.16	4273312.29	UCART1	8.84
2,563	635886.16	4273312.29	UCART1	8.84
2,564	635926.16	4273312.29	UCART1	8.89
2,565	635966.16	4273312.29	UCART1	8.91
2,566	636006.16	4273312.29	UCART1	8.75
2,567	636046.16	4273312.29	UCART1	8.55
2,568	636086.16	4273312.29	UCART1	8.45
2,569	636126.16	4273312.29	UCART1	8.40
2,570	636166.16	4273312.29	UCART1	8.53
2,571	636206.16	4273312.29	UCART1	8.84
2,572	636246.16	4273312.29	UCART1	8.96
2,573	636286.16	4273312.29	UCART1	9.14
2,574	636326.16	4273312.29	UCART1	9.14
2,575	636366.16	4273312.29	UCART1	9.14
2,576	636406.16	4273312.29	UCART1	8.92

Receptor Pathway

AERMOD

2,577	636446.16	4273312.29	UCART1	8.84
2,578	636486.16	4273312.29	UCART1	8.84
2,579	638206.16	4273312.29	UCART1	10.20
2,580	638246.16	4273312.29	UCART1	11.91
2,581	638286.16	4273312.29	UCART1	12.32
2,582	638326.16	4273312.29	UCART1	12.50
2,583	638366.16	4273312.29	UCART1	12.50
2,584	635686.16	4273352.29	UCART1	9.14
2,585	635726.16	4273352.29	UCART1	9.00
2,586	635766.16	4273352.29	UCART1	8.84
2,587	635806.16	4273352.29	UCART1	8.84
2,588	635846.16	4273352.29	UCART1	8.85
2,589	635886.16	4273352.29	UCART1	9.02
2,590	635926.16	4273352.29	UCART1	9.11
2,591	635966.16	4273352.29	UCART1	9.13
2,592	636006.16	4273352.29	UCART1	8.94
2,593	636046.16	4273352.29	UCART1	8.61
2,594	636086.16	4273352.29	UCART1	8.42
2,595	636126.16	4273352.29	UCART1	8.53
2,596	636166.16	4273352.29	UCART1	8.53
2,597	636206.16	4273352.29	UCART1	8.85
2,598	636246.16	4273352.29	UCART1	9.07
2,599	636286.16	4273352.29	UCART1	9.14
2,600	636326.16	4273352.29	UCART1	9.14
2,601	636366.16	4273352.29	UCART1	9.14
2,602	636406.16	4273352.29	UCART1	8.92
2,603	636446.16	4273352.29	UCART1	8.84
2,604	636486.16	4273352.29	UCART1	8.84
2,605	636526.16	4273352.29	UCART1	8.84
2,606	636566.16	4273352.29	UCART1	9.14
2,607	636606.16	4273352.29	UCART1	9.14
2,608	638206.16	4273352.29	UCART1	10.30
2,609	638246.16	4273352.29	UCART1	11.76
2,610	638286.16	4273352.29	UCART1	12.42
2,611	638326.16	4273352.29	UCART1	12.63
2,612	638366.16	4273352.29	UCART1	12.66
2,613	635766.16	4273392.29	UCART1	9.12
2,614	635806.16	4273392.29	UCART1	9.12

Receptor Pathway

AERMOD

2,615	635846.16	4273392.29	UCART1	8.86
2,616	635886.16	4273392.29	UCART1	9.26
2,617	635926.16	4273392.29	UCART1	9.42
2,618	635966.16	4273392.29	UCART1	9.40
2,619	636006.16	4273392.29	UCART1	9.13
2,620	636046.16	4273392.29	UCART1	8.69
2,621	636086.16	4273392.29	UCART1	8.51
2,622	636126.16	4273392.29	UCART1	8.37
2,623	636166.16	4273392.29	UCART1	8.53
2,624	636206.16	4273392.29	UCART1	8.86
2,625	636246.16	4273392.29	UCART1	9.14
2,626	636286.16	4273392.29	UCART1	9.14
2,627	636326.16	4273392.29	UCART1	9.14
2,628	636366.16	4273392.29	UCART1	9.14
2,629	636406.16	4273392.29	UCART1	9.12
2,630	636446.16	4273392.29	UCART1	8.84
2,631	636486.16	4273392.29	UCART1	8.95
2,632	636526.16	4273392.29	UCART1	9.12
2,633	636566.16	4273392.29	UCART1	9.14
2,634	636606.16	4273392.29	UCART1	9.26
2,635	636646.16	4273392.29	UCART1	9.65
2,636	635806.16	4273432.29	UCART1	8.91
2,637	635846.16	4273432.29	UCART1	9.07
2,638	635886.16	4273432.29	UCART1	9.27
2,639	635926.16	4273432.29	UCART1	9.50
2,640	635966.16	4273432.29	UCART1	9.80
2,641	636006.16	4273432.29	UCART1	9.34
2,642	636046.16	4273432.29	UCART1	9.07
2,643	636086.16	4273432.29	UCART1	8.60
2,644	636126.16	4273432.29	UCART1	8.53
2,645	636166.16	4273432.29	UCART1	8.53
2,646	636206.16	4273432.29	UCART1	8.86
2,647	636246.16	4273432.29	UCART1	9.14
2,648	636286.16	4273432.29	UCART1	9.14
2,649	636326.16	4273432.29	UCART1	9.21
2,650	636366.16	4273432.29	UCART1	9.14
2,651	636406.16	4273432.29	UCART1	9.14
2,652	636446.16	4273432.29	UCART1	9.14

Receptor Pathway

AERMOD

2,653	636486.16	4273432.29	UCART1	9.14
2,654	636526.16	4273432.29	UCART1	9.20
2,655	636566.16	4273432.29	UCART1	9.24
2,656	636606.16	4273432.29	UCART1	9.48
2,657	636646.16	4273432.29	UCART1	9.92
2,658	636686.16	4273432.29	UCART1	10.16
2,659	638006.16	4273432.29	UCART1	12.59
2,660	638046.16	4273432.29	UCART1	12.88
2,661	638086.16	4273432.29	UCART1	12.88
2,662	638126.16	4273432.29	UCART1	12.76
2,663	638166.16	4273432.29	UCART1	10.54
2,664	638206.16	4273432.29	UCART1	10.42
2,665	638246.16	4273432.29	UCART1	11.70
2,666	638286.16	4273432.29	UCART1	12.64
2,667	638326.16	4273432.29	UCART1	13.63
2,668	638366.16	4273432.29	UCART1	13.44
2,669	635846.16	4273472.29	UCART1	8.53
2,670	635886.16	4273472.29	UCART1	9.34
2,671	635926.16	4273472.29	UCART1	9.98
2,672	635966.16	4273472.29	UCART1	10.07
2,673	636006.16	4273472.29	UCART1	10.18
2,674	636046.16	4273472.29	UCART1	10.01
2,675	636086.16	4273472.29	UCART1	9.33
2,676	636126.16	4273472.29	UCART1	8.82
2,677	636166.16	4273472.29	UCART1	8.71
2,678	636206.16	4273472.29	UCART1	8.86
2,679	636246.16	4273472.29	UCART1	9.14
2,680	636286.16	4273472.29	UCART1	9.14
2,681	636326.16	4273472.29	UCART1	9.26
2,682	636366.16	4273472.29	UCART1	9.14
2,683	636406.16	4273472.29	UCART1	9.14
2,684	636446.16	4273472.29	UCART1	9.14
2,685	636606.16	4273472.29	UCART1	9.75
2,686	636646.16	4273472.29	UCART1	10.16
2,687	636686.16	4273472.29	UCART1	10.55
2,688	636726.16	4273472.29	UCART1	10.62
2,689	637606.16	4273472.29	UCART1	13.28
2,690	637646.16	4273472.29	UCART1	13.16

Receptor Pathway

AERMOD

2,691	637686.16	4273472.29	UCART1	13.28
2,692	637726.16	4273472.29	UCART1	13.38
2,693	637766.16	4273472.29	UCART1	13.41
2,694	638006.16	4273472.29	UCART1	13.16
2,695	638046.16	4273472.29	UCART1	13.28
2,696	638086.16	4273472.29	UCART1	13.28
2,697	638126.16	4273472.29	UCART1	12.94
2,698	638166.16	4273472.29	UCART1	10.10
2,699	638206.16	4273472.29	UCART1	10.31
2,700	638246.16	4273472.29	UCART1	11.93
2,701	638286.16	4273472.29	UCART1	12.94
2,702	638326.16	4273472.29	UCART1	13.91
2,703	638366.16	4273472.29	UCART1	13.66
2,704	635926.16	4273512.29	UCART1	10.63
2,705	635966.16	4273512.29	UCART1	10.36
2,706	636006.16	4273512.29	UCART1	10.64
2,707	636046.16	4273512.29	UCART1	10.64
2,708	636086.16	4273512.29	UCART1	10.58
2,709	636126.16	4273512.29	UCART1	9.96
2,710	636166.16	4273512.29	UCART1	8.71
2,711	636206.16	4273512.29	UCART1	8.84
2,712	636246.16	4273512.29	UCART1	8.98
2,713	636286.16	4273512.29	UCART1	9.14
2,714	636326.16	4273512.29	UCART1	9.14
2,715	636366.16	4273512.29	UCART1	9.14
2,716	636646.16	4273512.29	UCART1	10.28
2,717	636686.16	4273512.29	UCART1	10.39
2,718	636726.16	4273512.29	UCART1	10.50
2,719	637606.16	4273512.29	UCART1	13.69
2,720	637646.16	4273512.29	UCART1	13.69
2,721	637686.16	4273512.29	UCART1	13.58
2,722	637726.16	4273512.29	UCART1	13.41
2,723	637766.16	4273512.29	UCART1	13.41
2,724	638006.16	4273512.29	UCART1	13.73
2,725	638046.16	4273512.29	UCART1	14.25
2,726	638086.16	4273512.29	UCART1	13.83
2,727	638126.16	4273512.29	UCART1	13.06
2,728	638166.16	4273512.29	UCART1	10.26

Receptor Pathway

AERMOD

2,729	638206.16	4273512.29	UCART1	10.81
2,730	638246.16	4273512.29	UCART1	12.21
2,731	638286.16	4273512.29	UCART1	13.16
2,732	638326.16	4273512.29	UCART1	13.94
2,733	638366.16	4273512.29	UCART1	13.41
2,734	636006.16	4273552.29	UCART1	10.62
2,735	636046.16	4273552.29	UCART1	10.67
2,736	636086.16	4273552.29	UCART1	10.67
2,737	636126.16	4273552.29	UCART1	10.67
2,738	636166.16	4273552.29	UCART1	9.48
2,739	636206.16	4273552.29	UCART1	8.77
2,740	636246.16	4273552.29	UCART1	8.93
2,741	636286.16	4273552.29	UCART1	9.12
2,742	636326.16	4273552.29	UCART1	9.14
2,743	636606.16	4273552.29	UCART1	10.39
2,744	636646.16	4273552.29	UCART1	10.61
2,745	636686.16	4273552.29	UCART1	10.67
2,746	637606.16	4273552.29	UCART1	14.02
2,747	637646.16	4273552.29	UCART1	14.00
2,748	637686.16	4273552.29	UCART1	13.79
2,749	637726.16	4273552.29	UCART1	13.79
2,750	637766.16	4273552.29	UCART1	13.79
2,751	637806.16	4273552.29	UCART1	13.79
2,752	637846.16	4273552.29	UCART1	13.74
2,753	637886.16	4273552.29	UCART1	13.48
2,754	638006.16	4273552.29	UCART1	14.66
2,755	638046.16	4273552.29	UCART1	14.97
2,756	638086.16	4273552.29	UCART1	14.39
2,757	638126.16	4273552.29	UCART1	13.70
2,758	638166.16	4273552.29	UCART1	11.10
2,759	638206.16	4273552.29	UCART1	11.22
2,760	638246.16	4273552.29	UCART1	12.61
2,761	638286.16	4273552.29	UCART1	13.32
2,762	638326.16	4273552.29	UCART1	13.70
2,763	638366.16	4273552.29	UCART1	13.48
2,764	636086.16	4273592.29	UCART1	10.67
2,765	636126.16	4273592.29	UCART1	10.74
2,766	636166.16	4273592.29	UCART1	10.30

Receptor Pathway

AERMOD

2,767	636206.16	4273592.29	UCART1	8.72
2,768	636246.16	4273592.29	UCART1	8.84
2,769	636286.16	4273592.29	UCART1	8.93
2,770	636606.16	4273592.29	UCART1	10.59
2,771	636646.16	4273592.29	UCART1	10.67
2,772	636126.16	4273632.29	UCART1	10.68
2,773	636166.16	4273632.29	UCART1	10.04
2,774	636206.16	4273632.29	UCART1	8.84
2,775	636246.16	4273632.29	UCART1	8.84
2,776	636286.16	4273632.29	UCART1	8.84

Plant Boundary Receptors

Receptor Pathway

AERMOD

Cartesian Plant Boundary

Primary

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	637060.45	4271428.10	FENCEPRI	10.38	
2	637144.17	4271358.02	FENCEPRI	9.75	
3	637162.34	4271343.09	FENCEPRI	9.87	
4	637135.08	4271306.75	FENCEPRI	9.76	
5	637139.62	4271298.32	FENCEPRI	9.81	
6	637089.66	4271236.67	FENCEPRI	9.46	
7	637081.22	4271243.81	FENCEPRI	9.47	
8	637067.59	4271229.53	FENCEPRI	9.45	
9	637059.81	4271238.62	FENCEPRI	9.45	
10	637073.43	4271249.65	FENCEPRI	9.45	
11	637066.29	4271258.73	FENCEPRI	9.45	
12	637118.86	4271320.38	FENCEPRI	9.75	
13	637127.94	4271313.89	FENCEPRI	9.75	
14	637148.71	4271343.74	FENCEPRI	9.81	
15	637056.56	4271416.42	FENCEPRI	10.36	
16	637022.17	4271432.00	FENCEPRI	9.97	
17	636978.69	4271445.62	FENCEPRI	9.69	
18	636955.98	4271450.17	FENCEPRI	9.42	
19	636917.69	4271450.17	FENCEPRI	9.14	
20	636833.33	4271442.38	FENCEPRI	9.14	
21	636745.08	4271433.94	FENCEPRI	9.14	
22	636680.83	4271428.10	FENCEPRI	9.14	
23	636581.44	4271417.55	FENCEPRI	9.14	
24	636489.30	4271410.24	FENCEPRI	7.97	
25	636414.70	4271411.70	FENCEPRI	7.96	
26	636354.74	4271414.63	FENCEPRI	7.93	
27	636300.62	4271426.33	FENCEPRI	7.92	
28	636223.10	4271438.03	FENCEPRI	7.99	
29	636094.39	4271457.04	FENCEPRI	7.80	
30	636012.48	4271474.59	FENCEPRI	7.93	
31	635929.33	4271498.57	FENCEPRI	7.93	
32	635832.80	4271536.60	FENCEPRI	7.91	
33	635781.60	4271558.54	FENCEPRI	8.01	
34	635723.10	4271595.11	FENCEPRI	7.93	
35	635651.43	4271653.62	FENCEPRI	7.93	
36	635569.52	4271716.51	FENCEPRI	8.24	
37	635497.85	4271763.32	FENCEPRI	8.03	
38	635436.41	4271813.05	FENCEPRI	7.89	
39	635348.66	4271899.34	FENCEPRI	8.45	

Receptor Pathway

AERMOD

40	635268.21	4271978.33	FENCEPRI	8.45	
41	635193.61	4272048.53	FENCEPRI	8.10	
42	635154.12	4272082.18	FENCEPRI	8.15	
43	635102.93	4272026.59	FENCEPRI	9.54	
44	635079.53	4272063.16	FENCEPRI	9.86	
45	635082.45	4272093.88	FENCEPRI	9.30	
46	635098.54	4272123.13	FENCEPRI	8.42	
47	634974.21	4272202.11	FENCEPRI	10.14	
48	634974.21	4272285.48	FENCEPRI	7.92	
49	634930.33	4272330.83	FENCEPRI	7.76	
50	634921.56	4272320.59	FENCEPRI	7.87	
51	634928.87	4272304.50	FENCEPRI	8.08	
52	634934.72	4272289.87	FENCEPRI	8.26	
53	634931.80	4272284.02	FENCEPRI	8.37	
54	634917.17	4272305.96	FENCEPRI	8.10	
55	634904.01	4272329.36	FENCEPRI	7.88	
56	634871.47	4272348.56	FENCEPRI	7.89	
57	634810.04	4272377.81	FENCEPRI	7.85	
58	634769.08	4272389.52	FENCEPRI	7.78	
59	634694.49	4272382.20	FENCEPRI	7.85	
60	634631.59	4272373.43	FENCEPRI	7.94	
61	634552.61	4272366.11	FENCEPRI	8.01	
62	634441.44	4272325.16	FENCEPRI	7.97	
63	634296.63	4272265.19	FENCEPRI	7.97	
64	634129.89	4272187.66	FENCEPRI	8.23	
65	634042.07	4272147.14	FENCEPRI	8.46	
66	633982.39	4272112.33	FENCEPRI	9.88	
67	633962.49	4272091.19	FENCEPRI	10.09	
68	633951.30	4272065.08	FENCEPRI	10.15	
69	633941.36	4272027.78	FENCEPRI	9.51	
70	633933.90	4272001.67	FENCEPRI	8.68	
71	633921.46	4271975.56	FENCEPRI	7.34	
72	633901.57	4271955.67	FENCEPRI	6.14	
73	633868.00	4271940.75	FENCEPRI	6.90	
74	633826.97	4271932.05	FENCEPRI	7.48	
75	633808.32	4271923.34	FENCEPRI	7.32	
76	633788.43	4271908.42	FENCEPRI	7.32	
77	633774.75	4271891.02	FENCEPRI	7.28	
78	633753.62	4271827.61	FENCEPRI	6.91	
79	633710.10	4271690.84	FENCEPRI	10.38	
80	633693.34	4271700.25	FENCEPRI	10.00	
81	633765.12	4271898.78	FENCEPRI	7.23	
82	633786.50	4271928.55	FENCEPRI	7.40	

Receptor Pathway

AERMOD

83	633803.29	4271938.48	FENCEPRI	7.72	
84	633831.55	4271943.06	FENCEPRI	7.70	
85	633860.56	4271946.88	FENCEPRI	7.22	
86	633881.94	4271952.99	FENCEPRI	6.57	
87	633908.67	4271972.84	FENCEPRI	7.09	
88	633921.65	4271994.22	FENCEPRI	8.47	
89	633931.57	4272030.87	FENCEPRI	9.97	
90	633937.68	4272053.01	FENCEPRI	10.19	
91	633918.59	4272053.01	FENCEPRI	10.37	
92	633911.72	4272097.30	FENCEPRI	8.95	
93	633956.01	4272101.12	FENCEPRI	9.86	
94	634007.93	4272137.00	FENCEPRI	8.70	
95	634056.79	4272161.44	FENCEPRI	8.15	
96	634114.06	4272189.69	FENCEPRI	8.23	
97	634214.87	4272236.41	FENCEPRI	7.75	
98	634313.68	4272280.42	FENCEPRI	8.18	
99	634496.05	4272358.58	FENCEPRI	8.09	
100	634555.34	4272374.75	FENCEPRI	7.93	
101	634637.98	4272384.63	FENCEPRI	7.77	
102	634746.68	4272396.31	FENCEPRI	7.71	
103	634773.23	4272395.49	FENCEPRI	7.72	
104	634790.10	4272394.19	FENCEPRI	7.73	
105	634810.87	4272389.00	FENCEPRI	7.54	
106	634828.40	4272381.21	FENCEPRI	7.57	
107	634845.92	4272371.47	FENCEPRI	7.74	
108	634857.61	4272363.03	FENCEPRI	7.74	
109	634873.18	4272355.89	FENCEPRI	7.81	
110	634888.11	4272350.05	FENCEPRI	7.78	
111	634923.16	4272339.02	FENCEPRI	7.68	
112	634929.00	4272338.37	FENCEPRI	7.69	
113	634948.48	4272324.09	FENCEPRI	7.83	
114	634975.09	4272301.37	FENCEPRI	7.91	
115	634991.31	4272270.22	FENCEPRI	7.90	
116	635047.80	4272253.61	FENCEPRI	3.16	
117	635110.71	4272224.35	FENCEPRI	3.05	
118	635172.16	4272170.22	FENCEPRI	3.05	
119	635251.15	4272095.61	FENCEPRI	3.05	
120	635343.32	4272006.37	FENCEPRI	3.05	
121	635421.88	4271924.43	FENCEPRI	3.05	
122	635515.51	4271824.95	FENCEPRI	4.46	
123	635571.11	4271789.83	FENCEPRI	5.40	
124	635606.22	4271772.28	FENCEPRI	3.42	
125	635606.22	4271732.78	FENCEPRI	7.53	

Receptor Pathway

AERMOD

126	635629.63	4271716.68	FENCEPRI	7.43	
127	635620.85	4271693.28	FENCEPRI	7.88	
128	635689.39	4271635.05	FENCEPRI	7.84	
129	635729.62	4271600.14	FENCEPRI	7.87	
130	635767.57	4271575.74	FENCEPRI	7.98	
131	635798.41	4271560.83	FENCEPRI	7.82	
132	635851.61	4271538.13	FENCEPRI	7.81	
133	635882.74	4271523.78	FENCEPRI	7.73	
134	635911.76	4271512.32	FENCEPRI	7.83	
135	635954.53	4271498.57	FENCEPRI	7.76	
136	636030.91	4271477.95	FENCEPRI	7.89	
137	636077.50	4271468.02	FENCEPRI	7.74	
138	636174.50	4271455.80	FENCEPRI	6.19	
139	636228.73	4271448.17	FENCEPRI	7.89	
140	636300.52	4271434.42	FENCEPRI	7.92	
141	636374.61	4271422.20	FENCEPRI	7.87	
142	636470.85	4271418.38	FENCEPRI	7.89	
143	636535.00	4271419.91	FENCEPRI	9.10	
144	636617.49	4271428.31	FENCEPRI	9.14	
145	636772.15	4271443.25	FENCEPRI	9.14	
146	636825.01	4271448.54	FENCEPRI	9.14	
147	636866.24	4271451.71	FENCEPRI	9.14	
148	636909.58	4271457.00	FENCEPRI	9.14	
149	636940.24	4271459.11	FENCEPRI	9.23	
150	636961.38	4271458.05	FENCEPRI	9.39	
151	637012.13	4271446.42	FENCEPRI	9.75	

Receptor Groups

Record Number	Group ID	Group Description
1	FENCEPRI	Cartesian plant boundary Primary Receptors
2	UCART2	Receptors generated from Uniform Cartesian Grid
3	UCART1	Receptors generated from Uniform Cartesian Grid

Receptor Pathway

AERMOD

Terrain Elevations and Flagpole Heights for Network Grids

Receptor Pathway

AERMOD

Multi-Tier Grid (Risk)

Fenceline Grid

Meteorology Pathway

AERMOD

Met Input Data

Surface Met Data

Filename: ..\..\59 SMUD\AERMOD\MET\14-18.SFC

Format Type: Default AERMET format

Profile Met Data

Filename: ..\..\59 SMUD\AERMOD\MET\14-18.PFL

Format Type: Default AERMET format

Wind Speed



Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 835.15 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2014			SACRAMENTO/EXECUTIVE ARPT
Upper Air		2014			OAKLAND/WSO AP

Data Period

Data Period to Process

Start Date: 1/1/2015

Start Hour: 1

End Date: 12/25/2018

End Hour: 24











Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Output Pathway

AERMOD

Tabular Printed Outputs

Short Term Averaging Period	RECTABLE Highest Values Table										MAXTABLE Maximum Values Table	DAYTABLE Daily Values Table
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
1												No

Contour Plot Files (PLOTFILE)

Path for PLOTFILES: SCENARIO1N.AD

Averaging Period	Source Group ID	High Value	File Name
1	SLINE	1st	01H1G001.PLT
1	VOL	1st	01H1G002.PLT
Period	SLINE	N/A	PE00G001.PLT
Period	VOL	N/A	PE00G002.PLT

Results Summary

C:\Users\shaurya.johari\OneDrive - Ascent Environmental\Desktop\Proj

PM10 - Concentration - Source Group: SLINE

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	245.50052	ug/m^3	633606.16	4271032.29	7.62	0.00	7.62	12/24/2017, 9
PERIOD		14.07928	ug/m^3	637148.71	4271343.74	9.81	0.00	9.81	

PM10 - Concentration - Source Group: VOL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	428.58690	ug/m^3	635606.22	4271732.78	7.53	0.00	7.53	3/6/2018, 8
PERIOD		29.31511	ug/m^3	635154.12	4272082.18	8.15	0.00	8.15	

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215	ALL	637806.2	4270072	1.5E-08	1YrCancerD	1.91E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
216	ALL	637846.2	4270072	1.75E-08	1YrCancerD	1.75E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
217	ALL	637886.2	4270072	1.61E-08	1YrCancerD	1.61E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
218	ALL	637926.2	4270072	1.50E-08	1YrCancerD	1.50E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
219	ALL	637966.2	4270072	1.40E-08	1YrCancerD	1.40E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
220	ALL	638006.2	4270112	1.59E-08	1YrCancerD	1.59E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
221	ALL	638046.2	4270112	1.73E-08	1YrCancerD	1.73E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
222	ALL	638086.2	4270112	1.87E-08	1YrCancerD	1.87E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
223	ALL	638126.2	4270112	2.00E-08	1YrCancerD	2.00E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
224	ALL	638166.2	4270112	2.09E-08	1YrCancerD	2.09E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
225	ALL	638206.2	4270112	2.13E-08	1YrCancerD	2.13E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
226	ALL	638246.2	4270112	2.14E-08	1YrCancerD	2.14E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
227	ALL	638286.2	4270112	2.14E-08	1YrCancerD	2.14E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
228	ALL	638326.2	4270112	1.52E-08	1YrCancerD	1.52E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
229	ALL	638406.2	4270112	1.60E-08	1YrCancerD	1.60E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
230	ALL	638446.2	4270112	1.66E-08	1YrCancerD	1.66E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
231	ALL	638606.2	4270112	2.26E-08	1YrCancerD	2.26E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
232	ALL	638646.2	4270112	2.65E-08	1YrCancerD	2.65E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
233	ALL	638686.2	4270112	3.30E-08	1YrCancerD	3.30E-08	0										

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647	All	635926.2	4270552	2.85E-08	1YrCancerD	2.65E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
643	All	537086.2	4270552	2.25E-08	1YrCancerD	2.25E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
644	All	637126.2	4270552	2.18E-08	1YrCancerD	2.18E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
645	All	637166.2	4270552	2.13E-08	1YrCancerD	2.13E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
646	All	637206.2	4270552	2.10E-08	1YrCancerD	2.10E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
647	All	637646.2	4270552	2.43E-08	1YrCancerD	2.43E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
648	All	637686.2	4270552	2.70E-08	1YrCancerD	2.70E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
649	All	637726.2	4270552	3.18E-08	1YrCancerD	3.18E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
650	All	637766.2	4270552	4.11E-08	1YrCancerD	4.11E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
651	All	637806.2	4270552	6.38E-08	1YrCancerD	6.38E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
652	All	637846.2	4270552	1.69E-07	1YrCancerD	1.69E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
653	All	638006.2	4270552	3.33E-08	1YrCancerD	3.33E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
654	All	638046.2	4270552	2.67E-08	1YrCancerD	2.67E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
655	All	638086.2	4270552	2.25E-08	1YrCancerD	2.25E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
656	All	633406.2	4270592	5.60E-08	1YrCancerD	5.50E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
657	All	633446.2	4270592	1.03E-07	1YrCancerD	1.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
658	All	63646.2	4270592	1.73E-07	1YrCancerD	1.73E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
659	All	63686.2	4270592	1.21E-07	1YrCancerD	1.21E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
660	All	633726.2	4270592	9.34E-08	1YrCancerD	9.34E-08	0.00E+00	0.00E+00									

749	All	637686.2	4270572	2.15E-08	1YrCancerD	2.15E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
750	All	537726.2	4270672	2.38E-08	1YrCancerD	2.38E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
751	All	637766.2	4270672	2.65E-08	1YrCancerD	2.65E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
752	All	637806.2	4270672	3.20E-08	1YrCancerD	3.20E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
753	All	637846.2	4270672	4.11E-08	1YrCancerD	4.11E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
754	All	637886.2	4270672	6.04E-08	1YrCancerD	6.04E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
755	All	637926.2	4270672	1.20E-07	1YrCancerD	1.20E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
756	All	634346.2	4270712	1.08E-07	1YrCancerD	1.08E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
757	All	633486.2	4270712	1.97E-07	1YrCancerD	1.97E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
758	All	633686.2	4270712	1.98E-07	1YrCancerD	1.98E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
759	All	633726.2	4270712	1.35E-07	1YrCancerD	1.35E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
760	All	633766.2	4270712	1.02E-07	1YrCancerD	1.02E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
761	All	633806.2	4270712	8.03E-08	1YrCancerD	8.03E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
762	All	636206.2	4270712	2.08E-08	1YrCancerD	2.08E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
763	All	636486.2	4270712	3.34E-08	1YrCancerD	3.34E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
764	All	636526.2	4270712	4.11E-08	1YrCancerD	4.11E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
765	All	636566.2	4270712	5.82E-08	1YrCancerD	5.82E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
766	All	636606.2	4270712	1.16E-07	1YrCancerD	1.16E-07	0.00E+00	0.00E+0										

850 ALL	633766.2	4270832	2.23E-07	1YrCancerD	1.40E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
857 ALL	636206.2	4270832	2.23E-07	1YrCancerD	2.31E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
858 ALL	636446.2	4270832	2.69E-08	1YrCancerD	2.59E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
859 ALL	636486.2	4270832	2.87E-08	1YrCancerD	2.87E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
860 ALL	636526.2	4270832	3.12E-08	1YrCancerD	3.12E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
861 ALL	636566.2	4270832	3.51E-08	1YrCancerD	3.51E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
862 ALL	636606.2	4270832	4.21E-08	1YrCancerD	4.21E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
863 ALL	636646.2	4270832	5.54E-08	1YrCancerD	5.54E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
864 ALL	636686.2	4270832	8.66E-08	1YrCancerD	8.66E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
865 ALL	636766.2	4270832	1.64E-07	1YrCancerD	1.64E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
866 ALL	636806.2	4270832	7.51E-07	1YrCancerD	7.51E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
867 ALL	636886.2	4270832	4.16E-08	1YrCancerD	4.16E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
868 ALL	636926.2	4270832	3.57E-08	1YrCancerD	3.57E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
869 ALL	636966.2	4270832	3.18E-08	1YrCancerD	3.18E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
870 ALL	637006.2	4270832	2.90E-08	1YrCancerD	2.90E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
871 ALL	637046.2	4270832	2.69E-08	1YrCancerD	2.69E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
872 ALL	637086.2	4270832	2.52E-08	1YrCancerD	2.52E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
873 ALL	637126.2	4270832	2.38E-08	1YrCancerD	2.38E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
874 ALL	637166.2	4270832	2.27E-08	1YrCancerD	2.27E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
875 ALL	637246.2	4270832	2.11E-08	1YrCancerD	2.11E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
876 ALL	637286.2	4270832	2.04E-08	1YrCancerD	2.04E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
877 ALL	637326.2	4270832	1.92E-08	1YrCancerD										

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177	ALL	634406.2	4271072	7.95E-08	1YrCancerD	1.795E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1178	ALL	634446.2	4271072	1.75E-08	1YrCancerD	1.75E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1179	ALL	634486.2	4271072	1.72E-08	1YrCancerD	1.72E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1180	ALL	634526.2	4271072	1.69E-08	1YrCancerD	1.69E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1181	ALL	634566.2	4271072	1.68E-08	1YrCancerD	1.68E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1182	ALL	634606.2	4271072	1.67E-08	1YrCancerD	1.67E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1183	ALL	634646.2	4271072	1.67E-08	1YrCancerD	1.67E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1184	ALL	634686.2	4271072	1.67E-08	1YrCancerD	1.67E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1185	ALL	634726.2	4271072	1.68E-08	1YrCancerD	1.68E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1186	ALL	634766.2	4271072	1.70E-08	1YrCancerD	1.70E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1187	ALL	634806.2	4271072	1.72E-08	1YrCancerD	1.72E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1188	ALL	634846.2	4271072	1.74E-08	1YrCancerD	1.74E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1189	ALL	634886.2	4271072	1.76E-08	1YrCancerD	1.76E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1190	ALL	634926.2	4271072	1.79E-08	1YrCancerD	1.79E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1191	ALL	634966.2	4271072	1.82E-08	1YrCancerD	1.82E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1192	ALL	635006.2	4271072	1.84E-08	1YrCancerD	1.84E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1193	ALL	635046.2	4271072	1.87E-08	1YrCancerD	1.87E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1194	ALL	635086.2	4271072	1.91E-08	1YrCancerD	1.91E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1195	ALL	635126.2	4271072	1.94E-08	1YrCancerD	1.94E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1196	ALL	635862.2	4271072	3.20E-08	1YrCancerD	3.20E-08	0.00									

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1717	ALL	638246.2	4271332	3.95E-08	1YrCancerD	2.39E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1713	ALL	638286.2	4271332	2.07E-08	1YrCancerD	2.07E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1714	ALL	638326.2	4271332	1.82E-08	1YrCancerD	1.82E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1715	ALL	638366.2	4271332	1.63E-08	1YrCancerD	1.63E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1716	ALL	633366.2	4271332	3.28E-08	1YrCancerD	3.28E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1717	ALL	633406.2	4271332	3.78E-08	1YrCancerD	3.78E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1718	ALL	633446.2	4271332	4.48E-08	1YrCancerD	4.48E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1719	ALL	633486.2	4271332	5.59E-08	1YrCancerD	5.59E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1720	ALL	633526.2	4271332	7.55E-08	1YrCancerD	7.55E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1721	ALL	633566.2	4271332	1.35E-07	1YrCancerD	1.35E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1722	ALL	633606.2	4271332	2.00E-07	1YrCancerD	2.00E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1723	ALL	633646.2	4271332	1.10E-07	1YrCancerD	1.10E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1724	ALL	633686.2	4271332	9.65E-08	1YrCancerD	9.65E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1725	ALL	633726.2	4271332	1.02E-07	1YrCancerD	1.02E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1726	ALL	633886.2	4271332	8.03E-08	1YrCancerD	8.03E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1727	ALL	634006.2	4271332	4.43E-08	1YrCancerD	4.43E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1728	ALL	634046.2	4271332	3.86E-08	1YrCancerD	3.86E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1729	ALL	634086.2	4271332	3.42E-08	1YrCancerD	3.42E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1730	ALL	634126.2	4271332	3.09E-08	1YrCancerD	3.09E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1731	ALL	634166.2	4271332	2.22E-08	1YrCancerD	2.22E-08	0.00									

1819	All	635446.2	4271392	5.13E-08	1YrCancerD	5.13E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1820	All	635486.2	4271392	5.45E-08	1YrCancerD	5.45E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1821	All	63552.2	4271392	5.77E-08	1YrCancerD	5.77E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1822	All	63556.2	4271392	6.06E-08	1YrCancerD	6.06E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1823	All	63560.2	4271392	6.33E-08	1YrCancerD	6.33E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1824	All	63576.2	4271392	6.17E-08	1YrCancerD	6.17E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1825	All	63580.2	4271392	5.91E-08	1YrCancerD	5.91E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1826	All	63588.2	4271392	5.56E-08	1YrCancerD	5.56E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1827	All	63592.2	4271392	5.53E-08	1YrCancerD	5.53E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1828	All	63596.2	4271392	5.57E-08	1YrCancerD	5.57E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1829	All	63600.2	4271392	5.70E-08	1YrCancerD	5.70E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1830	All	63604.2	4271392	5.88E-08	1YrCancerD	5.88E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1831	All	63608.2	4271392	6.12E-08	1YrCancerD	6.12E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1832	All	63612.2	4271392	6.42E-08	1YrCancerD	6.42E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1833	All	63616.2	4271392	6.72E-08	1YrCancerD	6.72E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1834	All	63620.2	4271392	7.14E-08	1YrCancerD	7.14E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1835	All	63624.2	4271392	7.74E-08	1YrCancerD	7.74E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1836	All	63628.2	4271392	8.57E-08	1YrCancerD	8.57E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1837	All	63632.2	4271392	9.80E-08	1YrCancerD	9.80E-08	0.00E+00	0.00									

2140	AII	638126.2	427167.2	6.46E-08	1YrCancerD	6.46E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2141	AII	638166.2	427167.2	3.50E-08	1YrCancerD	3.50E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2142	AII	638206.2	427167.2	2.83E-08	1YrCancerD	2.83E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2143	AII	638246.2	427167.2	2.38E-08	1YrCancerD	2.38E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2144	AII	638286.2	427167.2	2.05E-08	1YrCancerD	2.05E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2145	AII	638326.2	427167.2	1.80E-08	1YrCancerD	1.80E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2146	AII	638366.2	427167.2	1.60E-08	1YrCancerD	1.60E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2147	AII	634166.2	427171.2	6.78E-08	1YrCancerD	6.78E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2148	AII	634206.2	427171.2	5.70E-08	1YrCancerD	5.70E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2149	AII	634246.2	427171.2	5.01E-08	1YrCancerD	5.01E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2150	AII	634286.2	427171.2	4.53E-08	1YrCancerD	4.53E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2151	AII	634326.2	427171.2	4.19E-08	1YrCancerD	4.19E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2152	AII	634366.2	427171.2	3.97E-08	1YrCancerD	3.97E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2153	AII	634406.2	427171.2	3.81E-08	1YrCancerD	3.81E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2154	AII	634446.2	427171.2	3.70E-08	1YrCancerD	3.70E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2155	AII	634486.2	427171.2	3.62E-08	1YrCancerD	3.62E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2156	AII	634526.2	427171.2	3.56E-08	1YrCancerD	3.56E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2157	AII	634566.2	427171.2	3.53E-08	1YrCancerD	3.53E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2158	AII	634606.2	427171.2														

[illegible]

2461	A1L	638206.2	4273072	9.13E-09	1YrCancerD	9.47E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2462	A1L	638246.2	4273072	9.13E-09	1YrCancerD	9.13E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2463	A1L	638326.2	4273072	8.51E-09	1YrCancerD	8.51E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2464	A1L	638366.2	4273072	8.20E-09	1YrCancerD	8.20E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2465	A1L	635886.2	4273112	1.58E-07	1YrCancerD	1.58E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2466	A1L	635926.2	4273112	1.30E-07	1YrCancerD	1.30E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2467	A1L	635966.2	4273112	1.19E-07	1YrCancerD	1.19E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2468	A1L	636006.2	4273112	1.11E-07	1YrCancerD	1.11E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2469	A1L	636046.2	4273112	1.03E-07	1YrCancerD	1.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2470	A1L	636086.2	4273112	9.68E-08	1YrCancerD	9.68E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2471	A1L	636126.2	4273112	9.11E-08	1YrCancerD	9.11E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2472	A1L	636166.2	4273112	8.60E-08	1YrCancerD	8.60E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2473	A1L	636206.2	4273112	8.14E-08	1YrCancerD	8.14E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2474	A1L	636246.2	4273112	7.74E-08	1YrCancerD	7.74E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2475	A1L	636286.2	4273112	7.39E-08	1YrCancerD	7.39E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2476	A1L	636326.2	4273112	7.11E-08	1YrCancerD	7.11E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2477	A1L	637366.2	4273112	1.45E-07	1YrCancerD	1.45E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2478	A1L	638046.2	4273112	1.08E-08	1YrCancerD	1.08E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2479	A1L	638086.2	4273112	1.03E-08	1YrCancerD	1.03E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2480	A1L	638126.2	4273112	9.88E-09	1YrCancerD											

2568	AI1	6360862	4273332	03E-08	1YrCancerD	0.03E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2569	AI1	6361262	4273332	2.95E-08	1YrCancerD	2.95E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2570	AI1	6361662	4273332	2.88E-08	1YrCancerD	2.88E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2571	AI1	6362062	4273332	2.81E-08	1YrCancerD	2.81E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2572	AI1	6362462	4273332	2.75E-08	1YrCancerD	2.75E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2573	AI1	6362862	4273332	2.69E-08	1YrCancerD	2.69E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2574	AI1	6363262	4273332	2.63E-08	1YrCancerD	2.63E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2575	AI1	6363662	4273332	2.58E-08	1YrCancerD	2.58E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2576	AI1	6364062	4273332	2.53E-08	1YrCancerD	2.53E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2577	AI1	6364462	4273332	2.48E-08	1YrCancerD	2.48E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2578	AI1	6364862	4273332	2.44E-08	1YrCancerD	2.44E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2579	AI1	6382062	4273332	8.21E-09	1YrCancerD	8.21E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2580	AI1	6382462	4273332	7.95E-09	1YrCancerD	7.95E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2581	AI1	6382862	4273332	7.72E-09	1YrCancerD	7.72E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2582	AI1	6383262	4273332	7.49E-09	1YrCancerD	7.49E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2583	AI1	6383662	4273332	7.28E-09	1YrCancerD	7.28E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2584	AI1	6358682	4273352	4.62E-08	1YrCancerD	4.62E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2585	AI1	6357262	4273352	4.18E-08	1YrCancerD	4.18E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2586	AI1	6357662	4273352	3.87E-08	1YrCancerD	3.87E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2587	AI1	6358062	4273352	3.63E-08	1YrCancerD	3.63E-08	0.00E+									

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2889	All	634948.5	4272324	2.81E-07	1YrCancerD	2.81E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2890	All	634975.1	4272301	3.39E-07	1YrCancerD	3.39E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2891	All	634991.3	4272270	6.19E-07	1YrCancerD	6.19E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2892	All	635047.8	4272254	1.22E-05	1YrCancerD	1.22E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2893	All	635110.7	4272224	1.36E-05	1YrCancerD	1.36E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2894	All	635172.2	4272170	1.49E-05	1YrCancerD	1.49E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2895	All	635251.2	4272096	1.31E-06	1YrCancerD	1.31E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2896	All	635343.3	4272006	1.15E-06	1YrCancerD	1.15E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2897	All	635421.9	4271924	1.19E-06	1YrCancerD	1.19E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2898	All	635515.5	4271825	1.22E-06	1YrCancerD	1.22E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2899	All	635571.1	4271750	1.09E-06	1YrCancerD	1.09E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2900	All	635606.2	4271772	6.56E-07	1YrCancerD	6.56E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2901	All	635606.2	4271733	1.02E-06	1YrCancerD	1.02E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2902	All	635629.6	4271717	3.81E-07	1YrCancerD	3.81E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2903	All	635620.9	4271693	4.31E-07	1YrCancerD	4.31E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2904	All	635689.4	4271635	3.42E-07	1YrCancerD	3.42E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2905	All	635729.6	4271600	3.63E-07	1YrCancerD	3.63E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2906	All	635767.6	4271576	2.08E-07	1YrCancerD	2.08E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2907	All	635798.4	4271561	3.27E-07	1YrCancerD	3.27E-07											

REC	GRP	NETID	X	Y	SCENARIO	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/DEWESP	SKIN	EYE	BONE/TEETENDO	BLOOD	ODOR	GENERAL	MAXHI
1	ALL	636726.2	4269592	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-05
2	ALL	636766.2	4269592	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-05
3	ALL	637006.2	4269592	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-05
4	ALL	637046.2	4269592	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-05
5	ALL	637086.2	4269592	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-05
6	ALL	637126.2	4269592	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E-05
7	ALL	637166.2	4269592	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-05
8	ALL	637206.2	4269592	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-05
9	ALL	637246.2	4269592	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-05
10	ALL	637286.2	4269592	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-05
11	ALL	637326.2	4269592	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-05
12	ALL	636766.2	4269632	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-05
13	ALL	637006.2	4269632	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-05
14	ALL	637046.2	4269632	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-05
15	ALL	637086.2	4269632	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-05
16	ALL	637126.2	4269632	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.19E-05
17	ALL	637166.2	4269632	NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E-05
18	ALL	637206.																

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495 ALL	636446.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E-05
496 ALL	636526.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-05
497 ALL	636645.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.93E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.93E-05
498 ALL	636686.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.23E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.23E-05
499 ALL	636726.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.88E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.88E-05
500 ALL	636766.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.03E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.03E-05
501 ALL	636846.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.06E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.06E-05
502 ALL	636886.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-05
503 ALL	636966.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E-05
504 ALL	637006.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-05
505 ALL	637046.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-05
506 ALL	637086.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E-05
507 ALL	637166.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E-05
508 ALL	637206.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-05
509 ALL	637606.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.82E-05
510 ALL	637646.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.54E-05
511 ALL	637686.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.09E-05
512 ALL	637726.2	4270392 NonCancer	0.00E+00	0.00E+00	0.00E+00	0.											

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2574 AL	636326.2	4273312 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.20E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.20E-05
2575 AL	636366.2	4273312 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-05
2576 AL	636406.2	4273312 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E-05
2577 AL	636446.2	4273312 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-05
2578 AL	636486.2	4273312 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-05
2579 AL	638206.2	4273312 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-05
2580 AL	638246.2	4273312 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.68E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.68E-06
2581 AL	638286.2	4273312 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.40E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.40E-06
2582 AL	638326.2	4273312 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.12E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.12E-06
2583 AL	638366.2	4273312 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-06
2584 AL	635866.2	4273352 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.63E-05
2585 AL	635726.2	4273352 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-05
2586 AL	635766.2	4273352 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.72E-05
2587 AL	635806.2	4273352 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.42E-05
2588 AL	635846.2	4273352 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.19E-05
2589 AL	635886.2	4273352 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-05
2590 AL	635926.2	4273352 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-05
2591 AL	635966.2	4273352 Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.											

[illegible]

2772 AU	636126.2	4273632	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-05
2773 AU	636166.2	4273632	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-05
2774 AU	636206.2	4273632	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-05
2775 AU	636246.2	4273632	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-05
2776 AU	636286.2	4273632	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-05
2777 AU	637060.5	4271428	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-04
2778 AU	637144.2	4271358	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-04
2779 AU	637162.3	4271343	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-04
2780 AU	637135.1	4271307	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-04
2781 AU	637139.6	4271298	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.96E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.96E-04
2782 AU	637089.7	4271237	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.76E-04
2783 AU	637081.2	4271244	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-04
2784 AU	637067.6	4271230	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-04
2785 AU	637059.8	4271239	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.01E-04
2786 AU	637073.4	4271250	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.98E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.98E-04
2787 AU	637066.3	4271259	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-04
2788 AU	637118.9	4271320	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-04
2789 AU	637127.9	4271314	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.42E-04
2790 AU	637148.7	4271344	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E-04
2791 AU	637056.6	4271416	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-04
2792 AU	637022.2	4271432	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-04
2793 AU	636978.7	4271446	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-04
2794 AU	636956	4271450	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-04
2795 AU	636917.7	4271450	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-04
2796 AU	636833.3	4271442	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-04
2797 AU	636745.1	4271434	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-04
2798 AU	636680.8	4271428	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-04
2799 AU	636581.4	4271418	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-04
2800 AU	636489.3	4271410	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-04
2801 AU	636414.7	4271412	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-04
2802 AU	636347.7	4271415	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-04
2803 AU	636300.6	4271426	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-04
2804 AU	636223.1	4271438	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-04
2805 AU	636094.4	4271457	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-04
2806 AU	636012.3	4271475	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-04
2807 AU	635929.3	4271499	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-04
2808 AU	635832.8	4271537	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-04
2809 AU	635781.6	4271559	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-04
2810 AU	635723.1	4271595	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E-04
2811 AU	635651.4	4271654	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-04
2812 AU	635569.5	4271717	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.24E-03
2813 AU	635497.9	4271763	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-03
2814 AU	635436.4	4271813	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-03
2815 AU	635348.7	4271899	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-03
2816 AU	635268.2	4271978	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-03
2817 AU	635199.6	4272049	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-03
2818 AU	635134.1	4272082	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-03
2819 AU	635102.9	4272027	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.37E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.37E-04
2820 AU	635079.5	4272063	Non Cancer	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.57E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0				

[illegible]

Health Risk Assessment Scenario 2: Haul Route North

Haul trucks would travel along the top of the levee crossing the paved bicycle path adjacent to the 28th and B Street Skate Park. Bicycle traffic would be controlled by a dedicated flagger during construction to prevent collisions from occurring. Haul trucks would enter the main ingress point and deliver their loads along Site 1-1 and then continue along the top of the levee east to exit at Glenn Hall Park and continue on Carlson Drive to H Street. Haul trucks would travel south along Howe Avenue to U.S. 50. This emissions scenario included 100 percent of the haul truck trips traveling south on Howe Avenue to U.S. 50.

Control Pathway

AERMOD

Dispersion Options

Titles C:\Users\shaurya.johari\OneDrive - Ascent Environmental\Desktop\Proj	
Dispersion Options <input checked="" type="checkbox"/> Regulatory Default <input type="checkbox"/> Non-Default Options	Dispersion Coefficient Urban Population: Name (Optional): Roughness Length:
	Output Type <input checked="" type="checkbox"/> Concentration <input type="checkbox"/> Total Deposition (Dry & Wet) <input type="checkbox"/> Dry Deposition <input type="checkbox"/> Wet Deposition
	Plume Depletion <input type="checkbox"/> Dry Removal <input type="checkbox"/> Wet Removal
	Output Warnings <input type="checkbox"/> No Output Warnings <input type="checkbox"/> Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type PM10	Exponential Decay <input checked="" type="checkbox"/> Half-life of 4 hrs will be used
Averaging Time Options Hours <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input type="checkbox"/> 8 <input type="checkbox"/> 12 <input type="checkbox"/> 24 <input type="checkbox"/> Month <input checked="" type="checkbox"/> Period <input type="checkbox"/> Annual	Terrain Height Options <input type="checkbox"/> Flat <input checked="" type="checkbox"/> Elevated SO: Meters RE: Meters TG: Meters
Flagpole Receptors <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Default Height = 0.00 m	

Optional Files



Re-Start File



Init File



Multi-Year Analyses



Event Input File



Error Listing File

Detailed Error Listing File

Filename: Scenario2S.err

Source Pathway - Source Inputs

AERMOD

Source Pathway - Source Inputs

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Volume Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL3673	634994.79	4272245.06	8.21	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3674	635004.79	4272245.06	7.93	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3675	635014.79	4272245.06	6.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3676	635024.79	4272245.06	5.62	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3874	634994.79	4272235.06	8.41	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3875	635004.79	4272235.06	8.07	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3876	635014.79	4272235.06	7.39	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3877	635024.79	4272235.06	6.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3878	635034.79	4272235.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3879	635044.79	4272235.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL3880	635054.79	4272235.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4075	634994.79	4272225.06	8.60	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4076	635004.79	4272225.06	8.21	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL4077	635014.79	4272225.06	8.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4078	635024.79	4272225.06	7.79	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4079	635034.79	4272225.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4080	635044.79	4272225.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4081	635054.79	4272225.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4082	635064.79	4272225.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4083	635074.79	4272225.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4276	634994.79	4272215.06	8.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4277	635004.79	4272215.06	8.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4278	635014.79	4272215.06	8.37	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4279	635024.79	4272215.06	8.14	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4280	635034.79	4272215.06	7.83	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4281	635044.79	4272215.06	6.74	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL4282	635054.79	4272215.06	5.65	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4283	635064.79	4272215.06	4.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4284	635074.79	4272215.06	4.07	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4285	635084.79	4272215.06	3.54	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4286	635094.79	4272215.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4478	635004.79	4272205.06	9.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4479	635014.79	4272205.06	8.74	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4480	635024.79	4272205.06	8.47	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4481	635034.79	4272205.06	8.17	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4482	635044.79	4272205.06	7.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4483	635054.79	4272205.06	6.87	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4484	635064.79	4272205.06	6.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4485	635074.79	4272205.06	5.11	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL4486	635084.79	4272205.06	4.04	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4487	635094.79	4272205.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4488	635104.79	4272205.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4680	635014.79	4272195.06	9.11	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4681	635024.79	4272195.06	8.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4682	635034.79	4272195.06	8.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4683	635044.79	4272195.06	8.30	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4684	635054.79	4272195.06	8.10	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4685	635064.79	4272195.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4686	635074.79	4272195.06	6.15	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4687	635084.79	4272195.06	4.53	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4688	635094.79	4272195.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4689	635104.79	4272195.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL4690	635114.79	4272195.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4882	635024.79	4272185.06	9.12	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4883	635034.79	4272185.06	8.82	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4884	635044.79	4272185.06	8.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4885	635054.79	4272185.06	8.34	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4886	635064.79	4272185.06	8.03	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4887	635074.79	4272185.06	6.87	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4888	635084.79	4272185.06	5.72	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4889	635094.79	4272185.06	4.65	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4890	635104.79	4272185.06	4.62	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4891	635114.79	4272185.06	4.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL4892	635124.79	4272185.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5085	635044.79	4272175.06	8.85	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL5086	635054.79	4272175.06	8.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5087	635064.79	4272175.06	8.27	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5088	635074.79	4272175.06	7.59	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5089	635084.79	4272175.06	6.91	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5090	635094.79	4272175.06	6.27	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5091	635104.79	4272175.06	6.20	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5092	635114.79	4272175.06	6.14	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5093	635124.79	4272175.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5094	635134.79	4272175.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5287	635054.79	4272165.06	8.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5288	635064.79	4272165.06	8.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5289	635074.79	4272165.06	8.31	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5290	635084.79	4272165.06	8.10	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL5291	635094.79	4272165.06	7.90	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5292	635104.79	4272165.06	7.79	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5293	635114.79	4272165.06	7.69	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5294	635124.79	4272165.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5295	635134.79	4272165.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5296	635144.79	4272165.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5297	635154.79	4272165.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5490	635074.79	4272155.06	8.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5491	635084.79	4272155.06	8.24	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5492	635094.79	4272155.06	8.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5493	635104.79	4272155.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5494	635114.79	4272155.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5495	635124.79	4272155.06	7.63	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL5496	635134.79	4272155.06	6.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5497	635144.79	4272155.06	5.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5498	635154.79	4272155.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5499	635164.79	4272155.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5693	635094.79	4272145.06	8.12	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5694	635104.79	4272145.06	8.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5695	635114.79	4272145.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5696	635124.79	4272145.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5697	635134.79	4272145.06	7.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5698	635144.79	4272145.06	6.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5699	635154.79	4272145.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5700	635164.79	4272145.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5701	635174.79	4272145.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL5895	635104.79	4272135.06	8.12	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5896	635114.79	4272135.06	8.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5897	635124.79	4272135.06	7.91	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5898	635134.79	4272135.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5899	635144.79	4272135.06	7.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5900	635154.79	4272135.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5901	635164.79	4272135.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5902	635174.79	4272135.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL5903	635184.79	4272135.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6097	635114.79	4272125.06	8.22	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6098	635124.79	4272125.06	8.11	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6099	635134.79	4272125.06	7.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6100	635144.79	4272125.06	7.84	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL6101	635154.79	4272125.06	7.63	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6102	635164.79	4272125.06	6.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6103	635174.79	4272125.06	5.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6104	635184.79	4272125.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6105	635194.79	4272125.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6298	635114.79	4272115.06	8.42	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6299	635124.79	4272115.06	8.31	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6300	635134.79	4272115.06	8.15	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6301	635144.79	4272115.06	7.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6302	635154.79	4272115.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6303	635164.79	4272115.06	7.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6304	635174.79	4272115.06	6.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6305	635184.79	4272115.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

										AERMOD
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL6306	635194.79	4272115.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6307	635204.79	4272115.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6498	635104.79	4272105.06	8.73	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6499	635114.79	4272105.06	8.63	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6500	635124.79	4272105.06	8.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6501	635134.79	4272105.06	8.31	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6502	635144.79	4272105.06	8.11	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6503	635154.79	4272105.06	7.91	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6504	635164.79	4272105.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6505	635174.79	4272105.06	7.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6506	635184.79	4272105.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6507	635194.79	4272105.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6508	635204.79	4272105.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

										AERMOD
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL6509	635214.79	4272105.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6699	635104.79	4272095.06	8.89	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6700	635114.79	4272095.06	8.76	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6701	635124.79	4272095.06	8.62	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6702	635134.79	4272095.06	8.41	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6703	635144.79	4272095.06	8.21	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6704	635154.79	4272095.06	8.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6705	635164.79	4272095.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6706	635174.79	4272095.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6707	635184.79	4272095.06	7.63	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6708	635194.79	4272095.06	6.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6709	635204.79	4272095.06	5.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6710	635214.79	4272095.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL6711	635224.79	4272095.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6900	635104.79	4272085.06	9.06	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6901	635114.79	4272085.06	8.89	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6902	635124.79	4272085.06	8.72	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6903	635134.79	4272085.06	8.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6907	635174.79	4272085.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6908	635184.79	4272085.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6909	635194.79	4272085.06	7.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6910	635204.79	4272085.06	6.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6911	635214.79	4272085.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6912	635224.79	4272085.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL6913	635234.79	4272085.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7101	635104.79	4272075.06	9.23	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL7102	635114.79	4272075.06	9.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7103	635124.79	4272075.06	8.82	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7109	635184.79	4272075.06	7.91	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7110	635194.79	4272075.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7111	635204.79	4272075.06	7.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7112	635214.79	4272075.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7113	635224.79	4272075.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7114	635234.79	4272075.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7115	635244.79	4272075.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7302	635104.79	4272065.06	9.29	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7303	635114.79	4272065.06	9.06	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7311	635194.79	4272065.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7312	635204.79	4272065.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL7313	635214.79	4272065.06	7.63	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7314	635224.79	4272065.06	6.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7315	635234.79	4272065.06	5.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7316	635244.79	4272065.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7317	635254.79	4272065.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7513	635204.79	4272055.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7514	635214.79	4272055.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7515	635224.79	4272055.06	7.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7516	635234.79	4272055.06	6.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7517	635244.79	4272055.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7518	635254.79	4272055.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7519	635264.79	4272055.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7716	635224.79	4272045.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

										AERMOD
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL7717	635234.79	4272045.06	7.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7718	635244.79	4272045.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7719	635254.79	4272045.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7720	635264.79	4272045.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7721	635274.79	4272045.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7918	635234.79	4272035.06	7.84	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7919	635244.79	4272035.06	7.63	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7920	635254.79	4272035.06	6.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7921	635264.79	4272035.06	5.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7922	635274.79	4272035.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL7923	635284.79	4272035.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8120	635244.79	4272025.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8121	635254.79	4272025.06	7.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL8122	635264.79	4272025.06	6.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8123	635274.79	4272025.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8124	635284.79	4272025.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8125	635294.79	4272025.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8322	635254.79	4272015.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8323	635264.79	4272015.06	7.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8324	635274.79	4272015.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8325	635284.79	4272015.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8326	635294.79	4272015.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8327	635304.79	4272015.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8524	635264.79	4272005.06	7.94	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8525	635274.79	4272005.06	7.73	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8526	635284.79	4272005.06	6.64	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL8527	635294.79	4272005.06	5.55	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8528	635304.79	4272005.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8529	635314.79	4272005.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8726	635274.79	4271995.06	7.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8727	635284.79	4271995.06	7.32	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8728	635294.79	4271995.06	6.67	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8729	635304.79	4271995.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8730	635314.79	4271995.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8731	635324.79	4271995.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8928	635284.79	4271985.06	8.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8929	635294.79	4271985.06	7.79	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8930	635304.79	4271985.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8931	635314.79	4271985.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

										AERMOD
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL8932	635324.79	4271985.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL8933	635334.79	4271985.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9130	635294.79	4271975.06	8.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9131	635304.79	4271975.06	7.73	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9132	635314.79	4271975.06	6.68	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9133	635324.79	4271975.06	5.62	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9134	635334.79	4271975.06	4.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9135	635344.79	4271975.06	4.07	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9332	635304.79	4271965.06	7.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9333	635314.79	4271965.06	7.39	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9334	635324.79	4271965.06	6.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9335	635334.79	4271965.06	6.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9336	635344.79	4271965.06	5.11	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

										AERMOD
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL9337	635354.79	4271965.06	4.04	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9534	635314.79	4271955.06	8.11	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9535	635324.79	4271955.06	8.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9536	635334.79	4271955.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9537	635344.79	4271955.06	6.15	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9538	635354.79	4271955.06	4.53	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9539	635364.79	4271955.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9736	635324.79	4271945.06	8.15	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9737	635334.79	4271945.06	7.93	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9738	635344.79	4271945.06	6.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9739	635354.79	4271945.06	5.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9740	635364.79	4271945.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9741	635374.79	4271945.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL9938	635334.79	4271935.06	8.07	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9939	635344.79	4271935.06	7.39	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9940	635354.79	4271935.06	6.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9941	635364.79	4271935.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9942	635374.79	4271935.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL9943	635384.79	4271935.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10140	635344.79	4271925.06	8.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10141	635354.79	4271925.06	7.79	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10142	635364.79	4271925.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10143	635374.79	4271925.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10144	635384.79	4271925.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10145	635394.79	4271925.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10342	635354.79	4271915.06	8.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL10343	635364.79	4271915.06	7.73	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10344	635374.79	4271915.06	6.64	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10345	635384.79	4271915.06	5.55	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10346	635394.79	4271915.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10347	635404.79	4271915.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10544	635364.79	4271905.06	7.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10545	635374.79	4271905.06	7.32	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10546	635384.79	4271905.06	6.67	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10547	635394.79	4271905.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10548	635404.79	4271905.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10549	635414.79	4271905.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10746	635374.79	4271895.06	8.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10747	635384.79	4271895.06	7.79	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL10748	635394.79	4271895.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10749	635404.79	4271895.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10750	635414.79	4271895.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10751	635424.79	4271895.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10948	635384.79	4271885.06	8.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10949	635394.79	4271885.06	7.73	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10950	635404.79	4271885.06	6.64	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10951	635414.79	4271885.06	5.55	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10952	635424.79	4271885.06	4.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL10953	635434.79	4271885.06	4.01	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11150	635394.79	4271875.06	7.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11151	635404.79	4271875.06	7.32	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11152	635414.79	4271875.06	6.67	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

										AERMOD
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL11153	635424.79	4271875.06	5.99	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11154	635434.79	4271875.06	4.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11155	635444.79	4271875.06	3.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11352	635404.79	4271865.06	8.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11353	635414.79	4271865.06	7.79	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11354	635424.79	4271865.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11355	635434.79	4271865.06	5.96	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11356	635444.79	4271865.06	4.44	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11357	635454.79	4271865.06	3.05	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11554	635414.79	4271855.06	7.97	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11555	635424.79	4271855.06	7.63	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11556	635434.79	4271855.06	6.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11557	635444.79	4271855.06	5.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

										AERMOD
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL11558	635454.79	4271855.06	4.55	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11559	635464.79	4271855.06	4.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11756	635424.79	4271845.06	7.77	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11757	635434.79	4271845.06	7.19	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11758	635444.79	4271845.06	6.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11759	635454.79	4271845.06	6.07	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11760	635464.79	4271845.06	6.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11761	635474.79	4271845.06	5.94	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11958	635434.79	4271835.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11959	635444.79	4271835.06	7.70	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11960	635454.79	4271835.06	7.59	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11961	635464.79	4271835.06	7.49	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL11962	635474.79	4271835.06	7.39	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL11963	635484.79	4271835.06	7.18	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12160	635444.79	4271825.06	7.78	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12161	635454.79	4271825.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12162	635464.79	4271825.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12163	635474.79	4271825.06	7.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12164	635484.79	4271825.06	7.33	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12165	635494.79	4271825.06	6.35	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12362	635454.79	4271815.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12363	635464.79	4271815.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12364	635474.79	4271815.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12365	635484.79	4271815.06	7.47	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12366	635494.79	4271815.06	6.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12367	635504.79	4271815.06	6.38	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

										AERMOD
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL12564	635464.79	4271805.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12565	635474.79	4271805.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12566	635484.79	4271805.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12567	635494.79	4271805.06	7.50	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12568	635504.79	4271805.06	7.39	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12569	635514.79	4271805.06	7.29	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12766	635474.79	4271795.06	7.78	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12767	635484.79	4271795.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12768	635494.79	4271795.06	7.65	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12769	635504.79	4271795.06	7.58	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12770	635514.79	4271795.06	7.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12771	635524.79	4271795.06	7.41	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12772	635534.79	4271795.06	7.30	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL12969	635494.79	4271785.06	7.78	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12970	635504.79	4271785.06	7.75	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12971	635514.79	4271785.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12972	635524.79	4271785.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12973	635534.79	4271785.06	7.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL12974	635544.79	4271785.06	7.37	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13171	635504.79	4271775.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13172	635514.79	4271775.06	7.91	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13173	635524.79	4271775.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13174	635534.79	4271775.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13175	635544.79	4271775.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13176	635554.79	4271775.06	7.50	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13177	635564.79	4271775.06	7.39	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL13373	635514.79	4271765.06	8.11	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13374	635524.79	4271765.06	7.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13375	635534.79	4271765.06	7.84	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13376	635544.79	4271765.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13377	635554.79	4271765.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13378	635564.79	4271765.06	7.51	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13379	635574.79	4271765.06	7.34	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13380	635584.79	4271765.06	6.38	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13576	635534.79	4271755.06	7.98	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13577	635544.79	4271755.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13578	635554.79	4271755.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13579	635564.79	4271755.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13580	635574.79	4271755.06	7.48	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL13581	635584.79	4271755.06	7.00	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13582	635594.79	4271755.06	6.52	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13778	635544.79	4271745.06	7.92	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13779	635554.79	4271745.06	7.81	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13780	635564.79	4271745.06	7.71	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13781	635574.79	4271745.06	7.62	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13782	635584.79	4271745.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13783	635594.79	4271745.06	7.61	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13980	635554.79	4271735.06	8.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13981	635564.79	4271735.06	7.91	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13982	635574.79	4271735.06	7.82	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13983	635584.79	4271735.06	7.78	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL13984	635594.79	4271735.06	7.75	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD										
Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL14183	635574.79	4271725.06	8.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL14184	635584.79	4271725.06	7.95	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL14185	635594.79	4271725.06	7.88	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL14385	635584.79	4271715.06	8.12	1.50	0.00253	9.98	Surface-Based	2.32	2.32
VOLUME	VOL14386	635594.79	4271715.06	8.02	1.50	0.00253	9.98	Surface-Based	2.32	2.32

Source Pathway - Source Inputs

AERMOD

Line Volume Sources

Source Type: LINE VOLUME

Source: NS_SLINE1

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.44	1.00000		635609.79	4271691.39	7.95	0.00
			635651.49	4271657.81	7.91	0.00
			635680.48	4271632.58	7.93	0.00
			635723.67	4271597.81	7.94	0.00
			635763.46	4271573.14	8.16	0.00
			635788.46	4271560.24	7.93	0.00
			635848.71	4271535.56	7.92	0.00
			635902.70	4271513.69	7.94	0.00
			635994.20	4271486.22	7.94	0.00
			636060.70	4271471.08	7.91	0.00
			636111.64	4271461.74	7.71	0.00
			636165.80	4271455.14	7.95	0.00
			636228.65	4271445.91	7.94	0.00
			636277.46	4271437.99	7.92	0.00
			636316.24	4271430.73	7.92	0.00
			636376.42	4271421.49	7.95	0.00
			636419.88	4271418.86	7.93	0.00
			636494.77	4271418.20	8.01	0.00
			636591.06	4271425.45	9.14	0.00
			636658.59	4271432.05	9.14	0.00
			636733.48	4271440.63	9.14	0.00
			636791.65	4271445.25	9.14	0.00
			636873.90	4271452.50	9.14	0.00
			636920.70	4271457.12	9.17	0.00
			636956.81	4271458.44	9.45	0.00
			636992.25	4271452.50	9.77	0.00
			637020.75	4271442.95	9.77	0.00
			637063.55	4271425.80	10.36	0.00
			637098.99	4271399.41	10.03	0.00
			637138.44	4271366.42	9.75	0.00

Source Pathway - Source Inputs

AERMOD

Source Type: LINE VOLUME

Source: NS_SLINE1

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.44	1.00000		637162.51	4271347.95	9.75	0.00
			637091.63	4271257.56	9.59	0.00
			637030.78	4271186.96	9.31	0.00
			636988.54	4271127.79	9.21	0.00
			636939.49	4271073.91	9.21	0.00
			636851.58	4270969.14	9.45	0.00
			636748.21	4270842.42	9.15	0.00
			636695.15	4270778.00	9.14	0.00
			636618.95	4270689.75	9.14	0.00
			636610.26	4270679.19	9.14	0.00
			636596.21	4270652.79	9.14	0.00
			636588.85	4270637.61	9.29	0.00
			636582.84	4270622.44	9.65	0.00
			636574.81	4270596.04	10.52	0.00
			636571.46	4270578.22	10.66	0.00
			636566.11	4270553.14	10.38	0.00
			636562.77	4270514.87	10.37	0.00
			636560.90	4270478.85	10.37	0.00
			636565.26	4270453.06	10.36	0.00
			636578.33	4270404.71	10.67	0.00
			636600.11	4270349.90	10.67	0.00
			636622.98	4270317.66	10.67	0.00
			636651.29	4270288.65	10.67	0.00
			636668.21	4270275.06	10.67	0.00
			636693.26	4270260.02	10.67	0.00
			636732.47	4270237.45	10.67	0.00
			636757.52	4270221.33	10.67	0.00
			636782.57	4270192.32	10.67	0.00
			636809.80	4270154.70	10.67	0.00
			636852.74	4269998.67	10.81	0.00
			636870.83	4269930.25	11.18	0.00

Source Pathway - Source Inputs

AERMOD

Source Type: LINE VOLUME

Source: NS_SLINE1

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.44	1.00000		636922.08	4269848.44	12.17	0.00
			636976.55	4269927.14	11.97	0.00
			637104.49	4270037.29	10.05	0.00
			637214.53	4270080.48	8.87	0.00
			637396.94	4270117.66	4.76	0.00
			637510.00	4270147.41	9.32	0.00
			637567.28	4270163.77	10.12	0.00
			637618.58	4270193.48	10.67	0.00
			637653.29	4270218.77	10.37	0.00
			637689.62	4270273.69	10.25	0.00
			637758.97	4270376.35	10.01	0.00
			637880.13	4270577.23	10.67	0.00
			637959.66	4270673.41	10.65	0.00
			638021.12	4270712.69	10.67	0.00

Source Pathway - Source Inputs

AERMOD

Source Type: LINE VOLUME

Source: STH_SLINE3

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
8.44	1.00000		638041.11	4270711.05	10.67	1.70
			638071.01	4270626.75	10.67	1.70
			638111.63	4270568.50	10.67	1.70
			638146.11	4270533.24	10.67	1.70
			638192.10	4270498.75	10.73	1.70
			638258.01	4270467.33	11.37	1.70
			638361.48	4270417.51	10.69	1.70
			638469.19	4270366.98	10.67	1.70
			638507.19	4270341.07	10.67	1.70
			638543.47	4270301.34	10.67	1.70
			638564.20	4270270.25	10.67	1.70
			638591.84	4270223.61	10.67	1.70
			638603.93	4270183.88	10.67	1.70
			638607.38	4270126.87	10.37	1.70
			638607.38	4269763.79	9.45	1.70
			638602.97	4269520.04	8.53	1.70
			638604.26	4268468.31	10.68	1.70

Source Pathway - Source Inputs

AERMOD

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
STH_SLINE3	L0061323	638042.53	4270707.08	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061324	638045.35	4270699.12	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061325	638048.17	4270691.17	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061326	638050.99	4270683.21	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061327	638053.81	4270675.26	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061328	638056.63	4270667.30	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061329	638059.45	4270659.35	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061330	638062.27	4270651.39	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061331	638065.09	4270643.44	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061332	638067.91	4270635.48	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061333	638070.73	4270627.53	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061334	638075.36	4270620.50	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061335	638080.19	4270613.58	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061336	638085.01	4270606.66	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061337	638089.84	4270599.74	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061338	638094.67	4270592.81	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061339	638099.50	4270585.89	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061340	638104.33	4270578.97	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061341	638109.15	4270572.04	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061342	638114.51	4270565.56	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061343	638120.41	4270559.52	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061344	638126.31	4270553.49	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061345	638132.21	4270547.46	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061346	638138.11	4270541.42	10.67	1.70	0.00334	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
STH_SLINE3	L0061347	638144.02	4270535.39	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061348	638150.47	4270529.98	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061349	638157.22	4270524.92	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061350	638163.97	4270519.85	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061351	638170.72	4270514.79	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061352	638177.47	4270509.72	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061353	638184.23	4270504.66	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061354	638190.98	4270499.60	10.70	1.70	0.00334	8.44		3.93	1.93
	L0061355	638198.45	4270495.73	10.76	1.70	0.00334	8.44		3.93	1.93
	L0061356	638206.07	4270492.09	10.84	1.70	0.00334	8.44		3.93	1.93
	L0061357	638213.69	4270488.46	10.93	1.70	0.00334	8.44		3.93	1.93
	L0061358	638221.31	4270484.83	10.90	1.70	0.00334	8.44		3.93	1.93
	L0061359	638228.93	4270481.20	10.88	1.70	0.00334	8.44		3.93	1.93
	L0061360	638236.54	4270477.57	10.95	1.70	0.00334	8.44		3.93	1.93
	L0061361	638244.16	4270473.93	11.11	1.70	0.00334	8.44		3.93	1.93
	L0061362	638251.78	4270470.30	11.15	1.70	0.00334	8.44		3.93	1.93
	L0061363	638259.40	4270466.66	11.09	1.70	0.00334	8.44		3.93	1.93
	L0061364	638267.00	4270463.00	10.94	1.70	0.00334	8.44		3.93	1.93
	L0061365	638274.61	4270459.34	10.71	1.70	0.00334	8.44		3.93	1.93
	L0061366	638282.21	4270455.68	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061367	638289.82	4270452.02	10.71	1.70	0.00334	8.44		3.93	1.93
	L0061368	638297.42	4270448.36	10.75	1.70	0.00334	8.44		3.93	1.93
	L0061369	638305.02	4270444.70	10.77	1.70	0.00334	8.44		3.93	1.93
	L0061370	638312.63	4270441.03	10.81	1.70	0.00334	8.44		3.93	1.93
	L0061371	638320.23	4270437.37	10.85	1.70	0.00334	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
STH_SLINE3	L0061372	638327.84	4270433.71	10.88	1.70	0.00334	8.44		3.93	1.93
	L0061373	638335.44	4270430.05	10.91	1.70	0.00334	8.44		3.93	1.93
	L0061374	638343.05	4270426.39	10.87	1.70	0.00334	8.44		3.93	1.93
	L0061375	638350.65	4270422.73	10.80	1.70	0.00334	8.44		3.93	1.93
	L0061376	638358.26	4270419.07	10.73	1.70	0.00334	8.44		3.93	1.93
	L0061377	638365.88	4270415.45	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061378	638373.52	4270411.86	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061379	638381.16	4270408.28	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061380	638388.80	4270404.69	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061381	638396.44	4270401.11	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061382	638404.09	4270397.53	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061383	638411.73	4270393.94	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061384	638419.37	4270390.36	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061385	638427.01	4270386.77	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061386	638434.65	4270383.19	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061387	638442.29	4270379.60	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061388	638449.93	4270376.02	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061389	638457.57	4270372.43	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061390	638465.21	4270368.85	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061391	638472.53	4270364.70	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061392	638479.51	4270359.95	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061393	638486.48	4270355.19	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061394	638493.45	4270350.44	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061395	638500.43	4270345.68	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061396	638507.36	4270340.89	10.67	1.70	0.00334	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
STH_SLINE3	L0061397	638513.05	4270334.65	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061398	638518.74	4270328.42	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061399	638524.43	4270322.19	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061400	638530.13	4270315.95	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061401	638535.82	4270309.72	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061402	638541.51	4270303.49	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061403	638546.54	4270296.74	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061404	638551.22	4270289.72	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061405	638555.90	4270282.69	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061406	638560.58	4270275.67	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061407	638565.18	4270268.59	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061408	638569.48	4270261.33	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061409	638573.78	4270254.07	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061410	638578.09	4270246.81	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061411	638582.39	4270239.55	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061412	638586.69	4270232.29	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061413	638590.99	4270225.03	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061414	638593.81	4270217.11	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061415	638596.27	4270209.04	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061416	638598.73	4270200.97	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061417	638601.19	4270192.89	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061418	638603.64	4270184.82	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061419	638604.38	4270176.43	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061420	638604.89	4270168.01	10.67	1.70	0.00334	8.44		3.93	1.93
	L0061421	638605.40	4270159.58	10.67	1.70	0.00334	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
STH_SLINE3	L0061422	638605.91	4270151.16	10.63	1.70	0.00334	8.44		3.93	1.93
	L0061423	638606.42	4270142.74	10.55	1.70	0.00334	8.44		3.93	1.93
	L0061424	638606.93	4270134.31	10.48	1.70	0.00334	8.44		3.93	1.93
	L0061425	638607.38	4270125.88	10.41	1.70	0.00334	8.44		3.93	1.93
	L0061426	638607.38	4270117.44	10.39	1.70	0.00334	8.44		3.93	1.93
	L0061427	638607.38	4270109.00	10.38	1.70	0.00334	8.44		3.93	1.93
	L0061428	638607.38	4270100.56	10.37	1.70	0.00334	8.44		3.93	1.93
	L0061429	638607.38	4270092.12	10.36	1.70	0.00334	8.44		3.93	1.93
	L0061430	638607.38	4270083.68	10.36	1.70	0.00334	8.44		3.93	1.93
	L0061431	638607.38	4270075.24	10.36	1.70	0.00334	8.44		3.93	1.93
	L0061432	638607.38	4270066.80	10.36	1.70	0.00334	8.44		3.93	1.93
	L0061433	638607.38	4270058.36	10.36	1.70	0.00334	8.44		3.93	1.93
	L0061434	638607.38	4270049.92	10.36	1.70	0.00334	8.44		3.93	1.93
	L0061435	638607.38	4270041.48	10.36	1.70	0.00334	8.44		3.93	1.93
	L0061436	638607.38	4270033.04	10.34	1.70	0.00334	8.44		3.93	1.93
	L0061437	638607.38	4270024.60	10.26	1.70	0.00334	8.44		3.93	1.93
	L0061438	638607.38	4270016.16	10.17	1.70	0.00334	8.44		3.93	1.93
	L0061439	638607.38	4270007.72	10.09	1.70	0.00334	8.44		3.93	1.93
	L0061440	638607.38	4269999.28	10.06	1.70	0.00334	8.44		3.93	1.93
	L0061441	638607.38	4269990.84	10.06	1.70	0.00334	8.44		3.93	1.93
	L0061442	638607.38	4269982.40	10.06	1.70	0.00334	8.44		3.93	1.93
	L0061443	638607.38	4269973.96	10.06	1.70	0.00334	8.44		3.93	1.93
	L0061444	638607.38	4269965.52	10.06	1.70	0.00334	8.44		3.93	1.93
	L0061445	638607.38	4269957.08	10.06	1.70	0.00334	8.44		3.93	1.93
	L0061446	638607.38	4269948.64	10.06	1.70	0.00334	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
STH_SLINE3	L0061447	638607.38	4269940.20	10.02	1.70	0.00334	8.44		3.93	1.93
	L0061448	638607.38	4269931.76	9.94	1.70	0.00334	8.44		3.93	1.93
	L0061449	638607.38	4269923.32	9.86	1.70	0.00334	8.44		3.93	1.93
	L0061450	638607.38	4269914.88	9.79	1.70	0.00334	8.44		3.93	1.93
	L0061451	638607.38	4269906.44	9.78	1.70	0.00334	8.44		3.93	1.93
	L0061452	638607.38	4269898.00	9.77	1.70	0.00334	8.44		3.93	1.93
	L0061453	638607.38	4269889.56	9.76	1.70	0.00334	8.44		3.93	1.93
	L0061454	638607.38	4269881.12	9.75	1.70	0.00334	8.44		3.93	1.93
	L0061455	638607.38	4269872.68	9.75	1.70	0.00334	8.44		3.93	1.93
	L0061456	638607.38	4269864.24	9.75	1.70	0.00334	8.44		3.93	1.93
	L0061457	638607.38	4269855.80	9.75	1.70	0.00334	8.44		3.93	1.93
	L0061458	638607.38	4269847.36	9.68	1.70	0.00334	8.44		3.93	1.93
	L0061459	638607.38	4269838.92	9.59	1.70	0.00334	8.44		3.93	1.93
	L0061460	638607.38	4269830.48	9.51	1.70	0.00334	8.44		3.93	1.93
	L0061461	638607.38	4269822.04	9.45	1.70	0.00334	8.44		3.93	1.93
	L0061462	638607.38	4269813.60	9.45	1.70	0.00334	8.44		3.93	1.93
	L0061463	638607.38	4269805.16	9.45	1.70	0.00334	8.44		3.93	1.93
	L0061464	638607.38	4269796.72	9.45	1.70	0.00334	8.44		3.93	1.93
	L0061465	638607.38	4269788.28	9.45	1.70	0.00334	8.44		3.93	1.93
	L0061466	638607.38	4269779.84	9.45	1.70	0.00334	8.44		3.93	1.93
	L0061467	638607.38	4269771.40	9.45	1.70	0.00334	8.44		3.93	1.93
	L0061468	638607.36	4269762.96	9.45	1.70	0.00334	8.44		3.93	1.93
	L0061469	638607.21	4269754.53	9.45	1.70	0.00334	8.44		3.93	1.93
	L0061470	638607.06	4269746.09	9.45	1.70	0.00334	8.44		3.93	1.93
	L0061471	638606.90	4269737.65	9.45	1.70	0.00334	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
STH_SLINE3	L0061472	638606.75	4269729.21	9.45	1.70	0.00334	8.44		3.93	1.93
	L0061473	638606.60	4269720.77	9.45	1.70	0.00334	8.44		3.93	1.93
	L0061474	638606.45	4269712.33	9.45	1.70	0.00334	8.44		3.93	1.93
	L0061475	638606.29	4269703.89	9.44	1.70	0.00334	8.44		3.93	1.93
	L0061476	638606.14	4269695.46	9.35	1.70	0.00334	8.44		3.93	1.93
	L0061477	638605.99	4269687.02	9.27	1.70	0.00334	8.44		3.93	1.93
	L0061478	638605.84	4269678.58	9.18	1.70	0.00334	8.44		3.93	1.93
	L0061479	638605.68	4269670.14	9.14	1.70	0.00334	8.44		3.93	1.93
	L0061480	638605.53	4269661.70	9.14	1.70	0.00334	8.44		3.93	1.93
	L0061481	638605.38	4269653.26	9.14	1.70	0.00334	8.44		3.93	1.93
	L0061482	638605.23	4269644.82	9.14	1.70	0.00334	8.44		3.93	1.93
	L0061483	638605.07	4269636.38	9.14	1.70	0.00334	8.44		3.93	1.93
	L0061484	638604.92	4269627.95	9.14	1.70	0.00334	8.44		3.93	1.93
	L0061485	638604.77	4269619.51	9.14	1.70	0.00334	8.44		3.93	1.93
	L0061486	638604.62	4269611.07	9.10	1.70	0.00334	8.44		3.93	1.93
	L0061487	638604.46	4269602.63	9.02	1.70	0.00334	8.44		3.93	1.93
	L0061488	638604.31	4269594.19	8.93	1.70	0.00334	8.44		3.93	1.93
	L0061489	638604.16	4269585.75	8.85	1.70	0.00334	8.44		3.93	1.93
	L0061490	638604.01	4269577.31	8.84	1.70	0.00334	8.44		3.93	1.93
	L0061491	638603.85	4269568.88	8.84	1.70	0.00334	8.44		3.93	1.93
	L0061492	638603.70	4269560.44	8.84	1.70	0.00334	8.44		3.93	1.93
	L0061493	638603.55	4269552.00	8.81	1.70	0.00334	8.44		3.93	1.93
	L0061494	638603.40	4269543.56	8.72	1.70	0.00334	8.44		3.93	1.93
	L0061495	638603.24	4269535.12	8.64	1.70	0.00334	8.44		3.93	1.93
	L0061496	638603.09	4269526.68	8.55	1.70	0.00334	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
STH_SLINE3	L0061497	638602.97	4269518.24	8.53	1.70	0.00334	8.44		3.93	1.93
	L0061498	638602.98	4269509.80	8.53	1.70	0.00334	8.44		3.93	1.93
	L0061499	638602.99	4269501.36	8.53	1.70	0.00334	8.44		3.93	1.93
	L0061500	638603.00	4269492.92	8.53	1.70	0.00334	8.44		3.93	1.93
	L0061501	638603.01	4269484.48	8.53	1.70	0.00334	8.44		3.93	1.93
	L0061502	638603.02	4269476.04	8.53	1.70	0.00334	8.44		3.93	1.93
	L0061503	638603.03	4269467.60	8.53	1.70	0.00334	8.44		3.93	1.93
	L0061504	638603.04	4269459.16	8.48	1.70	0.00334	8.44		3.93	1.93
	L0061505	638603.05	4269450.72	8.39	1.70	0.00334	8.44		3.93	1.93
	L0061506	638603.07	4269442.28	8.30	1.70	0.00334	8.44		3.93	1.93
	L0061507	638603.08	4269433.84	8.23	1.70	0.00334	8.44		3.93	1.93
	L0061508	638603.09	4269425.40	8.23	1.70	0.00334	8.44		3.93	1.93
	L0061509	638603.10	4269416.96	8.23	1.70	0.00334	8.44		3.93	1.93
	L0061510	638603.11	4269408.52	8.23	1.70	0.00334	8.44		3.93	1.93
	L0061511	638603.12	4269400.08	8.23	1.70	0.00334	8.44		3.93	1.93
	L0061512	638603.13	4269391.64	8.23	1.70	0.00334	8.44		3.93	1.93
	L0061513	638603.14	4269383.20	8.23	1.70	0.00334	8.44		3.93	1.93
	L0061514	638603.15	4269374.76	8.23	1.70	0.00334	8.44		3.93	1.93
	L0061515	638603.16	4269366.32	8.14	1.70	0.00334	8.44		3.93	1.93
	L0061516	638603.17	4269357.88	8.06	1.70	0.00334	8.44		3.93	1.93
	L0061517	638603.18	4269349.44	7.97	1.70	0.00334	8.44		3.93	1.93
	L0061518	638603.19	4269341.00	7.92	1.70	0.00334	8.44		3.93	1.93
	L0061519	638603.20	4269332.56	7.92	1.70	0.00334	8.44		3.93	1.93
	L0061520	638603.21	4269324.12	7.92	1.70	0.00334	8.44		3.93	1.93
	L0061521	638603.22	4269315.68	7.92	1.70	0.00334	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
STH_SLINE3	L0061522	638603.23	4269307.24	7.92	1.70	0.00334	8.44		3.93	1.93
	L0061523	638603.24	4269298.80	7.92	1.70	0.00334	8.44		3.93	1.93
	L0061524	638603.25	4269290.36	7.92	1.70	0.00334	8.44		3.93	1.93
	L0061525	638603.26	4269281.92	7.89	1.70	0.00334	8.44		3.93	1.93
	L0061526	638603.27	4269273.48	7.81	1.70	0.00334	8.44		3.93	1.93
	L0061527	638603.28	4269265.04	7.72	1.70	0.00334	8.44		3.93	1.93
	L0061528	638603.29	4269256.60	7.64	1.70	0.00334	8.44		3.93	1.93
	L0061529	638603.30	4269248.16	7.28	1.70	0.00334	8.44		3.93	1.93
	L0061530	638603.31	4269239.72	6.85	1.70	0.00334	8.44		3.93	1.93
	L0061531	638603.32	4269231.28	6.42	1.70	0.00334	8.44		3.93	1.93
	L0061532	638603.33	4269222.84	6.10	1.70	0.00334	8.44		3.93	1.93
	L0061533	638603.34	4269214.40	6.10	1.70	0.00334	8.44		3.93	1.93
	L0061534	638603.35	4269205.96	6.10	1.70	0.00334	8.44		3.93	1.93
	L0061535	638603.36	4269197.52	6.10	1.70	0.00334	8.44		3.93	1.93
	L0061536	638603.37	4269189.08	6.10	1.70	0.00334	8.44		3.93	1.93
	L0061537	638603.38	4269180.64	6.10	1.70	0.00334	8.44		3.93	1.93
	L0061538	638603.40	4269172.20	6.10	1.70	0.00334	8.44		3.93	1.93
	L0061539	638603.41	4269163.76	6.10	1.70	0.00334	8.44		3.93	1.93
	L0061540	638603.42	4269155.32	6.10	1.70	0.00334	8.44		3.93	1.93
	L0061541	638603.43	4269146.88	6.10	1.70	0.00334	8.44		3.93	1.93
	L0061542	638603.44	4269138.44	6.10	1.70	0.00334	8.44		3.93	1.93
	L0061543	638603.45	4269130.00	6.35	1.70	0.00334	8.44		3.93	1.93
	L0061544	638603.46	4269121.56	6.77	1.70	0.00334	8.44		3.93	1.93
	L0061545	638603.47	4269113.12	7.20	1.70	0.00334	8.44		3.93	1.93
	L0061546	638603.48	4269104.68	7.62	1.70	0.00334	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
STH_SLINE3	L0061547	638603.49	4269096.24	7.71	1.70	0.00334	8.44		3.93	1.93
	L0061548	638603.50	4269087.80	7.79	1.70	0.00334	8.44		3.93	1.93
	L0061549	638603.51	4269079.36	7.88	1.70	0.00334	8.44		3.93	1.93
	L0061550	638603.52	4269070.92	7.97	1.70	0.00334	8.44		3.93	1.93
	L0061551	638603.53	4269062.48	8.05	1.70	0.00334	8.44		3.93	1.93
	L0061552	638603.54	4269054.04	8.14	1.70	0.00334	8.44		3.93	1.93
	L0061553	638603.55	4269045.60	8.22	1.70	0.00334	8.44		3.93	1.93
	L0061554	638603.56	4269037.16	8.39	1.70	0.00334	8.44		3.93	1.93
	L0061555	638603.57	4269028.72	8.56	1.70	0.00334	8.44		3.93	1.93
	L0061556	638603.58	4269020.28	8.73	1.70	0.00334	8.44		3.93	1.93
	L0061557	638603.59	4269011.84	8.87	1.70	0.00334	8.44		3.93	1.93
	L0061558	638603.60	4269003.40	8.96	1.70	0.00334	8.44		3.93	1.93
	L0061559	638603.61	4268994.96	9.04	1.70	0.00334	8.44		3.93	1.93
	L0061560	638603.62	4268986.52	9.13	1.70	0.00334	8.44		3.93	1.93
	L0061561	638603.63	4268978.08	9.35	1.70	0.00334	8.44		3.93	1.93
	L0061562	638603.64	4268969.64	9.61	1.70	0.00334	8.44		3.93	1.93
	L0061563	638603.65	4268961.20	9.86	1.70	0.00334	8.44		3.93	1.93
	L0061564	638603.66	4268952.76	10.18	1.70	0.00334	8.44		3.93	1.93
	L0061565	638603.67	4268944.32	10.70	1.70	0.00334	8.44		3.93	1.93
	L0061566	638603.68	4268935.88	11.22	1.70	0.00334	8.44		3.93	1.93
	L0061567	638603.69	4268927.44	11.73	1.70	0.00334	8.44		3.93	1.93
	L0061568	638603.70	4268919.00	11.94	1.70	0.00334	8.44		3.93	1.93
	L0061569	638603.71	4268910.56	12.03	1.70	0.00334	8.44		3.93	1.93
	L0061570	638603.73	4268902.12	12.12	1.70	0.00334	8.44		3.93	1.93
	L0061571	638603.74	4268893.68	12.19	1.70	0.00334	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
STH_SLINE3	L0061572	638603.75	4268885.24	12.19	1.70	0.00334	8.44		3.93	1.93
	L0061573	638603.76	4268876.80	12.19	1.70	0.00334	8.44		3.93	1.93
	L0061574	638603.77	4268868.36	12.19	1.70	0.00334	8.44		3.93	1.93
	L0061575	638603.78	4268859.92	12.19	1.70	0.00334	8.44		3.93	1.93
	L0061576	638603.79	4268851.48	12.19	1.70	0.00334	8.44		3.93	1.93
	L0061577	638603.80	4268843.04	12.19	1.70	0.00334	8.44		3.93	1.93
	L0061578	638603.81	4268834.60	12.19	1.70	0.00334	8.44		3.93	1.93
	L0061579	638603.82	4268826.16	12.10	1.70	0.00334	8.44		3.93	1.93
	L0061580	638603.83	4268817.72	12.01	1.70	0.00334	8.44		3.93	1.93
	L0061581	638603.84	4268809.28	11.93	1.70	0.00334	8.44		3.93	1.93
	L0061582	638603.85	4268800.84	11.84	1.70	0.00334	8.44		3.93	1.93
	L0061583	638603.86	4268792.40	11.76	1.70	0.00334	8.44		3.93	1.93
	L0061584	638603.87	4268783.96	11.67	1.70	0.00334	8.44		3.93	1.93
	L0061585	638603.88	4268775.52	11.59	1.70	0.00334	8.44		3.93	1.93
	L0061586	638603.89	4268767.08	11.50	1.70	0.00334	8.44		3.93	1.93
	L0061587	638603.90	4268758.64	11.42	1.70	0.00334	8.44		3.93	1.93
	L0061588	638603.91	4268750.20	11.33	1.70	0.00334	8.44		3.93	1.93
	L0061589	638603.92	4268741.76	11.28	1.70	0.00334	8.44		3.93	1.93
	L0061590	638603.93	4268733.32	11.28	1.70	0.00334	8.44		3.93	1.93
	L0061591	638603.94	4268724.88	11.28	1.70	0.00334	8.44		3.93	1.93
	L0061592	638603.95	4268716.44	11.28	1.70	0.00334	8.44		3.93	1.93
	L0061593	638603.96	4268708.00	11.21	1.70	0.00334	8.44		3.93	1.93
	L0061594	638603.97	4268699.56	11.12	1.70	0.00334	8.44		3.93	1.93
	L0061595	638603.98	4268691.12	11.04	1.70	0.00334	8.44		3.93	1.93
	L0061596	638603.99	4268682.68	10.97	1.70	0.00334	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
STH_SLINE3	L0061597	638604.00	4268674.24	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061598	638604.01	4268665.80	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061599	638604.02	4268657.36	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061600	638604.03	4268648.92	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061601	638604.04	4268640.48	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061602	638604.06	4268632.04	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061603	638604.07	4268623.60	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061604	638604.08	4268615.16	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061605	638604.09	4268606.72	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061606	638604.10	4268598.28	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061607	638604.11	4268589.84	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061608	638604.12	4268581.40	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061609	638604.13	4268572.96	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061610	638604.14	4268564.52	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061611	638604.15	4268556.08	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061612	638604.16	4268547.64	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061613	638604.17	4268539.20	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061614	638604.18	4268530.76	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061615	638604.19	4268522.32	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061616	638604.20	4268513.88	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061617	638604.21	4268505.44	10.97	1.70	0.00334	8.44		3.93	1.93
	L0061618	638604.22	4268497.00	10.89	1.70	0.00334	8.44		3.93	1.93
	L0061619	638604.23	4268488.56	10.81	1.70	0.00334	8.44		3.93	1.93
	L0061620	638604.24	4268480.12	10.72	1.70	0.00334	8.44		3.93	1.93
	L0061621	638604.25	4268471.68	10.67	1.70	0.00334	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068446	635613.08	4271688.74	7.91	0.00	0.00170	8.44		3.93	1.93
	L0068447	635619.65	4271683.45	7.93	0.00	0.00170	8.44		3.93	1.93
	L0068448	635626.22	4271678.16	7.94	0.00	0.00170	8.44		3.93	1.93
	L0068449	635632.80	4271672.86	7.93	0.00	0.00170	8.44		3.93	1.93
	L0068450	635639.37	4271667.57	7.90	0.00	0.00170	8.44		3.93	1.93
	L0068451	635645.95	4271662.28	7.89	0.00	0.00170	8.44		3.93	1.93
	L0068452	635652.49	4271656.95	7.91	0.00	0.00170	8.44		3.93	1.93
	L0068453	635658.85	4271651.40	7.93	0.00	0.00170	8.44		3.93	1.93
	L0068454	635665.22	4271645.86	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068455	635671.59	4271640.32	7.89	0.00	0.00170	8.44		3.93	1.93
	L0068456	635677.95	4271634.78	7.88	0.00	0.00170	8.44		3.93	1.93
	L0068457	635684.44	4271629.39	7.89	0.00	0.00170	8.44		3.93	1.93
	L0068458	635691.02	4271624.10	7.93	0.00	0.00170	8.44		3.93	1.93
	L0068459	635697.59	4271618.80	7.95	0.00	0.00170	8.44		3.93	1.93
	L0068460	635704.17	4271613.51	7.94	0.00	0.00170	8.44		3.93	1.93
	L0068461	635710.74	4271608.22	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068462	635717.32	4271602.93	7.91	0.00	0.00170	8.44		3.93	1.93
	L0068463	635723.91	4271597.66	7.90	0.00	0.00170	8.44		3.93	1.93
	L0068464	635731.08	4271593.21	7.94	0.00	0.00170	8.44		3.93	1.93
	L0068465	635738.26	4271588.77	7.99	0.00	0.00170	8.44		3.93	1.93
	L0068466	635745.43	4271584.32	8.03	0.00	0.00170	8.44		3.93	1.93
	L0068467	635752.60	4271579.87	8.08	0.00	0.00170	8.44		3.93	1.93
	L0068468	635759.77	4271575.42	8.06	0.00	0.00170	8.44		3.93	1.93
	L0068469	635767.11	4271571.25	8.03	0.00	0.00170	8.44		3.93	1.93
	L0068470	635774.61	4271567.39	7.99	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068471	635782.11	4271563.52	7.96	0.00	0.00170	8.44		3.93	1.93
	L0068472	635789.66	4271559.75	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068473	635797.47	4271556.55	7.87	0.00	0.00170	8.44		3.93	1.93
	L0068474	635805.28	4271553.35	7.83	0.00	0.00170	8.44		3.93	1.93
	L0068475	635813.09	4271550.15	7.78	0.00	0.00170	8.44		3.93	1.93
	L0068476	635820.90	4271546.95	7.80	0.00	0.00170	8.44		3.93	1.93
	L0068477	635828.71	4271543.76	7.84	0.00	0.00170	8.44		3.93	1.93
	L0068478	635836.52	4271540.56	7.87	0.00	0.00170	8.44		3.93	1.93
	L0068479	635844.33	4271537.36	7.90	0.00	0.00170	8.44		3.93	1.93
	L0068480	635852.14	4271534.17	7.85	0.00	0.00170	8.44		3.93	1.93
	L0068481	635859.97	4271531.00	7.80	0.00	0.00170	8.44		3.93	1.93
	L0068482	635867.79	4271527.84	7.75	0.00	0.00170	8.44		3.93	1.93
	L0068483	635875.61	4271524.67	7.72	0.00	0.00170	8.44		3.93	1.93
	L0068484	635883.43	4271521.50	7.76	0.00	0.00170	8.44		3.93	1.93
	L0068485	635891.26	4271518.33	7.79	0.00	0.00170	8.44		3.93	1.93
	L0068486	635899.08	4271515.16	7.82	0.00	0.00170	8.44		3.93	1.93
	L0068487	635907.04	4271512.39	7.84	0.00	0.00170	8.44		3.93	1.93
	L0068488	635915.13	4271509.96	7.85	0.00	0.00170	8.44		3.93	1.93
	L0068489	635923.21	4271507.54	7.88	0.00	0.00170	8.44		3.93	1.93
	L0068490	635931.29	4271505.11	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068491	635939.38	4271502.68	7.87	0.00	0.00170	8.44		3.93	1.93
	L0068492	635947.46	4271500.25	7.81	0.00	0.00170	8.44		3.93	1.93
	L0068493	635955.54	4271497.83	7.76	0.00	0.00170	8.44		3.93	1.93
	L0068494	635963.63	4271495.40	7.72	0.00	0.00170	8.44		3.93	1.93
	L0068495	635971.71	4271492.97	7.74	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068496	635979.79	4271490.54	7.77	0.00	0.00170	8.44		3.93	1.93
	L0068497	635987.88	4271488.12	7.79	0.00	0.00170	8.44		3.93	1.93
	L0068498	635995.99	4271485.81	7.81	0.00	0.00170	8.44		3.93	1.93
	L0068499	636004.22	4271483.94	7.83	0.00	0.00170	8.44		3.93	1.93
	L0068500	636012.45	4271482.06	7.85	0.00	0.00170	8.44		3.93	1.93
	L0068501	636020.68	4271480.19	7.87	0.00	0.00170	8.44		3.93	1.93
	L0068502	636028.91	4271478.31	7.88	0.00	0.00170	8.44		3.93	1.93
	L0068503	636037.14	4271476.44	7.90	0.00	0.00170	8.44		3.93	1.93
	L0068504	636045.37	4271474.57	7.93	0.00	0.00170	8.44		3.93	1.93
	L0068505	636053.60	4271472.69	7.93	0.00	0.00170	8.44		3.93	1.93
	L0068506	636061.84	4271470.87	7.86	0.00	0.00170	8.44		3.93	1.93
	L0068507	636070.14	4271469.35	7.79	0.00	0.00170	8.44		3.93	1.93
	L0068508	636078.44	4271467.82	7.74	0.00	0.00170	8.44		3.93	1.93
	L0068509	636086.74	4271466.30	7.71	0.00	0.00170	8.44		3.93	1.93
	L0068510	636095.04	4271464.78	7.72	0.00	0.00170	8.44		3.93	1.93
	L0068511	636103.35	4271463.26	7.74	0.00	0.00170	8.44		3.93	1.93
	L0068512	636111.65	4271461.74	7.75	0.00	0.00170	8.44		3.93	1.93
	L0068513	636120.02	4271460.72	7.76	0.00	0.00170	8.44		3.93	1.93
	L0068514	636128.40	4271459.70	7.77	0.00	0.00170	8.44		3.93	1.93
	L0068515	636136.78	4271458.68	7.79	0.00	0.00170	8.44		3.93	1.93
	L0068516	636145.16	4271457.66	7.72	0.00	0.00170	8.44		3.93	1.93
	L0068517	636153.54	4271456.64	7.24	0.00	0.00170	8.44		3.93	1.93
	L0068518	636161.92	4271455.61	6.84	0.00	0.00170	8.44		3.93	1.93
	L0068519	636170.28	4271454.48	6.55	0.00	0.00170	8.44		3.93	1.93
	L0068520	636178.63	4271453.26	6.77	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068521	636186.98	4271452.03	7.24	0.00	0.00170	8.44		3.93	1.93
	L0068522	636195.33	4271450.80	7.61	0.00	0.00170	8.44		3.93	1.93
	L0068523	636203.68	4271449.57	7.87	0.00	0.00170	8.44		3.93	1.93
	L0068524	636212.03	4271448.35	7.89	0.00	0.00170	8.44		3.93	1.93
	L0068525	636220.38	4271447.12	7.90	0.00	0.00170	8.44		3.93	1.93
	L0068526	636228.73	4271445.89	7.91	0.00	0.00170	8.44		3.93	1.93
	L0068527	636237.06	4271444.54	7.93	0.00	0.00170	8.44		3.93	1.93
	L0068528	636245.39	4271443.19	7.94	0.00	0.00170	8.44		3.93	1.93
	L0068529	636253.72	4271441.84	7.94	0.00	0.00170	8.44		3.93	1.93
	L0068530	636262.05	4271440.49	7.93	0.00	0.00170	8.44		3.93	1.93
	L0068531	636270.39	4271439.14	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068532	636278.71	4271437.75	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068533	636287.01	4271436.20	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068534	636295.30	4271434.65	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068535	636303.60	4271433.10	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068536	636311.90	4271431.54	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068537	636320.21	4271430.12	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068538	636328.56	4271428.84	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068539	636336.90	4271427.56	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068540	636345.24	4271426.28	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068541	636353.58	4271425.00	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068542	636361.93	4271423.72	7.90	0.00	0.00170	8.44		3.93	1.93
	L0068543	636370.27	4271422.44	7.88	0.00	0.00170	8.44		3.93	1.93
	L0068544	636378.63	4271421.36	7.87	0.00	0.00170	8.44		3.93	1.93
	L0068545	636387.06	4271420.85	7.86	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068546	636395.48	4271420.34	7.87	0.00	0.00170	8.44		3.93	1.93
	L0068547	636403.91	4271419.83	7.87	0.00	0.00170	8.44		3.93	1.93
	L0068548	636412.33	4271419.31	7.88	0.00	0.00170	8.44		3.93	1.93
	L0068549	636420.76	4271418.85	7.88	0.00	0.00170	8.44		3.93	1.93
	L0068550	636429.20	4271418.77	7.89	0.00	0.00170	8.44		3.93	1.93
	L0068551	636437.64	4271418.70	7.89	0.00	0.00170	8.44		3.93	1.93
	L0068552	636446.07	4271418.63	7.89	0.00	0.00170	8.44		3.93	1.93
	L0068553	636454.51	4271418.55	7.89	0.00	0.00170	8.44		3.93	1.93
	L0068554	636462.95	4271418.48	7.89	0.00	0.00170	8.44		3.93	1.93
	L0068555	636471.39	4271418.40	7.89	0.00	0.00170	8.44		3.93	1.93
	L0068556	636479.83	4271418.33	7.90	0.00	0.00170	8.44		3.93	1.93
	L0068557	636488.27	4271418.25	7.91	0.00	0.00170	8.44		3.93	1.93
	L0068558	636496.71	4271418.34	7.92	0.00	0.00170	8.44		3.93	1.93
	L0068559	636505.12	4271418.98	7.97	0.00	0.00170	8.44		3.93	1.93
	L0068560	636513.54	4271419.61	8.30	0.00	0.00170	8.44		3.93	1.93
	L0068561	636521.96	4271420.24	8.62	0.00	0.00170	8.44		3.93	1.93
	L0068562	636530.37	4271420.88	8.94	0.00	0.00170	8.44		3.93	1.93
	L0068563	636538.79	4271421.51	9.09	0.00	0.00170	8.44		3.93	1.93
	L0068564	636547.20	4271422.15	9.10	0.00	0.00170	8.44		3.93	1.93
	L0068565	636555.62	4271422.78	9.12	0.00	0.00170	8.44		3.93	1.93
	L0068566	636564.04	4271423.42	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068567	636572.45	4271424.05	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068568	636580.87	4271424.69	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068569	636589.28	4271425.32	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068570	636597.69	4271426.10	9.14	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068571	636606.09	4271426.92	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068572	636614.49	4271427.74	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068573	636622.89	4271428.56	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068574	636631.29	4271429.38	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068575	636639.69	4271430.20	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068576	636648.09	4271431.02	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068577	636656.49	4271431.85	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068578	636664.88	4271432.77	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068579	636673.26	4271433.73	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068580	636681.65	4271434.69	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068581	636690.03	4271435.65	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068582	636698.42	4271436.61	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068583	636706.80	4271437.57	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068584	636715.19	4271438.53	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068585	636723.57	4271439.49	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068586	636731.96	4271440.45	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068587	636740.37	4271441.17	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068588	636748.78	4271441.84	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068589	636757.19	4271442.51	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068590	636765.61	4271443.18	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068591	636774.02	4271443.85	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068592	636782.43	4271444.51	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068593	636790.85	4271445.18	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068594	636799.26	4271445.92	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068595	636807.66	4271446.66	9.14	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068596	636816.07	4271447.40	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068597	636824.48	4271448.14	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068598	636832.89	4271448.88	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068599	636841.29	4271449.63	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068600	636849.70	4271450.37	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068601	636858.11	4271451.11	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068602	636866.51	4271451.85	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068603	636874.92	4271452.60	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068604	636883.32	4271453.43	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068605	636891.72	4271454.26	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068606	636900.12	4271455.09	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068607	636908.52	4271455.92	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068608	636916.92	4271456.75	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068609	636925.34	4271457.29	9.15	0.00	0.00170	8.44		3.93	1.93
	L0068610	636933.77	4271457.60	9.20	0.00	0.00170	8.44		3.93	1.93
	L0068611	636942.20	4271457.91	9.25	0.00	0.00170	8.44		3.93	1.93
	L0068612	636950.64	4271458.22	9.29	0.00	0.00170	8.44		3.93	1.93
	L0068613	636959.04	4271458.07	9.37	0.00	0.00170	8.44		3.93	1.93
	L0068614	636967.37	4271456.67	9.47	0.00	0.00170	8.44		3.93	1.93
	L0068615	636975.69	4271455.28	9.56	0.00	0.00170	8.44		3.93	1.93
	L0068616	636984.02	4271453.88	9.66	0.00	0.00170	8.44		3.93	1.93
	L0068617	636992.34	4271452.47	9.70	0.00	0.00170	8.44		3.93	1.93
	L0068618	637000.34	4271449.79	9.73	0.00	0.00170	8.44		3.93	1.93
	L0068619	637008.34	4271447.11	9.75	0.00	0.00170	8.44		3.93	1.93
	L0068620	637016.34	4271444.43	9.78	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068621	637024.27	4271441.54	9.89	0.00	0.00170	8.44		3.93	1.93
	L0068622	637032.11	4271438.40	10.00	0.00	0.00170	8.44		3.93	1.93
	L0068623	637039.94	4271435.26	10.12	0.00	0.00170	8.44		3.93	1.93
	L0068624	637047.77	4271432.12	10.23	0.00	0.00170	8.44		3.93	1.93
	L0068625	637055.61	4271428.98	10.33	0.00	0.00170	8.44		3.93	1.93
	L0068626	637063.44	4271425.84	10.40	0.00	0.00170	8.44		3.93	1.93
	L0068627	637070.23	4271420.83	10.41	0.00	0.00170	8.44		3.93	1.93
	L0068628	637076.99	4271415.79	10.40	0.00	0.00170	8.44		3.93	1.93
	L0068629	637083.76	4271410.75	10.41	0.00	0.00170	8.44		3.93	1.93
	L0068630	637090.53	4271405.70	10.39	0.00	0.00170	8.44		3.93	1.93
	L0068631	637097.30	4271400.66	10.34	0.00	0.00170	8.44		3.93	1.93
	L0068632	637103.85	4271395.34	10.27	0.00	0.00170	8.44		3.93	1.93
	L0068633	637110.33	4271389.93	10.14	0.00	0.00170	8.44		3.93	1.93
	L0068634	637116.80	4271384.51	10.05	0.00	0.00170	8.44		3.93	1.93
	L0068635	637123.28	4271379.10	10.00	0.00	0.00170	8.44		3.93	1.93
	L0068636	637129.75	4271373.69	9.94	0.00	0.00170	8.44		3.93	1.93
	L0068637	637136.22	4271368.27	9.86	0.00	0.00170	8.44		3.93	1.93
	L0068638	637142.84	4271363.04	9.76	0.00	0.00170	8.44		3.93	1.93
	L0068639	637149.54	4271357.90	9.74	0.00	0.00170	8.44		3.93	1.93
	L0068640	637156.24	4271352.76	9.77	0.00	0.00170	8.44		3.93	1.93
	L0068641	637162.19	4271347.53	9.82	0.00	0.00170	8.44		3.93	1.93
	L0068642	637156.98	4271340.89	9.86	0.00	0.00170	8.44		3.93	1.93
	L0068643	637151.77	4271334.25	9.88	0.00	0.00170	8.44		3.93	1.93
	L0068644	637146.56	4271327.61	9.87	0.00	0.00170	8.44		3.93	1.93
	L0068645	637141.36	4271320.96	9.83	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068646	637136.15	4271314.32	9.78	0.00	0.00170	8.44		3.93	1.93
	L0068647	637130.94	4271307.68	9.75	0.00	0.00170	8.44		3.93	1.93
	L0068648	637125.73	4271301.04	9.75	0.00	0.00170	8.44		3.93	1.93
	L0068649	637120.52	4271294.40	9.75	0.00	0.00170	8.44		3.93	1.93
	L0068650	637115.32	4271287.76	9.75	0.00	0.00170	8.44		3.93	1.93
	L0068651	637110.11	4271281.12	9.75	0.00	0.00170	8.44		3.93	1.93
	L0068652	637104.90	4271274.47	9.75	0.00	0.00170	8.44		3.93	1.93
	L0068653	637099.69	4271267.83	9.71	0.00	0.00170	8.44		3.93	1.93
	L0068654	637094.48	4271261.19	9.63	0.00	0.00170	8.44		3.93	1.93
	L0068655	637089.14	4271254.66	9.55	0.00	0.00170	8.44		3.93	1.93
	L0068656	637083.63	4271248.27	9.49	0.00	0.00170	8.44		3.93	1.93
	L0068657	637078.12	4271241.88	9.46	0.00	0.00170	8.44		3.93	1.93
	L0068658	637072.61	4271235.48	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068659	637067.10	4271229.09	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068660	637061.59	4271222.70	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068661	637056.08	4271216.30	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068662	637050.57	4271209.91	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068663	637045.06	4271203.52	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068664	637039.55	4271197.13	9.40	0.00	0.00170	8.44		3.93	1.93
	L0068665	637034.04	4271190.73	9.35	0.00	0.00170	8.44		3.93	1.93
	L0068666	637028.77	4271184.14	9.29	0.00	0.00170	8.44		3.93	1.93
	L0068667	637023.87	4271177.28	9.24	0.00	0.00170	8.44		3.93	1.93
	L0068668	637018.97	4271170.41	9.19	0.00	0.00170	8.44		3.93	1.93
	L0068669	637014.06	4271163.54	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068670	637009.16	4271156.67	9.14	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
NS_SLINE1	L0068671	637004.25	4271149.80	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068672	636999.35	4271142.93	9.15	0.00	0.00170	8.44		3.93	1.93
	L0068673	636994.45	4271136.06	9.18	0.00	0.00170	8.44		3.93	1.93
	L0068674	636989.54	4271129.19	9.17	0.00	0.00170	8.44		3.93	1.93
	L0068675	636984.02	4271122.82	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068676	636978.34	4271116.58	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068677	636972.66	4271110.34	9.17	0.00	0.00170	8.44		3.93	1.93
	L0068678	636966.97	4271104.10	9.19	0.00	0.00170	8.44		3.93	1.93
	L0068679	636961.29	4271097.86	9.19	0.00	0.00170	8.44		3.93	1.93
	L0068680	636955.61	4271091.62	9.16	0.00	0.00170	8.44		3.93	1.93
	L0068681	636949.93	4271085.38	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068682	636944.25	4271079.14	9.20	0.00	0.00170	8.44		3.93	1.93
	L0068683	636938.61	4271072.86	9.27	0.00	0.00170	8.44		3.93	1.93
	L0068684	636933.18	4271066.39	9.33	0.00	0.00170	8.44		3.93	1.93
	L0068685	636927.76	4271059.93	9.40	0.00	0.00170	8.44		3.93	1.93
	L0068686	636922.33	4271053.46	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068687	636916.91	4271047.00	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068688	636911.48	4271040.53	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068689	636906.05	4271034.07	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068690	636900.63	4271027.60	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068691	636895.20	4271021.14	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068692	636889.78	4271014.67	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068693	636884.35	4271008.21	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068694	636878.93	4271001.74	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068695	636873.50	4270995.27	9.45	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068696	636868.08	4270988.81	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068697	636862.65	4270982.34	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068698	636857.23	4270975.88	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068699	636851.80	4270969.41	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068700	636846.46	4270962.88	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068701	636841.13	4270956.34	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068702	636835.79	4270949.80	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068703	636830.46	4270943.26	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068704	636825.13	4270936.71	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068705	636819.79	4270930.17	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068706	636814.46	4270923.63	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068707	636809.12	4270917.09	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068708	636803.79	4270910.55	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068709	636798.45	4270904.01	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068710	636793.12	4270897.47	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068711	636787.78	4270890.93	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068712	636782.45	4270884.39	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068713	636777.12	4270877.85	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068714	636771.78	4270871.31	9.43	0.00	0.00170	8.44		3.93	1.93
	L0068715	636766.45	4270864.77	9.37	0.00	0.00170	8.44		3.93	1.93
	L0068716	636761.11	4270858.23	9.32	0.00	0.00170	8.44		3.93	1.93
	L0068717	636755.78	4270851.69	9.26	0.00	0.00170	8.44		3.93	1.93
	L0068718	636750.44	4270845.15	9.21	0.00	0.00170	8.44		3.93	1.93
	L0068719	636745.09	4270838.62	9.16	0.00	0.00170	8.44		3.93	1.93
	L0068720	636739.72	4270832.11	9.14	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
NS_SLINE1	L0068721	636734.36	4270825.60	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068722	636728.99	4270819.08	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068723	636723.62	4270812.57	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068724	636718.26	4270806.05	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068725	636712.89	4270799.54	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068726	636707.52	4270793.02	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068727	636702.16	4270786.51	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068728	636696.79	4270780.00	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068729	636691.32	4270773.57	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068730	636685.81	4270767.18	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068731	636680.29	4270760.79	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068732	636674.78	4270754.40	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068733	636669.26	4270748.02	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068734	636663.74	4270741.63	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068735	636658.23	4270735.24	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068736	636652.71	4270728.85	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068737	636647.20	4270722.46	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068738	636641.68	4270716.07	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068739	636636.17	4270709.69	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068740	636630.65	4270703.30	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068741	636625.13	4270696.91	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068742	636619.62	4270690.52	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068743	636614.24	4270684.02	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068744	636609.23	4270677.26	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068745	636605.27	4270669.81	9.14	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068746	636601.30	4270662.36	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068747	636597.34	4270654.91	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068748	636593.58	4270647.36	9.15	0.00	0.00170	8.44		3.93	1.93
	L0068749	636589.90	4270639.76	9.25	0.00	0.00170	8.44		3.93	1.93
	L0068750	636586.62	4270631.99	9.45	0.00	0.00170	8.44		3.93	1.93
	L0068751	636583.51	4270624.14	9.75	0.00	0.00170	8.44		3.93	1.93
	L0068752	636580.91	4270616.12	10.03	0.00	0.00170	8.44		3.93	1.93
	L0068753	636578.46	4270608.04	10.29	0.00	0.00170	8.44		3.93	1.93
	L0068754	636576.00	4270599.97	10.46	0.00	0.00170	8.44		3.93	1.93
	L0068755	636574.01	4270591.78	10.55	0.00	0.00170	8.44		3.93	1.93
	L0068756	636572.45	4270583.48	10.62	0.00	0.00170	8.44		3.93	1.93
	L0068757	636570.82	4270575.20	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068758	636569.06	4270566.95	10.60	0.00	0.00170	8.44		3.93	1.93
	L0068759	636567.30	4270558.69	10.52	0.00	0.00170	8.44		3.93	1.93
	L0068760	636565.87	4270550.39	10.43	0.00	0.00170	8.44		3.93	1.93
	L0068761	636565.14	4270541.98	10.38	0.00	0.00170	8.44		3.93	1.93
	L0068762	636564.40	4270533.57	10.37	0.00	0.00170	8.44		3.93	1.93
	L0068763	636563.67	4270525.17	10.36	0.00	0.00170	8.44		3.93	1.93
	L0068764	636562.94	4270516.76	10.36	0.00	0.00170	8.44		3.93	1.93
	L0068765	636562.43	4270508.33	10.36	0.00	0.00170	8.44		3.93	1.93
	L0068766	636561.99	4270499.91	10.36	0.00	0.00170	8.44		3.93	1.93
	L0068767	636561.56	4270491.48	10.36	0.00	0.00170	8.44		3.93	1.93
	L0068768	636561.12	4270483.05	10.36	0.00	0.00170	8.44		3.93	1.93
	L0068769	636561.61	4270474.67	10.36	0.00	0.00170	8.44		3.93	1.93
	L0068770	636563.01	4270466.35	10.36	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

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NS_SLINE1	L0068771	636564.42	4270458.03	10.37	0.00	0.00170	8.44		3.93	1.93
	L0068772	636566.14	4270449.78	10.43	0.00	0.00170	8.44		3.93	1.93
	L0068773	636568.35	4270441.63	10.52	0.00	0.00170	8.44		3.93	1.93
	L0068774	636570.55	4270433.48	10.60	0.00	0.00170	8.44		3.93	1.93
	L0068775	636572.75	4270425.33	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068776	636574.95	4270417.19	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068777	636577.15	4270409.04	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068778	636579.79	4270401.03	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068779	636582.90	4270393.19	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068780	636586.02	4270385.35	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068781	636589.14	4270377.50	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068782	636592.25	4270369.66	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068783	636595.37	4270361.82	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068784	636598.49	4270353.97	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068785	636602.46	4270346.59	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068786	636607.34	4270339.71	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068787	636612.22	4270332.82	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068788	636617.11	4270325.94	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068789	636621.99	4270319.06	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068790	636627.68	4270312.85	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068791	636633.57	4270306.81	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068792	636639.47	4270300.77	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068793	636645.36	4270294.73	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068794	636651.26	4270288.69	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068795	636657.84	4270283.40	10.67	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068796	636664.42	4270278.11	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068797	636671.27	4270273.22	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068798	636678.51	4270268.88	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068799	636685.75	4270264.53	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068800	636692.98	4270260.19	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068801	636700.29	4270255.97	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068802	636707.61	4270251.76	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068803	636714.92	4270247.55	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068804	636722.24	4270243.34	10.68	0.00	0.00170	8.44		3.93	1.93
	L0068805	636729.55	4270239.13	10.70	0.00	0.00170	8.44		3.93	1.93
	L0068806	636736.74	4270234.71	10.69	0.00	0.00170	8.44		3.93	1.93
	L0068807	636743.83	4270230.14	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068808	636750.93	4270225.57	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068809	636757.92	4270220.88	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068810	636763.43	4270214.49	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068811	636768.95	4270208.10	10.68	0.00	0.00170	8.44		3.93	1.93
	L0068812	636774.46	4270201.71	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068813	636779.98	4270195.32	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068814	636785.19	4270188.70	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068815	636790.14	4270181.86	10.68	0.00	0.00170	8.44		3.93	1.93
	L0068816	636795.09	4270175.02	10.70	0.00	0.00170	8.44		3.93	1.93
	L0068817	636800.04	4270168.19	10.69	0.00	0.00170	8.44		3.93	1.93
	L0068818	636804.99	4270161.35	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068819	636809.86	4270154.48	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068820	636812.10	4270146.34	10.67	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068821	636814.34	4270138.20	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068822	636816.58	4270130.06	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068823	636818.82	4270121.93	10.68	0.00	0.00170	8.44		3.93	1.93
	L0068824	636821.06	4270113.79	10.72	0.00	0.00170	8.44		3.93	1.93
	L0068825	636823.30	4270105.65	10.74	0.00	0.00170	8.44		3.93	1.93
	L0068826	636825.54	4270097.51	10.75	0.00	0.00170	8.44		3.93	1.93
	L0068827	636827.78	4270089.38	10.73	0.00	0.00170	8.44		3.93	1.93
	L0068828	636830.02	4270081.24	10.71	0.00	0.00170	8.44		3.93	1.93
	L0068829	636832.26	4270073.10	10.69	0.00	0.00170	8.44		3.93	1.93
	L0068830	636834.50	4270064.96	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068831	636836.74	4270056.83	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068832	636838.97	4270048.69	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068833	636841.21	4270040.55	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068834	636843.45	4270032.41	10.69	0.00	0.00170	8.44		3.93	1.93
	L0068835	636845.69	4270024.28	10.73	0.00	0.00170	8.44		3.93	1.93
	L0068836	636847.93	4270016.14	10.77	0.00	0.00170	8.44		3.93	1.93
	L0068837	636850.17	4270008.00	10.79	0.00	0.00170	8.44		3.93	1.93
	L0068838	636852.41	4269999.86	10.84	0.00	0.00170	8.44		3.93	1.93
	L0068839	636854.58	4269991.71	10.90	0.00	0.00170	8.44		3.93	1.93
	L0068840	636856.74	4269983.55	10.96	0.00	0.00170	8.44		3.93	1.93
	L0068841	636858.89	4269975.39	11.02	0.00	0.00170	8.44		3.93	1.93
	L0068842	636861.05	4269967.23	11.02	0.00	0.00170	8.44		3.93	1.93
	L0068843	636863.21	4269959.07	10.99	0.00	0.00170	8.44		3.93	1.93
	L0068844	636865.37	4269950.91	10.97	0.00	0.00170	8.44		3.93	1.93
	L0068845	636867.52	4269942.75	11.00	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
NS_SLINE1	L0068846	636869.68	4269934.59	11.14	0.00	0.00170	8.44		3.93	1.93
	L0068847	636872.93	4269926.90	11.32	0.00	0.00170	8.44		3.93	1.93
	L0068848	636877.41	4269919.75	11.57	0.00	0.00170	8.44		3.93	1.93
	L0068849	636881.89	4269912.60	11.79	0.00	0.00170	8.44		3.93	1.93
	L0068850	636886.37	4269905.45	11.84	0.00	0.00170	8.44		3.93	1.93
	L0068851	636890.85	4269898.29	11.91	0.00	0.00170	8.44		3.93	1.93
	L0068852	636895.33	4269891.14	11.94	0.00	0.00170	8.44		3.93	1.93
	L0068853	636899.81	4269883.99	11.84	0.00	0.00170	8.44		3.93	1.93
	L0068854	636904.29	4269876.84	11.89	0.00	0.00170	8.44		3.93	1.93
	L0068855	636908.77	4269869.68	11.97	0.00	0.00170	8.44		3.93	1.93
	L0068856	636913.26	4269862.53	12.06	0.00	0.00170	8.44		3.93	1.93
	L0068857	636917.74	4269855.38	12.18	0.00	0.00170	8.44		3.93	1.93
	L0068858	636922.23	4269848.65	12.13	0.00	0.00170	8.44		3.93	1.93
	L0068859	636927.03	4269855.59	12.18	0.00	0.00170	8.44		3.93	1.93
	L0068860	636931.83	4269862.53	12.08	0.00	0.00170	8.44		3.93	1.93
	L0068861	636936.64	4269869.47	12.02	0.00	0.00170	8.44		3.93	1.93
	L0068862	636941.44	4269876.41	12.01	0.00	0.00170	8.44		3.93	1.93
	L0068863	636946.24	4269883.35	12.04	0.00	0.00170	8.44		3.93	1.93
	L0068864	636951.05	4269890.29	12.14	0.00	0.00170	8.44		3.93	1.93
	L0068865	636955.85	4269897.23	12.18	0.00	0.00170	8.44		3.93	1.93
	L0068866	636960.65	4269904.17	12.15	0.00	0.00170	8.44		3.93	1.93
	L0068867	636965.46	4269911.11	12.09	0.00	0.00170	8.44		3.93	1.93
	L0068868	636970.26	4269918.05	12.01	0.00	0.00170	8.44		3.93	1.93
	L0068869	636975.06	4269924.99	11.95	0.00	0.00170	8.44		3.93	1.93
	L0068870	636980.97	4269930.94	11.90	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068871	636987.36	4269936.45	11.83	0.00	0.00170	8.44		3.93	1.93
	L0068872	636993.76	4269941.96	11.70	0.00	0.00170	8.44		3.93	1.93
	L0068873	637000.15	4269947.46	11.51	0.00	0.00170	8.44		3.93	1.93
	L0068874	637006.55	4269952.97	11.31	0.00	0.00170	8.44		3.93	1.93
	L0068875	637012.95	4269958.48	11.15	0.00	0.00170	8.44		3.93	1.93
	L0068876	637019.34	4269963.98	11.03	0.00	0.00170	8.44		3.93	1.93
	L0068877	637025.74	4269969.49	10.91	0.00	0.00170	8.44		3.93	1.93
	L0068878	637032.14	4269975.00	10.79	0.00	0.00170	8.44		3.93	1.93
	L0068879	637038.53	4269980.50	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068880	637044.93	4269986.01	10.55	0.00	0.00170	8.44		3.93	1.93
	L0068881	637051.32	4269991.52	10.42	0.00	0.00170	8.44		3.93	1.93
	L0068882	637057.72	4269997.02	10.30	0.00	0.00170	8.44		3.93	1.93
	L0068883	637064.12	4270002.53	10.18	0.00	0.00170	8.44		3.93	1.93
	L0068884	637070.51	4270008.04	10.09	0.00	0.00170	8.44		3.93	1.93
	L0068885	637076.91	4270013.54	10.04	0.00	0.00170	8.44		3.93	1.93
	L0068886	637083.30	4270019.05	10.01	0.00	0.00170	8.44		3.93	1.93
	L0068887	637089.70	4270024.55	10.00	0.00	0.00170	8.44		3.93	1.93
	L0068888	637096.10	4270030.06	10.02	0.00	0.00170	8.44		3.93	1.93
	L0068889	637102.49	4270035.57	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068890	637109.89	4270039.41	10.00	0.00	0.00170	8.44		3.93	1.93
	L0068891	637117.75	4270042.49	9.92	0.00	0.00170	8.44		3.93	1.93
	L0068892	637125.61	4270045.57	9.84	0.00	0.00170	8.44		3.93	1.93
	L0068893	637133.46	4270048.66	9.76	0.00	0.00170	8.44		3.93	1.93
	L0068894	637141.32	4270051.74	9.68	0.00	0.00170	8.44		3.93	1.93
	L0068895	637149.18	4270054.83	9.60	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068896	637157.03	4270057.91	9.52	0.00	0.00170	8.44		3.93	1.93
	L0068897	637164.89	4270060.99	9.44	0.00	0.00170	8.44		3.93	1.93
	L0068898	637172.75	4270064.08	9.36	0.00	0.00170	8.44		3.93	1.93
	L0068899	637180.60	4270067.16	9.29	0.00	0.00170	8.44		3.93	1.93
	L0068900	637188.46	4270070.24	9.21	0.00	0.00170	8.44		3.93	1.93
	L0068901	637196.32	4270073.33	9.12	0.00	0.00170	8.44		3.93	1.93
	L0068902	637204.17	4270076.41	9.04	0.00	0.00170	8.44		3.93	1.93
	L0068903	637212.03	4270079.50	8.96	0.00	0.00170	8.44		3.93	1.93
	L0068904	637220.17	4270081.63	8.88	0.00	0.00170	8.44		3.93	1.93
	L0068905	637228.44	4270083.31	8.75	0.00	0.00170	8.44		3.93	1.93
	L0068906	637236.71	4270085.00	8.58	0.00	0.00170	8.44		3.93	1.93
	L0068907	637244.98	4270086.68	8.41	0.00	0.00170	8.44		3.93	1.93
	L0068908	637253.25	4270088.37	8.24	0.00	0.00170	8.44		3.93	1.93
	L0068909	637261.52	4270090.06	8.15	0.00	0.00170	8.44		3.93	1.93
	L0068910	637269.79	4270091.74	8.07	0.00	0.00170	8.44		3.93	1.93
	L0068911	637278.06	4270093.43	7.98	0.00	0.00170	8.44		3.93	1.93
	L0068912	637286.33	4270095.11	7.90	0.00	0.00170	8.44		3.93	1.93
	L0068913	637294.60	4270096.80	7.75	0.00	0.00170	8.44		3.93	1.93
	L0068914	637302.87	4270098.49	7.50	0.00	0.00170	8.44		3.93	1.93
	L0068915	637311.14	4270100.17	7.17	0.00	0.00170	8.44		3.93	1.93
	L0068916	637319.41	4270101.86	6.49	0.00	0.00170	8.44		3.93	1.93
	L0068917	637327.68	4270103.54	5.75	0.00	0.00170	8.44		3.93	1.93
	L0068918	637335.94	4270105.23	5.11	0.00	0.00170	8.44		3.93	1.93
	L0068919	637344.21	4270106.92	4.57	0.00	0.00170	8.44		3.93	1.93
	L0068920	637352.48	4270108.60	4.57	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068921	637360.75	4270110.29	4.57	0.00	0.00170	8.44		3.93	1.93
	L0068922	637369.02	4270111.97	4.57	0.00	0.00170	8.44		3.93	1.93
	L0068923	637377.29	4270113.66	4.57	0.00	0.00170	8.44		3.93	1.93
	L0068924	637385.56	4270115.34	4.57	0.00	0.00170	8.44		3.93	1.93
	L0068925	637393.83	4270117.03	4.57	0.00	0.00170	8.44		3.93	1.93
	L0068926	637402.04	4270119.01	4.57	0.00	0.00170	8.44		3.93	1.93
	L0068927	637410.20	4270121.15	5.31	0.00	0.00170	8.44		3.93	1.93
	L0068928	637418.36	4270123.30	6.30	0.00	0.00170	8.44		3.93	1.93
	L0068929	637426.52	4270125.45	7.32	0.00	0.00170	8.44		3.93	1.93
	L0068930	637434.69	4270127.60	8.19	0.00	0.00170	8.44		3.93	1.93
	L0068931	637442.85	4270129.74	8.34	0.00	0.00170	8.44		3.93	1.93
	L0068932	637451.01	4270131.89	8.51	0.00	0.00170	8.44		3.93	1.93
	L0068933	637459.17	4270134.04	8.71	0.00	0.00170	8.44		3.93	1.93
	L0068934	637467.33	4270136.19	8.89	0.00	0.00170	8.44		3.93	1.93
	L0068935	637475.50	4270138.33	9.01	0.00	0.00170	8.44		3.93	1.93
	L0068936	637483.66	4270140.48	9.14	0.00	0.00170	8.44		3.93	1.93
	L0068937	637491.82	4270142.63	9.29	0.00	0.00170	8.44		3.93	1.93
	L0068938	637499.98	4270144.78	9.31	0.00	0.00170	8.44		3.93	1.93
	L0068939	637508.15	4270146.92	9.26	0.00	0.00170	8.44		3.93	1.93
	L0068940	637516.27	4270149.20	9.21	0.00	0.00170	8.44		3.93	1.93
	L0068941	637524.39	4270151.52	9.15	0.00	0.00170	8.44		3.93	1.93
	L0068942	637532.50	4270153.84	9.32	0.00	0.00170	8.44		3.93	1.93
	L0068943	637540.62	4270156.16	9.50	0.00	0.00170	8.44		3.93	1.93
	L0068944	637548.73	4270158.47	9.67	0.00	0.00170	8.44		3.93	1.93
	L0068945	637556.85	4270160.79	9.84	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068946	637564.96	4270163.11	10.09	0.00	0.00170	8.44		3.93	1.93
	L0068947	637572.50	4270166.79	10.32	0.00	0.00170	8.44		3.93	1.93
	L0068948	637579.80	4270171.02	10.54	0.00	0.00170	8.44		3.93	1.93
	L0068949	637587.11	4270175.26	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068950	637594.41	4270179.49	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068951	637601.71	4270183.72	10.67	0.00	0.00170	8.44		3.93	1.93
	L0068952	637609.02	4270187.95	10.64	0.00	0.00170	8.44		3.93	1.93
	L0068953	637616.32	4270192.18	10.59	0.00	0.00170	8.44		3.93	1.93
	L0068954	637623.29	4270196.92	10.55	0.00	0.00170	8.44		3.93	1.93
	L0068955	637630.11	4270201.89	10.50	0.00	0.00170	8.44		3.93	1.93
	L0068956	637636.93	4270206.86	10.45	0.00	0.00170	8.44		3.93	1.93
	L0068957	637643.76	4270211.83	10.39	0.00	0.00170	8.44		3.93	1.93
	L0068958	637650.58	4270216.79	10.36	0.00	0.00170	8.44		3.93	1.93
	L0068959	637656.09	4270223.01	10.36	0.00	0.00170	8.44		3.93	1.93
	L0068960	637660.75	4270230.05	10.36	0.00	0.00170	8.44		3.93	1.93
	L0068961	637665.41	4270237.09	10.36	0.00	0.00170	8.44		3.93	1.93
	L0068962	637670.07	4270244.13	10.36	0.00	0.00170	8.44		3.93	1.93
	L0068963	637674.72	4270251.17	10.36	0.00	0.00170	8.44		3.93	1.93
	L0068964	637679.38	4270258.20	10.34	0.00	0.00170	8.44		3.93	1.93
	L0068965	637684.04	4270265.24	10.29	0.00	0.00170	8.44		3.93	1.93
	L0068966	637688.70	4270272.28	10.23	0.00	0.00170	8.44		3.93	1.93
	L0068967	637693.41	4270279.29	10.17	0.00	0.00170	8.44		3.93	1.93
	L0068968	637698.13	4270286.28	10.12	0.00	0.00170	8.44		3.93	1.93
	L0068969	637702.85	4270293.27	10.07	0.00	0.00170	8.44		3.93	1.93
	L0068970	637707.58	4270300.27	10.06	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimension [m]	Initial Vertical Dimension [m]
NS_SLINE1	L0068971	637712.30	4270307.26	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068972	637717.03	4270314.26	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068973	637721.75	4270321.25	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068974	637726.47	4270328.24	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068975	637731.20	4270335.24	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068976	637735.92	4270342.23	10.04	0.00	0.00170	8.44		3.93	1.93
	L0068977	637740.65	4270349.23	10.02	0.00	0.00170	8.44		3.93	1.93
	L0068978	637745.37	4270356.22	10.02	0.00	0.00170	8.44		3.93	1.93
	L0068979	637750.09	4270363.22	10.05	0.00	0.00170	8.44		3.93	1.93
	L0068980	637754.82	4270370.21	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068981	637759.50	4270377.23	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068982	637763.86	4270384.46	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068983	637768.22	4270391.69	10.05	0.00	0.00170	8.44		3.93	1.93
	L0068984	637772.57	4270398.91	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068985	637776.93	4270406.14	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068986	637781.29	4270413.37	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068987	637785.65	4270420.59	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068988	637790.01	4270427.82	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068989	637794.37	4270435.05	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068990	637798.73	4270442.28	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068991	637803.09	4270449.50	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068992	637807.45	4270456.73	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068993	637811.81	4270463.96	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068994	637816.17	4270471.18	10.06	0.00	0.00170	8.44		3.93	1.93
	L0068995	637820.53	4270478.41	10.06	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
NS_SLINE1	L0068996	637824.88	4270485.64	10.07	0.00	0.00170	8.44		3.93	1.93
	L0068997	637829.24	4270492.87	10.18	0.00	0.00170	8.44		3.93	1.93
	L0068998	637833.60	4270500.09	10.26	0.00	0.00170	8.44		3.93	1.93
	L0068999	637837.96	4270507.32	10.32	0.00	0.00170	8.44		3.93	1.93
	L0069000	637842.32	4270514.55	10.36	0.00	0.00170	8.44		3.93	1.93
	L0069001	637846.68	4270521.77	10.36	0.00	0.00170	8.44		3.93	1.93
	L0069002	637851.04	4270529.00	10.36	0.00	0.00170	8.44		3.93	1.93
	L0069003	637855.40	4270536.23	10.37	0.00	0.00170	8.44		3.93	1.93
	L0069004	637859.76	4270543.46	10.42	0.00	0.00170	8.44		3.93	1.93
	L0069005	637864.12	4270550.68	10.51	0.00	0.00170	8.44		3.93	1.93
	L0069006	637868.48	4270557.91	10.58	0.00	0.00170	8.44		3.93	1.93
	L0069007	637872.83	4270565.14	10.63	0.00	0.00170	8.44		3.93	1.93
	L0069008	637877.19	4270572.36	10.66	0.00	0.00170	8.44		3.93	1.93
	L0069009	637881.89	4270579.36	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069010	637887.26	4270585.86	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069011	637892.64	4270592.36	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069012	637898.02	4270598.87	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069013	637903.40	4270605.37	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069014	637908.78	4270611.88	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069015	637914.16	4270618.38	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069016	637919.53	4270624.89	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069017	637924.91	4270631.39	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069018	637930.29	4270637.90	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069019	637935.67	4270644.40	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069020	637941.05	4270650.90	10.67	0.00	0.00170	8.44		3.93	1.93

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
NS_SLINE1	L0069021	637946.43	4270657.41	10.66	0.00	0.00170	8.44		3.93	1.93
	L0069022	637951.80	4270663.91	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069023	637957.18	4270670.42	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069024	637963.50	4270675.86	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069025	637970.61	4270680.41	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069026	637977.72	4270684.96	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069027	637984.83	4270689.50	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069028	637991.94	4270694.05	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069029	637999.05	4270698.59	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069030	638006.16	4270703.14	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069031	638013.28	4270707.68	10.67	0.00	0.00170	8.44		3.93	1.93
	L0069032	638020.39	4270712.23	10.67	0.00	0.00170	8.44		3.93	1.93

Building Downwash Information

Option not in use

Emission Rate Units for Output

For Concentration

Unit Factor:	1E6
Emission Unit Label:	GRAMS/SEC
Concentration Unit Label:	MICROGRAMS/M**3

Source Pathway

AERMOD

Source Groups

Source Group ID: Volume	List of Sources in Group (Source Range or Single Sources)
	VOL3673
	VOL3674
	VOL3675
	VOL3676
	VOL3874
	VOL3875
	VOL3876
	VOL3877
	VOL3878
	VOL3879
	VOL3880
	VOL4075
	VOL4076
	VOL4077
	VOL4078
	VOL4079
	VOL4080
	VOL4081
	VOL4082
	VOL4083
	VOL4276
	VOL4277
	VOL4278
	VOL4279
	VOL4280
	VOL4281
	VOL4282
	VOL4283
	VOL4284
	VOL4285
	VOL4286
	VOL4478
	VOL4479
	VOL4480
	VOL4481
	VOL4482
	VOL4483
	VOL4484
	VOL4485
	VOL4486
	VOL4487
	VOL4488
	VOL4680
	VOL4681

Source Pathway

AERMOD

VOL4682
VOL4683
VOL4684
VOL4685
VOL4686
VOL4687
VOL4688
VOL4689
VOL4690
VOL4882
VOL4883
VOL4884
VOL4885
VOL4886
VOL4887
VOL4888
VOL4889
VOL4890
VOL4891
VOL4892
VOL5085
VOL5086
VOL5087
VOL5088
VOL5089
VOL5090
VOL5091
VOL5092
VOL5093
VOL5094
VOL5287
VOL5288
VOL5289
VOL5290
VOL5291
VOL5292
VOL5293
VOL5294
VOL5295
VOL5296
VOL5297
VOL5490
VOL5491
VOL5492
VOL5493
VOL5494
VOL5495

Source Pathway

AERMOD

VOL5496
VOL5497
VOL5498
VOL5499
VOL5693
VOL5694
VOL5695
VOL5696
VOL5697
VOL5698
VOL5699
VOL5700
VOL5701
VOL5895
VOL5896
VOL5897
VOL5898
VOL5899
VOL5900
VOL5901
VOL5902
VOL5903
VOL6097
VOL6098
VOL6099
VOL6100
VOL6101
VOL6102
VOL6103
VOL6104
VOL6105
VOL6298
VOL6299
VOL6300
VOL6301
VOL6302
VOL6303
VOL6304
VOL6305
VOL6306
VOL6307
VOL6498
VOL6499
VOL6500
VOL6501
VOL6502
VOL6503

Source Pathway

AERMOD

VOL6504
VOL6505
VOL6506
VOL6507
VOL6508
VOL6509
VOL6699
VOL6700
VOL6701
VOL6702
VOL6703
VOL6704
VOL6705
VOL6706
VOL6707
VOL6708
VOL6709
VOL6710
VOL6711
VOL6900
VOL6901
VOL6902
VOL6903
VOL6907
VOL6908
VOL6909
VOL6910
VOL6911
VOL6912
VOL6913
VOL7101
VOL7102
VOL7103
VOL7109
VOL7110
VOL7111
VOL7112
VOL7113
VOL7114
VOL7115
VOL7302
VOL7303
VOL7311
VOL7312
VOL7313
VOL7314
VOL7315

Source Pathway

AERMOD

VOL7316
VOL7317
VOL7513
VOL7514
VOL7515
VOL7516
VOL7517
VOL7518
VOL7519
VOL7716
VOL7717
VOL7718
VOL7719
VOL7720
VOL7721
VOL7918
VOL7919
VOL7920
VOL7921
VOL7922
VOL7923
VOL8120
VOL8121
VOL8122
VOL8123
VOL8124
VOL8125
VOL8322
VOL8323
VOL8324
VOL8325
VOL8326
VOL8327
VOL8524
VOL8525
VOL8526
VOL8527
VOL8528
VOL8529
VOL8726
VOL8727
VOL8728
VOL8729
VOL8730
VOL8731
VOL8928
VOL8929

Source Pathway

AERMOD

VOL8930
VOL8931
VOL8932
VOL8933
VOL9130
VOL9131
VOL9132
VOL9133
VOL9134
VOL9135
VOL9332
VOL9333
VOL9334
VOL9335
VOL9336
VOL9337
VOL9534
VOL9535
VOL9536
VOL9537
VOL9538
VOL9539
VOL9736
VOL9737
VOL9738
VOL9739
VOL9740
VOL9741
VOL9938
VOL9939
VOL9940
VOL9941
VOL9942
VOL9943
VOL10140
VOL10141
VOL10142
VOL10143
VOL10144
VOL10145
VOL10342
VOL10343
VOL10344
VOL10345
VOL10346
VOL10347
VOL10544

Source Pathway

AERMOD

VOL10545
VOL10546
VOL10547
VOL10548
VOL10549
VOL10746
VOL10747
VOL10748
VOL10749
VOL10750
VOL10751
VOL10948
VOL10949
VOL10950
VOL10951
VOL10952
VOL10953
VOL11150
VOL11151
VOL11152
VOL11153
VOL11154
VOL11155
VOL11352
VOL11353
VOL11354
VOL11355
VOL11356
VOL11357
VOL11554
VOL11555
VOL11556
VOL11557
VOL11558
VOL11559
VOL11756
VOL11757
VOL11758
VOL11759
VOL11760
VOL11761
VOL11958
VOL11959
VOL11960
VOL11961
VOL11962
VOL11963

Source Pathway

AERMOD

VOL12160
VOL12161
VOL12162
VOL12163
VOL12164
VOL12165
VOL12362
VOL12363
VOL12364
VOL12365
VOL12366
VOL12367
VOL12564
VOL12565
VOL12566
VOL12567
VOL12568
VOL12569
VOL12766
VOL12767
VOL12768
VOL12769
VOL12770
VOL12771
VOL12772
VOL12969
VOL12970
VOL12971
VOL12972
VOL12973
VOL12974
VOL13171
VOL13172
VOL13173
VOL13174
VOL13175
VOL13176
VOL13177
VOL13373
VOL13374
VOL13375
VOL13376
VOL13377
VOL13378
VOL13379
VOL13380
VOL13576

Source Pathway

AERMOD

VOL13577
VOL13578
VOL13579
VOL13580
VOL13581
VOL13582
VOL13778
VOL13779
VOL13780
VOL13781
VOL13782
VOL13783
VOL13980
VOL13981
VOL13982
VOL13983
VOL13984
VOL14183
VOL14184
VOL14185
VOL14385
VOL14386

Source Group ID: Sline	List of Sources in Group (Source Range or Single Sources)
	NS_SLIN1 STH_SLIN3
Source Group ID: ALL	List of Sources in Group (Source Range or Single Sources)
	All Sources Included

Variable Emissions

Source Pathway

AERMOD

Hourly Emission Rate Variation

Scenario: Sline

Source ID: NS_SLINE1						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: STH_SLINE3						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Scenario: Volume

Source ID: VOL3673						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3674						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3675						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3676						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3874						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL3875						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3876						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3877						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3878						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3879						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL3880						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4075						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4076						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL4076						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4077						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4078						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4079						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4080						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4081						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4082						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4083						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL4276						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4277						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4278						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4279						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4280						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4281						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4282						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4283						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL4283						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4284						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4285						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4286						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4478						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4479						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4480						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4481						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL4481							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4482							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4483							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4484							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4485							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4486							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4487							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4488							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL4680						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4681						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4682						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4683						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4684						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4685						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4686						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4687						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL4687						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4688						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4689						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4690						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4882						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4883						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4884						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4885						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL4886						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4887						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4888						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4889						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4890						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4891						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL4892						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5085						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL5085						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5086						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5087						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5088						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5089						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5090						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5091						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5092						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL5092							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5093							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5094							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5287							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5288							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5289							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5290							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5291							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL5292						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5293						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5294						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5295						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5296						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5297						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5490						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5491						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL5491						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5492						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5493						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5494						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5495						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5496						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5497						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5498						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL5499						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5693						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5694						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5695						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5696						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5697						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5698						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5699						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL5699						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5700						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5701						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5895						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5896						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5897						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5898						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5899						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL5899							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5900							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5901							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5902							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL5903							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6097							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6098							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6099							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL6100						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6101						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6102						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6103						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6104						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6105						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6298						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6299						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL6299						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6300						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6301						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6302						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6303						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6304						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6305						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6306						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL6307						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6498						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6499						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6500						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6501						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6502						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6503						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6504						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL6504						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6505						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6506						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6507						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6508						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6509						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6699						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6700						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL6700							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6701							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6702							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6703							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6704							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6705							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6706							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6707							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL6708						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6709						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6710						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6711						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6900						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6901						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6902						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6903						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL6903						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6907						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6908						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6909						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6910						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6911						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6912						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL6913						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL7101						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7102						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7103						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7109						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7110						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7111						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7112						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7113						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL7113						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7114						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7115						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7302						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7303						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7311						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7312						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7313						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL7313							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7314							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7315							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7316							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7317							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7513							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7514							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7515							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL7516						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7517						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7518						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7519						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7716						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7717						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7718						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7719						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL7719						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7720						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7721						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7918						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7919						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7920						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7921						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL7922						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL7923						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8120						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8121						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8122						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8123						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8124						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8125						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8322						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL8322						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8323						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8324						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8325						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8326						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8327						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8524						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8525						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL8525							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8526							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8527							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8528							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8529							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8726							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8727							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8728							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL8729						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8730						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8731						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8928						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8929						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8930						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8931						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8932						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL8932						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL8933						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9130						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9131						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9132						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9133						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9134						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9135						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL9332						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9333						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9334						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9335						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9336						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9337						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9534						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9535						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL9535						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9536						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9537						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9538						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9539						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9736						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9737						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9738						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL9738							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9739							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9740							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9741							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9938							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9939							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9940							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9941							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL9942						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL9943						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10140						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10141						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10142						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10143						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10144						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10145						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL10145						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10342						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10343						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10344						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10345						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10346						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10347						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10544						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL10545						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10546						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10547						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10548						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10549						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10746						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10747						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10748						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL10748						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10749						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10750						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10751						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10948						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10949						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10950						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL10951						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL10951						
19 to 24		0.00	0.00	0.00	0.00	0.00
Source ID: VOL10952						
1 to 6		0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00
Source ID: VOL10953						
1 to 6		0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00
Source ID: VOL11150						
1 to 6		0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00
Source ID: VOL11151						
1 to 6		0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00
Source ID: VOL11152						
1 to 6		0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00
Source ID: VOL11153						
1 to 6		0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00
Source ID: VOL11154						
1 to 6		0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL11155						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11352						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11353						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11354						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11355						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11356						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11357						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11554						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL11554						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11555						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11556						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11557						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11558						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11559						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11756						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11757						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL11758						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11759						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11760						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11761						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11958						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11959						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11960						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11961						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL11961						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11962						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL11963						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12160						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12161						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12162						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12163						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12164						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL12164							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12165							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12362							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12363							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12364							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12365							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12366							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12367							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL12564						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12565						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12566						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12567						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12568						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12569						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12766						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12767						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL12767						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12768						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12769						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12770						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12771						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12772						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12969						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12970						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL12971						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12972						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12973						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL12974						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13171						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13172						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13173						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13174						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL13174						
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13175						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13176						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13177						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13373						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13374						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13375						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13376						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00

Source Pathway

AERMOD

Source ID: VOL13376							
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13377							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13378							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13379							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13380							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13576							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13577							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13578							
1 to 6		0.00	0.00	0.00	0.00	0.00	0.00
7 to 12		1.00	1.00	1.00	1.00	1.00	1.00
13 to 18		1.00	1.00	1.00	1.00	1.00	0.00
19 to 24		0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL13579						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13580						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13581						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13582						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13778						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13779						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13780						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13781						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00

Source Pathway

AERMOD

Source ID: VOL13781						
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13782						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13783						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13980						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13981						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13982						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13983						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL13984						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

AERMOD

Source ID: VOL14183						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL14184						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL14185						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL14385						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID: VOL14386						
1 to 6	0.00	0.00	0.00	0.00	0.00	0.00
7 to 12	1.00	1.00	1.00	1.00	1.00	1.00
13 to 18	1.00	1.00	1.00	1.00	1.00	0.00
19 to 24	0.00	0.00	0.00	0.00	0.00	0.00

Receptor Pathway

AERMOD

Receptor Networks

Note: Terrain Elevations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	636686.16	4269592.29	UCART1	10.96	
2	636726.16	4269592.29	UCART1	10.99	
3	636766.16	4269592.29	UCART1	11.98	
4	637126.16	4269592.29	UCART1	10.44	
5	637166.16	4269592.29	UCART1	10.27	
6	637206.16	4269592.29	UCART1	9.93	
7	637246.16	4269592.29	UCART1	9.53	
8	637286.16	4269592.29	UCART1	9.12	
9	637326.16	4269592.29	UCART1	8.72	
10	638446.16	4269592.29	UCART1	8.84	
11	638526.16	4269592.29	UCART1	8.91	
12	636766.16	4269632.29	UCART1	11.89	
13	637166.16	4269632.29	UCART1	10.05	
14	637206.16	4269632.29	UCART1	9.76	
15	637246.16	4269632.29	UCART1	9.35	
16	637286.16	4269632.29	UCART1	8.95	
17	637326.16	4269632.29	UCART1	8.54	
18	637726.16	4269632.29	UCART1	8.50	
19	637766.16	4269632.29	UCART1	8.53	
20	637806.16	4269632.29	UCART1	8.61	
21	637846.16	4269632.29	UCART1	8.71	
22	637886.16	4269632.29	UCART1	8.84	
23	637926.16	4269632.29	UCART1	8.91	
24	637966.16	4269632.29	UCART1	9.02	
25	638006.16	4269632.29	UCART1	9.03	
26	638046.16	4269632.29	UCART1	9.14	
27	638086.16	4269632.29	UCART1	9.14	
28	638126.16	4269632.29	UCART1	9.14	
29	638166.16	4269632.29	UCART1	9.14	
30	638206.16	4269632.29	UCART1	9.14	

Receptor Pathway

AERMOD

31	638246.16	4269632.29	UCART1	9.14
32	638286.16	4269632.29	UCART1	9.09
33	638326.16	4269632.29	UCART1	9.02
34	638366.16	4269632.29	UCART1	9.02
35	638406.16	4269632.29	UCART1	9.02
36	638446.16	4269632.29	UCART1	9.02
37	638486.16	4269632.29	UCART1	9.14
38	638526.16	4269632.29	UCART1	9.14
39	638566.16	4269632.29	UCART1	9.14
40	636686.16	4269672.29	UCART1	11.30
41	636726.16	4269672.29	UCART1	11.56
42	637206.16	4269672.29	UCART1	9.63
43	637246.16	4269672.29	UCART1	9.22
44	637286.16	4269672.29	UCART1	8.82
45	637326.16	4269672.29	UCART1	8.41
46	637366.16	4269672.29	UCART1	8.02
47	637686.16	4269672.29	UCART1	8.35
48	637766.16	4269672.29	UCART1	8.81
49	637806.16	4269672.29	UCART1	8.82
50	637846.16	4269672.29	UCART1	8.84
51	637886.16	4269672.29	UCART1	9.12
52	637926.16	4269672.29	UCART1	9.13
53	637966.16	4269672.29	UCART1	9.14
54	638006.16	4269672.29	UCART1	9.14
55	638046.16	4269672.29	UCART1	9.14
56	638086.16	4269672.29	UCART1	9.14
57	638126.16	4269672.29	UCART1	9.14
58	638166.16	4269672.29	UCART1	9.14
59	638206.16	4269672.29	UCART1	9.14
60	638246.16	4269672.29	UCART1	9.14
61	638286.16	4269672.29	UCART1	9.14
62	638326.16	4269672.29	UCART1	9.14
63	638366.16	4269672.29	UCART1	9.14
64	638406.16	4269672.29	UCART1	9.14
65	638446.16	4269672.29	UCART1	9.14
66	638486.16	4269672.29	UCART1	9.14
67	638526.16	4269672.29	UCART1	9.14
68	638566.16	4269672.29	UCART1	9.14

Receptor Pathway

AERMOD

69	636686.16	4269712.29	UCART1	11.58
70	636726.16	4269712.29	UCART1	11.71
71	636766.16	4269712.29	UCART1	11.94
72	637286.16	4269712.29	UCART1	8.74
73	637326.16	4269712.29	UCART1	8.37
74	637366.16	4269712.29	UCART1	8.00
75	637686.16	4269712.29	UCART1	8.66
76	637766.16	4269712.29	UCART1	8.91
77	637806.16	4269712.29	UCART1	8.91
78	637846.16	4269712.29	UCART1	9.08
79	637886.16	4269712.29	UCART1	9.22
80	637926.16	4269712.29	UCART1	9.22
81	637966.16	4269712.29	UCART1	9.39
82	638006.16	4269712.29	UCART1	9.45
83	638046.16	4269712.29	UCART1	9.45
84	638086.16	4269712.29	UCART1	9.45
85	638126.16	4269712.29	UCART1	9.45
86	638166.16	4269712.29	UCART1	9.45
87	638206.16	4269712.29	UCART1	9.45
88	638246.16	4269712.29	UCART1	9.45
89	638286.16	4269712.29	UCART1	9.36
90	638326.16	4269712.29	UCART1	9.22
91	638366.16	4269712.29	UCART1	9.22
92	638406.16	4269712.29	UCART1	9.22
93	638446.16	4269712.29	UCART1	9.22
94	638486.16	4269712.29	UCART1	9.22
95	638526.16	4269712.29	UCART1	9.22
96	638566.16	4269712.29	UCART1	9.39
97	636646.16	4269752.29	UCART1	11.50
98	636686.16	4269752.29	UCART1	11.60
99	636726.16	4269752.29	UCART1	11.81
100	636766.16	4269752.29	UCART1	12.11
101	636806.16	4269752.29	UCART1	11.43
102	637086.16	4269752.29	UCART1	10.85
103	637126.16	4269752.29	UCART1	10.31
104	637286.16	4269752.29	UCART1	8.51
105	637326.16	4269752.29	UCART1	8.16
106	637686.16	4269752.29	UCART1	8.83

Receptor Pathway

AERMOD

107	637726.16	4269752.29	UCART1	9.02
108	637766.16	4269752.29	UCART1	9.14
109	637806.16	4269752.29	UCART1	9.22
110	637846.16	4269752.29	UCART1	9.32
111	637886.16	4269752.29	UCART1	9.45
112	637926.16	4269752.29	UCART1	9.45
113	637966.16	4269752.29	UCART1	9.45
114	638006.16	4269752.29	UCART1	9.45
115	638046.16	4269752.29	UCART1	9.45
116	638086.16	4269752.29	UCART1	9.45
117	638126.16	4269752.29	UCART1	9.45
118	638166.16	4269752.29	UCART1	9.45
119	638206.16	4269752.29	UCART1	9.45
120	638246.16	4269752.29	UCART1	9.45
121	638286.16	4269752.29	UCART1	9.45
122	638326.16	4269752.29	UCART1	9.45
123	638366.16	4269752.29	UCART1	9.45
124	638406.16	4269752.29	UCART1	9.45
125	638446.16	4269752.29	UCART1	9.45
126	638486.16	4269752.29	UCART1	9.45
127	638526.16	4269752.29	UCART1	9.45
128	638566.16	4269752.29	UCART1	9.45
129	636646.16	4269792.29	UCART1	11.78
130	636686.16	4269792.29	UCART1	11.86
131	636726.16	4269792.29	UCART1	11.89
132	636766.16	4269792.29	UCART1	12.11
133	636806.16	4269792.29	UCART1	12.03
134	636846.16	4269792.29	UCART1	11.83
135	637046.16	4269792.29	UCART1	11.26
136	637086.16	4269792.29	UCART1	10.74
137	637126.16	4269792.29	UCART1	10.14
138	637166.16	4269792.29	UCART1	9.73
139	637286.16	4269792.29	UCART1	8.51
140	637326.16	4269792.29	UCART1	8.11
141	637646.16	4269792.29	UCART1	9.14
142	637686.16	4269792.29	UCART1	9.41
143	637726.16	4269792.29	UCART1	9.63
144	637766.16	4269792.29	UCART1	9.42

Receptor Pathway

AERMOD

145	637806.16	4269792.29	UCART1	9.43
146	637846.16	4269792.29	UCART1	9.45
147	637886.16	4269792.29	UCART1	9.73
148	637926.16	4269792.29	UCART1	9.73
149	637966.16	4269792.29	UCART1	9.73
150	638006.16	4269792.29	UCART1	9.73
151	638046.16	4269792.29	UCART1	9.73
152	638086.16	4269792.29	UCART1	9.73
153	638126.16	4269792.29	UCART1	9.73
154	638166.16	4269792.29	UCART1	9.73
155	638206.16	4269792.29	UCART1	9.73
156	638246.16	4269792.29	UCART1	9.71
157	638286.16	4269792.29	UCART1	9.45
158	638326.16	4269792.29	UCART1	9.45
159	638366.16	4269792.29	UCART1	9.45
160	638406.16	4269792.29	UCART1	9.45
161	638446.16	4269792.29	UCART1	9.45
162	638526.16	4269792.29	UCART1	9.45
163	638566.16	4269792.29	UCART1	9.45
164	636646.16	4269832.29	UCART1	12.03
165	636686.16	4269832.29	UCART1	12.18
166	636726.16	4269832.29	UCART1	11.93
167	636766.16	4269832.29	UCART1	12.06
168	636806.16	4269832.29	UCART1	12.12
169	636846.16	4269832.29	UCART1	11.79
170	637006.16	4269832.29	UCART1	11.85
171	637046.16	4269832.29	UCART1	11.26
172	637086.16	4269832.29	UCART1	10.72
173	637126.16	4269832.29	UCART1	10.14
174	637166.16	4269832.29	UCART1	9.73
175	637206.16	4269832.29	UCART1	9.32
176	637246.16	4269832.29	UCART1	8.92
177	637286.16	4269832.29	UCART1	8.42
178	637326.16	4269832.29	UCART1	7.89
179	637646.16	4269832.29	UCART1	9.48
180	637686.16	4269832.29	UCART1	10.08
181	637726.16	4269832.29	UCART1	10.27
182	637766.16	4269832.29	UCART1	10.13

Receptor Pathway

AERMOD

183	637806.16	4269832.29	UCART1	10.01
184	637846.16	4269832.29	UCART1	9.83
185	637886.16	4269832.29	UCART1	9.75
186	637926.16	4269832.29	UCART1	9.78
187	637966.16	4269832.29	UCART1	9.83
188	638006.16	4269832.29	UCART1	9.83
189	638046.16	4269832.29	UCART1	9.83
190	638086.16	4269832.29	UCART1	9.83
191	638126.16	4269832.29	UCART1	9.83
192	638166.16	4269832.29	UCART1	9.83
193	638206.16	4269832.29	UCART1	9.83
194	638246.16	4269832.29	UCART1	9.75
195	638286.16	4269832.29	UCART1	9.75
196	638326.16	4269832.29	UCART1	9.75
197	638366.16	4269832.29	UCART1	9.74
198	638406.16	4269832.29	UCART1	9.52
199	638446.16	4269832.29	UCART1	9.52
200	638526.16	4269832.29	UCART1	9.52
201	638566.16	4269832.29	UCART1	9.52
202	636646.16	4269872.29	UCART1	12.08
203	636686.16	4269872.29	UCART1	12.19
204	636726.16	4269872.29	UCART1	12.14
205	636766.16	4269872.29	UCART1	12.06
206	636806.16	4269872.29	UCART1	12.07
207	636846.16	4269872.29	UCART1	11.62
208	637006.16	4269872.29	UCART1	11.87
209	637046.16	4269872.29	UCART1	11.24
210	637086.16	4269872.29	UCART1	10.62
211	637126.16	4269872.29	UCART1	10.14
212	637166.16	4269872.29	UCART1	9.73
213	637206.16	4269872.29	UCART1	9.25
214	637246.16	4269872.29	UCART1	8.74
215	637286.16	4269872.29	UCART1	8.21
216	637646.16	4269872.29	UCART1	9.67
217	637686.16	4269872.29	UCART1	10.41
218	637726.16	4269872.29	UCART1	10.67
219	637766.16	4269872.29	UCART1	10.53
220	637806.16	4269872.29	UCART1	10.31

Receptor Pathway

AERMOD

221	637846.16	4269872.29	UCART1	10.10
222	637886.16	4269872.29	UCART1	9.93
223	637926.16	4269872.29	UCART1	9.98
224	637966.16	4269872.29	UCART1	10.06
225	638006.16	4269872.29	UCART1	10.06
226	638046.16	4269872.29	UCART1	10.06
227	638086.16	4269872.29	UCART1	10.19
228	638126.16	4269872.29	UCART1	10.22
229	638166.16	4269872.29	UCART1	10.06
230	638206.16	4269872.29	UCART1	10.06
231	638246.16	4269872.29	UCART1	9.93
232	638286.16	4269872.29	UCART1	9.93
233	638326.16	4269872.29	UCART1	9.80
234	638366.16	4269872.29	UCART1	9.75
235	638406.16	4269872.29	UCART1	9.75
236	638446.16	4269872.29	UCART1	9.75
237	638486.16	4269872.29	UCART1	9.75
238	638526.16	4269872.29	UCART1	9.75
239	638566.16	4269872.29	UCART1	9.75
240	636646.16	4269912.29	UCART1	11.83
241	636686.16	4269912.29	UCART1	11.93
242	636726.16	4269912.29	UCART1	12.19
243	636766.16	4269912.29	UCART1	12.19
244	636806.16	4269912.29	UCART1	12.19
245	637046.16	4269912.29	UCART1	10.98
246	637086.16	4269912.29	UCART1	10.54
247	637126.16	4269912.29	UCART1	9.93
248	637166.16	4269912.29	UCART1	9.45
249	637206.16	4269912.29	UCART1	9.04
250	637246.16	4269912.29	UCART1	8.61
251	637286.16	4269912.29	UCART1	8.21
252	637646.16	4269912.29	UCART1	9.80
253	637686.16	4269912.29	UCART1	10.49
254	637726.16	4269912.29	UCART1	10.67
255	637766.16	4269912.29	UCART1	10.67
256	637806.16	4269912.29	UCART1	10.53
257	637846.16	4269912.29	UCART1	10.34
258	637886.16	4269912.29	UCART1	10.34

Receptor Pathway

AERMOD

259	637926.16	4269912.29	UCART1	10.34
260	637966.16	4269912.29	UCART1	10.34
261	638006.16	4269912.29	UCART1	10.34
262	638046.16	4269912.29	UCART1	10.34
263	638086.16	4269912.29	UCART1	10.36
264	638126.16	4269912.29	UCART1	10.36
265	638166.16	4269912.29	UCART1	10.34
266	638206.16	4269912.29	UCART1	10.34
267	638246.16	4269912.29	UCART1	10.06
268	638286.16	4269912.29	UCART1	10.06
269	638326.16	4269912.29	UCART1	10.04
270	638366.16	4269912.29	UCART1	10.01
271	638406.16	4269912.29	UCART1	9.75
272	638446.16	4269912.29	UCART1	9.75
273	638486.16	4269912.29	UCART1	9.75
274	638526.16	4269912.29	UCART1	9.75
275	638566.16	4269912.29	UCART1	9.75
276	636646.16	4269952.29	UCART1	11.73
277	636686.16	4269952.29	UCART1	11.89
278	636726.16	4269952.29	UCART1	11.98
279	636766.16	4269952.29	UCART1	12.12
280	636806.16	4269952.29	UCART1	11.81
281	637086.16	4269952.29	UCART1	10.24
282	637126.16	4269952.29	UCART1	9.83
283	637166.16	4269952.29	UCART1	9.42
284	637206.16	4269952.29	UCART1	8.95
285	637246.16	4269952.29	UCART1	8.54
286	637286.16	4269952.29	UCART1	7.92
287	637606.16	4269952.29	UCART1	9.37
288	637646.16	4269952.29	UCART1	10.08
289	637686.16	4269952.29	UCART1	10.44
290	637726.16	4269952.29	UCART1	10.67
291	637766.16	4269952.29	UCART1	10.66
292	637806.16	4269952.29	UCART1	10.50
293	637846.16	4269952.29	UCART1	10.36
294	637886.16	4269952.29	UCART1	10.36
295	637926.16	4269952.29	UCART1	10.36
296	637966.16	4269952.29	UCART1	10.42

Receptor Pathway

AERMOD

297	638006.16	4269952.29	UCART1	10.44
298	638046.16	4269952.29	UCART1	10.53
299	638086.16	4269952.29	UCART1	10.67
300	638126.16	4269952.29	UCART1	10.67
301	638166.16	4269952.29	UCART1	10.57
302	638206.16	4269952.29	UCART1	10.44
303	638246.16	4269952.29	UCART1	10.43
304	638286.16	4269952.29	UCART1	10.27
305	638326.16	4269952.29	UCART1	10.08
306	638366.16	4269952.29	UCART1	10.06
307	638406.16	4269952.29	UCART1	10.06
308	638446.16	4269952.29	UCART1	10.06
309	638486.16	4269952.29	UCART1	9.83
310	638526.16	4269952.29	UCART1	9.92
311	638566.16	4269952.29	UCART1	10.06
312	636286.16	4269992.29	UCART1	10.67
313	636326.16	4269992.29	UCART1	10.67
314	636366.16	4269992.29	UCART1	10.67
315	636406.16	4269992.29	UCART1	10.44
316	636606.16	4269992.29	UCART1	11.10
317	636646.16	4269992.29	UCART1	11.50
318	636686.16	4269992.29	UCART1	11.72
319	636726.16	4269992.29	UCART1	11.89
320	636766.16	4269992.29	UCART1	11.76
321	636806.16	4269992.29	UCART1	11.38
322	637086.16	4269992.29	UCART1	10.06
323	637126.16	4269992.29	UCART1	9.79
324	637166.16	4269992.29	UCART1	9.40
325	637206.16	4269992.29	UCART1	8.72
326	637246.16	4269992.29	UCART1	8.31
327	637286.16	4269992.29	UCART1	7.91
328	637606.16	4269992.29	UCART1	9.55
329	637646.16	4269992.29	UCART1	10.06
330	637686.16	4269992.29	UCART1	10.23
331	637806.16	4269992.29	UCART1	10.54
332	637846.16	4269992.29	UCART1	10.54
333	637886.16	4269992.29	UCART1	10.54
334	637926.16	4269992.29	UCART1	10.54

Receptor Pathway

AERMOD

335	637966.16	4269992.29	UCART1	10.63
336	638006.16	4269992.29	UCART1	10.66
337	638046.16	4269992.29	UCART1	10.49
338	638086.16	4269992.29	UCART1	10.62
339	638126.16	4269992.29	UCART1	10.67
340	638166.16	4269992.29	UCART1	10.67
341	638206.16	4269992.29	UCART1	10.67
342	638246.16	4269992.29	UCART1	10.66
343	638286.16	4269992.29	UCART1	10.47
344	638326.16	4269992.29	UCART1	10.27
345	638366.16	4269992.29	UCART1	10.06
346	638406.16	4269992.29	UCART1	10.06
347	638446.16	4269992.29	UCART1	10.06
348	638486.16	4269992.29	UCART1	10.06
349	638526.16	4269992.29	UCART1	10.06
350	638566.16	4269992.29	UCART1	10.06
351	636166.16	4270032.29	UCART1	9.37
352	636246.16	4270032.29	UCART1	10.67
353	636286.16	4270032.29	UCART1	10.67
354	636326.16	4270032.29	UCART1	10.65
355	636366.16	4270032.29	UCART1	10.39
356	636406.16	4270032.29	UCART1	10.37
357	636606.16	4270032.29	UCART1	11.10
358	636646.16	4270032.29	UCART1	11.50
359	636686.16	4270032.29	UCART1	11.58
360	636726.16	4270032.29	UCART1	11.61
361	636766.16	4270032.29	UCART1	11.38
362	636806.16	4270032.29	UCART1	11.23
363	636886.16	4270032.29	UCART1	10.67
364	636926.16	4270032.29	UCART1	10.67
365	636966.16	4270032.29	UCART1	10.68
366	637166.16	4270032.29	UCART1	9.42
367	637206.16	4270032.29	UCART1	8.88
368	637246.16	4270032.29	UCART1	8.31
369	637606.16	4270032.29	UCART1	9.75
370	637646.16	4270032.29	UCART1	10.06
371	637686.16	4270032.29	UCART1	10.18
372	637766.16	4270032.29	UCART1	10.67

Receptor Pathway

AERMOD

373	637806.16	4270032.29	UCART1	10.67
374	637846.16	4270032.29	UCART1	10.67
375	637886.16	4270032.29	UCART1	10.67
376	637926.16	4270032.29	UCART1	10.67
377	637966.16	4270032.29	UCART1	10.46
378	638006.16	4270032.29	UCART1	10.39
379	638046.16	4270032.29	UCART1	10.36
380	638086.16	4270032.29	UCART1	10.38
381	638126.16	4270032.29	UCART1	10.67
382	638206.16	4270032.29	UCART1	10.67
383	638246.16	4270032.29	UCART1	10.67
384	638286.16	4270032.29	UCART1	10.54
385	638326.16	4270032.29	UCART1	10.36
386	638366.16	4270032.29	UCART1	10.06
387	638406.16	4270032.29	UCART1	10.06
388	638446.16	4270032.29	UCART1	10.06
389	638486.16	4270032.29	UCART1	10.06
390	638526.16	4270032.29	UCART1	10.06
391	638566.16	4270032.29	UCART1	10.06
392	636046.16	4270072.29	UCART1	7.85
393	636086.16	4270072.29	UCART1	8.56
394	636126.16	4270072.29	UCART1	8.96
395	636166.16	4270072.29	UCART1	9.37
396	636206.16	4270072.29	UCART1	10.02
397	636246.16	4270072.29	UCART1	10.52
398	636326.16	4270072.29	UCART1	10.36
399	636366.16	4270072.29	UCART1	10.36
400	636406.16	4270072.29	UCART1	10.36
401	636606.16	4270072.29	UCART1	11.07
402	636646.16	4270072.29	UCART1	11.26
403	636686.16	4270072.29	UCART1	11.51
404	636726.16	4270072.29	UCART1	11.41
405	636766.16	4270072.29	UCART1	11.22
406	636806.16	4270072.29	UCART1	10.95
407	636846.16	4270072.29	UCART1	10.67
408	636886.16	4270072.29	UCART1	10.67
409	636926.16	4270072.29	UCART1	10.67
410	636966.16	4270072.29	UCART1	10.67

Receptor Pathway

AERMOD

411	637006.16	4270072.29	UCART1	10.67
412	637046.16	4270072.29	UCART1	10.35
413	637086.16	4270072.29	UCART1	10.10
414	637246.16	4270072.29	UCART1	8.39
415	637606.16	4270072.29	UCART1	10.13
416	637646.16	4270072.29	UCART1	10.13
417	637686.16	4270072.29	UCART1	10.15
418	637726.16	4270072.29	UCART1	10.34
419	637766.16	4270072.29	UCART1	10.43
420	637806.16	4270072.29	UCART1	10.33
421	637846.16	4270072.29	UCART1	10.29
422	637886.16	4270072.29	UCART1	10.29
423	637926.16	4270072.29	UCART1	10.29
424	637966.16	4270072.29	UCART1	10.06
425	638006.16	4270072.29	UCART1	9.99
426	638046.16	4270072.29	UCART1	10.15
427	638086.16	4270072.29	UCART1	10.34
428	638126.16	4270072.29	UCART1	10.39
429	638166.16	4270072.29	UCART1	10.67
430	638206.16	4270072.29	UCART1	10.67
431	638326.16	4270072.29	UCART1	10.44
432	638366.16	4270072.29	UCART1	10.34
433	638406.16	4270072.29	UCART1	10.06
434	638446.16	4270072.29	UCART1	10.06
435	638486.16	4270072.29	UCART1	10.06
436	638526.16	4270072.29	UCART1	10.23
437	638566.16	4270072.29	UCART1	10.36
438	635926.16	4270112.29	UCART1	7.82
439	635966.16	4270112.29	UCART1	7.62
440	636006.16	4270112.29	UCART1	7.69
441	636046.16	4270112.29	UCART1	8.02
442	636086.16	4270112.29	UCART1	8.57
443	636126.16	4270112.29	UCART1	9.14
444	636166.16	4270112.29	UCART1	9.42
445	636206.16	4270112.29	UCART1	9.76
446	636246.16	4270112.29	UCART1	9.95
447	636326.16	4270112.29	UCART1	10.20
448	636406.16	4270112.29	UCART1	10.36

Receptor Pathway

AERMOD

449	636446.16	4270112.29	UCART1	10.67
450	636606.16	4270112.29	UCART1	10.97
451	636646.16	4270112.29	UCART1	11.07
452	636686.16	4270112.29	UCART1	11.28
453	636726.16	4270112.29	UCART1	11.21
454	636766.16	4270112.29	UCART1	11.01
455	636806.16	4270112.29	UCART1	10.79
456	636846.16	4270112.29	UCART1	10.67
457	636886.16	4270112.29	UCART1	10.67
458	636926.16	4270112.29	UCART1	10.67
459	636966.16	4270112.29	UCART1	10.67
460	637006.16	4270112.29	UCART1	10.67
461	637046.16	4270112.29	UCART1	10.54
462	637086.16	4270112.29	UCART1	10.42
463	637166.16	4270112.29	UCART1	9.72
464	637206.16	4270112.29	UCART1	9.12
465	637246.16	4270112.29	UCART1	8.52
466	637606.16	4270112.29	UCART1	10.54
467	637646.16	4270112.29	UCART1	10.35
468	637686.16	4270112.29	UCART1	10.23
469	637726.16	4270112.29	UCART1	10.33
470	637806.16	4270112.29	UCART1	10.13
471	637846.16	4270112.29	UCART1	9.93
472	637886.16	4270112.29	UCART1	9.88
473	637926.16	4270112.29	UCART1	9.88
474	637966.16	4270112.29	UCART1	9.66
475	638006.16	4270112.29	UCART1	9.60
476	638046.16	4270112.29	UCART1	9.95
477	638086.16	4270112.29	UCART1	10.28
478	638126.16	4270112.29	UCART1	10.55
479	638166.16	4270112.29	UCART1	10.67
480	638206.16	4270112.29	UCART1	10.67
481	638326.16	4270112.29	UCART1	10.44
482	638366.16	4270112.29	UCART1	10.35
483	638406.16	4270112.29	UCART1	10.16
484	638446.16	4270112.29	UCART1	10.06
485	638486.16	4270112.29	UCART1	10.24
486	638526.16	4270112.29	UCART1	10.36

Receptor Pathway

AERMOD

487	638566.16	4270112.29	UCART1	10.36
488	635966.16	4270152.29	UCART1	7.90
489	636006.16	4270152.29	UCART1	8.02
490	636046.16	4270152.29	UCART1	8.43
491	636086.16	4270152.29	UCART1	8.84
492	636126.16	4270152.29	UCART1	9.15
493	636166.16	4270152.29	UCART1	9.38
494	636206.16	4270152.29	UCART1	9.50
495	636246.16	4270152.29	UCART1	9.76
496	636286.16	4270152.29	UCART1	9.99
497	636326.16	4270152.29	UCART1	10.06
498	636406.16	4270152.29	UCART1	10.36
499	636446.16	4270152.29	UCART1	10.67
500	636606.16	4270152.29	UCART1	10.97
501	636646.16	4270152.29	UCART1	10.97
502	636686.16	4270152.29	UCART1	11.00
503	636726.16	4270152.29	UCART1	10.99
504	636766.16	4270152.29	UCART1	10.97
505	636846.16	4270152.29	UCART1	10.67
506	636886.16	4270152.29	UCART1	10.67
507	636926.16	4270152.29	UCART1	10.67
508	636966.16	4270152.29	UCART1	10.67
509	637006.16	4270152.29	UCART1	10.67
510	637046.16	4270152.29	UCART1	10.67
511	637086.16	4270152.29	UCART1	10.66
512	637166.16	4270152.29	UCART1	10.01
513	637206.16	4270152.29	UCART1	9.48
514	637246.16	4270152.29	UCART1	8.69
515	637606.16	4270152.29	UCART1	10.67
516	637646.16	4270152.29	UCART1	10.64
517	637686.16	4270152.29	UCART1	10.64
518	637726.16	4270152.29	UCART1	10.64
519	637766.16	4270152.29	UCART1	10.64
520	637846.16	4270152.29	UCART1	9.55
521	637886.16	4270152.29	UCART1	9.48
522	637926.16	4270152.29	UCART1	9.48
523	637966.16	4270152.29	UCART1	9.46
524	638006.16	4270152.29	UCART1	9.19

Receptor Pathway

AERMOD

525	638046.16	4270152.29	UCART1	9.94
526	638086.16	4270152.29	UCART1	10.43
527	638126.16	4270152.29	UCART1	10.67
528	638166.16	4270152.29	UCART1	10.67
529	638206.16	4270152.29	UCART1	10.67
530	638246.16	4270152.29	UCART1	10.67
531	638286.16	4270152.29	UCART1	10.67
532	638326.16	4270152.29	UCART1	10.44
533	638366.16	4270152.29	UCART1	10.36
534	638406.16	4270152.29	UCART1	10.35
535	638486.16	4270152.29	UCART1	10.36
536	638526.16	4270152.29	UCART1	10.48
537	638566.16	4270152.29	UCART1	10.64
538	635966.16	4270192.29	UCART1	8.24
539	636006.16	4270192.29	UCART1	8.40
540	636046.16	4270192.29	UCART1	8.76
541	636086.16	4270192.29	UCART1	9.07
542	636166.16	4270192.29	UCART1	9.31
543	636206.16	4270192.29	UCART1	9.45
544	636246.16	4270192.29	UCART1	9.57
545	636286.16	4270192.29	UCART1	9.98
546	636326.16	4270192.29	UCART1	10.06
547	636366.16	4270192.29	UCART1	10.23
548	636406.16	4270192.29	UCART1	10.36
549	636446.16	4270192.29	UCART1	10.60
550	636566.16	4270192.29	UCART1	10.68
551	636606.16	4270192.29	UCART1	10.90
552	636646.16	4270192.29	UCART1	10.95
553	636686.16	4270192.29	UCART1	10.97
554	636726.16	4270192.29	UCART1	10.94
555	636806.16	4270192.29	UCART1	10.67
556	636846.16	4270192.29	UCART1	10.67
557	636886.16	4270192.29	UCART1	10.67
558	636926.16	4270192.29	UCART1	10.67
559	636966.16	4270192.29	UCART1	10.67
560	637006.16	4270192.29	UCART1	10.67
561	637046.16	4270192.29	UCART1	10.67
562	637086.16	4270192.29	UCART1	10.67

Receptor Pathway

AERMOD

563	637166.16	4270192.29	UCART1	10.40
564	637206.16	4270192.29	UCART1	9.78
565	637246.16	4270192.29	UCART1	8.92
566	637566.16	4270192.29	UCART1	10.18
567	637686.16	4270192.29	UCART1	10.50
568	637726.16	4270192.29	UCART1	10.31
569	637766.16	4270192.29	UCART1	9.94
570	637806.16	4270192.29	UCART1	9.32
571	637846.16	4270192.29	UCART1	9.14
572	637886.16	4270192.29	UCART1	9.37
573	637926.16	4270192.29	UCART1	9.28
574	637966.16	4270192.29	UCART1	9.20
575	638006.16	4270192.29	UCART1	9.53
576	638046.16	4270192.29	UCART1	9.95
577	638086.16	4270192.29	UCART1	10.59
578	638126.16	4270192.29	UCART1	10.67
579	638166.16	4270192.29	UCART1	10.67
580	638206.16	4270192.29	UCART1	10.67
581	638246.16	4270192.29	UCART1	10.67
582	638286.16	4270192.29	UCART1	10.67
583	638326.16	4270192.29	UCART1	10.67
584	638366.16	4270192.29	UCART1	10.43
585	638406.16	4270192.29	UCART1	10.36
586	638446.16	4270192.29	UCART1	10.36
587	638486.16	4270192.29	UCART1	10.36
588	635966.16	4270232.29	UCART1	8.43
589	636006.16	4270232.29	UCART1	8.71
590	636046.16	4270232.29	UCART1	8.81
591	636086.16	4270232.29	UCART1	8.85
592	636166.16	4270232.29	UCART1	9.14
593	636206.16	4270232.29	UCART1	9.29
594	636246.16	4270232.29	UCART1	9.57
595	636286.16	4270232.29	UCART1	9.98
596	636326.16	4270232.29	UCART1	10.24
597	636366.16	4270232.29	UCART1	10.36
598	636406.16	4270232.29	UCART1	10.49
599	636446.16	4270232.29	UCART1	10.55
600	636566.16	4270232.29	UCART1	10.67

Receptor Pathway

AERMOD

601	636606.16	4270232.29	UCART1	10.67
602	636646.16	4270232.29	UCART1	10.76
603	636686.16	4270232.29	UCART1	10.80
604	636766.16	4270232.29	UCART1	10.67
605	636806.16	4270232.29	UCART1	10.67
606	636846.16	4270232.29	UCART1	10.67
607	636886.16	4270232.29	UCART1	10.67
608	636926.16	4270232.29	UCART1	10.67
609	636966.16	4270232.29	UCART1	10.67
610	637006.16	4270232.29	UCART1	10.67
611	637046.16	4270232.29	UCART1	10.67
612	637086.16	4270232.29	UCART1	10.67
613	637206.16	4270232.29	UCART1	10.38
614	637246.16	4270232.29	UCART1	10.00
615	637566.16	4270232.29	UCART1	10.36
616	637606.16	4270232.29	UCART1	10.36
617	637726.16	4270232.29	UCART1	10.14
618	637766.16	4270232.29	UCART1	9.73
619	637806.16	4270232.29	UCART1	9.40
620	637886.16	4270232.29	UCART1	9.14
621	637926.16	4270232.29	UCART1	9.14
622	637966.16	4270232.29	UCART1	9.37
623	638006.16	4270232.29	UCART1	10.33
624	638046.16	4270232.29	UCART1	10.47
625	638086.16	4270232.29	UCART1	10.59
626	638126.16	4270232.29	UCART1	10.67
627	638166.16	4270232.29	UCART1	10.67
628	638206.16	4270232.29	UCART1	10.67
629	638246.16	4270232.29	UCART1	10.67
630	638286.16	4270232.29	UCART1	10.67
631	638326.16	4270232.29	UCART1	10.67
632	638366.16	4270232.29	UCART1	10.66
633	638406.16	4270232.29	UCART1	10.47
634	638446.16	4270232.29	UCART1	10.36
635	638486.16	4270232.29	UCART1	10.36
636	638526.16	4270232.29	UCART1	10.43
637	635966.16	4270272.29	UCART1	9.09
638	636006.16	4270272.29	UCART1	9.12

Receptor Pathway

AERMOD

639	636086.16	4270272.29	UCART1	9.12
640	636126.16	4270272.29	UCART1	9.14
641	636166.16	4270272.29	UCART1	9.14
642	636206.16	4270272.29	UCART1	9.44
643	636366.16	4270272.29	UCART1	10.36
644	636406.16	4270272.29	UCART1	10.59
645	636446.16	4270272.29	UCART1	10.67
646	636566.16	4270272.29	UCART1	10.67
647	636606.16	4270272.29	UCART1	10.67
648	636646.16	4270272.29	UCART1	10.67
649	636686.16	4270272.29	UCART1	10.67
650	636726.16	4270272.29	UCART1	10.67
651	636766.16	4270272.29	UCART1	10.67
652	636806.16	4270272.29	UCART1	10.67
653	636846.16	4270272.29	UCART1	10.67
654	636886.16	4270272.29	UCART1	10.67
655	636926.16	4270272.29	UCART1	10.67
656	636966.16	4270272.29	UCART1	10.67
657	637006.16	4270272.29	UCART1	10.67
658	637046.16	4270272.29	UCART1	10.67
659	637566.16	4270272.29	UCART1	10.53
660	637606.16	4270272.29	UCART1	10.36
661	637646.16	4270272.29	UCART1	10.36
662	637726.16	4270272.29	UCART1	10.07
663	637766.16	4270272.29	UCART1	9.75
664	637806.16	4270272.29	UCART1	9.61
665	637846.16	4270272.29	UCART1	9.43
666	637926.16	4270272.29	UCART1	9.14
667	637966.16	4270272.29	UCART1	9.16
668	638006.16	4270272.29	UCART1	9.82
669	638046.16	4270272.29	UCART1	10.49
670	638086.16	4270272.29	UCART1	11.07
671	638126.16	4270272.29	UCART1	10.93
672	638166.16	4270272.29	UCART1	10.67
673	638206.16	4270272.29	UCART1	10.67
674	638246.16	4270272.29	UCART1	10.67
675	638286.16	4270272.29	UCART1	10.67
676	638326.16	4270272.29	UCART1	10.67

Receptor Pathway

AERMOD

677	638366.16	4270272.29	UCART1	10.67
678	638406.16	4270272.29	UCART1	10.66
679	638446.16	4270272.29	UCART1	10.64
680	638486.16	4270272.29	UCART1	10.64
681	638526.16	4270272.29	UCART1	10.65
682	635966.16	4270312.29	UCART1	9.14
683	636006.16	4270312.29	UCART1	9.14
684	636046.16	4270312.29	UCART1	9.14
685	636086.16	4270312.29	UCART1	9.14
686	636126.16	4270312.29	UCART1	9.14
687	636166.16	4270312.29	UCART1	9.14
688	636206.16	4270312.29	UCART1	9.47
689	636286.16	4270312.29	UCART1	10.28
690	636326.16	4270312.29	UCART1	10.45
691	636366.16	4270312.29	UCART1	10.67
692	636406.16	4270312.29	UCART1	10.67
693	636446.16	4270312.29	UCART1	10.67
694	636566.16	4270312.29	UCART1	10.67
695	636606.16	4270312.29	UCART1	10.67
696	636646.16	4270312.29	UCART1	10.67
697	636686.16	4270312.29	UCART1	10.67
698	636726.16	4270312.29	UCART1	10.67
699	636766.16	4270312.29	UCART1	10.67
700	636806.16	4270312.29	UCART1	10.66
701	636846.16	4270312.29	UCART1	10.59
702	636886.16	4270312.29	UCART1	10.42
703	636926.16	4270312.29	UCART1	10.36
704	636966.16	4270312.29	UCART1	10.36
705	637006.16	4270312.29	UCART1	10.59
706	637046.16	4270312.29	UCART1	10.67
707	637086.16	4270312.29	UCART1	10.64
708	637126.16	4270312.29	UCART1	10.37
709	637166.16	4270312.29	UCART1	10.52
710	637606.16	4270312.29	UCART1	10.42
711	637646.16	4270312.29	UCART1	10.36
712	637686.16	4270312.29	UCART1	10.24
713	637766.16	4270312.29	UCART1	9.75
714	637806.16	4270312.29	UCART1	9.66

Receptor Pathway

AERMOD

715	637846.16	4270312.29	UCART1	9.47
716	637886.16	4270312.29	UCART1	9.43
717	637966.16	4270312.29	UCART1	9.14
718	638006.16	4270312.29	UCART1	9.46
719	638046.16	4270312.29	UCART1	10.79
720	638086.16	4270312.29	UCART1	11.37
721	638126.16	4270312.29	UCART1	11.35
722	638166.16	4270312.29	UCART1	11.23
723	638206.16	4270312.29	UCART1	11.05
724	638246.16	4270312.29	UCART1	11.05
725	638286.16	4270312.29	UCART1	11.02
726	638326.16	4270312.29	UCART1	10.80
727	638366.16	4270312.29	UCART1	10.67
728	638406.16	4270312.29	UCART1	10.67
729	638446.16	4270312.29	UCART1	10.67
730	638486.16	4270312.29	UCART1	10.67
731	638566.16	4270312.29	UCART1	10.67
732	635966.16	4270352.29	UCART1	9.14
733	636006.16	4270352.29	UCART1	9.14
734	636046.16	4270352.29	UCART1	9.14
735	636086.16	4270352.29	UCART1	9.14
736	636126.16	4270352.29	UCART1	9.14
737	636166.16	4270352.29	UCART1	9.14
738	636206.16	4270352.29	UCART1	9.47
739	636286.16	4270352.29	UCART1	10.28
740	636326.16	4270352.29	UCART1	10.67
741	636366.16	4270352.29	UCART1	10.67
742	636406.16	4270352.29	UCART1	10.67
743	636446.16	4270352.29	UCART1	10.67
744	636566.16	4270352.29	UCART1	10.67
745	636606.16	4270352.29	UCART1	10.67
746	636646.16	4270352.29	UCART1	10.67
747	636686.16	4270352.29	UCART1	10.67
748	636726.16	4270352.29	UCART1	10.67
749	636766.16	4270352.29	UCART1	10.67
750	636806.16	4270352.29	UCART1	10.48
751	636846.16	4270352.29	UCART1	10.36
752	636886.16	4270352.29	UCART1	10.36

Receptor Pathway

AERMOD

753	636926.16	4270352.29	UCART1	10.36
754	636966.16	4270352.29	UCART1	10.36
755	637006.16	4270352.29	UCART1	10.59
756	637046.16	4270352.29	UCART1	10.67
757	637086.16	4270352.29	UCART1	10.54
758	637126.16	4270352.29	UCART1	10.14
759	637166.16	4270352.29	UCART1	10.07
760	637206.16	4270352.29	UCART1	10.04
761	637606.16	4270352.29	UCART1	10.63
762	637646.16	4270352.29	UCART1	10.53
763	637686.16	4270352.29	UCART1	10.31
764	637726.16	4270352.29	UCART1	10.10
765	637806.16	4270352.29	UCART1	9.75
766	637846.16	4270352.29	UCART1	9.66
767	637886.16	4270352.29	UCART1	9.45
768	637926.16	4270352.29	UCART1	9.40
769	637966.16	4270352.29	UCART1	9.32
770	638046.16	4270352.29	UCART1	10.10
771	638086.16	4270352.29	UCART1	11.83
772	638126.16	4270352.29	UCART1	11.92
773	638166.16	4270352.29	UCART1	11.71
774	638206.16	4270352.29	UCART1	11.63
775	638246.16	4270352.29	UCART1	11.60
776	638286.16	4270352.29	UCART1	11.23
777	638326.16	4270352.29	UCART1	11.02
778	638366.16	4270352.29	UCART1	10.67
779	638406.16	4270352.29	UCART1	10.67
780	638446.16	4270352.29	UCART1	10.67
781	638526.16	4270352.29	UCART1	10.67
782	638566.16	4270352.29	UCART1	10.80
783	635966.16	4270392.29	UCART1	9.14
784	636006.16	4270392.29	UCART1	9.14
785	636046.16	4270392.29	UCART1	9.14
786	636086.16	4270392.29	UCART1	8.89
787	636126.16	4270392.29	UCART1	9.14
788	636166.16	4270392.29	UCART1	9.14
789	636206.16	4270392.29	UCART1	9.47
790	636526.16	4270392.29	UCART1	10.67

Receptor Pathway

AERMOD

791	636566.16	4270392.29	UCART1	10.67
792	636606.16	4270392.29	UCART1	10.67
793	636646.16	4270392.29	UCART1	10.67
794	636686.16	4270392.29	UCART1	10.67
795	636726.16	4270392.29	UCART1	10.67
796	636766.16	4270392.29	UCART1	10.67
797	636806.16	4270392.29	UCART1	10.36
798	636846.16	4270392.29	UCART1	10.25
799	636886.16	4270392.29	UCART1	10.09
800	636926.16	4270392.29	UCART1	10.36
801	636966.16	4270392.29	UCART1	10.48
802	637006.16	4270392.29	UCART1	10.66
803	637046.16	4270392.29	UCART1	10.65
804	637086.16	4270392.29	UCART1	10.38
805	637126.16	4270392.29	UCART1	10.14
806	637166.16	4270392.29	UCART1	10.06
807	637206.16	4270392.29	UCART1	10.15
808	637606.16	4270392.29	UCART1	10.67
809	637646.16	4270392.29	UCART1	10.65
810	637686.16	4270392.29	UCART1	10.36
811	637726.16	4270392.29	UCART1	10.14
812	637846.16	4270392.29	UCART1	9.75
813	637886.16	4270392.29	UCART1	9.73
814	637926.16	4270392.29	UCART1	9.73
815	637966.16	4270392.29	UCART1	9.93
816	638006.16	4270392.29	UCART1	9.98
817	638086.16	4270392.29	UCART1	10.76
818	638126.16	4270392.29	UCART1	11.93
819	638166.16	4270392.29	UCART1	12.17
820	638206.16	4270392.29	UCART1	12.17
821	638246.16	4270392.29	UCART1	11.86
822	638286.16	4270392.29	UCART1	11.33
823	638326.16	4270392.29	UCART1	10.98
824	638366.16	4270392.29	UCART1	10.67
825	638486.16	4270392.29	UCART1	10.69
826	638526.16	4270392.29	UCART1	10.95
827	638566.16	4270392.29	UCART1	10.97
828	635966.16	4270432.29	UCART1	9.07

Receptor Pathway

AERMOD

829	636006.16	4270432.29	UCART1	9.07
830	636046.16	4270432.29	UCART1	8.90
831	636126.16	4270432.29	UCART1	9.14
832	636166.16	4270432.29	UCART1	9.37
833	636206.16	4270432.29	UCART1	9.47
834	636286.16	4270432.29	UCART1	10.28
835	636326.16	4270432.29	UCART1	10.67
836	636366.16	4270432.29	UCART1	10.67
837	636406.16	4270432.29	UCART1	10.67
838	636446.16	4270432.29	UCART1	10.65
839	636526.16	4270432.29	UCART1	10.36
840	636606.16	4270432.29	UCART1	10.67
841	636646.16	4270432.29	UCART1	10.67
842	636686.16	4270432.29	UCART1	10.67
843	636726.16	4270432.29	UCART1	10.67
844	636766.16	4270432.29	UCART1	10.44
845	636806.16	4270432.29	UCART1	10.34
846	636846.16	4270432.29	UCART1	10.06
847	636886.16	4270432.29	UCART1	10.06
848	636926.16	4270432.29	UCART1	10.29
849	636966.16	4270432.29	UCART1	10.49
850	637006.16	4270432.29	UCART1	10.67
851	637046.16	4270432.29	UCART1	10.67
852	637086.16	4270432.29	UCART1	10.57
853	637126.16	4270432.29	UCART1	10.21
854	637166.16	4270432.29	UCART1	10.37
855	637206.16	4270432.29	UCART1	10.53
856	637606.16	4270432.29	UCART1	10.61
857	637646.16	4270432.29	UCART1	10.58
858	637686.16	4270432.29	UCART1	10.36
859	637726.16	4270432.29	UCART1	10.19
860	637766.16	4270432.29	UCART1	10.06
861	637886.16	4270432.29	UCART1	10.06
862	637926.16	4270432.29	UCART1	10.26
863	637966.16	4270432.29	UCART1	10.61
864	638006.16	4270432.29	UCART1	10.86
865	638046.16	4270432.29	UCART1	10.53
866	638086.16	4270432.29	UCART1	10.67

Receptor Pathway

AERMOD

867	638166.16	4270432.29	UCART1	11.17
868	638206.16	4270432.29	UCART1	11.84
869	638246.16	4270432.29	UCART1	12.04
870	638286.16	4270432.29	UCART1	11.03
871	638406.16	4270432.29	UCART1	10.67
872	638446.16	4270432.29	UCART1	10.67
873	638486.16	4270432.29	UCART1	10.97
874	638526.16	4270432.29	UCART1	10.97
875	638566.16	4270432.29	UCART1	10.97
876	636006.16	4270472.29	UCART1	8.84
877	636046.16	4270472.29	UCART1	8.84
878	636086.16	4270472.29	UCART1	8.86
879	636126.16	4270472.29	UCART1	9.14
880	636166.16	4270472.29	UCART1	9.24
881	636206.16	4270472.29	UCART1	9.47
882	636526.16	4270472.29	UCART1	10.36
883	636606.16	4270472.29	UCART1	10.67
884	636646.16	4270472.29	UCART1	10.67
885	636686.16	4270472.29	UCART1	10.67
886	636726.16	4270472.29	UCART1	10.60
887	636766.16	4270472.29	UCART1	10.40
888	636806.16	4270472.29	UCART1	10.18
889	636846.16	4270472.29	UCART1	10.06
890	636886.16	4270472.29	UCART1	10.06
891	636926.16	4270472.29	UCART1	10.24
892	636966.16	4270472.29	UCART1	10.49
893	637006.16	4270472.29	UCART1	10.67
894	637046.16	4270472.29	UCART1	10.67
895	637086.16	4270472.29	UCART1	10.60
896	637126.16	4270472.29	UCART1	10.53
897	637166.16	4270472.29	UCART1	10.55
898	637206.16	4270472.29	UCART1	10.67
899	637646.16	4270472.29	UCART1	10.36
900	637686.16	4270472.29	UCART1	10.36
901	637726.16	4270472.29	UCART1	10.36
902	637766.16	4270472.29	UCART1	10.06
903	637886.16	4270472.29	UCART1	10.26
904	637926.16	4270472.29	UCART1	10.59

Receptor Pathway

AERMOD

905	637966.16	4270472.29	UCART1	10.67
906	638006.16	4270472.29	UCART1	10.67
907	638046.16	4270472.29	UCART1	10.67
908	638086.16	4270472.29	UCART1	10.67
909	638126.16	4270472.29	UCART1	10.67
910	638166.16	4270472.29	UCART1	10.72
911	638326.16	4270472.29	UCART1	10.67
912	638366.16	4270472.29	UCART1	10.67
913	638406.16	4270472.29	UCART1	10.67
914	638446.16	4270472.29	UCART1	10.67
915	638486.16	4270472.29	UCART1	10.97
916	638526.16	4270472.29	UCART1	10.97
917	638566.16	4270472.29	UCART1	10.97
918	635966.16	4270512.29	UCART1	8.54
919	636006.16	4270512.29	UCART1	8.67
920	636046.16	4270512.29	UCART1	8.84
921	636086.16	4270512.29	UCART1	8.86
922	636126.16	4270512.29	UCART1	9.14
923	636166.16	4270512.29	UCART1	9.14
924	636206.16	4270512.29	UCART1	9.47
925	636286.16	4270512.29	UCART1	10.58
926	636326.16	4270512.29	UCART1	10.67
927	636366.16	4270512.29	UCART1	10.78
928	636406.16	4270512.29	UCART1	10.74
929	636526.16	4270512.29	UCART1	10.29
930	636566.16	4270512.29	UCART1	10.39
931	636606.16	4270512.29	UCART1	10.67
932	636646.16	4270512.29	UCART1	10.67
933	636686.16	4270512.29	UCART1	10.67
934	636726.16	4270512.29	UCART1	10.54
935	636766.16	4270512.29	UCART1	10.16
936	636806.16	4270512.29	UCART1	10.06
937	636846.16	4270512.29	UCART1	10.06
938	636886.16	4270512.29	UCART1	10.06
939	636926.16	4270512.29	UCART1	10.36
940	636966.16	4270512.29	UCART1	10.49
941	637006.16	4270512.29	UCART1	10.67
942	637046.16	4270512.29	UCART1	10.65

Receptor Pathway

AERMOD

943	637086.16	4270512.29	UCART1	10.49
944	637126.16	4270512.29	UCART1	10.66
945	637166.16	4270512.29	UCART1	10.67
946	637206.16	4270512.29	UCART1	10.67
947	637646.16	4270512.29	UCART1	10.62
948	637686.16	4270512.29	UCART1	10.36
949	637726.16	4270512.29	UCART1	10.36
950	637766.16	4270512.29	UCART1	10.34
951	637806.16	4270512.29	UCART1	10.34
952	637926.16	4270512.29	UCART1	10.67
953	637966.16	4270512.29	UCART1	10.67
954	638006.16	4270512.29	UCART1	10.67
955	638046.16	4270512.29	UCART1	10.67
956	638086.16	4270512.29	UCART1	10.67
957	638126.16	4270512.29	UCART1	10.67
958	638286.16	4270512.29	UCART1	10.68
959	638326.16	4270512.29	UCART1	10.67
960	638366.16	4270512.29	UCART1	10.67
961	638406.16	4270512.29	UCART1	10.67
962	638446.16	4270512.29	UCART1	10.67
963	638486.16	4270512.29	UCART1	10.71
964	638526.16	4270512.29	UCART1	10.97
965	638566.16	4270512.29	UCART1	10.97
966	634406.16	4270552.29	UCART1	7.64
967	635966.16	4270552.29	UCART1	8.47
968	636046.16	4270552.29	UCART1	8.84
969	636086.16	4270552.29	UCART1	8.86
970	636126.16	4270552.29	UCART1	9.10
971	636166.16	4270552.29	UCART1	9.37
972	636206.16	4270552.29	UCART1	9.56
973	636486.16	4270552.29	UCART1	10.06
974	636526.16	4270552.29	UCART1	10.28
975	636606.16	4270552.29	UCART1	10.64
976	636646.16	4270552.29	UCART1	10.48
977	636686.16	4270552.29	UCART1	10.14
978	636726.16	4270552.29	UCART1	10.12
979	636766.16	4270552.29	UCART1	9.98
980	636806.16	4270552.29	UCART1	10.06

Receptor Pathway

AERMOD

981	636846.16	4270552.29	UCART1	10.06
982	636886.16	4270552.29	UCART1	10.23
983	636926.16	4270552.29	UCART1	10.36
984	636966.16	4270552.29	UCART1	10.36
985	637006.16	4270552.29	UCART1	10.53
986	637046.16	4270552.29	UCART1	10.67
987	637086.16	4270552.29	UCART1	10.67
988	637126.16	4270552.29	UCART1	10.67
989	637166.16	4270552.29	UCART1	10.36
990	637206.16	4270552.29	UCART1	10.49
991	637646.16	4270552.29	UCART1	10.60
992	637686.16	4270552.29	UCART1	10.57
993	637726.16	4270552.29	UCART1	10.44
994	637766.16	4270552.29	UCART1	10.44
995	637806.16	4270552.29	UCART1	10.44
996	637846.16	4270552.29	UCART1	10.44
997	638046.16	4270552.29	UCART1	10.67
998	638086.16	4270552.29	UCART1	10.67
999	638326.16	4270552.29	UCART1	10.67
1,000	638366.16	4270552.29	UCART1	10.67
1,001	638406.16	4270552.29	UCART1	10.67
1,002	638446.16	4270552.29	UCART1	10.67
1,003	638486.16	4270552.29	UCART1	10.69
1,004	638526.16	4270552.29	UCART1	10.97
1,005	638566.16	4270552.29	UCART1	10.97
1,006	635966.16	4270592.29	UCART1	8.43
1,007	636006.16	4270592.29	UCART1	8.76
1,008	636046.16	4270592.29	UCART1	8.84
1,009	636126.16	4270592.29	UCART1	8.96
1,010	636166.16	4270592.29	UCART1	9.37
1,011	636206.16	4270592.29	UCART1	9.94
1,012	636286.16	4270592.29	UCART1	10.59
1,013	636326.16	4270592.29	UCART1	10.67
1,014	636366.16	4270592.29	UCART1	10.72
1,015	636406.16	4270592.29	UCART1	10.48
1,016	636486.16	4270592.29	UCART1	10.13
1,017	636526.16	4270592.29	UCART1	10.33
1,018	636606.16	4270592.29	UCART1	10.12

Receptor Pathway

AERMOD

1,019	636646.16	4270592.29	UCART1	9.51
1,020	636686.16	4270592.29	UCART1	9.28
1,021	636726.16	4270592.29	UCART1	9.47
1,022	636766.16	4270592.29	UCART1	9.71
1,023	636806.16	4270592.29	UCART1	9.89
1,024	636846.16	4270592.29	UCART1	10.06
1,025	636886.16	4270592.29	UCART1	10.06
1,026	636926.16	4270592.29	UCART1	10.19
1,027	636966.16	4270592.29	UCART1	10.26
1,028	637006.16	4270592.29	UCART1	10.36
1,029	637046.16	4270592.29	UCART1	10.50
1,030	637086.16	4270592.29	UCART1	10.60
1,031	637126.16	4270592.29	UCART1	10.49
1,032	637166.16	4270592.29	UCART1	10.36
1,033	637206.16	4270592.29	UCART1	10.49
1,034	637246.16	4270592.29	UCART1	10.67
1,035	637646.16	4270592.29	UCART1	10.05
1,036	637686.16	4270592.29	UCART1	10.56
1,037	637726.16	4270592.29	UCART1	10.67
1,038	637766.16	4270592.29	UCART1	10.67
1,039	637806.16	4270592.29	UCART1	10.67
1,040	637846.16	4270592.29	UCART1	10.67
1,041	638326.16	4270592.29	UCART1	10.67
1,042	638366.16	4270592.29	UCART1	10.67
1,043	638406.16	4270592.29	UCART1	10.67
1,044	638446.16	4270592.29	UCART1	10.67
1,045	638486.16	4270592.29	UCART1	10.68
1,046	638526.16	4270592.29	UCART1	10.80
1,047	638566.16	4270592.29	UCART1	10.80
1,048	635966.16	4270632.29	UCART1	8.81
1,049	636006.16	4270632.29	UCART1	8.84
1,050	636046.16	4270632.29	UCART1	8.84
1,051	636486.16	4270632.29	UCART1	10.35
1,052	636526.16	4270632.29	UCART1	10.57
1,053	636566.16	4270632.29	UCART1	10.05
1,054	636606.16	4270632.29	UCART1	9.20
1,055	636646.16	4270632.29	UCART1	9.15
1,056	636686.16	4270632.29	UCART1	9.14

Receptor Pathway

AERMOD

1,057	636726.16	4270632.29	UCART1	9.15
1,058	636766.16	4270632.29	UCART1	9.40
1,059	636806.16	4270632.29	UCART1	9.76
1,060	636846.16	4270632.29	UCART1	9.78
1,061	636886.16	4270632.29	UCART1	9.78
1,062	636926.16	4270632.29	UCART1	10.06
1,063	636966.16	4270632.29	UCART1	10.07
1,064	637006.16	4270632.29	UCART1	10.09
1,065	637046.16	4270632.29	UCART1	10.09
1,066	637086.16	4270632.29	UCART1	10.10
1,067	637126.16	4270632.29	UCART1	10.09
1,068	637166.16	4270632.29	UCART1	10.11
1,069	637206.16	4270632.29	UCART1	10.37
1,070	637246.16	4270632.29	UCART1	10.60
1,071	637686.16	4270632.29	UCART1	9.93
1,072	637726.16	4270632.29	UCART1	10.32
1,073	637766.16	4270632.29	UCART1	10.39
1,074	637806.16	4270632.29	UCART1	10.39
1,075	637846.16	4270632.29	UCART1	10.60
1,076	637886.16	4270632.29	UCART1	10.67
1,077	638366.16	4270632.29	UCART1	10.67
1,078	638406.16	4270632.29	UCART1	10.67
1,079	638446.16	4270632.29	UCART1	10.67
1,080	638486.16	4270632.29	UCART1	10.67
1,081	638526.16	4270632.29	UCART1	10.67
1,082	638566.16	4270632.29	UCART1	10.67
1,083	635966.16	4270672.29	UCART1	9.31
1,084	636006.16	4270672.29	UCART1	9.52
1,085	636046.16	4270672.29	UCART1	9.47
1,086	636126.16	4270672.29	UCART1	9.95
1,087	636166.16	4270672.29	UCART1	10.36
1,088	636206.16	4270672.29	UCART1	10.45
1,089	636246.16	4270672.29	UCART1	10.67
1,090	636486.16	4270672.29	UCART1	10.18
1,091	636526.16	4270672.29	UCART1	9.34
1,092	636566.16	4270672.29	UCART1	9.14
1,093	636646.16	4270672.29	UCART1	9.14
1,094	636686.16	4270672.29	UCART1	9.14

Receptor Pathway

AERMOD

1,095	636726.16	4270672.29	UCART1	9.14
1,096	636766.16	4270672.29	UCART1	9.37
1,097	636806.16	4270672.29	UCART1	9.47
1,098	636846.16	4270672.29	UCART1	9.71
1,099	636886.16	4270672.29	UCART1	9.75
1,100	636926.16	4270672.29	UCART1	9.75
1,101	636966.16	4270672.29	UCART1	9.75
1,102	637006.16	4270672.29	UCART1	9.75
1,103	637046.16	4270672.29	UCART1	9.75
1,104	637086.16	4270672.29	UCART1	9.72
1,105	637126.16	4270672.29	UCART1	9.68
1,106	637166.16	4270672.29	UCART1	9.70
1,107	637206.16	4270672.29	UCART1	9.98
1,108	637246.16	4270672.29	UCART1	10.10
1,109	637686.16	4270672.29	UCART1	9.57
1,110	637726.16	4270672.29	UCART1	9.92
1,111	637766.16	4270672.29	UCART1	10.08
1,112	637806.16	4270672.29	UCART1	10.32
1,113	637846.16	4270672.29	UCART1	10.36
1,114	637886.16	4270672.29	UCART1	10.67
1,115	637926.16	4270672.29	UCART1	10.67
1,116	638446.16	4270672.29	UCART1	10.67
1,117	638486.16	4270672.29	UCART1	10.67
1,118	638526.16	4270672.29	UCART1	10.67
1,119	638566.16	4270672.29	UCART1	10.67
1,120	635966.16	4270712.29	UCART1	10.11
1,121	636006.16	4270712.29	UCART1	10.11
1,122	636046.16	4270712.29	UCART1	10.01
1,123	636126.16	4270712.29	UCART1	10.29
1,124	636166.16	4270712.29	UCART1	10.59
1,125	636206.16	4270712.29	UCART1	10.67
1,126	636246.16	4270712.29	UCART1	10.60
1,127	636486.16	4270712.29	UCART1	9.27
1,128	636526.16	4270712.29	UCART1	9.18
1,129	636566.16	4270712.29	UCART1	9.14
1,130	636606.16	4270712.29	UCART1	9.14
1,131	636686.16	4270712.29	UCART1	9.14
1,132	636726.16	4270712.29	UCART1	9.14

Receptor Pathway

AERMOD

1,133	636766.16	4270712.29	UCART1	9.37
1,134	636806.16	4270712.29	UCART1	9.45
1,135	636846.16	4270712.29	UCART1	9.50
1,136	636886.16	4270712.29	UCART1	9.58
1,137	636926.16	4270712.29	UCART1	9.58
1,138	636966.16	4270712.29	UCART1	9.58
1,139	637006.16	4270712.29	UCART1	9.58
1,140	637046.16	4270712.29	UCART1	9.58
1,141	637086.16	4270712.29	UCART1	9.52
1,142	637126.16	4270712.29	UCART1	9.45
1,143	637166.16	4270712.29	UCART1	9.45
1,144	637206.16	4270712.29	UCART1	9.40
1,145	637246.16	4270712.29	UCART1	9.18
1,146	637686.16	4270712.29	UCART1	9.57
1,147	637726.16	4270712.29	UCART1	9.75
1,148	637766.16	4270712.29	UCART1	10.07
1,149	637806.16	4270712.29	UCART1	10.29
1,150	637846.16	4270712.29	UCART1	10.36
1,151	638446.16	4270712.29	UCART1	10.67
1,152	638486.16	4270712.29	UCART1	10.67
1,153	638526.16	4270712.29	UCART1	10.67
1,154	638566.16	4270712.29	UCART1	10.67
1,155	635366.16	4270752.29	UCART1	7.65
1,156	635406.16	4270752.29	UCART1	7.65
1,157	635446.16	4270752.29	UCART1	7.65
1,158	635486.16	4270752.29	UCART1	7.70
1,159	635526.16	4270752.29	UCART1	7.75
1,160	635566.16	4270752.29	UCART1	7.53
1,161	635606.16	4270752.29	UCART1	7.41
1,162	635646.16	4270752.29	UCART1	7.50
1,163	635686.16	4270752.29	UCART1	7.32
1,164	635726.16	4270752.29	UCART1	7.93
1,165	635766.16	4270752.29	UCART1	8.83
1,166	635806.16	4270752.29	UCART1	8.99
1,167	635846.16	4270752.29	UCART1	9.37
1,168	635926.16	4270752.29	UCART1	10.54
1,169	635966.16	4270752.29	UCART1	10.66
1,170	636006.16	4270752.29	UCART1	10.81

Receptor Pathway

AERMOD

1,171	636046.16	4270752.29	UCART1	10.64
1,172	636126.16	4270752.29	UCART1	10.09
1,173	636166.16	4270752.29	UCART1	10.31
1,174	636206.16	4270752.29	UCART1	10.39
1,175	636246.16	4270752.29	UCART1	10.27
1,176	636446.16	4270752.29	UCART1	9.14
1,177	636486.16	4270752.29	UCART1	9.14
1,178	636526.16	4270752.29	UCART1	9.14
1,179	636566.16	4270752.29	UCART1	9.14
1,180	636606.16	4270752.29	UCART1	9.14
1,181	636646.16	4270752.29	UCART1	9.14
1,182	636686.16	4270752.29	UCART1	9.14
1,183	636726.16	4270752.29	UCART1	9.14
1,184	636766.16	4270752.29	UCART1	9.37
1,185	636806.16	4270752.29	UCART1	9.45
1,186	636846.16	4270752.29	UCART1	9.45
1,187	636886.16	4270752.29	UCART1	9.45
1,188	636926.16	4270752.29	UCART1	9.45
1,189	636966.16	4270752.29	UCART1	9.45
1,190	637006.16	4270752.29	UCART1	9.45
1,191	637046.16	4270752.29	UCART1	9.45
1,192	637086.16	4270752.29	UCART1	9.45
1,193	637126.16	4270752.29	UCART1	9.45
1,194	637166.16	4270752.29	UCART1	9.15
1,195	637206.16	4270752.29	UCART1	8.87
1,196	637246.16	4270752.29	UCART1	8.64
1,197	635246.16	4270792.29	UCART1	7.55
1,198	635286.16	4270792.29	UCART1	7.62
1,199	635326.16	4270792.29	UCART1	7.62
1,200	635366.16	4270792.29	UCART1	7.55
1,201	635406.16	4270792.29	UCART1	7.45
1,202	635446.16	4270792.29	UCART1	7.54
1,203	635486.16	4270792.29	UCART1	7.62
1,204	635526.16	4270792.29	UCART1	7.62
1,205	635566.16	4270792.29	UCART1	7.45
1,206	635606.16	4270792.29	UCART1	7.70
1,207	635646.16	4270792.29	UCART1	7.92
1,208	635686.16	4270792.29	UCART1	8.54

Receptor Pathway

AERMOD

1,209	635726.16	4270792.29	UCART1	9.31
1,210	635806.16	4270792.29	UCART1	10.13
1,211	635846.16	4270792.29	UCART1	10.52
1,212	635886.16	4270792.29	UCART1	10.67
1,213	635926.16	4270792.29	UCART1	10.61
1,214	635966.16	4270792.29	UCART1	10.52
1,215	636006.16	4270792.29	UCART1	10.49
1,216	636126.16	4270792.29	UCART1	9.63
1,217	636166.16	4270792.29	UCART1	9.85
1,218	636206.16	4270792.29	UCART1	9.61
1,219	636446.16	4270792.29	UCART1	9.14
1,220	636486.16	4270792.29	UCART1	9.14
1,221	636526.16	4270792.29	UCART1	9.14
1,222	636566.16	4270792.29	UCART1	9.14
1,223	636606.16	4270792.29	UCART1	9.14
1,224	636646.16	4270792.29	UCART1	9.14
1,225	636686.16	4270792.29	UCART1	9.14
1,226	636726.16	4270792.29	UCART1	9.14
1,227	636766.16	4270792.29	UCART1	9.37
1,228	636806.16	4270792.29	UCART1	9.45
1,229	636846.16	4270792.29	UCART1	9.45
1,230	636886.16	4270792.29	UCART1	9.45
1,231	636926.16	4270792.29	UCART1	9.45
1,232	636966.16	4270792.29	UCART1	9.45
1,233	637006.16	4270792.29	UCART1	9.45
1,234	637046.16	4270792.29	UCART1	9.45
1,235	637086.16	4270792.29	UCART1	9.45
1,236	637126.16	4270792.29	UCART1	9.22
1,237	637166.16	4270792.29	UCART1	9.05
1,238	637206.16	4270792.29	UCART1	8.72
1,239	637246.16	4270792.29	UCART1	8.31
1,240	638086.16	4270792.29	UCART1	10.67
1,241	638126.16	4270792.29	UCART1	10.67
1,242	638166.16	4270792.29	UCART1	10.67
1,243	638206.16	4270792.29	UCART1	10.67
1,244	638246.16	4270792.29	UCART1	10.67
1,245	638286.16	4270792.29	UCART1	10.67
1,246	638326.16	4270792.29	UCART1	10.67

Receptor Pathway

AERMOD

1,247	638366.16	4270792.29	UCART1	10.67
1,248	638406.16	4270792.29	UCART1	10.67
1,249	638446.16	4270792.29	UCART1	10.67
1,250	638486.16	4270792.29	UCART1	10.67
1,251	638526.16	4270792.29	UCART1	10.67
1,252	638566.16	4270792.29	UCART1	10.67
1,253	635126.16	4270832.29	UCART1	7.62
1,254	635166.16	4270832.29	UCART1	7.62
1,255	635206.16	4270832.29	UCART1	7.49
1,256	635246.16	4270832.29	UCART1	7.32
1,257	635286.16	4270832.29	UCART1	7.44
1,258	635326.16	4270832.29	UCART1	7.44
1,259	635366.16	4270832.29	UCART1	7.32
1,260	635406.16	4270832.29	UCART1	7.39
1,261	635446.16	4270832.29	UCART1	7.59
1,262	635486.16	4270832.29	UCART1	7.63
1,263	635526.16	4270832.29	UCART1	7.80
1,264	635566.16	4270832.29	UCART1	7.93
1,265	635606.16	4270832.29	UCART1	8.30
1,266	635686.16	4270832.29	UCART1	9.24
1,267	635726.16	4270832.29	UCART1	9.77
1,268	635766.16	4270832.29	UCART1	10.11
1,269	635806.16	4270832.29	UCART1	10.59
1,270	635846.16	4270832.29	UCART1	10.77
1,271	635886.16	4270832.29	UCART1	10.42
1,272	635966.16	4270832.29	UCART1	9.87
1,273	636006.16	4270832.29	UCART1	9.58
1,274	636046.16	4270832.29	UCART1	9.31
1,275	636086.16	4270832.29	UCART1	8.97
1,276	636126.16	4270832.29	UCART1	9.09
1,277	636166.16	4270832.29	UCART1	9.40
1,278	636206.16	4270832.29	UCART1	9.15
1,279	636446.16	4270832.29	UCART1	9.14
1,280	636486.16	4270832.29	UCART1	9.14
1,281	636526.16	4270832.29	UCART1	9.14
1,282	636566.16	4270832.29	UCART1	9.14
1,283	636606.16	4270832.29	UCART1	9.14
1,284	636646.16	4270832.29	UCART1	9.14

Receptor Pathway

AERMOD

1,285	636686.16	4270832.29	UCART1	9.14
1,286	636766.16	4270832.29	UCART1	9.37
1,287	636806.16	4270832.29	UCART1	9.45
1,288	636846.16	4270832.29	UCART1	9.45
1,289	636886.16	4270832.29	UCART1	9.45
1,290	636926.16	4270832.29	UCART1	9.45
1,291	636966.16	4270832.29	UCART1	9.45
1,292	637006.16	4270832.29	UCART1	9.45
1,293	637046.16	4270832.29	UCART1	9.45
1,294	637086.16	4270832.29	UCART1	9.38
1,295	637126.16	4270832.29	UCART1	9.18
1,296	637166.16	4270832.29	UCART1	8.84
1,297	637206.16	4270832.29	UCART1	8.72
1,298	637246.16	4270832.29	UCART1	8.31
1,299	637286.16	4270832.29	UCART1	8.09
1,300	638086.16	4270832.29	UCART1	10.67
1,301	638126.16	4270832.29	UCART1	10.67
1,302	638166.16	4270832.29	UCART1	10.67
1,303	638206.16	4270832.29	UCART1	10.67
1,304	638246.16	4270832.29	UCART1	10.67
1,305	638286.16	4270832.29	UCART1	10.67
1,306	638326.16	4270832.29	UCART1	10.67
1,307	638366.16	4270832.29	UCART1	10.67
1,308	638406.16	4270832.29	UCART1	10.67
1,309	638446.16	4270832.29	UCART1	10.67
1,310	638486.16	4270832.29	UCART1	10.67
1,311	638526.16	4270832.29	UCART1	10.67
1,312	638566.16	4270832.29	UCART1	10.67
1,313	635126.16	4270872.29	UCART1	7.34
1,314	635166.16	4270872.29	UCART1	7.34
1,315	635206.16	4270872.29	UCART1	7.32
1,316	635246.16	4270872.29	UCART1	7.32
1,317	635286.16	4270872.29	UCART1	7.32
1,318	635326.16	4270872.29	UCART1	7.52
1,319	635366.16	4270872.29	UCART1	7.59
1,320	635406.16	4270872.29	UCART1	7.60
1,321	635446.16	4270872.29	UCART1	7.62
1,322	635486.16	4270872.29	UCART1	7.90

Receptor Pathway

AERMOD

1,323	635526.16	4270872.29	UCART1	8.04
1,324	635566.16	4270872.29	UCART1	8.43
1,325	635646.16	4270872.29	UCART1	9.13
1,326	635686.16	4270872.29	UCART1	9.37
1,327	635726.16	4270872.29	UCART1	9.50
1,328	635766.16	4270872.29	UCART1	9.90
1,329	635846.16	4270872.29	UCART1	10.11
1,330	635886.16	4270872.29	UCART1	9.96
1,331	635926.16	4270872.29	UCART1	9.57
1,332	635966.16	4270872.29	UCART1	9.20
1,333	636006.16	4270872.29	UCART1	9.05
1,334	636046.16	4270872.29	UCART1	8.87
1,335	636086.16	4270872.29	UCART1	8.86
1,336	636126.16	4270872.29	UCART1	9.02
1,337	636166.16	4270872.29	UCART1	8.68
1,338	636206.16	4270872.29	UCART1	8.05
1,339	636246.16	4270872.29	UCART1	8.42
1,340	636286.16	4270872.29	UCART1	8.55
1,341	636406.16	4270872.29	UCART1	9.28
1,342	636446.16	4270872.29	UCART1	9.40
1,343	636486.16	4270872.29	UCART1	9.14
1,344	636526.16	4270872.29	UCART1	9.14
1,345	636566.16	4270872.29	UCART1	9.14
1,346	636606.16	4270872.29	UCART1	9.14
1,347	636646.16	4270872.29	UCART1	9.14
1,348	636686.16	4270872.29	UCART1	9.14
1,349	636726.16	4270872.29	UCART1	9.14
1,350	636806.16	4270872.29	UCART1	9.45
1,351	636846.16	4270872.29	UCART1	9.45
1,352	636886.16	4270872.29	UCART1	9.45
1,353	636926.16	4270872.29	UCART1	9.45
1,354	636966.16	4270872.29	UCART1	9.45
1,355	637006.16	4270872.29	UCART1	9.45
1,356	637046.16	4270872.29	UCART1	9.43
1,357	637086.16	4270872.29	UCART1	9.16
1,358	637126.16	4270872.29	UCART1	9.14
1,359	637166.16	4270872.29	UCART1	8.84
1,360	637206.16	4270872.29	UCART1	8.72

Receptor Pathway

AERMOD

1,361	637246.16	4270872.29	UCART1	8.51
1,362	637286.16	4270872.29	UCART1	8.21
1,363	638086.16	4270872.29	UCART1	10.67
1,364	638126.16	4270872.29	UCART1	10.67
1,365	638166.16	4270872.29	UCART1	10.67
1,366	638206.16	4270872.29	UCART1	10.67
1,367	638246.16	4270872.29	UCART1	10.67
1,368	638286.16	4270872.29	UCART1	10.67
1,369	638326.16	4270872.29	UCART1	10.67
1,370	638366.16	4270872.29	UCART1	10.67
1,371	638406.16	4270872.29	UCART1	10.67
1,372	638446.16	4270872.29	UCART1	10.67
1,373	638486.16	4270872.29	UCART1	10.67
1,374	638526.16	4270872.29	UCART1	10.67
1,375	638566.16	4270872.29	UCART1	10.67
1,376	635166.16	4270912.29	UCART1	7.32
1,377	635206.16	4270912.29	UCART1	7.32
1,378	635246.16	4270912.29	UCART1	7.32
1,379	635286.16	4270912.29	UCART1	7.44
1,380	635326.16	4270912.29	UCART1	7.62
1,381	635366.16	4270912.29	UCART1	7.62
1,382	635406.16	4270912.29	UCART1	7.71
1,383	635446.16	4270912.29	UCART1	7.91
1,384	635486.16	4270912.29	UCART1	7.92
1,385	635526.16	4270912.29	UCART1	8.05
1,386	635766.16	4270912.29	UCART1	9.33
1,387	635846.16	4270912.29	UCART1	9.37
1,388	635886.16	4270912.29	UCART1	9.37
1,389	635926.16	4270912.29	UCART1	9.20
1,390	635966.16	4270912.29	UCART1	8.84
1,391	636006.16	4270912.29	UCART1	8.84
1,392	636046.16	4270912.29	UCART1	8.78
1,393	636086.16	4270912.29	UCART1	8.53
1,394	636166.16	4270912.29	UCART1	7.70
1,395	636206.16	4270912.29	UCART1	7.64
1,396	636246.16	4270912.29	UCART1	7.94
1,397	636286.16	4270912.29	UCART1	8.14
1,398	636406.16	4270912.29	UCART1	9.28

Receptor Pathway

AERMOD

1,399	636446.16	4270912.29	UCART1	9.36
1,400	636486.16	4270912.29	UCART1	9.14
1,401	636526.16	4270912.29	UCART1	9.14
1,402	636566.16	4270912.29	UCART1	9.14
1,403	636606.16	4270912.29	UCART1	9.14
1,404	636646.16	4270912.29	UCART1	9.14
1,405	636686.16	4270912.29	UCART1	9.14
1,406	636726.16	4270912.29	UCART1	9.14
1,407	636766.16	4270912.29	UCART1	9.37
1,408	636846.16	4270912.29	UCART1	9.45
1,409	636886.16	4270912.29	UCART1	9.45
1,410	636926.16	4270912.29	UCART1	9.45
1,411	636966.16	4270912.29	UCART1	9.45
1,412	637006.16	4270912.29	UCART1	9.39
1,413	637046.16	4270912.29	UCART1	9.14
1,414	637086.16	4270912.29	UCART1	9.14
1,415	637126.16	4270912.29	UCART1	8.92
1,416	637166.16	4270912.29	UCART1	8.84
1,417	637206.16	4270912.29	UCART1	8.72
1,418	637246.16	4270912.29	UCART1	8.53
1,419	637286.16	4270912.29	UCART1	8.28
1,420	638086.16	4270912.29	UCART1	10.67
1,421	638126.16	4270912.29	UCART1	10.67
1,422	638166.16	4270912.29	UCART1	10.67
1,423	638206.16	4270912.29	UCART1	10.67
1,424	638246.16	4270912.29	UCART1	10.67
1,425	638286.16	4270912.29	UCART1	10.67
1,426	638326.16	4270912.29	UCART1	10.67
1,427	638366.16	4270912.29	UCART1	10.67
1,428	638406.16	4270912.29	UCART1	10.67
1,429	638446.16	4270912.29	UCART1	10.67
1,430	638486.16	4270912.29	UCART1	10.59
1,431	638526.16	4270912.29	UCART1	10.50
1,432	638566.16	4270912.29	UCART1	10.31
1,433	635166.16	4270952.29	UCART1	7.14
1,434	635206.16	4270952.29	UCART1	7.27
1,435	635246.16	4270952.29	UCART1	7.32
1,436	635286.16	4270952.29	UCART1	7.37

Receptor Pathway

AERMOD

1,437	635326.16	4270952.29	UCART1	7.57
1,438	635366.16	4270952.29	UCART1	7.62
1,439	635406.16	4270952.29	UCART1	7.62
1,440	635446.16	4270952.29	UCART1	7.72
1,441	635486.16	4270952.29	UCART1	7.92
1,442	635686.16	4270952.29	UCART1	8.76
1,443	635726.16	4270952.29	UCART1	8.78
1,444	635766.16	4270952.29	UCART1	8.72
1,445	635846.16	4270952.29	UCART1	8.80
1,446	635886.16	4270952.29	UCART1	8.97
1,447	635926.16	4270952.29	UCART1	8.97
1,448	635966.16	4270952.29	UCART1	8.83
1,449	636006.16	4270952.29	UCART1	8.66
1,450	636046.16	4270952.29	UCART1	8.57
1,451	636086.16	4270952.29	UCART1	8.51
1,452	636126.16	4270952.29	UCART1	8.18
1,453	636166.16	4270952.29	UCART1	7.88
1,454	636206.16	4270952.29	UCART1	7.80
1,455	636246.16	4270952.29	UCART1	7.87
1,456	636366.16	4270952.29	UCART1	9.30
1,457	636406.16	4270952.29	UCART1	9.45
1,458	636446.16	4270952.29	UCART1	9.14
1,459	636486.16	4270952.29	UCART1	9.14
1,460	636526.16	4270952.29	UCART1	9.14
1,461	636566.16	4270952.29	UCART1	9.14
1,462	636606.16	4270952.29	UCART1	9.14
1,463	636646.16	4270952.29	UCART1	9.14
1,464	636686.16	4270952.29	UCART1	9.14
1,465	636726.16	4270952.29	UCART1	9.14
1,466	636766.16	4270952.29	UCART1	9.37
1,467	636806.16	4270952.29	UCART1	9.45
1,468	636886.16	4270952.29	UCART1	9.45
1,469	636926.16	4270952.29	UCART1	9.45
1,470	636966.16	4270952.29	UCART1	9.45
1,471	637006.16	4270952.29	UCART1	9.22
1,472	637046.16	4270952.29	UCART1	9.14
1,473	637086.16	4270952.29	UCART1	9.14
1,474	637126.16	4270952.29	UCART1	9.05

Receptor Pathway

AERMOD

1,475	637166.16	4270952.29	UCART1	8.84
1,476	637206.16	4270952.29	UCART1	8.79
1,477	637246.16	4270952.29	UCART1	8.58
1,478	637286.16	4270952.29	UCART1	8.53
1,479	638086.16	4270952.29	UCART1	10.67
1,480	638126.16	4270952.29	UCART1	10.67
1,481	638166.16	4270952.29	UCART1	10.67
1,482	638206.16	4270952.29	UCART1	10.67
1,483	638246.16	4270952.29	UCART1	10.67
1,484	638286.16	4270952.29	UCART1	10.67
1,485	638326.16	4270952.29	UCART1	10.67
1,486	638366.16	4270952.29	UCART1	10.67
1,487	638406.16	4270952.29	UCART1	10.67
1,488	638446.16	4270952.29	UCART1	10.67
1,489	638486.16	4270952.29	UCART1	10.36
1,490	638526.16	4270952.29	UCART1	10.29
1,491	638566.16	4270952.29	UCART1	10.09
1,492	634846.16	4270992.29	UCART1	7.01
1,493	634886.16	4270992.29	UCART1	7.01
1,494	634926.16	4270992.29	UCART1	7.15
1,495	634966.16	4270992.29	UCART1	7.32
1,496	635166.16	4270992.29	UCART1	7.01
1,497	635206.16	4270992.29	UCART1	7.03
1,498	635246.16	4270992.29	UCART1	7.32
1,499	635286.16	4270992.29	UCART1	7.32
1,500	635326.16	4270992.29	UCART1	7.54
1,501	635366.16	4270992.29	UCART1	7.62
1,502	635406.16	4270992.29	UCART1	7.62
1,503	635446.16	4270992.29	UCART1	7.62
1,504	635486.16	4270992.29	UCART1	7.67
1,505	635526.16	4270992.29	UCART1	7.92
1,506	635646.16	4270992.29	UCART1	8.13
1,507	635686.16	4270992.29	UCART1	7.98
1,508	635726.16	4270992.29	UCART1	7.98
1,509	635766.16	4270992.29	UCART1	7.98
1,510	635806.16	4270992.29	UCART1	7.98
1,511	635846.16	4270992.29	UCART1	8.00
1,512	635886.16	4270992.29	UCART1	8.40

Receptor Pathway

AERMOD

1,513	635926.16	4270992.29	UCART1	8.56
1,514	635966.16	4270992.29	UCART1	8.56
1,515	636006.16	4270992.29	UCART1	8.53
1,516	636046.16	4270992.29	UCART1	8.53
1,517	636086.16	4270992.29	UCART1	8.53
1,518	636126.16	4270992.29	UCART1	8.39
1,519	636206.16	4270992.29	UCART1	8.22
1,520	636246.16	4270992.29	UCART1	8.60
1,521	636366.16	4270992.29	UCART1	9.28
1,522	636406.16	4270992.29	UCART1	9.45
1,523	636446.16	4270992.29	UCART1	9.14
1,524	636486.16	4270992.29	UCART1	9.14
1,525	636526.16	4270992.29	UCART1	9.14
1,526	636566.16	4270992.29	UCART1	9.14
1,527	636606.16	4270992.29	UCART1	9.14
1,528	636646.16	4270992.29	UCART1	9.14
1,529	636686.16	4270992.29	UCART1	9.14
1,530	636726.16	4270992.29	UCART1	9.26
1,531	636766.16	4270992.29	UCART1	9.44
1,532	636806.16	4270992.29	UCART1	9.45
1,533	636846.16	4270992.29	UCART1	9.45
1,534	636886.16	4270992.29	UCART1	9.45
1,535	636926.16	4270992.29	UCART1	9.45
1,536	636966.16	4270992.29	UCART1	9.45
1,537	637006.16	4270992.29	UCART1	9.43
1,538	637046.16	4270992.29	UCART1	9.14
1,539	637086.16	4270992.29	UCART1	9.14
1,540	637126.16	4270992.29	UCART1	9.14
1,541	637166.16	4270992.29	UCART1	9.10
1,542	637206.16	4270992.29	UCART1	8.84
1,543	637246.16	4270992.29	UCART1	8.82
1,544	637286.16	4270992.29	UCART1	8.79
1,545	638086.16	4270992.29	UCART1	10.67
1,546	638126.16	4270992.29	UCART1	10.67
1,547	638166.16	4270992.29	UCART1	10.67
1,548	638206.16	4270992.29	UCART1	10.67
1,549	638246.16	4270992.29	UCART1	10.67
1,550	638286.16	4270992.29	UCART1	10.67

Receptor Pathway

AERMOD

1,551	638326.16	4270992.29	UCART1	10.67
1,552	638366.16	4270992.29	UCART1	10.67
1,553	638406.16	4270992.29	UCART1	10.67
1,554	638446.16	4270992.29	UCART1	10.67
1,555	638486.16	4270992.29	UCART1	10.06
1,556	638526.16	4270992.29	UCART1	9.80
1,557	638566.16	4270992.29	UCART1	9.78
1,558	634806.16	4271032.29	UCART1	6.87
1,559	634846.16	4271032.29	UCART1	7.01
1,560	634886.16	4271032.29	UCART1	7.01
1,561	634926.16	4271032.29	UCART1	7.01
1,562	634966.16	4271032.29	UCART1	7.01
1,563	635006.16	4271032.29	UCART1	7.01
1,564	635046.16	4271032.29	UCART1	7.01
1,565	635086.16	4271032.29	UCART1	7.01
1,566	635166.16	4271032.29	UCART1	7.01
1,567	635206.16	4271032.29	UCART1	7.01
1,568	635246.16	4271032.29	UCART1	7.32
1,569	635286.16	4271032.29	UCART1	7.32
1,570	635326.16	4271032.29	UCART1	7.32
1,571	635366.16	4271032.29	UCART1	7.62
1,572	635406.16	4271032.29	UCART1	7.62
1,573	635446.16	4271032.29	UCART1	7.62
1,574	635486.16	4271032.29	UCART1	7.62
1,575	635526.16	4271032.29	UCART1	7.62
1,576	635566.16	4271032.29	UCART1	7.62
1,577	635606.16	4271032.29	UCART1	7.62
1,578	635646.16	4271032.29	UCART1	7.62
1,579	635686.16	4271032.29	UCART1	7.62
1,580	635726.16	4271032.29	UCART1	7.62
1,581	635766.16	4271032.29	UCART1	7.71
1,582	635806.16	4271032.29	UCART1	7.85
1,583	635846.16	4271032.29	UCART1	7.62
1,584	635886.16	4271032.29	UCART1	7.74
1,585	635926.16	4271032.29	UCART1	8.09
1,586	635966.16	4271032.29	UCART1	8.25
1,587	636006.16	4271032.29	UCART1	8.46
1,588	636046.16	4271032.29	UCART1	8.51

Receptor Pathway

AERMOD

1,589	636126.16	4271032.29	UCART1	8.56
1,590	636166.16	4271032.29	UCART1	8.61
1,591	636206.16	4271032.29	UCART1	8.63
1,592	636326.16	4271032.29	UCART1	9.45
1,593	636366.16	4271032.29	UCART1	9.45
1,594	636406.16	4271032.29	UCART1	9.45
1,595	636446.16	4271032.29	UCART1	9.14
1,596	636486.16	4271032.29	UCART1	9.14
1,597	636526.16	4271032.29	UCART1	9.14
1,598	636566.16	4271032.29	UCART1	9.14
1,599	636606.16	4271032.29	UCART1	9.14
1,600	636646.16	4271032.29	UCART1	9.14
1,601	636686.16	4271032.29	UCART1	9.38
1,602	636726.16	4271032.29	UCART1	9.45
1,603	636766.16	4271032.29	UCART1	9.45
1,604	636806.16	4271032.29	UCART1	9.45
1,605	636846.16	4271032.29	UCART1	9.45
1,606	636886.16	4271032.29	UCART1	9.45
1,607	636926.16	4271032.29	UCART1	9.45
1,608	636966.16	4271032.29	UCART1	9.45
1,609	637006.16	4271032.29	UCART1	9.45
1,610	637046.16	4271032.29	UCART1	9.43
1,611	637086.16	4271032.29	UCART1	9.19
1,612	637126.16	4271032.29	UCART1	9.14
1,613	637166.16	4271032.29	UCART1	9.14
1,614	637206.16	4271032.29	UCART1	9.05
1,615	637246.16	4271032.29	UCART1	8.91
1,616	637286.16	4271032.29	UCART1	8.84
1,617	637846.16	4271032.29	UCART1	9.60
1,618	637886.16	4271032.29	UCART1	9.77
1,619	637926.16	4271032.29	UCART1	10.01
1,620	637966.16	4271032.29	UCART1	10.28
1,621	638086.16	4271032.29	UCART1	10.72
1,622	638126.16	4271032.29	UCART1	10.97
1,623	638166.16	4271032.29	UCART1	10.97
1,624	638206.16	4271032.29	UCART1	10.92
1,625	638246.16	4271032.29	UCART1	10.67
1,626	638286.16	4271032.29	UCART1	10.64

Receptor Pathway

AERMOD

1,627	638326.16	4271032.29	UCART1	10.59
1,628	638366.16	4271032.29	UCART1	10.57
1,629	638406.16	4271032.29	UCART1	9.97
1,630	638446.16	4271032.29	UCART1	9.26
1,631	638486.16	4271032.29	UCART1	9.22
1,632	638526.16	4271032.29	UCART1	9.19
1,633	638566.16	4271032.29	UCART1	9.31
1,634	634766.16	4271072.29	UCART1	6.89
1,635	634806.16	4271072.29	UCART1	7.01
1,636	634846.16	4271072.29	UCART1	7.01
1,637	634886.16	4271072.29	UCART1	7.01
1,638	634926.16	4271072.29	UCART1	7.01
1,639	634966.16	4271072.29	UCART1	7.01
1,640	635006.16	4271072.29	UCART1	7.01
1,641	635046.16	4271072.29	UCART1	7.01
1,642	635086.16	4271072.29	UCART1	7.01
1,643	635126.16	4271072.29	UCART1	7.01
1,644	635166.16	4271072.29	UCART1	7.01
1,645	635206.16	4271072.29	UCART1	7.01
1,646	635246.16	4271072.29	UCART1	7.32
1,647	635286.16	4271072.29	UCART1	7.32
1,648	635326.16	4271072.29	UCART1	7.32
1,649	635366.16	4271072.29	UCART1	7.62
1,650	635406.16	4271072.29	UCART1	7.62
1,651	635446.16	4271072.29	UCART1	7.62
1,652	635486.16	4271072.29	UCART1	7.62
1,653	635526.16	4271072.29	UCART1	7.62
1,654	635566.16	4271072.29	UCART1	7.62
1,655	635606.16	4271072.29	UCART1	7.62
1,656	635646.16	4271072.29	UCART1	7.62
1,657	635686.16	4271072.29	UCART1	7.62
1,658	635726.16	4271072.29	UCART1	7.62
1,659	635806.16	4271072.29	UCART1	7.62
1,660	635886.16	4271072.29	UCART1	7.74
1,661	635926.16	4271072.29	UCART1	7.92
1,662	635966.16	4271072.29	UCART1	8.23
1,663	636046.16	4271072.29	UCART1	8.46
1,664	636086.16	4271072.29	UCART1	8.55

Receptor Pathway

AERMOD

1,665	636126.16	4271072.29	UCART1	8.76
1,666	636166.16	4271072.29	UCART1	8.84
1,667	636286.16	4271072.29	UCART1	9.14
1,668	636326.16	4271072.29	UCART1	9.45
1,669	636366.16	4271072.29	UCART1	9.45
1,670	636406.16	4271072.29	UCART1	9.45
1,671	636446.16	4271072.29	UCART1	9.14
1,672	636486.16	4271072.29	UCART1	9.14
1,673	636526.16	4271072.29	UCART1	9.14
1,674	636566.16	4271072.29	UCART1	9.14
1,675	636606.16	4271072.29	UCART1	9.14
1,676	636646.16	4271072.29	UCART1	9.14
1,677	636686.16	4271072.29	UCART1	9.15
1,678	636726.16	4271072.29	UCART1	9.34
1,679	636766.16	4271072.29	UCART1	9.45
1,680	636806.16	4271072.29	UCART1	9.45
1,681	636846.16	4271072.29	UCART1	9.45
1,682	636886.16	4271072.29	UCART1	9.32
1,683	636966.16	4271072.29	UCART1	9.34
1,684	637006.16	4271072.29	UCART1	9.45
1,685	637046.16	4271072.29	UCART1	9.45
1,686	637086.16	4271072.29	UCART1	9.40
1,687	637126.16	4271072.29	UCART1	9.19
1,688	637166.16	4271072.29	UCART1	9.14
1,689	637206.16	4271072.29	UCART1	9.14
1,690	637246.16	4271072.29	UCART1	9.14
1,691	637286.16	4271072.29	UCART1	9.03
1,692	637846.16	4271072.29	UCART1	9.37
1,693	637886.16	4271072.29	UCART1	9.59
1,694	637926.16	4271072.29	UCART1	9.88
1,695	637966.16	4271072.29	UCART1	10.28
1,696	638086.16	4271072.29	UCART1	10.76
1,697	638126.16	4271072.29	UCART1	10.80
1,698	638166.16	4271072.29	UCART1	10.80
1,699	638206.16	4271072.29	UCART1	10.70
1,700	638246.16	4271072.29	UCART1	10.66
1,701	638286.16	4271072.29	UCART1	10.44
1,702	638326.16	4271072.29	UCART1	10.23

Receptor Pathway

AERMOD

1,703	638366.16	4271072.29	UCART1	10.14
1,704	638406.16	4271072.29	UCART1	9.40
1,705	638446.16	4271072.29	UCART1	9.27
1,706	638486.16	4271072.29	UCART1	9.46
1,707	638526.16	4271072.29	UCART1	9.50
1,708	638566.16	4271072.29	UCART1	9.32
1,709	634726.16	4271112.29	UCART1	6.91
1,710	634766.16	4271112.29	UCART1	7.01
1,711	634806.16	4271112.29	UCART1	7.01
1,712	634846.16	4271112.29	UCART1	7.01
1,713	634886.16	4271112.29	UCART1	7.01
1,714	634926.16	4271112.29	UCART1	7.01
1,715	634966.16	4271112.29	UCART1	7.01
1,716	635006.16	4271112.29	UCART1	7.01
1,717	635046.16	4271112.29	UCART1	7.01
1,718	635086.16	4271112.29	UCART1	7.01
1,719	635126.16	4271112.29	UCART1	7.01
1,720	635166.16	4271112.29	UCART1	7.01
1,721	635246.16	4271112.29	UCART1	7.32
1,722	635286.16	4271112.29	UCART1	7.32
1,723	635326.16	4271112.29	UCART1	7.52
1,724	635366.16	4271112.29	UCART1	7.62
1,725	635406.16	4271112.29	UCART1	7.62
1,726	635446.16	4271112.29	UCART1	7.62
1,727	635486.16	4271112.29	UCART1	7.62
1,728	635526.16	4271112.29	UCART1	7.62
1,729	635566.16	4271112.29	UCART1	7.62
1,730	635606.16	4271112.29	UCART1	7.62
1,731	635646.16	4271112.29	UCART1	7.62
1,732	635686.16	4271112.29	UCART1	7.62
1,733	635726.16	4271112.29	UCART1	7.62
1,734	635766.16	4271112.29	UCART1	7.62
1,735	635806.16	4271112.29	UCART1	7.62
1,736	635846.16	4271112.29	UCART1	7.64
1,737	635886.16	4271112.29	UCART1	7.91
1,738	635926.16	4271112.29	UCART1	7.92
1,739	636006.16	4271112.29	UCART1	8.06
1,740	636046.16	4271112.29	UCART1	8.46

Receptor Pathway

AERMOD

1,741	636086.16	4271112.29	UCART1	8.81
1,742	636126.16	4271112.29	UCART1	8.84
1,743	636246.16	4271112.29	UCART1	9.14
1,744	636286.16	4271112.29	UCART1	9.14
1,745	636326.16	4271112.29	UCART1	9.45
1,746	636366.16	4271112.29	UCART1	9.45
1,747	636406.16	4271112.29	UCART1	9.45
1,748	636446.16	4271112.29	UCART1	9.14
1,749	636486.16	4271112.29	UCART1	9.14
1,750	636526.16	4271112.29	UCART1	9.14
1,751	636566.16	4271112.29	UCART1	9.14
1,752	636606.16	4271112.29	UCART1	9.14
1,753	636646.16	4271112.29	UCART1	9.14
1,754	636686.16	4271112.29	UCART1	9.14
1,755	636726.16	4271112.29	UCART1	9.15
1,756	636766.16	4271112.29	UCART1	9.38
1,757	636806.16	4271112.29	UCART1	9.45
1,758	636846.16	4271112.29	UCART1	9.34
1,759	636886.16	4271112.29	UCART1	9.15
1,760	636926.16	4271112.29	UCART1	9.14
1,761	637006.16	4271112.29	UCART1	9.38
1,762	637046.16	4271112.29	UCART1	9.45
1,763	637086.16	4271112.29	UCART1	9.45
1,764	637126.16	4271112.29	UCART1	9.43
1,765	637166.16	4271112.29	UCART1	9.40
1,766	637206.16	4271112.29	UCART1	9.14
1,767	637246.16	4271112.29	UCART1	9.14
1,768	637286.16	4271112.29	UCART1	9.14
1,769	637886.16	4271112.29	UCART1	9.47
1,770	637926.16	4271112.29	UCART1	9.88
1,771	637966.16	4271112.29	UCART1	10.28
1,772	638086.16	4271112.29	UCART1	10.67
1,773	638126.16	4271112.29	UCART1	10.67
1,774	638166.16	4271112.29	UCART1	10.67
1,775	638206.16	4271112.29	UCART1	10.67
1,776	638246.16	4271112.29	UCART1	10.39
1,777	638286.16	4271112.29	UCART1	10.36
1,778	638326.16	4271112.29	UCART1	10.14

Receptor Pathway

AERMOD

1,779	638366.16	4271112.29	UCART1	9.50
1,780	638406.16	4271112.29	UCART1	9.32
1,781	638446.16	4271112.29	UCART1	9.37
1,782	638486.16	4271112.29	UCART1	9.75
1,783	638526.16	4271112.29	UCART1	9.91
1,784	638566.16	4271112.29	UCART1	9.73
1,785	634726.16	4271152.29	UCART1	7.01
1,786	634766.16	4271152.29	UCART1	7.01
1,787	634806.16	4271152.29	UCART1	7.01
1,788	634846.16	4271152.29	UCART1	7.01
1,789	634886.16	4271152.29	UCART1	7.01
1,790	634926.16	4271152.29	UCART1	7.01
1,791	634966.16	4271152.29	UCART1	7.01
1,792	635006.16	4271152.29	UCART1	7.01
1,793	635046.16	4271152.29	UCART1	7.01
1,794	635086.16	4271152.29	UCART1	7.01
1,795	635126.16	4271152.29	UCART1	7.09
1,796	635166.16	4271152.29	UCART1	7.18
1,797	635286.16	4271152.29	UCART1	7.32
1,798	635326.16	4271152.29	UCART1	7.54
1,799	635366.16	4271152.29	UCART1	7.62
1,800	635406.16	4271152.29	UCART1	7.62
1,801	635446.16	4271152.29	UCART1	7.62
1,802	635486.16	4271152.29	UCART1	7.69
1,803	635526.16	4271152.29	UCART1	7.62
1,804	635566.16	4271152.29	UCART1	7.62
1,805	635606.16	4271152.29	UCART1	7.62
1,806	635646.16	4271152.29	UCART1	7.62
1,807	635686.16	4271152.29	UCART1	7.62
1,808	635726.16	4271152.29	UCART1	7.62
1,809	635766.16	4271152.29	UCART1	7.62
1,810	635806.16	4271152.29	UCART1	7.68
1,811	635846.16	4271152.29	UCART1	7.92
1,812	635886.16	4271152.29	UCART1	7.92
1,813	635926.16	4271152.29	UCART1	7.92
1,814	635966.16	4271152.29	UCART1	7.92
1,815	636006.16	4271152.29	UCART1	7.85
1,816	636046.16	4271152.29	UCART1	8.36

Receptor Pathway

AERMOD

1,817	636206.16	4271152.29	UCART1	9.14
1,818	636246.16	4271152.29	UCART1	9.14
1,819	636286.16	4271152.29	UCART1	9.14
1,820	636326.16	4271152.29	UCART1	9.45
1,821	636366.16	4271152.29	UCART1	9.42
1,822	636406.16	4271152.29	UCART1	9.20
1,823	636446.16	4271152.29	UCART1	9.14
1,824	636486.16	4271152.29	UCART1	9.14
1,825	636526.16	4271152.29	UCART1	9.14
1,826	636566.16	4271152.29	UCART1	9.14
1,827	636606.16	4271152.29	UCART1	9.14
1,828	636646.16	4271152.29	UCART1	9.14
1,829	636686.16	4271152.29	UCART1	9.14
1,830	636726.16	4271152.29	UCART1	9.14
1,831	636766.16	4271152.29	UCART1	9.37
1,832	636806.16	4271152.29	UCART1	9.45
1,833	636846.16	4271152.29	UCART1	9.36
1,834	636886.16	4271152.29	UCART1	9.16
1,835	636926.16	4271152.29	UCART1	9.14
1,836	636966.16	4271152.29	UCART1	9.14
1,837	637046.16	4271152.29	UCART1	9.45
1,838	637086.16	4271152.29	UCART1	9.45
1,839	637126.16	4271152.29	UCART1	9.45
1,840	637166.16	4271152.29	UCART1	9.45
1,841	637206.16	4271152.29	UCART1	9.48
1,842	637246.16	4271152.29	UCART1	9.52
1,843	637286.16	4271152.29	UCART1	9.52
1,844	637886.16	4271152.29	UCART1	9.47
1,845	637926.16	4271152.29	UCART1	9.88
1,846	637966.16	4271152.29	UCART1	10.28
1,847	634686.16	4271192.29	UCART1	7.01
1,848	634726.16	4271192.29	UCART1	7.01
1,849	634766.16	4271192.29	UCART1	7.01
1,850	634806.16	4271192.29	UCART1	7.01
1,851	634846.16	4271192.29	UCART1	7.01
1,852	634886.16	4271192.29	UCART1	7.01
1,853	634926.16	4271192.29	UCART1	7.01
1,854	634966.16	4271192.29	UCART1	7.01

Receptor Pathway

AERMOD

1,855	635006.16	4271192.29	UCART1	7.01
1,856	635046.16	4271192.29	UCART1	7.08
1,857	635086.16	4271192.29	UCART1	7.19
1,858	635126.16	4271192.29	UCART1	7.32
1,859	635166.16	4271192.29	UCART1	7.32
1,860	635246.16	4271192.29	UCART1	7.32
1,861	635326.16	4271192.29	UCART1	7.54
1,862	635366.16	4271192.29	UCART1	7.62
1,863	635406.16	4271192.29	UCART1	7.69
1,864	635446.16	4271192.29	UCART1	7.80
1,865	635486.16	4271192.29	UCART1	7.92
1,866	635526.16	4271192.29	UCART1	7.72
1,867	635566.16	4271192.29	UCART1	7.62
1,868	635606.16	4271192.29	UCART1	7.62
1,869	635646.16	4271192.29	UCART1	7.62
1,870	635686.16	4271192.29	UCART1	7.62
1,871	635726.16	4271192.29	UCART1	7.62
1,872	635766.16	4271192.29	UCART1	7.62
1,873	635846.16	4271192.29	UCART1	7.76
1,874	635926.16	4271192.29	UCART1	7.75
1,875	635966.16	4271192.29	UCART1	7.74
1,876	636006.16	4271192.29	UCART1	7.62
1,877	636166.16	4271192.29	UCART1	9.14
1,878	636206.16	4271192.29	UCART1	9.14
1,879	636246.16	4271192.29	UCART1	9.14
1,880	636286.16	4271192.29	UCART1	9.14
1,881	636326.16	4271192.29	UCART1	9.27
1,882	636366.16	4271192.29	UCART1	9.22
1,883	636406.16	4271192.29	UCART1	9.14
1,884	636446.16	4271192.29	UCART1	9.14
1,885	636486.16	4271192.29	UCART1	9.14
1,886	636526.16	4271192.29	UCART1	9.14
1,887	636566.16	4271192.29	UCART1	9.14
1,888	636606.16	4271192.29	UCART1	9.14
1,889	636646.16	4271192.29	UCART1	9.14
1,890	636686.16	4271192.29	UCART1	9.14
1,891	636726.16	4271192.29	UCART1	9.14
1,892	636766.16	4271192.29	UCART1	9.24

Receptor Pathway

AERMOD

1,893	636806.16	4271192.29	UCART1	9.45
1,894	636846.16	4271192.29	UCART1	9.45
1,895	636886.16	4271192.29	UCART1	9.35
1,896	636926.16	4271192.29	UCART1	9.14
1,897	636966.16	4271192.29	UCART1	9.14
1,898	637006.16	4271192.29	UCART1	9.14
1,899	637046.16	4271192.29	UCART1	9.45
1,900	637086.16	4271192.29	UCART1	9.45
1,901	637206.16	4271192.29	UCART1	9.68
1,902	637246.16	4271192.29	UCART1	9.75
1,903	637806.16	4271192.29	UCART1	8.48
1,904	637846.16	4271192.29	UCART1	9.06
1,905	637886.16	4271192.29	UCART1	9.47
1,906	637926.16	4271192.29	UCART1	9.88
1,907	637966.16	4271192.29	UCART1	10.28
1,908	638086.16	4271192.29	UCART1	10.44
1,909	638126.16	4271192.29	UCART1	10.36
1,910	638166.16	4271192.29	UCART1	10.36
1,911	638206.16	4271192.29	UCART1	10.36
1,912	638246.16	4271192.29	UCART1	10.18
1,913	638286.16	4271192.29	UCART1	9.99
1,914	638326.16	4271192.29	UCART1	9.79
1,915	638366.16	4271192.29	UCART1	9.45
1,916	638406.16	4271192.29	UCART1	9.32
1,917	634646.16	4271232.29	UCART1	7.31
1,918	634686.16	4271232.29	UCART1	7.29
1,919	634726.16	4271232.29	UCART1	7.08
1,920	634766.16	4271232.29	UCART1	7.01
1,921	634806.16	4271232.29	UCART1	7.12
1,922	634846.16	4271232.29	UCART1	7.29
1,923	634886.16	4271232.29	UCART1	7.29
1,924	634926.16	4271232.29	UCART1	7.29
1,925	634966.16	4271232.29	UCART1	7.29
1,926	635006.16	4271232.29	UCART1	7.29
1,927	635046.16	4271232.29	UCART1	7.30
1,928	635086.16	4271232.29	UCART1	7.32
1,929	635126.16	4271232.29	UCART1	7.32
1,930	635206.16	4271232.29	UCART1	7.32

Receptor Pathway

AERMOD

1,931	635246.16	4271232.29	UCART1	7.32
1,932	635366.16	4271232.29	UCART1	7.64
1,933	635406.16	4271232.29	UCART1	7.91
1,934	635446.16	4271232.29	UCART1	7.92
1,935	635486.16	4271232.29	UCART1	7.92
1,936	635526.16	4271232.29	UCART1	7.91
1,937	635566.16	4271232.29	UCART1	7.90
1,938	635606.16	4271232.29	UCART1	7.62
1,939	635646.16	4271232.29	UCART1	7.62
1,940	635686.16	4271232.29	UCART1	7.62
1,941	635726.16	4271232.29	UCART1	7.62
1,942	635766.16	4271232.29	UCART1	7.62
1,943	635806.16	4271232.29	UCART1	7.62
1,944	635846.16	4271232.29	UCART1	7.62
1,945	635886.16	4271232.29	UCART1	7.64
1,946	635926.16	4271232.29	UCART1	7.62
1,947	636126.16	4271232.29	UCART1	9.14
1,948	636166.16	4271232.29	UCART1	9.14
1,949	636206.16	4271232.29	UCART1	9.14
1,950	636246.16	4271232.29	UCART1	9.14
1,951	636286.16	4271232.29	UCART1	9.14
1,952	636326.16	4271232.29	UCART1	9.14
1,953	636366.16	4271232.29	UCART1	9.14
1,954	636406.16	4271232.29	UCART1	9.14
1,955	636446.16	4271232.29	UCART1	9.14
1,956	636486.16	4271232.29	UCART1	9.14
1,957	636526.16	4271232.29	UCART1	9.14
1,958	636566.16	4271232.29	UCART1	9.14
1,959	636606.16	4271232.29	UCART1	9.14
1,960	636646.16	4271232.29	UCART1	9.14
1,961	636686.16	4271232.29	UCART1	9.14
1,962	636726.16	4271232.29	UCART1	9.14
1,963	636766.16	4271232.29	UCART1	9.14
1,964	636806.16	4271232.29	UCART1	9.45
1,965	636846.16	4271232.29	UCART1	9.45
1,966	636886.16	4271232.29	UCART1	9.45
1,967	636926.16	4271232.29	UCART1	9.42
1,968	636966.16	4271232.29	UCART1	9.42

Receptor Pathway

AERMOD

1,969	637006.16	4271232.29	UCART1	9.42
1,970	637206.16	4271232.29	UCART1	10.14
1,971	637246.16	4271232.29	UCART1	10.10
1,972	637806.16	4271232.29	UCART1	8.59
1,973	637846.16	4271232.29	UCART1	9.34
1,974	637886.16	4271232.29	UCART1	9.47
1,975	637926.16	4271232.29	UCART1	9.88
1,976	637966.16	4271232.29	UCART1	10.28
1,977	638086.16	4271232.29	UCART1	10.44
1,978	638126.16	4271232.29	UCART1	10.36
1,979	638166.16	4271232.29	UCART1	10.36
1,980	638206.16	4271232.29	UCART1	10.16
1,981	638246.16	4271232.29	UCART1	10.04
1,982	638286.16	4271232.29	UCART1	9.77
1,983	638326.16	4271232.29	UCART1	9.75
1,984	638366.16	4271232.29	UCART1	9.45
1,985	638406.16	4271232.29	UCART1	9.32
1,986	634686.16	4271272.29	UCART1	7.36
1,987	634726.16	4271272.29	UCART1	7.32
1,988	634766.16	4271272.29	UCART1	7.32
1,989	634806.16	4271272.29	UCART1	7.32
1,990	634846.16	4271272.29	UCART1	7.32
1,991	634886.16	4271272.29	UCART1	7.32
1,992	634926.16	4271272.29	UCART1	7.32
1,993	634966.16	4271272.29	UCART1	7.32
1,994	635006.16	4271272.29	UCART1	7.32
1,995	635046.16	4271272.29	UCART1	7.32
1,996	635086.16	4271272.29	UCART1	7.32
1,997	635126.16	4271272.29	UCART1	7.32
1,998	635166.16	4271272.29	UCART1	7.32
1,999	635206.16	4271272.29	UCART1	7.32
2,000	635246.16	4271272.29	UCART1	7.32
2,001	635286.16	4271272.29	UCART1	7.44
2,002	635366.16	4271272.29	UCART1	7.71
2,003	635406.16	4271272.29	UCART1	7.92
2,004	635446.16	4271272.29	UCART1	7.98
2,005	635486.16	4271272.29	UCART1	7.92
2,006	635526.16	4271272.29	UCART1	7.92

Receptor Pathway

AERMOD

2,007	635566.16	4271272.29	UCART1	7.92
2,008	635606.16	4271272.29	UCART1	7.90
2,009	635646.16	4271272.29	UCART1	7.62
2,010	635686.16	4271272.29	UCART1	7.62
2,011	635726.16	4271272.29	UCART1	7.62
2,012	635766.16	4271272.29	UCART1	7.62
2,013	635806.16	4271272.29	UCART1	7.62
2,014	635846.16	4271272.29	UCART1	7.69
2,015	636046.16	4271272.29	UCART1	9.20
2,016	636086.16	4271272.29	UCART1	9.14
2,017	636126.16	4271272.29	UCART1	9.14
2,018	636166.16	4271272.29	UCART1	9.09
2,019	636206.16	4271272.29	UCART1	9.07
2,020	636246.16	4271272.29	UCART1	9.07
2,021	636286.16	4271272.29	UCART1	8.90
2,022	636326.16	4271272.29	UCART1	9.07
2,023	636366.16	4271272.29	UCART1	9.14
2,024	636406.16	4271272.29	UCART1	9.14
2,025	636446.16	4271272.29	UCART1	9.14
2,026	636486.16	4271272.29	UCART1	9.14
2,027	636526.16	4271272.29	UCART1	9.14
2,028	636566.16	4271272.29	UCART1	9.07
2,029	636606.16	4271272.29	UCART1	9.14
2,030	636646.16	4271272.29	UCART1	9.14
2,031	636686.16	4271272.29	UCART1	9.14
2,032	636726.16	4271272.29	UCART1	9.14
2,033	636766.16	4271272.29	UCART1	9.14
2,034	636806.16	4271272.29	UCART1	9.38
2,035	636846.16	4271272.29	UCART1	9.45
2,036	636886.16	4271272.29	UCART1	9.45
2,037	636926.16	4271272.29	UCART1	9.45
2,038	636966.16	4271272.29	UCART1	9.45
2,039	637006.16	4271272.29	UCART1	9.45
2,040	637046.16	4271272.29	UCART1	9.45
2,041	637806.16	4271272.29	UCART1	8.80
2,042	637846.16	4271272.29	UCART1	9.29
2,043	637886.16	4271272.29	UCART1	9.47
2,044	637926.16	4271272.29	UCART1	9.88

Receptor Pathway

AERMOD

2,045	637966.16	4271272.29	UCART1	10.28
2,046	638086.16	4271272.29	UCART1	10.44
2,047	638126.16	4271272.29	UCART1	10.36
2,048	638166.16	4271272.29	UCART1	10.24
2,049	638206.16	4271272.29	UCART1	10.06
2,050	638246.16	4271272.29	UCART1	10.04
2,051	638286.16	4271272.29	UCART1	9.75
2,052	638326.16	4271272.29	UCART1	9.53
2,053	638366.16	4271272.29	UCART1	9.43
2,054	638406.16	4271272.29	UCART1	9.14
2,055	634766.16	4271312.29	UCART1	7.32
2,056	634806.16	4271312.29	UCART1	7.32
2,057	634846.16	4271312.29	UCART1	7.32
2,058	634886.16	4271312.29	UCART1	7.33
2,059	634926.16	4271312.29	UCART1	7.49
2,060	634966.16	4271312.29	UCART1	7.49
2,061	635006.16	4271312.29	UCART1	7.49
2,062	635046.16	4271312.29	UCART1	7.42
2,063	635086.16	4271312.29	UCART1	7.32
2,064	635126.16	4271312.29	UCART1	7.32
2,065	635166.16	4271312.29	UCART1	7.32
2,066	635206.16	4271312.29	UCART1	7.32
2,067	635246.16	4271312.29	UCART1	7.33
2,068	635286.16	4271312.29	UCART1	7.54
2,069	635326.16	4271312.29	UCART1	7.62
2,070	635406.16	4271312.29	UCART1	8.00
2,071	635446.16	4271312.29	UCART1	8.20
2,072	635486.16	4271312.29	UCART1	8.09
2,073	635526.16	4271312.29	UCART1	7.92
2,074	635566.16	4271312.29	UCART1	7.92
2,075	635606.16	4271312.29	UCART1	7.90
2,076	635646.16	4271312.29	UCART1	7.62
2,077	635686.16	4271312.29	UCART1	7.62
2,078	635726.16	4271312.29	UCART1	7.62
2,079	635766.16	4271312.29	UCART1	7.69
2,080	635966.16	4271312.29	UCART1	9.26
2,081	636006.16	4271312.29	UCART1	9.14
2,082	636046.16	4271312.29	UCART1	9.14