

SOLANO COUNTY WATER AGENCY

INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

NAWCA 3 – LOWER PUTAH CREEK FLOODPLAIN
RESTORATION

3/25/2015

Table of Contents

Project Information	2
Environmental Factors Potentially Affected	3
Project Description	4
Photos	5
Maps	7
Environmental Checklist	9
I. Aesthetics	9
II. Agricultural and Forestry Resources	10
III. Air Quality	11
IV. Biological Resources	12
V. Cultural Resources	14
VI. Geology and Soils	14
VII. Greenhouse Gas Emissions	16
VIII. Hazards and Hazardous Materials	16
IX. Hydrology and Water Quality	17
X. Land Use and Planning	29
XI. Mineral Resources	20
XII. Noise	20
XIII. Population and Housing	21
XIV. Public Services	22
XV. Recreation	22
XVI. Transport/Traffic	23
XVII. Utilities and Service Systems	24
XVIII. Mandatory Finding of Significance	25
Mitigation Measures	25
References	36
Appendix	30

Project Information

1. Project title: North American Wetlands Conservation Act 3 – Lower Putah Creek Floodplain Restoration
2. Lead agency name and address: Solano County Water Agency, 810 Vaca Valley Parkway, Suite 203, Vacaville, CA 95688.
3. Contact person and phone number: Mark Snyder, (707) 455-1108
4. Project location: Lower Putah Creek, south of City of Winters and adjacent to Interstate 505.
5. Project sponsor's name and address: Solano County Water Agency, 810 Vaca Valley Parkway, Suite 203, Vacaville, CA 95688.
6. General plan designation: Open Space (Solano County; City of Winters)
7. Zoning: Open Space (Solano County; City of Winters)
8. Description of project: The proposed project is divided into two phases. Phase 1 will focus on the south side of the main channel, and Phase 2 will focus on the north side of the main channel. Both phases will recontour the floodplain and fill portions of the existing low-flow channel. A side channel will be created during Phase 1. Spawning gravels will be added to the constructed side channel, and native vegetation will be installed throughout the recontoured floodplain.
9. Surrounding land uses and setting: Briefly describe the project's surroundings:
The project is currently surrounded by agriculture, rural and suburban residential, business/industrial park, and highway service commercial.
10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.): California Department of Fish and Wildlife, Central Valley Regional Water Quality Control Board, Central Valley Flood Protection Board, Solano County, City of Winters, Caltrans, Army Corps of Engineers, United States Fish and Wildlife Service, and National Oceanic and Atmospheric Administration Fisheries

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology /Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality |
| <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature

3/25/13

Date

Signature

Date

Project Description

Purpose:

The purpose of the project is to improve fish and wildlife habitat in Lower Putah Creek, primarily by restoring natural form and function to the creek's channel and floodplain. Once complete, the project will reduce bank erosion and water temperatures, and promote the establishment of native vegetation.

Setting:

Lower Putah Creek is defined as the 23-mile stream segment located between the Putah Diversion Dam, near the City of Winters, and Putah Creek's confluence to the Yolo Bypass, near the City of West Sacramento. Lower Putah Creek is a perennial stream consisting primarily of a mixed riparian forest. Common native tree species include cottonwood, valley oak, Oregon ash, Goodding's willow, arroyo willow, white alder, and box elder. Common shrub species include blue elderberry, poison oak, wild rose, wild grape, and mulefat. Common invasive trees species include eucalyptus, tree-of-heaven, Himalayan blackberry, and giant reed.

The NAWCA 3 – Lower Putah Creek Floodplain Restoration (NAWCA3) project will continue the work of the Winters Putah Creek Park Channel Realignment project (WPCPCR), and it is contiguous to Phase 2 of the WPCPCR project that was completed in 2011. The NAWCA3 project is scheduled for summer 2015, and the project will have two phases.*

Phase 1 Primary Activities:

- Grade the existing floodplain to a uniform 1-2 percent slope, starting from approximately 18 inches above low-flow water surface elevation
- Fill south branch of split low-flow channel that runs against the south bank
- Create side channel with spawning gravels
- Control invasive plants
- Native vegetation installation

Phase 2 Primary Activities:

- Grade the existing floodplain to a uniform 1-2 percent slope, starting from approximately 2 feet above low-flow water surface elevation
- Fill over-widened north branch of split low-flow channel
- Narrow over-widened north branch of split low-flow channel and add root wad revetments
- Control invasive plants
- Native vegetation installation

* The parcel associated with Phase 2 is currently locked in sale negotiations, and construction of Phase 2 may require an agreement with the new landowner. The project is divided into two independent phases to allow Phase 1 to proceed without a landowner agreement for the Phase 2 parcel. Construction of Phase 1 and 2 may occur concurrently, if landowner agreements are executed by the start of construction. Phase 2 could be postponed indefinitely, if landowner agreements are not executed before the project's grant funding expires in March 2016.

Photos

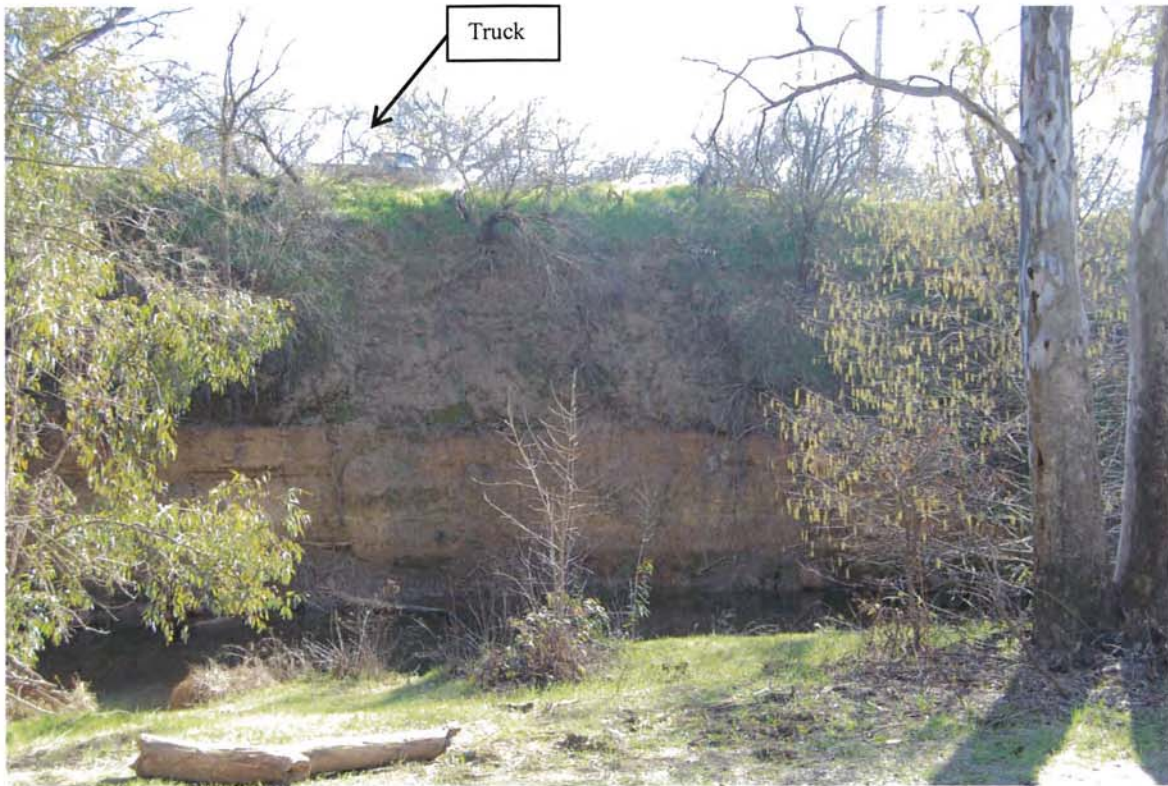


Photo 1 – Looking south at bank erosion at Phase 1. Notice truck traveling along Putah Creek Rd.



Photo 2 – Looking southwest at bank erosion shown in Photo 1. This is the southern branch of low-flow channel that will be filled during Phase 1.

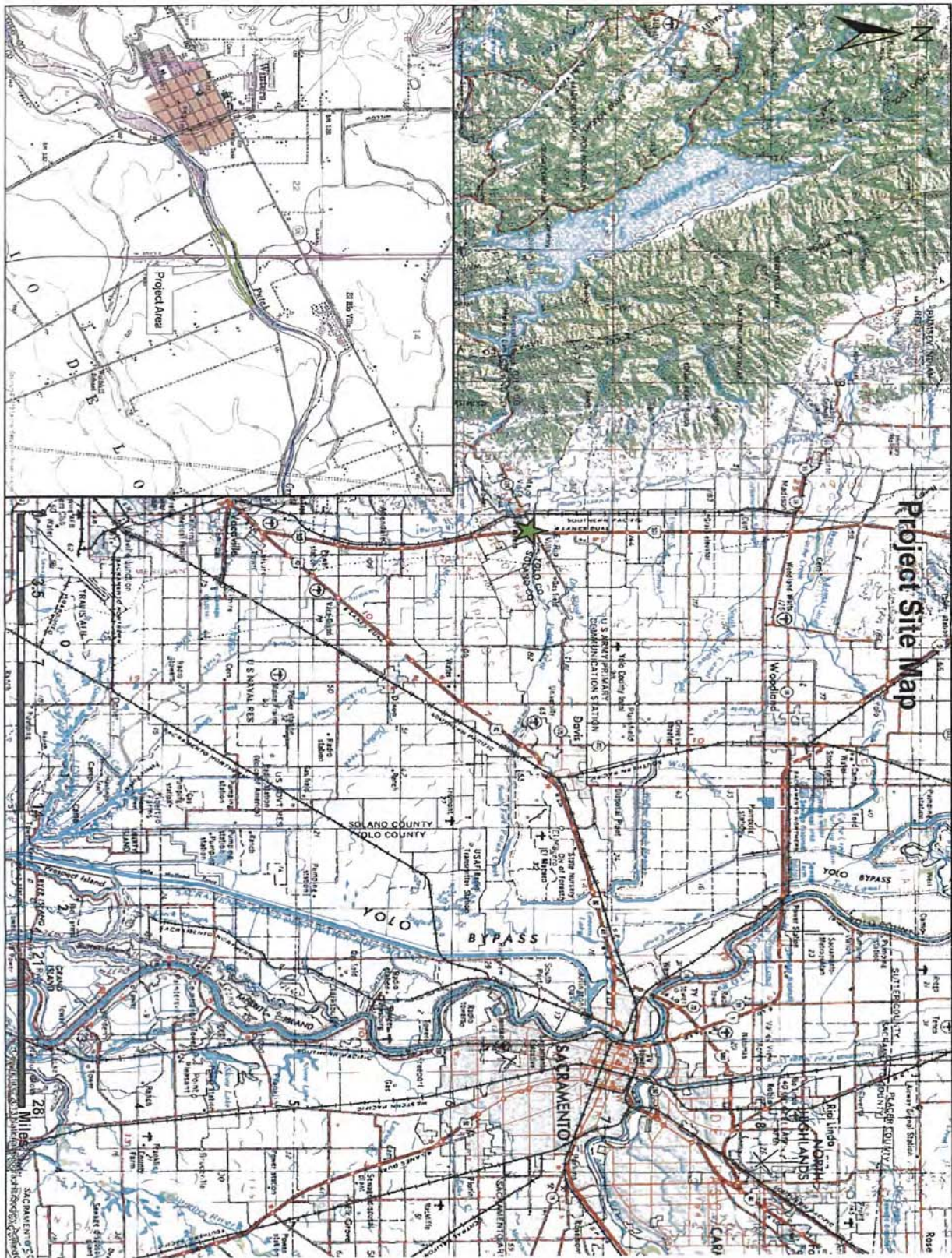


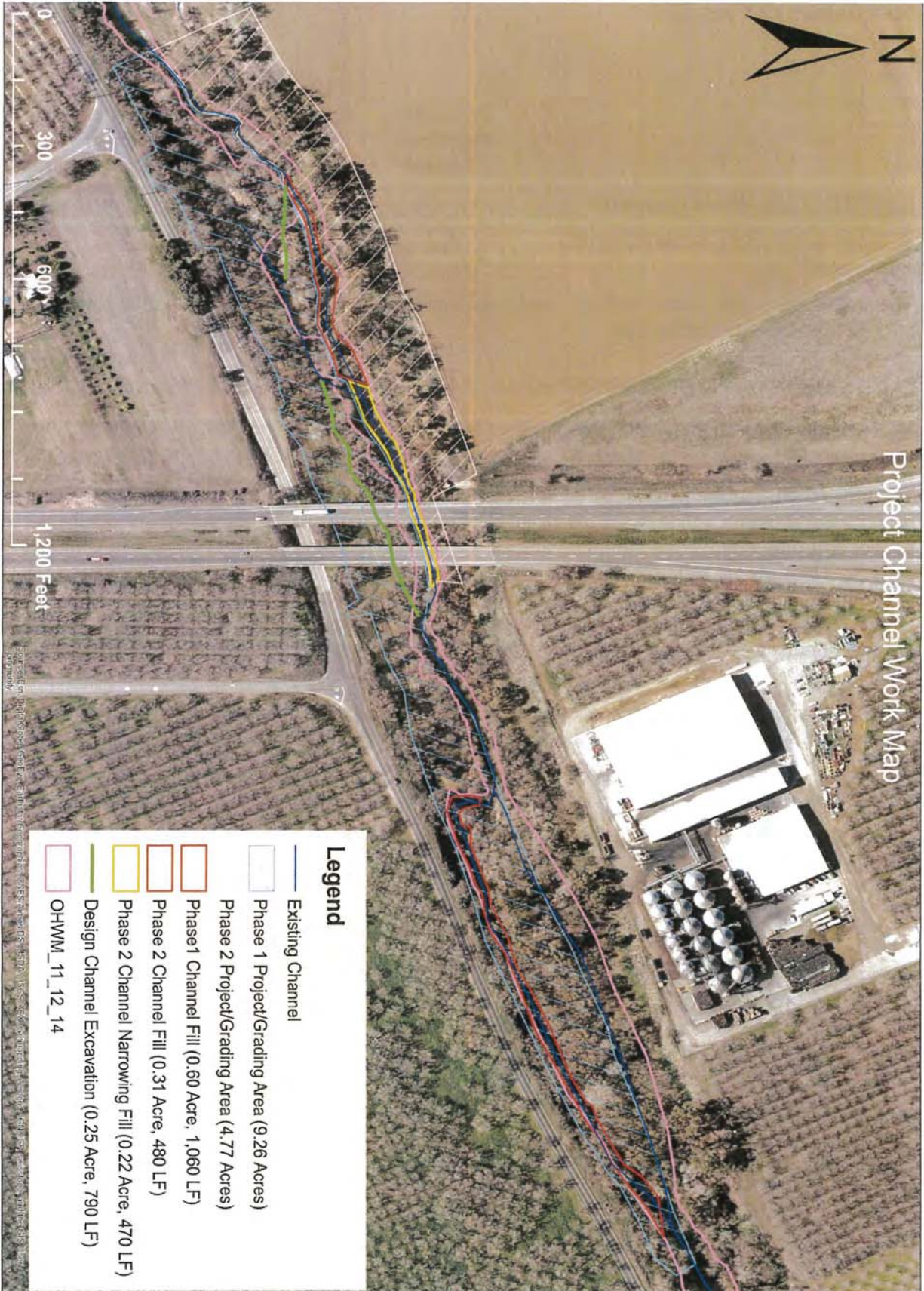
Photo 3 – Looking east at the over-widened low-flow channel and the I-505 bridge in the background. Phase 2 will narrow this segment of channel.



Photo 4 – Looking northeast at the south side floodplain and the I-505 bridge. A side channel with spawning gravel will be installed in this area of the floodplain during Phase 1.

Maps





Environmental Checklist

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
The project site is not located within a designated scenic vista, and the project is located below the line of sight from the surrounding area.				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
The project will require removal of some existing vegetation within the project area, but the project's revegetation activities will increase the visual character and quality of the site and its surroundings. The project will only remove the minimum amount of native vegetation that is necessary to complete the project. There are no state scenic highways near the project site (CA Dept. of Transportation [DOT], California Scenic Highway Program 2015).				
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
The project will temporarily reduce the visual character of the site, as some existing vegetation must be removed for the project to occur, but the project's revegetation activities will ultimately increase the visual character and quality of the site and its surroundings.				
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
The project will not create new sources of light or glare.				

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	---	------------------------------------	--------------

II. AGRICULTURE AND FORESTRY

RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

The CA Dept. of Conservation, Farmland Mapping and Monitoring Program [FMMP] (2015) has classified part of the project area as Unique Farmland; however, the classification appears to be inaccurate, as the project area is in a riparian corridor that has not been farmed in the last four years. Prime Farmland is located adjacent to the project area. The project will not convert any type of farmland to non-agricultural uses.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

The project does not conflict with the Williamson Act or existing zoning for agricultural use.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

The Project will not impact zoning.

d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

The project will not result in the loss or conversion of forest land.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

The project will not result in the conversion of farmland or forestland.

III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

The project area falls within the jurisdiction of the Yolo-Solano Air Quality Management District (Yolo-Solano Air Quality Management District, 2015). The project will not conflict or obstruct implementation of the applicable air quality plan.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	---	--------------------------	--------------------------

Both Yolo and Solano counties are non-attainment areas for Ozone and PM10 under the State standard, and the Ozone 8-hour National standard. All of Solano county and part of Yolo county are non-attainment areas for the National PM2.5 standard. (CA Environmental Protection Area, Air Resources Board, 2015). Dust and exhaust emissions emitted during construction may impact air quality. Mitigation measure AQ-1 will reduce the potential impacts to less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>

The project will not exceed the Yolo Solano Air Quality Management District’s thresholds, and will have a less than significant impact on the regions non-attainment criteria pollutants. Mitigation measure AQ-1 will further reduce the impacts.

d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
--	--------------------------	--------------------------	---	--------------------------

The nearest sensitive receptors may be located at residential area located approximately 100 feet from the northwest corner of the project area. Impacts from emissions and dust generated from construction activities will be short-term, intermittent, and reduced by mitigation measure AQ-1.

e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

The project will not create objectionable odors that would affect a significant number of people.

IV. BIOLOGICAL RESOURCES:

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	---	--------------------------	--------------------------

The project’s purpose is to improve habitat value by restoring a riparian area that has suitable habitat for special status and candidate species. California Department of Fish and Wildlife’s (CDFW) California Natural Diversity Database (2015), shows recorded sightings for the following special status species within a five mile radius of the project area: *Buteo swainsoni* (Swainson’s Hawk), *California macrophylla* (round-leaved filaree), *Athene cunicularia* (burrowing owl), *Brachinecta lynchi* (vernal pool fairy shrimp), *Actinemys marmorata marmorata* (northwestern pond turtle), *Navarretia leucocephala* spp. *Bakeri* (Baker’s navarretia), *Desmocerus californicus dimorphus* (valley elderberry longhorn beetle). Habitat for the following species exists within the project area: Swainson’s hawk, valley elderberry longhorn beetle, and northwestern pond turtle. The National Marine Fisheries Service (2015) has designated two evolutionary significant unit species in the project area: *Oncorhynchus tshawytscha* (Chinook salmon, fall/late-run) and *Oncorhynchus mykiss* (Central Valley steelhead); however, steelhead have not been positively identified in lower Putah Creek, and Chinook salmon will likely have left lower Putah Creek during early spring, prior to the start of construction. Existing

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--	---	---	---	----------------------

agricultural impoundments block fish access within the system during April through November. Impacts to special status species will be less than significant with mitigation measures BR-1 through BR-5 incorporated into the project.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	---	--------------------------	--------------------------

The project's grading and vegetation activities will temporarily disturb fish and wildlife habitat, but the adverse effect will be less than significant with mitigation measures BR-1 through BR-5 incorporated into the project. The project is designed to ultimately increase fish and wildlife habitat value.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limit to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

The project area was surveyed for wetlands, and a draft report was sent to the United States Army Corps of Engineers (USACE) for approval (BSK Associates, 2014). No wetlands were found within the project area.

d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
--	--------------------------	--------------------------	---	--------------------------

The project may be a temporary disturbance to fish and wildlife during construction, but it will not substantially impede or block the movement of fish and wildlife through the project site.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

The project does not conflict local policies or ordinances protecting biological resources.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

The project does not conflict with any habitat or natural community conservation plans.

V. CULTURAL RESOURCES. Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	---	--------------------------	--------------------------

The project area was surveyed for cultural resources and two resources sites were identified (Tremaine, 2015). These site are located near the perimeter of the project area and they will be completely avoided. Mitigation measure CR-1 will be incorporated to address buried cultural resources that may be revealed during work.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	---	--------------------------	--------------------------

The project will not change the significance of a known archaeological resource pursuant to § 15064.5. See mitigation measure CR-1.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	---	--------------------------	--------------------------

The project will not destroy a known unique paleontological resource or site or unique geologic feature. See mitigation measure CR-1.

d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	---	--------------------------	--------------------------

The project will not disturb any known human remains. See mitigation measure CR-1.

VI. GEOLOGY AND SOILS. Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.</p>				
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
<p>The project area is not located near an earthquake fault shown on the Alquist-Priola Earthquake Fault Zoning Map, and is located approximately 17 miles from the nearest Earthquake fault, , landslide zone, and liquefaction zone (CA Dept. of Conservation, Geological Survey of CA, 2015).</p>				
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
<p>The project will disturb soil and temporarily increase its susceptibility to erosion. Mitigation measure AQ-1 and BR-5 will reduce soil erosion potential. The project is designed to help reduce the erosive forces of flood flows by creating a more uniform and centralized flood flow.</p>				
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
<p>The project is not located on a geologic site or soil that is unstable (U.S. Dept. of Agriculture, Natural Resources Conservation Service, 2015).</p>				
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
<p>The project does not involve buildings.</p>				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
<p>The project does not involve septic tanks or the disposal of wastewater.</p>				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--	---	---	---	----------------------

VII. GREENHOUSE GAS EMISSIONS.

Would the project:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

The project will temporarily generate greenhouse gas emissions during construction through the normal operation of construction equipment. The construction equipment will abide by all applicable state and federal regulation regarding the operation of construction equipment. The project's revegetation component will result in a reduction in greenhouse gases. Mitigation measure AQ-1 will reduce the project's greenhouse gas emissions.

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

The project will not conflict with any applicable greenhouse gas emission policy, plan, or regulation.

VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

The project will use construction equipment that contains materials that are required for normal operation, such as fuel and oil. Herbicides will be used in accordance with their labels to control weeds. Mitigation Measure HHM-1 will reduce impacts to less than significant.

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

The project will not release hazardous materials into the environment.

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

The project is not located within 0.25 mile of a school (CA Dept. of Education, 2015).

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

The project is not located on a hazardous materials site (CA Dept. of Toxic Substance Control, 2015).

e) 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 or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

The project is not located within two miles of a public or public use airport (CA Dept. of Transportation, Division of Aeronautics [DA], 2015).

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

The project is not in the vicinity of a private airstrip (DA, 2015).

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

The project will not interfere with an emergency response or evacuation plan.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	---	--------------------------	--------------------------

Dry grasses and other vegetation may be located throughout the project site. Mitigation measure HHM-2 will reduce the risk of fire and the risk of loss, injury, or death involving fires.

IX. HYDROLOGY AND WATER QUALITY. Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
---	--------------------------	--------------------------	---	--------------------------

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--	---	---	---	----------------------

The project may cause temporary and intermittent increases in turbidity when in-water work requires the work area to be isolated from flowing water to protect water quality, or when work complete and flowing water is redirected to the previously isolated work areas. The project will comply with all applicable state and federal permit requirements regarding water quality and discharge requirements.

<p>b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</p>	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
--	--------------------------	--------------------------	---	--------------------------

Water will be used for dust control during construction, and a sprinkler/drip irrigation system will be used to help establish the native planting and grasses. The project will not significantly impact groundwater supply or groundwater recharge.

<p>c) 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 which would result in substantial erosion or siltation on- or off-site?</p>	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
---	--------------------------	--------------------------	---	--------------------------

The project both fills and creates segments of the low-flow channels, but does not change the course of the main channel. The project is designed to reduce bank erosion during high discharge events.

<p>d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?</p>	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
--	--------------------------	--------------------------	---	--------------------------

The project is not designed to substantially alter the existing drainage pattern of the project site, or substantially increase surface runoff.

<p>e) 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?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--	---	---	---	----------------------

The project will not result in polluted runoff or have an impact on the existing or planned stormwater drainage systems.

f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
---	--------------------------	--------------------------	---	--------------------------

The project will comply with all applicable state and federal permits regarding water quality, and will not result in substantial water quality degradation. The project is designed to improve post-project water quality by reducing bank erosion.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

The project will not place housing within the 100-year flood hazard area.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

Flood impeding or redirecting structures will not be placed within the 100-year floodplain.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

The project will not expose people or structures to flooding, and does not involve a levee or dam

j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

The project will not expose people to structures to seiche, tsunami, or mudflow.

X. LAND USE AND PLANNING. Would the project:

a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

The project will not alter an established community.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

The project will not conflict with any applicable lands use plan, policy or regulation.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

The project will not conflict with an applicable habitat conservation plan or natural community plan.

XI. MINERAL RESOURCES. Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

The project will not result in the loss of availability of known mineral resources (CA Dept. of Conservation, 2015).

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

The project will not result in the loss of locally important mineral resources recovery site.

XII. NOISE -- Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	---	--------------------------	--------------------------

The project will have temporary and intermittent increases to noise levels during construction activities. The City of Winters General Plan (1992) places a 90db noise limit (measured at 50 feet from the source) for construction activities, and the activities are limited to weekdays from 7AM-7PM. Mitigation measure N-1 will reduce noise impacts to less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>

Of the variety of construction equipment that is likely to be operated at the project site, large bulldozers will have the most ground borne vibration levels. The calculated vibration for the large dozer in relation to the project sites nearest building (100 feet) and potential sensitive receptor, is 0.01 peak particle velocity (in./sec.). This value is less than vibration damage threshold criterion of 0.20 in/sec for fragile buildings, and less than the 0.012 in./sec. “slightly perceptible” human response threshold for steady state vibration (CA Dept. of Transportation, 2004).

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

The project will not result in a permanent increase in noise levels.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	---	--------------------------	--------------------------

See Response to XII-a, and mitigation measure N-1.

e) 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 or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

The project is not located within an airport land use plan, or within two miles of a public airport (DA, 2015).

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

There are no private airstrips in the vicinity of the project site (DA, 2015).

XIII. POPULATION AND HOUSING.

Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

The project does not involve housing or infrastructure, and will not impact population growth.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? The project will not impact housing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? The project will not displace people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

XIV. PUBLIC SERVICES.

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

The project will not result in an increase to the service area or demand of public police protection, fire protection, schools, parks, or public facilities.

XV. RECREATION.

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
--	--------------------------	--------------------------	---	--------------------------

Winters Putah Creek Nature Park is adjacent to the project site, but the project is not anticipated to significantly increase use of the park.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? The project will not impact recreational facilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

XVI. TRANSPORTATION/TRAFFIC.

Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? The project requires transportation of equipment and materials, which could temporarily increase the travel time along the transport route.	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
--	--------------------------	--------------------------	---	--------------------------

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? The project will not conflict with an applicable congestion management program.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? The project will not impact air traffic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? The project will not impact transportation design.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Result in inadequate emergency access? The Project will not impact emergency access.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? No impact.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

XVII. UTILITIES AND SERVICE SYSTEMS.

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? The project will not impact wastewater or wastewater treatment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? The project does not involve water or wastewater treatment, and has no bearing on the construction or expansion of these types of facilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? The project does will not use storm water drainage facilities and will have no bearing on the construction of expansion of these facilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? The project will only require water for dust control during construction, and the initial establishment of native plantings after construction.	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
---	--------------------------	--------------------------	---	--------------------------

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

The project will have no demand for wastewater treatment.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
--	--------------------------	--------------------------	--------------------------	---

The project will generate a small amount of solid waste during construction. The Recology Hay Road solid waste disposal site can accept up to 2,400 tons per day, and will meet the project's solid waste disposal needs (Recology Hay Road, 2015).

g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

The project will comply with all solid waste regulations.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	---	--------------------------	--------------------------

The project is designed to improve fish and wildlife habitat value, but some construction activities, such as grading and vegetation removal, will temporarily impact that habitat. The Biological Resources mitigation measures have been incorporated into the project to reduce impacts to fish and wildlife to less than significant levels. The project will not result in take of special status species.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>

Past and future habitat restoration projects along Lower Putah Creek are designed to minimize temporary negative impacts, and have only beneficial long-term impacts. As a result, these past and future projects have less than significant cumulative impacts.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
---	--------------------------	--------------------------	--------------------------	---

The project will not have substantial adverse effect on human beings.

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; *Sundstrom v. County of Mendocino*, (1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors*, (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

Mitigation Measures

AQ-1:

- Disturbed soil areas will be watered at least twice daily to manage dust emissions.
- Vegetative cover will be planted as soon as construction activities allow.
- Straw and non-toxic tackifier will be applied to disturbed areas after seeding with grasses.
- Inactive storage piles that are susceptible to wind erosion will be covered.
- Construction exits will be rocked to reduce soil trackout by vehicles.
- Title 13, California Code of Regulations, section 2485 and 2449, limits the diesel engine idle time to five minutes for commercial vehicles exceeding a gross vehicle weight rating of 10,000 lbs, and off-road vehicles exceeding 24 horsepower. Signs referencing this restriction will be posted at the construction entrances.
- All construction equipment will be in good running condition and tuned to the manufacturer's specifications.

BR-1:

- All construction workers will undergo environmental awareness training. The training will provide the workers with information for all special status species that may be found in or around

the project site. The training will assist the workers in identifying and avoiding the special status species.

- A biological monitor will be on-site daily during construction activities to monitor for the presence of special status species. If species are found, the monitor will secure the site around the species and contact CDFW if the species is unable or unwilling to exit the work area under its own volition.
- Before construction activities begin, the project site will be inspected for special status species. CAFW will be immediately notified of any special status species that are identified during the survey.

BR-2:

- If construction activities occur during February 15 – August 31, then the project area will be surveyed for nesting migratory birds and protected raptors within the 15 days preceding the commencement of construction activities. The survey will extend out to 0.5 mile from the project site for Swainson's hawks. CDFW will be notified of the survey results before construction activities begin.

BR-3:

- Before construction activities commence, temporary orange fencing will be placed around all elderberry shrubs with a stem diameter of 1 inch or greater that are located within the project area. The fencing will be placed at least 20 feet from the shrubs dripline, and sign placement and wording will be consistent with the United States Fish and Wildlife Service's (USFWS) Conservation Guidelines for the Valley Elderberry Longhorn Beetle.

BR-4:

- The work area will be isolated from flowing water during in-water construction activities. A fish rescue will be performed immediately after the work area is isolated from flowing water.

BR-5:

- Project work requires permits from CDFW, USFWS, USACE, and the California Central Valley Regional Water Quality Control Board. The project will adhere to these permits, which include avoidance and minimization measures to reduce impacts to fish, wildlife, and natural resources.

CR-1:

- The project requires grading and excavation. If any object of potential cultural resource significance is unearthed, then the work area will be secured until qualified personnel can evaluate the object.

HHM-1:

- A minimum of two spill kits (20 Gallon minimum) must be onsite at all times during construction activities. Each kit must be placed within a conspicuous container, and one kit must be located within 150 feet of the primary work area, and one kit must be located at the equipment staging and refueling area.

HHM-2:

- All construction equipment with an internal combustion engine must be equipped with a fire extinguisher (2 lbs. minimum capacity, w/ ABC rating).
- A minimum of two fire suppression kits must be onsite at all times during construction activities. Each kit must be placed within a conspicuous container located within 150 feet of the primary work area, and where the risk of fire is greatest. Each kit will contain one 5 lbs capacity fire extinguisher (ABC rating), two full size round point shovels, and two full size Mcleod rakes.
- All off-road, stationary, or portable construction equipment with internal combustion engines meet SAE Standard J335 or USDA Forest Service Specification 5100-1 for spark arresters.

N-1:

- The project's construction activities occurring within the City of Winters General Plan Area will be limited to weekday's from 7AM-7PM. Work outside of the General Plan Area may extend to 8AM-5PM on Saturdays.

- The project will not require the use of equipment that is likely to exceed 90 db at 50 feet (U.S. Department of Transportation, Federal Highway Administration, 2015).

REFERENCES

- BSK Associates, 2014. Draft Ordinary High Water Mark Determination and Preliminary Wetland Delineation, Lower Putah Creek Restoratio Project, Upper Reach Program, Solano and Yolo Counties, California.
- CA Dept. of Conservation. (2015). Retrieved from <http://www.quake.ca.gov/gmaps/WH/smaramaps.htm>
- CA Dept. of Conservation, Farmland Mapping and Monitoring Program. (2015). Retrieved from <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>
- CA Dept of Conservation, Geological Survey of CA. (2015). Retrieved from <http://www.conservation.ca.gov/cgs/Pages/Index.aspx>
- CA Dept. of Education. (2015). Retrieved from <http://www.cde.ca.gov/re/sd/>
- CA Dept of Toxic Substance Control. (2015). Retrieved from <http://www.dtsc.ca.gov/>
- CA Dept of Transportaion. (2004). Transportation and Construction Induced Vibration Guidance Manual. Retrieved from <http://www.dot.ca.gov/hq/env/noise/pub/vibrationmanFINAL.pdf>
- CA Dept. of Transportation, CA Scenic Highway Program. (2015). Retrieved from http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm
- CA Dept. of Transportation, Division of Aeronautics. (2015). Retrieved from <http://www.dot.ca.gov/hq/planning/aeronaut/documents/maps/index.htm>
- CA Environmental Protection Area, Air Resources Board. (2015). Retrieved from <http://www.arb.ca.gov/homepage.htm>
- CA Fish and Wildlife. CA Natural Diversity Database. (2015). Retrieved from <http://www.dfg.ca.gov/biogeodata/cnddb/>
- City of Winters General Plan Policy Document. (1992). Retrieved from <http://www.cityofwinters.org/pdf/GeneralPlan.pdf>
- National Marine Fisheries Service. (2015). Retrieved from <http://www.fisheries.noaa.gov/index.html>
- Recology Hay Road. (2015). Retrieved from <http://www.recologyhayroad.com/>
- Treamaine, K. (2015). Draft Cultural Resources Inventory Report for the NAWCA 3 Lower Putah Creek Floodplain Restoration Project.

U.S. Dept of Agriculture, Natural Resources Conservation Service. (2015). Retrieved from
<http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

U.S. Department of Transportation, Federal Highway Administration. (2006). Construction Noise
Handbook. Retrieved from
http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm

Yolo-Solano Air Quality Management District Online. (2015). www.ysaqmd.org

Appendix

Draft Cultural Resources Inventory Report for the NAWCA 3 Lower Putah Creek Floodplain Restoration Project

Notice of Determination

Appendix D

To:

Office of Planning and Research
 U.S. Mail: Street Address:
 P.O. Box 3044 1400 Tenth St., Rm 113
 Sacramento, CA 95812-3044 Sacramento, CA 95814

County Clerk
 County of: Clerk of the Board
 Address: 675 Texas Street, Suite 6500, 6th Floor
Fairfield, CA 94533

From:

Public Agency: Solano County Water Agency
 Address: 810 Vaca Valley Parkway, Suite 203
Vacaville, CA 95688
 Contact: Mark Snyder
 Phone: (707) 455-1108

Lead Agency (if different from above):
 Address: _____
 Contact: _____
 Phone: _____

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2015032094

Project Title: North American Wetlands Conservation Act 3 - Lower Putah Creek Floodplain Restoration

Project Applicant: Solano County Water Agency

Project Location (include county): Lower Putah Creek near the City of Winters. Solano and Yolo Counties

Project Description:

The purpose of the project is to improve fish and wildlife habitat in Lower Putah Creek, primarily by restoring natural form and function to the creek's channel and floodplain. The project will grade the existing floodplain to a 1-2 percent slope, starting from approximately two feet above low-flow water surface elevation. The project will also fill and narrow over-widened segments of the low-flow channel, and fill a branch of the braided low-flow channel that is undercutting an embankment. Invasive weeds within the project area will be controlled, and native vegetation will be installed throughout the recontoured floodplain. A side channel and spawning gravel will also be installed.

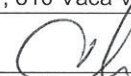
This is to advise that the Solano County Water Agency has approved the above
 Lead Agency or Responsible Agency)

described project on June 11, 2015 and has made the following determinations regarding the above
 (date)
 described project.

1. The project [will will not] have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
 A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [were were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [was was not] adopted for this project.
5. A statement of Overriding Considerations [was was not] adopted for this project.
6. Findings [were were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:

Solano County Water Agency, 810 Vaca Valley Parkway, Suite 203, Vacaville, CA 95688

Signature (Public Agency):  Title: PRINCIPAL

Date: 6/15/15 Date Received for filing at OPR: _____

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: North American Wetlands Conservation Act 3 - Lower Putah Creek Floodplain Restoration

Lead Agency: Solano County Water Agency Contact Person: Mark Snyder
Mailing Address: 810 Vaca Valley Parkway, Suite 203 Phone: (707) 455-1108
City: Vacaville Zip: 95688 County: Solano

Project Location: County: Solano and Yolo City/Nearest Community: Winters
Cross Streets: Putah Creek Road and Johnson Road Zip Code: 95694
Longitude/Latitude (degrees, minutes and seconds): 38 ° 31 ' 30 " N / 121 ° 57 ' 14 " W Total Acres: 14.0
Assessor's Parcel No.: 103240170, 103240160, 38007012 Section: 22/23 Twp.: 8N Range: 1W Base: Mt. Diablo
Within 2 Miles: State Hwy #: 128 Waterways: Lower Putah Creek
Airports: none Railways: none Schools: 10 public and private

Document Type:

- CEQA: [] NOP [] Draft EIR NEPA: [] NOI Other: [] Joint Document
[] Early Cons [] Supplement/Subsequent EIR [] EA [] Final Document
[] Neg Dec (Prior SCH No.) [] Draft EIS [] Other:
[X] Mit Neg Dec Other: [] FONSI

Local Action Type:

- [] General Plan Update [] Specific Plan [] Rezone [] Annexation
[] General Plan Amendment [] Master Plan [] Prezone [] Redevelopment
[] General Plan Element [] Planned Unit Development [] Use Permit [] Coastal Permit
[] Community Plan [] Site Plan [] Land Division (Subdivision, etc.) [X] Other: none

Development Type:

- [] Residential: Units Acres
[] Office: Sq.ft. Acres Employees [] Transportation: Type
[] Commercial: Sq.ft. Acres Employees [] Mining: Mineral
[] Industrial: Sq.ft. Acres Employees [] Power: Type MW
[] Educational: [] Waste Treatment: Type MGD
[] Recreational: [] Hazardous Waste: Type
[] Water Facilities: Type MGD [X] Other: Habitat Restoration (14 acres)

Project Issues Discussed in Document:

- [X] Aesthetic/Visual [] Fiscal [X] Recreation/Parks [X] Vegetation
[] Agricultural Land [X] Flood Plain/Flooding [] Schools/Universities [X] Water Quality
[X] Air Quality [X] Forest Land/Fire Hazard [] Septic Systems [X] Water Supply/Groundwater
[X] Archeological/Historical [] Geologic/Seismic [] Sewer Capacity [X] Wetland/Riparian
[X] Biological Resources [] Minerals [X] Soil Erosion/Compaction/Grading [] Growth Inducement
[] Coastal Zone [X] Noise [X] Solid Waste [] Land Use
[X] Drainage/Absorption [] Population/Housing Balance [X] Toxic/Hazardous [] Cumulative Effects
[] Economic/Jobs [] Public Services/Facilities [X] Traffic/Circulation [] Other:

Present Land Use/Zoning/General Plan Designation:

Open Space

Project Description: (please use a separate page if necessary)

The purpose of the project is to improve fish and wildlife habitat in Lower Putah Creek, primarily by restoring natural form and function to the creek's channel and floodplain. The project will grade the existing floodplain to a 1-2 percent slope, starting from approximately 2 feet above low-flow water surface elevation. The project will also fill and narrow over-widened segments of the low-flow channel, and fill a branch of the braided low-flow channel that is undercutting an embankment. Invasive weeds within the project area will be controlled, and native vegetation will be installed throughout the recontoured floodplain. A side channel and spawning gravel will also be installed.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X". If you have already sent your document to the agency please denote that with an "S".

- | | |
|---|--|
| <input checked="" type="checkbox"/> Air Resources Board | <input type="checkbox"/> Office of Historic Preservation |
| <input type="checkbox"/> Boating & Waterways, Department of | <input type="checkbox"/> Office of Public School Construction |
| <input type="checkbox"/> California Emergency Management Agency | <input type="checkbox"/> Parks & Recreation, Department of |
| <input type="checkbox"/> California Highway Patrol | <input type="checkbox"/> Pesticide Regulation, Department of |
| <input checked="" type="checkbox"/> Caltrans District #4 | <input type="checkbox"/> Public Utilities Commission |
| <input type="checkbox"/> Caltrans Division of Aeronautics | <input checked="" type="checkbox"/> Regional WQCB #5S |
| <input type="checkbox"/> Caltrans Planning | <input checked="" type="checkbox"/> Resources Agency |
| <input checked="" type="checkbox"/> Central Valley Flood Protection Board | <input type="checkbox"/> Resources Recycling and Recovery, Department of |
| <input type="checkbox"/> Coachella Valley Mtns. Conservancy | <input type="checkbox"/> S.F. Bay Conservation & Development Comm. |
| <input type="checkbox"/> Coastal Commission | <input type="checkbox"/> San Gabriel & Lower L.A. Rivers & Mtns. Conservancy |
| <input type="checkbox"/> Colorado River Board | <input type="checkbox"/> San Joaquin River Conservancy |
| <input type="checkbox"/> Conservation, Department of | <input type="checkbox"/> Santa Monica Mtns. Conservancy |
| <input type="checkbox"/> Corrections, Department of | <input type="checkbox"/> State Lands Commission |
| <input type="checkbox"/> Delta Protection Commission | <input type="checkbox"/> SWRCB: Clean Water Grants |
| <input type="checkbox"/> Education, Department of | <input checked="" type="checkbox"/> SWRCB: Water Quality |
| <input type="checkbox"/> Energy Commission | <input type="checkbox"/> SWRCB: Water Rights |
| <input checked="" type="checkbox"/> Fish & Game Region #3 | <input type="checkbox"/> Tahoe Regional Planning Agency |
| <input type="checkbox"/> Food & Agriculture, Department of | <input type="checkbox"/> Toxic Substances Control, Department of |
| <input type="checkbox"/> Forestry and Fire Protection, Department of | <input checked="" type="checkbox"/> Water Resources, Department of |
| <input type="checkbox"/> General Services, Department of | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Health Services, Department of | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Housing & Community Development | |
| <input type="checkbox"/> Native American Heritage Commission | |

Local Public Review Period (to be filled in by lead agency)

Starting Date March 31, 2015 Ending Date June 11, 2015

Lead Agency (Complete if applicable):

Consulting Firm: _____ Applicant: _____
 Address: _____ Address: _____
 City/State/Zip: _____ City/State/Zip: _____
 Contact: _____ Phone: _____
 Phone: _____

 Signature of Lead Agency Representative:  Date: 3/25/15

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

Operations and Readiness Branch

MITIGATED FINDING OF NO SIGNIFICANT IMPACT
408 Permission Numbers 19047, 19047-1, and 19027
Putah Creek Channel Restoration
Winters, California

I have reviewed and evaluated the information presented in the May 2018 Environmental Assessment (EA). The proposed projects encompass three locations within Putah Creek: WPCNP Phase I and II (408 Permission #19047), WPCNP Phase III (408 Permission #19047-1), and NAWCA 3 (408 Permission #19027) in Winters, California. In compliance with U.S.C. Title 33, Chapter 9, Subchapter 1, Section 408, the Solano County Water Agency (requester) has requested permissions through the Central Valley Flood Protection Board (CVFPB) from the U.S. Army Corps of Engineers (Corps) to alter the Sacramento River Flood Control Project, an existing federal flood risk management project, authorized by the Flood Control Act of 1917.

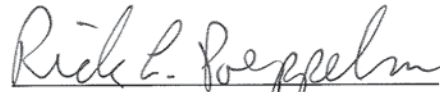
The proposed project includes stream re-contouring, in-channel structural improvements, low-flow channel reconfiguration and minor bank stabilization to prevent erosion, and habitat enhancement following a vegetation management plan. The permission request for 19047 is to authorize an existing project completed in 2011 that converted former gravel extraction pits into a river parkway. Project 19047-1 is requesting permission to convert former gravel extraction berms and pits, and a closed wastewater treatment plant into a river parkway, while connecting Phase I and II trails. Project 19027 is requesting permission to recontour the floodplain, restore riparian forest and salmonid spawning habitat.

A public notice was made available from July 11, 2016, to August 9, 2016, on the Corps' website, for public and agency review and comment for 19047-1. A public notice for 19027 and a second public notice for 19047-1 was made available from February 06, 2017, to March 08, 2017. All comments received were addressed and incorporated as appropriate in the EA.

The possible consequences of the work described in the EA have been studied with consideration given to environmental, social, economic, and engineering feasibility. The potential effects have been coordinated with federal and state agencies and the required consultations under Section 7 of the Endangered Species Act have been completed with the U.S. Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS). Consultations under Section 106 of the National Historic Preservation Act have been completed with Native American tribes and the California State Historic Preservation Officer (SHPO).

Based on my review of the EA (incorporated herein by reference), information provided by the requesters, and interested parties, I have determined these permissions

will not have a significant effect on environmental, social, or cultural resources. Based on these considerations, I am convinced that there is no need to prepare an Environmental Impact Statement. Therefore, the EA and Mitigated Finding of No Significant Impact provide adequate environmental documentation to grant 408 permissions for the proposed action.



Rick L. Poepelman, P.E.
Chief, Engineering Division
Levee Safety Officer

5/19/18

DATE SIGNED

ENVIRONMENTAL ASSESSMENT – PUTAH CREEK CHANNEL RESTORATION WINTERS, CALIFORNIA

408 PERMISSION #19027, 19047, AND 19047-1 UNITED STATES ARMY CORPS OF ENGINEERS

PREPARED FOR:
UNITED STATES ARMY CORPS OF ENGINEERS



**US Army Corps
of Engineers®**

May, 2018

408 PERMISSION #19027, 19047, AND 19047-1
UNITED STATES ARMY CORPS OF ENGINEERS

Prepared for:
United States Army Corps of Engineers



US Army
Corps of
Engineers
®

Prepared by:



Robert "Tony" Martin
Principal Geologist/Sacramento Branch Manager



Kevin Grove
Staff Planner

BSK Associates
3140 Gold Camp Drive, Suite
160 Rancho Cordova, CA 95670
(916) 853-9293

ENVIRONMENTAL ASSESSMENT
408 Permission # 19027, 19047, and 19047-1
Central Valley Flood Protection Board
United States Army Corps of Engineers
Putah Creek Channel Restoration
Winters, California

INTRODUCTION AND LOCATION

The Solano County Water Agency (SCWA) proposes to complete channel restoration involving re-contouring and realignment of the low-flow channel of Putah Creek, upstream, within, and downstream of the City of Winters' Putah Creek Nature Park (WPCNP). The overall Putah Creek Channel Restoration Project (Project) encompasses three areas within Putah Creek. The most upstream Project Area is identified WPCNP Phase I and II (408 Permission #19047) and is split by WPCNP Phase III (408 Permission #19047-1), and the most downstream Project Area is North American Wetlands Conservation Act 3 – Lower Putah Creek Floodplain (NAWCA 3) (408 Permission #19027). The proposed Project is a series of restoration activities intended to restore Putah Creek to a more natural condition, one that is self-maintaining and supports native plant and animal species.

The Project activities include stream re-contouring, in-channel structural improvements, such as natural stone feature construction, and low-flow channel reconfiguration to prevent erosion; minor bank stabilization; and, habitat enhancement following a vegetation management plan. The Project Area encompasses a total of approximately 42 acres and 5,900 linear feet of Putah Creek. Figure 1 shows the overall Project Area and surrounding vicinity. Figure 2a, 2b, 2c, and 2d show the individual Project Area details. These figures are included at the end of the document.

This National Environmental Policy Act (NEPA) Environmental Assessment (EA) document will focus on the restoration of Putah Creek and the potential environmental impacts of the project at the Project Area and its vicinity for the purposes of obtaining a US Army Corps of Engineers (USACE) 408 Permit.

Project Locations

The overall Project encompasses three locations within Putah Creek, from upstream to downstream: WPCNP Phase I and II (408 Permission #19047), WPCNP Phase III (408 Permission #19047-1), and NAWCA 3 (408 Permission #19027). The specific locations of this Project Area are discussed below.

Winters Putah Creek Nature Park Phase I and II (#19047)

The WPCNP Phase I and II (#19047) site is located along a small stretch of Putah Creek, beginning approximately 1,000 ft. west of the railroad bridge within the City of Winters, Yolo County, California. The WPCNP Phase I and II site is approximately 3,500 linear feet and incorporates approximately 25 acres (Figure 2b). WPCNP Phase I and II has two areas that are separated by WPCNP Phase III (#19047-1). The WPCNP Phase I and II site is located within portions of Section 21 and 22, Township 8 North, Range 1 West, Mount Diablo Baseline & Meridian; from approximately Latitude 38°31'02.84" N Longitude 121°58'09.58"W to 38°31'18.63" N 121°57'53.24"W and continuing downstream of WPCNP Phase III (#19047) from 38°31'22.40"N 121°57'40.39"W to 38°31'28.22"N 121°57'25.22"W on the Winters quadrangle topographic map.

Winters Putah Creek Nature Park Phase III (#19047-1)

The WPCNP Phase III (#19047-1) site is located along a small stretch of Putah Creek, from approximately 1,000 ft. east of the railroad bridge, within the City of Winters, Yolo County, California. The WPCNP Phase III site is approximately 11 acres, and incorporates approximately 1,300 linear feet (Figure 2c). The site is located between Phases I and II of WPCNP (#19047). The WPCNP Phase III site is located within portions of Section 21 and 22, Township 8 North, Range 1 West, Mount Diablo Baseline & Meridian; from approximately Latitude 38°31'18.63" N Longitude 121°57'53.24"W to 38°31'22.40"N 121°57'40.39"W on the Winters quadrangle topographic map.

NAWCA 3 (#19027)

NAWCA 3 is located downstream of the City of Winters and extends beneath the I-505 freeway. NAWCA 3 begins approximately 1,100 feet upstream of I-505. The NAWCA 3 site is approximately 6.16 acres, of which 3.04 acres are located below the OHWM, and incorporates approximately 1,050 linear feet of creek channel. The Project runs from approximately Latitude 38°31'26.69" N Longitude 121°57'24.67"W to 38°31'32.06"N 121°57'11.65"W on the Winters quadrangle topographic map.

1.1 Project Detail

The entire Project Area is approximately 42 acres and 5,900 linear feet of Putah Creek and encompasses 3 locations: WPCNP Phase I and II (#19047), WPCNP Phase III (#19047-1) and NAWCA 3 (#19027). Construction of WPCNP Phase I and II (#19047) was completed in 2011. WPCNP Phase III (#19047-1) is next to be completed, followed by NAWCA 3 (#19027). Construction is estimated to be a total of approximately 6 months, with approximately 8 weeks of earth moving activity. Each of these area's site details are described below.

WPCNP Phase I and II (#19047)

Environmental Assessment - Putah Creek Channel Restoration

USACE 408 Permission # 19027, 19047, and 19047-1 Winters, California

WPCNP Phase I and II (#19047) converted former gravel extraction pits into a river parkway, while creating approximately twelve-foot wide meandering trails on a twenty-foot wide terrace, ten feet above the low-flow water surface elevation on both banks. The Watershed Management Action Plan (EDAW, 2007a) ranks the park as “highest priority” for restoration throughout the creek. WPCNP Phase I and II is approximately 3,500 linear feet and approximately 25 acres.

WPCNP Phase I and II (#19047) minimized impacts to vegetation by leaving the largest trees in place, and the other native trees and shrubs in the construction area were relocated where feasible into the final realignment configuration of the channel. Approximately 110 non-native and native trees were removed to facilitate grading. After construction, the floodplain was seeded with native grasses and planted with native trees and shrubs. Approximately 1,200 native trees and 300 native shrubs will be planted following construction. Approximately 77,130 cy of existing, onsite material was used to re-contour the floodplain in Phase 1 and 2 of this site. Approximately 2,000 cy of spawning gravel was imported. This construction work was completed in 2011.

WPCNP Phase III (#19047-1)

WPCNP (#19047-1) would convert former gravel extraction berms and pits, and a closed wastewater treatment plant into a river parkway, while connecting the proposed Phase I and II trails. WPCNP Phase III (#19047-1) is approximately 11 acres and 1,300 linear feet. As stated above, the Watershed Management Action Plan (EDAW, 2007a) ranks the park as “highest priority” for restoration throughout the creek. In the center of the WPCNP Phase III is a former (closed by the Central Valley Regional Water Quality Control Board [CVRWQCB]) sewage aeration pond site that would be used as the restoration Project staging area to stage and borrow native fill materials. This staging area is located within a bend in the channel created by the historic aeration ponds. This staging area has remained isolated from the flow channel, but is proposed to become a portion of the Putah Creek channel, by straightening out the bend. The existing artificial channel bend would be filled and planted with native riparian vegetation.

To minimize Project impacts on the naturalized berm, the largest trees were left in place, and the other native trees and shrubs in the construction area were relocated where feasible into the final realignment configuration of the channel. Approximately 80 non-native and native trees and shrubs have been removed, and an additional 37 trees will be removed to facilitate grading. A minimum of 600 native trees and 200 native shrubs will be planted after construction activities are complete. Approximately 27,600 cy of fill material would be used to re-contour the floodplain, including approximately 10,000 cy of clean fill imported from SCWA off-site stockpile at PDD. Approximately 200 cy of spawning gravel would be imported. This work began in 2014, however due to seasonal restrictions for other permits, the project was closed prior to the winter season in 2014. Construction on this site is currently not active, but will reinitiate in spring 2018.

NAWCA 3 (#19027)

The NAWCA 3 (#19027) site of the Project would continue the WPCNP activities, including grading the

existing floodplain to a uniform 1-2 percent slope, starting approximately 18 inches above low-flow water surface elevation. The project takes a simple elegant approach to floodplain restoration. Rather than constructing a complex project with a multitude of wetland features, the project will restore natural form and function to the floodplain and channel, and allow the natural geomorphological processes of scour and deposition to increase both terrestrial and aquatic habitat complexity within the project area as the site matures. The project will have the immediate benefit of reduced water temperatures and an increase in suitable salmon spawning and juvenile rearing habitat. The project will convert 1.27 acres of open water and 1.77 acres of seasonally flooded riparian forest within WOTUS, to 1.25 acres of open water and 2.77 acres of seasonally flooded riparian forest within WOTUS. The loss of 0.02 acre of open water is associated with the narrowing of an over-widened segment of channel for the purpose of reducing water temperature, an ecological benefit to fish such as native salmon and trout. The constructed side channel reduces the loss of open water from channel narrowing, and the channel will increase ecological value of open water by providing suitable salmon spawning and rearing habitat with the addition of 150 CY of gravel. This is a net gain of 1-acre of restored riparian forest and 1,050 feet of spawning and juvenile salmonid rearing habitat. Additionally, 200 native trees will be planted. Plants will be chosen specifically to support a wide range of native fish, birds, insect pollinators, amphibians, and other animals.

ACTIVITIES

Floodplain recontouring - Areas throughout the creek that have steep and high banks and transition into a low terrace, rather than a functional floodplain, tend to promote the establishment of upland species, such as valley oak and black walnut (*Acer negundo*), in addition to non-native species such as tree-of-heaven, eucalyptus, Himalayan blackberries, and giant reed. The steep banks have minimal surface area that is ideal for establishment by native species such as white alder, cottonwood, and willow species.

The project will restore a functional floodplain to the project area. The existing low-flow channel banks will be graded down to approximately 18 inches above low-flow water surface elevation, and the floodplain will be graded back (perpendicular) from the channel at a positive 1-2 percent slope. This lower top-of-bank elevation and gentle floodplain slope will maximize the surface area that is ideal for the natural recruitment of many different native plant species, including high value wetland dependent species.

Impacts to Jurisdictional Waters: Floodplain recontouring will result in temporary impacts to 2.77 acres of existing floodplain area within WOTUS. This activity will add 1.00 acres of new floodplain and 0.19 a new side channel within WOTUS will be constructed to provide habitat diversity and new spawning and juvenile rearing habitat.

Ecological Benefits: Floodplain recontouring promotes natural geological processes, such as scour and deposition, along the channel and floodplain. This activity will lead to an increase in the species diversity and amount of native plants that will be naturally recruited along the banks and floodplain, ultimately increasing the wildlife habitat value of the project area as the site matures.

Channel filling - The existing over-widened channel has high water residence time and a large water surface area that is exposed to solar radiation, both of which promote warm water temperatures.

Impacts to Jurisdictional Waters: This channel filling activity will permanently impact a total of approximately 0.21 acre (580 LF) of existing open water.

Ecological Benefits: Narrowing the over-widened section of channel will immediately promote cooler water temperatures by increasing flow velocity and reducing the surface area of water that is exposed to solar radiation. Water temperatures will also be reduced as nearby vegetation matures and provides shade over a larger percentage of open water than was possible with pre-project conditions.

Constructed Side Channel - A narrow side channel with a maximum width of 14 feet will be excavated within the recontoured floodplain. The side channel will have two segments (0.08 acre/240 LF and 0.11 acre/310 LF) that will connect to a portion of existing channel that is functioning as a backwater. Approximately 150 CY of clean gravel will be placed within the channel (as needed). The gravel size and composition will be suitable for spawning salmon. The design channel will also serve as temporary bypass channel during construction, to facilitate narrowing of the existing channel.

Impacts to Jurisdictional Waters: The design channel will create approximately 0.19 acre (550 LF) of new open water, and will reduce the project's net loss of open water that results from narrowing and filling existing open water.

Ecological Benefits: Creates Salmon Spawning and Rearing Habitat.

Vegetation Removal and Installation - The process of recontouring the floodplain will require the removal of vegetation that has become established more than one foot above and below the floodplain's design elevations. Up to 86 trees, both native and non-native species greater than four inches diameter-at-breast-height, are planned for removal to facilitate floodplain grading. Twenty three of those trees, of which 12 are native and 11 are non-native species, are located within WOTUS. The recontoured floodplain will be revegetated with native grasses, trees, and shrubs. Only the following species that are endemic to Putah Creek will be used for revegetation:

- California sycamore (*Plantanus racemosa*)
- Valley oak (*Quercus lobata*)
- Interior live oak (*Quecus wislizeni*)
- Blue oak (*Quercus douglasi*)
- Box elder (*Acer negundo*)
- Oregon ash (*Fraxinus latifolia*)
- Fremont cottonwood (*Populus fremontii*)
- Goodding's willow (*Salix gooddingii*)
- Red willow (*Salix laevigata*)
- Yellow willow (*Salix lutea*)
- White alder (*Alnus rhombifolia*)
- Arroyo willow (*Salix lasiolepis*)
- California buckeye (*Aesculus californica*)

Environmental Assessment - Putah Creek Channel Restoration

USACE 408 Permission # 19027, 19047, and 19047-1 Winters, California

- Big leaf maple (*Acer macrophyllum*).
- Mule fat (*Bacharis salicifolia*)
- California wild rose (*Rosa californica*)
- Buttonbush (*Cephalanthus occidentalis*)
- Blue elderberry (*Sambucus Mexicana* [only planted if required for mitigation or covered by safe harbor])
- Western redbud (*Cercis occidentalis*)
- Toyon (*Heteromeles arbutifolia*)
- California coffeeberry (*Frangula californica*)
- California wild grape (*Vitus californica*)
- California blackberry (*Rubus usinus*)
- Brown dogwood (*Cornus glabrata*)

The project's Streambed Alteration Agreement with the California Department of Fish and Wildlife requires that approximately 200 native trees and 24 shrubs be installed and maintained within the recontoured floodplain. In addition, the plantings will be maintained for a minimum of five years, at which point they should achieve a minimum of 80% survivability and 75% coverage.

Ecological Benefits: The project will replace non-native vegetation with native vegetation. The installed native trees and shrubs will increase the wildlife habitat value of the project area as the site matures. The seeded native grasses on the recontoured floodplain will increase wildlife habitat value after the first growing season.

CONSTRUCTION EQUIPMENT

The following construction equipment will be used for project related construction activities:

- Excavators
- Graders
- Dozers
- Scrapers
- Dump Trucks
- Water Trucks

EQUIPMENT ACCESS

The north side of the creek will be accessed through a privately owned agricultural parcel that is adjacent to the creek and is accessible from Highway 128/E. Grant Avenue in Winters, CA. Equipment will use a pre-existing ramp that leads from the top of the creek's embankment to the creek's low-terrace, located outside of WOTUS.

The south side of the creek may be accessed from the following two locations off of Putah Creek Road.

- A preexisting maintenance trail runs through the Winters Putah Creek Nature Park and connects the west end of the proposed project area.

Environmental Assessment - Putah Creek Channel Restoration

USACE 408 Permission # 19027, 19047, and 19047-1 Winters, California

- A temporary equipment access ramp may be installed near the west side of the I-505 bridge. The earthen access ramp will consist of suitable native fill material and will be located outside of WOTUS. The ramp will be removed and the embankment returned to its original condition after construction is complete.

EQUIPMENT STAGING AREA

The site will have one staging area on both the north and south sides of the creek. Equipment will be staged along the creeks embankment, outside of WOTUS.

PROJECT TIMING AND CONSTRUCTION ORDER

Project construction will occur between August and October 2018 for the following reasons:

- The nesting bird season will be completed by August.
- Creek discharge is minimal during this construction period.
- The chance of precipitation is minimal during this construction period.
- Desirable cold water fish have migrated out of the system or have moved upstream of the project area where summer water temperatures are cooler. The project will be completed before the salmon spawning season begins in November.

The order in which the construction task are completed will be determined by the contractor, but the following is the anticipated order in which the construction activities may occur:

- Install a temporary access ramp off of Putah Creek Road, if needed.
- Mobilize equipment and prepare staging areas.
- Remove the minimum amount of vegetation required to facilitate grading.
- Grade the south side of the creek and excavate the design channel.
- Place spawning gravel in the design channel.
- Redirect flow down the design channel and isolate the portion of the existing channel that will be narrowed.
- Perform fish rescue in the isolated channel segment.
- Dewater the isolated channel segment as necessary, and install clean fill.
- Redirect flow down both the main channel and design channel.
- Prepare floodplain for plantings.
- Demobilize equipment, remove staging areas and the temporary access ramp.
- Install vegetation, BMPs, and temporary irrigation.

PROJECT PURPOSE AND OBJECTIVES

The objective of the USACE is to determine whether to issue a Section 408 permit to allow the proposed Project to alter the Federal flood control system along Putah Creek.

The purpose of the proposed Project is to:

- Secure a 408 permit.

Environmental Assessment - Putah Creek Channel Restoration

USACE 408 Permission # 19027, 19047, and 19047-1 Winters, California

- Replace fill area with a design channel and floodplain.
- Connect the South Bank trail system.
- Restore floodplain to functional and natural state.
- Enhance habitat.
- Manage invasive riparian weeds.
- Revegetate Project Area with native species.

ALTERNATIVES

No Action Alternative

Under the No Action Alternative, the USACE would not grant 408 permission and the restoration would not occur.

Requester's Preferred Alternative

Channel and Floodplain Restoration: As described in Section 1.1, SCWA is proposing to restore the floodplain within areas of Putah Creek to a more natural and functional state. The Project would replace the existing over-widened channel, and expand the narrow floodplains, create a side channel for fish spawning habitat, fill and narrow branches of split low-flow channel to prevent erosion, remove and re-contour artificial pond structures with a new design channel appropriate to current hydrology, remove artificial bends in the channel created by pond complexes, complete the connection to the trail system within the City of Winters, enhance and create aquatic and riparian habitat, manage invasive riparian weeds, and revegetate the Project Area with native species. Following construction, vegetation will be maintained through mowing, watering, and weed control until the 1600 permit's success criteria is met. The Project would rehabilitate approximately 47.2 acres and 7,600 of Putah Creek. This includes grading the existing floodplain to a uniform slope above the low-flow water surface elevation. Construction for the entire Project Area is estimated to take approximately 6 months, with approximately 8 weeks of earth disturbing activities. Construction has begun and was completed for WPCNP Phase I & II (#19047). Construction began on WPCNP Phase III (#19047-1), but due to seasonal restrictions for other permits, the project was closed prior to the winter season in 2014. Construction on this site is currently not active, but will reinitiate in spring 2018. Work has not begun on NAWCA 3 (#19027).

Implementation of the requester's preferred alternative would have environmental effects, however those effects would be fully avoided, minimized or mitigated.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the environmental resources in the Project Area, as well as any significant effects of the alternatives on those resources. Under the Environmental Assessment (EA) the focus is solely on Project related impacts from the Project on the environment. Where no impact is likely from the proposed

Project the NEPA impact category is not discussed, with the exception of cases where the requester has made an additional environmental commitment.

AIR QUALITY

Environmental Setting

The proposed Project is located in the Sacramento Valley Air Basin (SVAB), which is situated in the northern half of the Central Valley and is bounded on the west by the Coastal Range, on the north and east by the Sierra Nevada Mountains. Within the SVAB, the Project is situated in the Yolo-Solano sub-basin.

The Yolo-Solano Air Quality Management District (YSAQMD) regulates air quality through its permit authority and through its planning and review activities over most types of stationary emission sources. The YSAQMD is responsible for implementing emissions standards and other requirements of federal and State laws.

Air quality monitoring stations are located throughout the counties, which collect data on ozone, carbon monoxide (CO) and particulate matter (PM₁₀ and PM_{2.5}), nitrogen oxide (NO_x), sulfur dioxide, and lead levels.

Air quality standards are established by both the federal and State governments. State standards, set through the California Air Resources Board (CARB), are generally more stringent than federal standards. The attainment statuses of Yolo and Solano Counties for criteria pollutants under State standards include non-attainment for ozone, and attainment for CO, and for PM₁₀ (YSAQMD, 2015).

No Action Alternative

There would be no affect to air quality under the no action alternative. Air quality would remain the same in the short-term and future air quality would continue on its current trend(s).

Requester's Preferred Alternative

Implementation of the requester's preferred alternative would involve the use of heavy equipment and vehicles during construction activities for approximately 98 acres of land for the overall Project. Construction activities for the entire Project would be approximately 6 months and would not involve any permanent stationary emissions of reactive organic gases (ROG), NO_x, and PM₁₀. Approximately 8 weeks of ground disturbing activities will occur during the 6 months of construction. The remaining time will be required to remove invasive plant species and plant native species. The overall Project would have no negative impact on existing air quality plans, and has the potential of nominally reducing air emissions from vehicle use by promoting local walking and bike use. There is expected to be regional use of this

park, however, the park would not likely be a sole destination that could promote additional air concerns from increased driving. Potential short-term impacts may occur during site clearing and grading from equipment exhaust emissions and dust. The YSAQMD thresholds for both construction and project related criteria pollutants of concern is 10 tons/year of ROG and NO_x, 80 lbs./day of PM₁₀, and any exceedance of a state ambient air quality standard for Carbon Monoxide (CO) (YSAQMD, 2007). Once construction is completed, no additional Project-related emissions will occur in relation to baseline levels. The Project will not increase baseline conditions of traffic, and therefore, no impact on state ambient air quality standards for CO will occur. Therefore, the only potential for air quality impacts is related to construction. A screening level CalEEMod analysis for the overall Project Area revealed that even if the total Project construction-related emissions occur simultaneously, they are below the YSAQMD thresholds. This analysis took a conservative approach to evaluate air emissions from the construction of the proposed project. The default truck trip values (280) were used for the largest of the sites (#19047 & #19047-1) instead of the estimated 42/trips per day that the project is estimated to use during construction. This conservative analysis was still below the YSAQMD thresholds. The screening level CalEEMod analysis for the Project is detailed in Table 1.

TABLE 1			
Construction-Generated Total Emissions Per Year			
Sources	ROG (Tons)	NOX (Tons)	PM10 (lbs./day)
YSAQMD Threshold	10 tons/year	10 tons/year	80 lbs./day
WPCNP Phase I and II (#19047)	0.13	1.03	31.2
WPCNP Phase III (#19047-1)	0.13	1.03	11.4
NAWCA 3 (#19027)	0.01	0.13	0.38
TOTAL	0.27	2.19	43.0

Source: BSK, 2015

Approximately 0.27 tons of ROG, 2.19 tons of NO_x, and 43.0 lbs./day of PM₁₀ would be emitted during construction activities. These levels are below the YSAQMD thresholds. Therefore, impacts to air quality are less than significant as defined by the YSAQMD standards. Vehicle emissions of ozone, ozone precursors, and PM₁₀ will not exceed or contribute to local violations of regulatory standards. An additional effect of this project on air quality would result from the minor vehicle traffic associated with the weed and vegetation maintenance following completion of the project. SCWA will maintain the Project Area following construction by mowing, watering, and performing weed control until the 1600 permit success criteria is met. This effort is a *de minimis* secondary effect on air quality.

Mitigation Measures

The following emission control practices would be implemented during construction for the Project Area as required by the City of Winters as best management practices (Winters, 1998):

Mitigation Measure AQ-1:

- To the extent that equipment and technology is available, the contractor shall use California Air Resources Board (CARB) certified catalyst and filtration technologies.
- All construction diesel engines, which have a rating of 50 hp or more, shall meet the Tier 3-4 California Emission Standards for off-road compression-ignition engines, unless otherwise certified by the Air District's Air Quality Construction Mitigation Monitor (AQCMM). In the event that a Tier 3-4 engine is not available, the contractor will work with YSAQMD to determine potential alternate means of compliance. Older engines will only be used if the AQCMM certifies that compliance is not feasible.
- Project sequencing is specifically designed to reduce air impacts from the operation of the heavy equipment. Wait times for dump trucks and idle time shall be minimized to 5 minutes or less.
- All disturbed areas, which are not being actively utilized for construction purposes, shall manage dust emissions using water (3 times per day), vegetative ground cover or other acceptable dust management practices.
- All bare ground will have ground cover replaced as soon as practicable.
- Heavy-duty diesel equipment will be maintained in optimum running condition.

WATERS OF THE U.S.

Environmental Setting

NAWCA 3 (#19027) will fill approximately 0.21 acre of existing open water channel, while excavating 0.19 acre of new open water channel. The Project will increase the area of seasonally flooded riparian area within the OHWM from 1.77 acres to approximately 2.77 acres, a 1.0 acre increase. The project will create seasonally flooded riparian wetlands and open water channel with spawning habitat; however, temporary impacts are anticipated through a variety of construction-related activities (including the placement of soils, equipment staging, etc.). As required by the NWP-27 for both WPCNP Phase I & II (#19047), and WPCNP Phase III (#19047-1) and the California Department of Fish and Wildlife (CDFW) 1600 permits, the project is fully self-mitigating because higher quality wetland habitat and floodplains will be created by Project activities. Please note, that the 404 permit was issued in 2011 for both WPCNP sites (#19047 and 19047-1). Due to seasonal restrictions for other permits, WPCNP Phase III (#19047-1) was delayed and the NWP-27 permit (SPK-2011-00371) will be reverified if the 408 permission is issued. All permit requirements will be implemented to fully mitigate impacts to waters of the U.S. and reduce

impacts to water quality during construction. Additionally, the implementation of the various water quality BMPs and habitat avoidance/compensation, including mitigation measure BR-6 and HWQ-1, would reduce or avoid impacts to a less-than-significant level.

No Action Alternative

Because no construction would occur, there would be no affect to waters of the U.S. under the no action alternative.

Requester's Preferred Alternative

Implementation of the requester's preferred alternative is not expected to result in permanent negative impacts to potential waters of the U.S., as all Project features and impacts are self-mitigated. NAWCA 2 (#19052) does not require a 404 permit.

As stated in a technical memorandum to SCWA, dated August 17, 2015, for both WPCNP Phase I and II (#19047) and WPCNP Phase III (#19047-1) an estimated 14.32 acres of open water was planned for conversion to 18.4 acres of seasonally flooded riparian wetlands, emergent wetlands, and open water channel. This additional acreage of much-higher ecological value features was a Special Condition of the permit. Current Geographic Information System (GIS) spatial analysis of the site identifies that the WPCNP Phase I & II (#19047) and WPCNP Phase III (#19047-1) exceeds those estimated mitigation averages, with 7.3 acres of restored open water (River Area), and 20.0 acres of Floodplain and Riparian Area, for a total of 27.3 acres. The project will also mitigate a temporary loss of 1.8 acres of waters by constructing, enhancing, and restoring a minimum of 2.4 acres of new channel and active floodplain. The permit minimum mitigation requirements have already been exceeded under both conditions.

NAWCA 3 (#19027) will fill approximately 0.21 acre of channel, while excavating 0.19 acre of channel to create seasonally flooded riparian wetlands and open water channel with spawning habitat. However, temporary impacts are anticipated through a variety of construction-related activities (including the placement of soils, equipment staging, etc.). As required by the NWP-27 for both WPCNP Phase I & II (#19047), and WPCNP Phase III (#19047-1) and the California Department of Fish and Wildlife (CDFW) 1600 permits, the project is fully self-mitigating because higher quality wetland habitat and floodplains will be created by Project activities. Please note, that the 404 permit was issued in 2011 for both WPCNP sites (#19047 and 19047-1). Due to seasonal restrictions for other permits, WPCNP Phase III (#19047-1) was delayed and the NWP-27 permit (SPK-2011-00371) was extended. All permit requirements will be implemented to fully mitigate impacts to waters of the U.S. and reduce impacts to water quality during construction. Additionally, the implementation of the various water quality BMPs and habitat avoidance/compensation, including mitigation measure BR-6 and HWQ-1, would reduce or avoid impacts to a less-than-significant level.

Mitigation Measures

Mitigation Measure BR-6:

Mitigation Measure BR-6 is described below.

Mitigation Measure HWQ-1:

Mitigation Measure HWQ-1 is described below.

BIOLOGICAL RESOURCES

Habitats

Environmental Setting

The Project Area is primarily located within the lower terraces of Putah Creek on the border of Yolo and Solano Counties. Land uses surrounding the Project Area include agricultural, open space, and urban (residential) uses. Aquatic habitats within Putah Creek include pools, riffles, and runs within a degraded channel. Putah creek currently has a disproportionate number of pools and virtually no floodplain (EDAW, 2007a). Open space areas include Valley foothill riparian habitat. Urban habitat types include landscape or planted vegetation, as well as developed urban lands with little or no native vegetation types. Species occurring within this habitat type are typically common and adapted to an urban environment. Agricultural lands, mainly walnut orchards, border the project, but are entirely outside of the impact areas.

Sensitive natural communities that occur within the Project Area and surrounding vicinity include Valley foothill riparian forest. This community provides habitat for a range of terrestrial wildlife species, including several species of birds, small mammals, fish, and reptiles.

Riparian habitat within the Project Area, which is largely concentrated along the banks of Putah Creek, may provide rearing and nesting habitat for wildlife (*aquatic* and *terrestrial*), and the creek functions as a movement and dispersal corridor for fish. Terrestrial and avian wildlife may also use the riparian habitat as a movement and dispersal corridor and as foraging and nesting habitat (BSK, 2011).

No Action Alternative

Because there would be no construction there would be no affect to riparian and wetland habitats under the no action alternative.

Requester's Preferred Alternative

Implementation of the requester's preferred alternative has the potential for the riparian habitat along Putah Creek to be subject to impacts associated with tree removal and earth movement during

construction activities. A total of approximately 468 non-native and native trees will be removed during the Project in accordance with the CDFW 1600 permits. Of these 468 non-native and native trees, the 150 trees from the WPCNP Phase I and II (#19047) have been removed, and the floodplain has been seeded with native grasses. Approximately 1,200 native trees and 300 native shrubs have been planted throughout the WPCNP Phase I and II (#19047) Project sites, following construction. WPCNP Phase III (#19047-1) has removed 80 trees, and will plant 600 native trees and 200 native shrubs following construction. NAWCA 3 (#19027) work has not begun, therefore no trees have been removed. These trees provide potential nesting habitat to a variety of birds and raptors, including Swainson Hawk, white-tailed kit, red-tailed hawks, and migratory bird species. Mitigation measures BR-1, 2, 5 and 6 will protect by avoiding or fully mitigating effects on any species displaced by the removal of these trees, and the disturbance of the ground and understory vegetation. Approximately 2,300 native trees will be planted throughout the Project Area to mitigate for tree removal as required by the CDFW 1600 permits. The Project would reduce invasive plants, and promote the growth of native and overhanging vegetation that could provide improved cover, foraging and nesting habitat for migratory birds.

Aquatic habitat for resident species such as western pond turtle, non-native fish (bass, crappie, and carp), and native fish species such hardhead and Sacramento blackfish, has the potential to be affected during in-water work. The habitat may be impacted briefly during construction, but the project intent is to significantly improve the habitat for these native species. This is a temporary impact that will be fully mitigated (BR-1, BR-6, BR-7, HWQ-1). However, the potential impacts could include minor incidental injury or mortality due to in-water project activities, which will be discussed in the next section.

Riparian habitat, including habitat for the Valley elderberry longhorn beetle, has the potential to be affected by Project Activities. Under BO #2014-F-0471-1, seven elderberry plants have been transplanted away from the staging area to other on-site areas.

Impacts to aquatic habitat would be protected during construction with implementation of mitigation measure BR-1, BR-5, best management practices required in the stormwater pollution prevention plan identified in mitigation measure HWQ-1, and the 401 certification (attached). With these measures, impacts to aquatic habitat would be avoided or fully mitigated to a less than significant impact. Impacts to floodplain and riparian habitat would be avoided or fully mitigated to a less than significant impact through implementation of mitigation measures BR-3, 4, and 5, and the CDFW 1600 permit-required tree and shrub mitigation (attached). Additionally, floodplain and riparian habitat would be created by expanding the floodplain through Project activities. However, these negative impacts would be temporary, and riparian habitat avoidance and compensation measures, including mitigation measure BR-1 and BR-6, would be implemented for the proposed Project, which would reduce or avoid riparian and aquatic wildlife habitat impacts to a less-than-significant level.

Special-Status Species

Environmental Setting

Environmental Assessment - Putah Creek Channel Restoration

USACE 408 Permission # 19027, 19047, and 19047-1 Winters, California

Special-status species are those plants and animals that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or other agencies as deserving special consideration. Some of these species receive specific legal protection pursuant to federal or state endangered species legislation. Others lack such legal protection, but have been characterized as “at risk or sensitive” on the basis of adopted policies and expertise of state resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives.

A list of federally listed special-status plant and animal species that have the potential to occur within, or in the vicinity of the Project Area was compiled based on data in the California Natural Diversity Database CNDDDB (CDFW, 2015), CNPS Inventory of Rare and Endangered Plants (CNPS, 2015), and the USFWS List of Federal Endangered and Threatened Species that may be Affected by Projects in the Winters, Allendale, Monticello Dam, and Mt. Vaca Quads (USFWS, 2013) [Table 2]. Conclusions regarding habitat suitability and species occurrence are based on a reconnaissance-level area assessment conducted by BSK or contracted biologists, as well as existing literature and databases described previously (BSK, 2011).

Table 2 Federal Special Status Species List				
Scientific Name	Common Name	Federal Status	CA Status*	Effect Determination
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Threatened	None	No effect – No suitable habitat present.
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	Threatened	Endangered	May affect, not likely to adversely affect – Discountable/Avoided/beneficial. (See BR-1, -2, -5, -7)
<i>Desmocerus californicus dimorphus</i>	Valley elderberry longhorn beetle	Threatened	None	May affect, not likely to adversely affect (19027) - (Appears Discountable)
<i>Desmocerus californicus dimorphus</i>	Valley elderberry longhorn beetle	Threatened	None	May affect, likely to adversely affect (19047-1)
<i>Oncorhynchus mykiss</i>	steelhead - California Central Valley DPS	Threatened	None	May affect, not likely to adversely affect – Discountable/Avoided/beneficial. (See BR- 5)
<i>Oncorhynchus tshawytscha</i>	Chinook Salmon – fall/late fall run	None	None	No adverse effect to EFH - Discountable/avoided/beneficial. (See BR- 5)

Source: BSK, 2016, adapted from CNDDDB and FWS CHM.

No Action Alternative

Because no construction would occur, there would be No Effect to special status species under the no action alternative. There would be No Effect to federally listed plants and wildlife under the no action

alternative.

Requester's Preferred Alternative

Construction-related activities could directly or indirectly affect active listed plants if present within the Project Area. However, it is unlikely that plant species are likely to occur within the Project Area itself due to the high degree of disturbance associated with surrounding developed land uses, channel mining, invasive plants, and the fact that no special-status plants have been found in repeated prior studies of the area. Implementation of mitigation measure BR-4 would reduce or avoid impacts to rare plant species to a less-than-significant level. The Corps was the lead federal agency for 19047-1 and has completed the required consultations. USFWS was the lead federal agency for 19027 due to their funding commitments and have completed the required consultations for this part of the project. Section 7 consultation under the Endangered Species Act has been completed with USFWS and NMFS (Appendix 1).

Implementation of the requester's preferred alternative could indirectly impact special-status species, such as valley elderberry longhorn beetle (VELB). Elderberry shrubs with stems measuring 1" or more in diameter at ground level represent suitable habitat for the Valley elderberry longhorn beetle (VELB) and occur within the Project Area. The plants have been mapped and assessed under the USFWS Biological Assessments. Under BO #2014-F-0471-1, seven elderberry plants have been transplanted away from the staging area to other on-site areas, due to project related activities. Implementation of the requester's preferred alternative could cause indirect potential impacts to valley elderberry longhorn beetle by dust or root damage to elderberry shrubs with stems containing 1" or more in diameter at ground level. However, implementation of the various VELB avoidance/compensation measures, including mitigation measure BR-3, prior to the construction phase of the proposed Project would minimize or avoid VELB impacts to a less-than-significant level and the effects would be discountable. A determination of May Effect, but not likely to adversely affect has been made for this species.

Riparian habitat associated with Putah Creek may provide suitable nesting habitat for special-status and migratory birds that use aquatic and riparian habitats. The Western yellow-billed cuckoo is a species which could potentially use habitat for foraging or nesting within the project area. This species has limited history of documented occurrences in the project area, and it has a very rapid nesting and hatching cycle, but a longer loafing period.

Construction-related activities could directly affect active nest sites through tree removal or cause indirect impacts such as nest abandonment. Valley oaks and cottonwoods and other large trees that grow within the riparian corridor along Putah Creek provide suitable nesting sites for many raptors and other birds. Construction activity within the vicinity of an active nest site can cause nesting birds to abandon the nest. However, implementation of the various bird species' nesting avoidance measures, including mitigation measures BR-1 and BR-2, prior to the construction phase of the proposed Project would avoid or minimize project impacts to nesting resident, migratory and raptor species to a less-than-significant level. For the Western yellow-billed cuckoo however, project timing does not overlap with the June to

August breeding season (Southwest Learning, 2014. Pp. 2). Therefore, a determination of No Effect – Avoided, has been made for Western yellow-billed cuckoo.

The non-resident listed fish species, Central Valley steelhead, is unlikely to be within the project area during project activities, because they seasonally migrate from tributaries like Putah Creek, to the Sacramento River and out to the Pacific Ocean. Central Valley steelhead enter fresh water from August through April to spawn. The juvenile steelhead will migrate to the ocean in the spring and early summer (NOAA 2014. pp. 49). Additionally, migrating non-resident fish species encounter a downstream fish barrier at the Los Rios Check Dam at the Yolo Bypass Wildlife Area. The flashboards at this dam are removed typically on December 1st and installed on April 1st (YBF 2015, pp. 13). In addition, regulated, attraction pulse flows are timed to bring migrants after that barrier removal. This species could be within the project area only for a very limited timeframe, specifically from December 1st, and will have exited the project area prior to the installation of the flashboards on April 1st. The project's in-water activities are scheduled to not overlap this time period for flood and water quality protection management, as well as anadromous fish avoidance. The work window will avoid or minimize potential impact to this species; therefore, a determination of No Effect- Avoided, has been made for Central Valley steelhead (Table 2).

Mitigation Measures

Mitigation Measure BR-1:

Wildlife and federal special-status species will be protected from site staging and operations areas through the use of fencing, a Worker Environmental Awareness Program (WEAP), and monitoring by a qualified biologist. The Project Area will be inspected daily for the presence of federal special-status species. Should active nest sites be discovered within areas that may be affected by construction activities, SCWA shall ensure that the construction contractor implement the following nest avoidance measures (City of Winters, 2008).

Mitigation Measure BR-2:

If construction occurs during the breeding season (March-September 1), the Project applicant shall conduct pre-construction breeding bird surveys no more than 14 days and no less than 7 days prior to initiating construction. A qualified biologist shall conduct the surveys and the surveys shall be submitted to the SCWA for review. The survey area shall include all potential nesting sites located within 0.8 km (½ mi) of the Project Area. If no active nests are found during the surveys, no further mitigation shall be required except with regard to foraging habitat.

If an active nest used by a migratory bird or raptor is found sufficiently close to the construction area, a qualified biologist shall notify the CDFW/USFWS. No intensive new disturbances (e.g., heavy equipment operation associated with construction, use of cranes or draglines, new rock crushing activities) or other Project related activities which may cause nest abandonment or forced fledging,

should be initiated within 0.4 km (¼ mi) buffer zone of an active nest between March 1- September 1 or until August 15 if a Management Authorization or Biological Opinion is obtained for the Project. If construction or other Project related activities, which may cause nest abandonment or forced fledging, are necessary within the buffer zone, monitoring of the nest site by a qualified biologist should be required. Routine disturbances such as agricultural activities, commuter traffic, and routine facility maintenance activities within 0.4 km (¼ mi) of an active nest should not be prohibited (CDFG, 1994b). Project-related construction activity would not commence within the no-work buffer area until a qualified biologist and CDFW/USFWS confirms that the nest is no longer active.

SCWA will ensure that the construction contractor maintain a setback of 100 feet from all elderberry shrubs to avoid impacts to valley elderberry longhorn beetle. If the 100-foot setback is not feasible, the construction contractor shall implement a number of avoidance measures (developed under the USFWS Biological Opinion).

Mitigation Measure BR-3:

Prior to land disturbance activities, the observed elderberry shrubs shall be identified, mapped, flagged, and be protected by bright temporary fencing for the duration of the Project earthmoving activities. Complete avoidance (i.e., no adverse effects) may be assumed when a 30 m (100 ft.) or wider, buffer is established and maintained around elderberry plants containing stems 2.5 cm (1.0 in) or greater in diameter at ground level. In the event that work must proceed in areas where encroachment on the 30 m (100 ft.) buffer has been approved by the USFWS, a minimum setback of at least 6 m (20ft) from the dripline of each elderberry plant shall be provided. Signs will be erected every 15 m (50 ft.) along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." (USFWS, 1999).

Mitigation Measure BR-4:

A pre-construction rare plant survey will be completed to ensure that special-status species are identified and if they do occur, it will be marked and avoided, or otherwise managed, with CDFW/USFWS permission.

Mitigation Measure BR-5:

Implementation of the following mitigation measure would reduce the potential impacts related to biological resources and habitats to a less than significant impact. Prior to any grading activities onsite, the Project proponent shall comply with the terms stated in the applicable NWP-27 permit, 401 certification, CDFW 1600 series permit, and BMPs discussed in mitigation measure HWQ-1.

All native fish species will be protected by limiting in-channel work and acquiring proper permits for work done within aquatic habitats (BR-6, BR-7). Additionally, fish shall be protected from Project Area

operations through the use of a WEAP (BR-1). If needed, fish salvage shall be performed under the direct supervision of an approved biologist to avoid incidental take from project activities. Once deemed safe by the biologist, the fish species shall be reintroduced to the channel in a safe location. If dewatering pump are used, they will be equipped with appropriately sized fish screens. In water work will occur during the summer months, when water temperatures are warmer and fish such as salmon and trout will likely not be present in the project area. The potential for indirect impacts will be mitigated for by sediment control activities under the SWPPP (Mitigation Measure HWQ-1). In add

Mitigation Measure BR-6:

Implementation of the following mitigation measure would reduce the potential impacts to a less than significant impact.

Prior to the commencement of grading or construction activities onsite, SCWA shall comply with all of the following:

- 1.) Obtain and comply with a California Department of Fish & Wildlife, Streambed Alteration Agreement in accordance with Sections 1600-1616 of the California Fish & Game Code, as required.
- 2.) Obtain and comply with the provisions of a SWPPP permit from the California Regional Water Quality Control Board. Construction cannot be started until the SWPPP is issued.
- 3.) Establish native grass and accelerate riparian transplanting for cover.

Following the CDFW 1600 SBAA permit, SCWA will implement the following riparian habitat avoidance, minimization and compensation measures.

- 1) Any tree designated for removal will be preserved if it is determined to support a Swainson's Hawk nest unless that tree is located within the direct path of the relocated channel for Putah Creek.
- 2) Work shall be timed with the driest time within the channel. If water is present at the time of construction, water shall be diverted around the work area and work shall begin after the site is dry or devoid of flowing water. The time period for completing the work within the flowing or standing water of the watercourses shall be confined to a period of April 15 to the date when boards are pulled at the Los Rios Check Dam (not later than December 15). Work within the dry portion of the stream zone shall cease until all reasonable erosion control measures, have been implemented prior to all storm events. Construction equipment and material shall be removed from the floodplain if inundation is likely. Revegetation, restoration and erosion control work is not confined to this time period.
- 3) At DFG's discretion, the work period may be extended based on the extent of the work remaining,

on site conditions and reasonably anticipated future conditions. If the Permittee finds more time is needed to complete the authorized activity, the Permittee shall submit a written request for a work period time extension to DFG. The work period extension request shall provide the following information: 1) Describe the extent of work already completed; 2) Provide specific detail of the activities that remain to be completed within the stream zone; and 3) Detail the actual time required to complete each of the remaining activities within the stream zone. The work period extension request should consider the effects of increased stream conditions, rain delays, increased erosion control measures, limited access due to saturated soil conditions and limited growth of erosion control grasses due to cool weather. Photographs of the work completed and the proposed work areas are helpful in assisting DFG in its evaluation. Time extensions are issued at the discretion of DFG. DFG will have ten calendar days to approve the proposed work period extension. DFG reserves the right to require additional measures designed to protect natural resources.

- 4) Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. Except for the trees specifically identified for removal in the Notification, no native trees with a trunk diameter at breast height (DBH) in excess of four (4) inches shall be removed or damaged without prior consultation and approval of a DFG representative. Using hand tools (clippers, chain saw, etc.), trees may be trimmed to the extent necessary to gain access to the work sites. All cleared material/vegetation shall be removed out of the riparian/stream zone.
- 5) If construction of tree falling activities will occur during the breeding season (February 15 through September 15), a qualified wildlife biologist shall conduct two preconstruction surveys to ensure that no nests of migratory birds will be disturbed during construction. The first survey can occur as early as February 1, and the second should occur no more than one week prior to the commencement of construction activities. The survey shall include the construction zone, including all staging areas, and a 500-foot radius surrounding the construction zone to determine whether the activities taking place have the potential to disturb or otherwise harm any nesting raptors (birds of prey) or migratory birds.
- 6) If an active nest is located within the proposed disturbance area, the wildlife biologist shall consult with DFG to establish a suitable buffer zone. If a raptor is located within 250 feet or migratory bird nest is located within the 100-feet of disturbance, and the disturbance must take place during the breeding season, a buffer zone shall be established by the biologist and confirmed by the appropriate agency (DFG and/or USFWS). The buffer area requirements will be 250 feet for any active raptor nest and 100 feet for any migratory bird nest or as defined by the DFG and/or USFWS. A qualified wildlife biologist shall monitor the nest to determine when the young have fledged and submit bi-weekly reports throughout the nesting season. The biological monitor shall have the authority to cease construction if there is any sign of distress to any raptor or migratory bird. Reference to this requirement and the Migratory Bird Treaty Act shall be included in the construction specifications.

- 7) If construction is to occur during the breeding season (March 1 – September 15), a pre-construction raptor nest survey shall be conducted within 30 days prior to the beginning of construction activities by a qualified biologist in order to identify active nests in the project site vicinity. The results of the survey shall be submitted to CDFG. If no active nests are found during the pre-construction survey, no further mitigation is required.

If active nests are found within a quarter-mile (1320 feet), an initial temporary nest disturbance buffer shall be established. If project related activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season (approximately March 1 to September 1), then an on-site biologist/monitor experienced with raptor behavior shall be retained by the project proponent to monitor the nest, and shall along with the project proponent, consult with the DFG to determine the best course of action necessary to avoid nest abandonment or take of individuals. Work may be allowed to proceed within the temporary nest disturbance buffer if raptors are not exhibiting agitated behavior such as defensive flights at intruders, getting up from a brooding position, or flying off the nest. The designated on-site biologist/monitor shall be on-site daily while construction related activities are taking place and shall have the authority to stop work if raptors are exhibiting agitated behavior.

In consultation with the DFG and depending on the behavior of the raptors, over time it may be determined that the on-site biologist/monitor may no longer be necessary due to the raptors' acclimation to construction related activities.

- 8) Precautions to minimize turbidity/siltation shall be taken into account during project planning and implementation. This may require the placement of silt fencing, coir logs, coir rolls, straw bale dikes, or other siltation barriers so that silt and/or other deleterious materials are not allowed to pass to downstream reaches. Passage of sediment beyond the sediment barrier(s) is prohibited. If any sediment barrier fails to retain sediment, corrective measures shall be taken. The sediment barrier(s) shall be maintained in good operating condition throughout the construction period and the following raining season. Maintenance includes, but is not limited to, removal of accumulated silt and/or replacement of damaged silt fencing, coir logs, coir rolls, and/or straw bale dikes. The Permittee is responsible for the removal of non-biodegradable silt barriers (such as plastic silt fencing) after the disturbed areas have been stabilized with erosion control vegetation (usually after the disturbed areas have been stabilized with erosion control vegetation (usually after the first growing season). Upon DFG determination that turbidity/siltation levels resulting from project related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation shall be halted until effective DFG approved control devices are installed or abatement procedures are initiated. (See also Mitigation Measure HWQ-1)
- 9) Utilize Best Management Practices (BMPs) to prevent spills and leaks into water bodies. If maintenance or refueling of vehicles or equipment must occur on-site, use a designated area and/or a secondary containment, located away from drainage courses to prevent the runoff of storm water and the runoff of spills. Ensure that all vehicles and equipment are in good working

order (no leaks). Place drip pans or absorbent materials under vehicles and equipment when not in use. Ensure that all construction areas have proper spill clean-up materials (absorbent pads, sealed containers, booms, etc.) to contain the movement of any spilled substances. Any other substances which could be hazardous to aquatic life, resulting from project related activities, shall be prevented from contaminating the soil and/or entering the waters of the state. Any of these materials, placed within or where they may enter a stream or lake by the Applicant or any party working under contract or with the permission of the Permittee, shall be removed immediately. DFG shall be notified immediately by the Permittee of any spills and shall be consulted regarding clean-up procedures.

Mitigation Measure BR-7:

Implementation of the following mitigation measure would reduce the potential impacts related to biological resources and habitats to a less than significant impact. The project is required to comply with BO # 2014-F-0471-1, BO # 81420-2011-I-0801-1, BO # 1-1-03-F-0098, and BO # 2016-I-1829-1.

CULTURAL RESOURCES

Environmental Setting

Cultural resource reports were prepared for the Project Area in 2007, 2015, and 2017. As part of the analysis conducted for the technical report, EDAW and Tremaine completed an archival review of records maintained at the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University and pedestrian field surveys. Two structures were eligible for California Register of Historical Resources within WPCNP (#19047 and #19047-1): the Yolo-Solano Bridge and the Southern Pacific Railroad Bridge. However, neither of these two bridges would be affected by Project activities (EDAW, 2007b; p. 13). One historic site was found eligible for the California Register of Historical Resources within NAWCA 3 (#19027): a small domicile.

The NWIC records search identified 16 archaeological sites or isolates within the Putah Creek corridor. Two additional prehistoric period resources were identified during the field survey of the Project Area. Consultation with the State Historic Preservation Office (SHPO) for the Project concurred with this statement (SHPO, 2012). Section 106 and tribal consultations have been completed for the project (Appendix 2).

No Action Alternative

Because no construction would occur, there would be no affect to cultural resources under the no action alternative.

Requester's Preferred Alternative

The proposed Project would not likely cause a significant impact to the eligibility of a historical resource. Coordination with SHPO prior to construction of WPCNP Phase I and II (#19047) determined that the Project would not affect or impact cultural resources (SHPO 2011). Two potential prehistoric resources were identified within the Project Area, and are believed to have been secondarily deposited. These items will either be avoided or relocated outside of the construction area under the direction of a cultural resources specialist, pending coordination with SHPO. Therefore, the proposed Project would result in no impacts or less than significant impacts to historical resource (as defined in §15064.5) with the implementation of mitigation measure CR-1.

The records search of all pertinent survey and data performed at the NWIC did not identify any recorded or new archaeological resources on or near the Project Area. The two prehistoric isolates found during the field survey would be avoided or relocated, under the direction of cultural resources specialties, to a safe location immediately outside of the construction area. There is a chance that construction activities associated with the proposed Project could result in accidentally discovering additional archaeological resources. Implementation of Mitigation Measures CR-1 would ensure that previously unidentified cultural resources (including prehistoric, historic or paleontological subsurface cultural resources) are appropriately identified and protected in the event of an unexpected discovery. Therefore, the impact would be less-than-significant with incorporation of mitigation.

Paleontological resources are the fossilized evidence of past life found in the geologic record. Despite the tremendous volume of sedimentary rock deposits preserved worldwide, preservation of plant or animal remains as fossils is an extremely rare occurrence. Because of the infrequency of fossil preservation, fossils (particularly vertebrate fossils) are typically considered to be nonrenewable resources. Because of their rarity, and the scientific information they can provide, fossils are considered highly significant records of ancient life.

No known paleontological resources or unique geologic features exist within the Project Area; therefore, the proposed Project is not likely to impact, either directly or indirectly, a unique paleontological resource or site, or geological feature. As described above under Item b), if such a resource should be encountered during construction, work would stop until the resource can be evaluated and a determination made of its significance and need for recovery, avoidance, and/or mitigation. With implementation of Mitigation Measures CR-1, the proposed Project would result in a less-than-significant impact on paleontological resources or unique geologic features.

Based upon a records search, no human remains are known to exist within the Project Area. In the unlikely event that human remains are discovered, work within the area will be stopped and the Yolo or Solano County Coroner will be notified immediately. Work will only resume after the investigation and in accordance with any requirements and procedures imposed by the appropriate County Coroner. In the event that the bone most likely represents a Native American interment, the NAHC will be notified so that the most likely descendants can be identified and appropriate treatment can be implemented. Therefore, with the incorporation of Mitigation Measures CR-1, the proposed Project would result in a less-than-

significant impact with respect to disturbing any human remains, including those interred outside of formal cemeteries.

Mitigation Measures

Mitigation Measure CR-1:

Even though the area of ground-disturbance within the Project Area is not expected to contain additional cultural or historic resources, ground-disrupting activities could inadvertently expose and significantly impact previously unrecorded human remains. Should previously undisclosed archaeological resources be found, the following procedures would be applied. Any locally darkened sediments, concentrations of chipped stone especially obsidian and flint, any shaped stone, circular pits in bedrock, and/or concentrations of bone or shell are found, all work in the immediate vicinity of the find(s) shall cease until a qualified archaeologist can be retained to evaluate the find(s) and make recommendations as necessary. If human remains or bones of any type are found, Work shall cease in the area of the find(s) until qualified individuals (County Coroner by law, potentially supported by a qualified archaeologist or forensic anthropologist working with the local Indian community) have determined that the bone is human and archaeological in nature. If the bone is human and archaeological, the Project proponent shall follow the procedures indicated in the California Public Resources Code as they relate to the discovery of human remains. The above noted procedures shall be included within the Project plan and shall be employed during Project construction, thereby incorporated as part of the Project description.

HYDROLOGY AND WATER QUALITY

Environmental Setting

The proposed Project Area is located within and adjacent to the Putah Creek stream channel. Section 303(d) of the federal Clean Water Act (CWA) requires states to identify the waters of the state that do not meet the CWA's national goal of "fishable, swimmable" and to develop total maximum daily loads (TMDLs) for such waters, with oversight of the United States Environmental Protection Agency (USEPA). These waters are commonly referred to as "impaired." A TMDL is a quantifiable assessment of potential water quality issues, contributing sources, and load reductions or control actions needed to restore or protect bodies of water. The Putah Creek watershed is listed on the 303(d) list for mercury and boron (SWRCB, 2012).

No Action Alternative

Because there would be no construction, no hydrology or water quality impacts would occur under the no action alternative.

Requester's Preferred Alternative

Implementation of the requester's preferred alternative at the Project Area was modeled using the USACE's HEC-RAS software to determine the effects of the Project on hydrology (attached). A summary of the modeling is included below for each site.

WPCNP Phases I & II (#19047)

The hydraulic modeling for the WPCNP Phases 1 & 2 project (#19047) shows a decrease in water surface elevation of about 10-ft across the project. This decrease does not have any negative effects on the surrounding areas (i.e., does not cause any bank overtopping) and therefore is of no significant additional flood risk. This work is completed, and the project is an "after-the-fact" application.

WPCNP Phase 3 (#19047-1)

The hydraulic modeling for the WPCNP Phase 3 project (#19047-1) shows a negligible difference in water surface elevation due to the implementation of the project. The project shows that the water surface elevation changes from a decrease of 0.23-ft to an increase of 0.07-ft at various cross-sections. This maximum increase of 0.07-ft does not have any negative effects on the surrounding areas (i.e., does not cause any bank overtopping) and therefore is of no significant additional flood risk. This work is not completed.

NAWCA 3 (#19027)

The hydraulic modeling for the NAWCA 3 project (#19027) shows a decrease in water surface elevation of 0.65-ft to 1.87-ft at different cross-sections due to the implementation of the project. The lowering of the water surface elevation is beneficial to the flood risk of Putah Creek, essentially increasing the flood conveyance capacity of the creek. This work has not begun.

Implementation of the requester's preferred alternative at the Project Area would be less-than significant according to the modeling performed.

Implementation of the requester's preferred alternative at the Project Area has the potential to expose bare soil and potentially generate other water quality pollutants that could be exposed to precipitation and subsequent entrainment in surface runoff to Putah Creek. Construction activities related to the restoration Project will involve soil disturbance, excavation, cutting/filling, and grading activities. These activities could result in increased erosion and sedimentation to Putah Creek and waters downstream, including potentially adversely affecting channel substrate composition. Specific rates of sedimentation are dependent upon the duration, volume, and frequency at which sediments are contributed to the surface water flow. If precautions are not taken to contain impairment, construction could produce impaired stormwater runoff (non-point source pollution), a contributor to the degradation of water quality.

Construction for the entire Project Area is estimated to take approximately 6 months, with approximately 8 weeks of earth disturbing activities. The Project Details for the entire Project are described in section

1.1 of this EA. As stated previously, WPCNP Phase I and II (#19047) were completed in 2011, and WPCNP Phase III (#19047-1) had started, but due to other permit restrictions, was closed late in 2014, and will resume in spring 2018. Following WPCNP Phase III (#19047-1), NAWCA 3 (#19027) would be completed. A variety of design measures (including limiting the size and location of Project staging areas away from the river channel; and, compliance with federal, state, and local regulations regarding the storage, handling, use, and disposal of any hazardous materials) will significantly minimize these water quality impacts for this phase of the Project. However, erosion or inadvertent spills of oil or fuels from construction equipment could still be an impact to Putah Creek. However, with implementation of mitigation measure HWQ-1 prior to construction would ensure that no Project-related water quality impacts would occur. Therefore, the impact would be less-than-significant with incorporation of mitigation.

Mitigation Measures

Mitigation Measure HWQ-1:

SCWA will ensure that the Project contractor complies with the requirements of the General Construction SWPPP permit and 401 Water Quality Certification from the Central Valley Regional Water Quality Control Board (CVRWQCB). As part of the permit, the contractor would be required to prepare and implement a SWPPP into their construction plans, prior to initiating construction activities, identifying BMPs to be used to avoid or minimize any adverse effects before, during, and after construction to surface waters. The following BMPs will be incorporated into the Project as part of the construction specifications:

- Implement erosion control measures, including stream bank and channel stabilization, Project scheduling to avoid peak flows and storm events, preserving existing vegetation, straw mulch, wood mulching, non-vegetated stabilization, and velocity dissipation devices.
- Implement wind erosion control measures including watering all disturbed areas daily to prevent dust from entering the water.
- Implement sediment control measures, such as gravel bag berms, straw bale barriers, and stabilized construction entrance and exit.

NOISE AND VIBRATION

Environmental Setting

Noise is defined as unwanted sound that evokes a subjective reaction to the physical characteristics of a physical phenomenon. Ambient noise generated by traffic along adjacent surface streets within the City of Winters and from I-505 and by adjacent agricultural land uses is present within Project Area. Existing noise levels in the Project Area are in the range of 60 to 70 decibels (dB) day-night sound level (Ldn), with ambient noise generated by surrounding land uses and traffic on adjacent streets.

The City of Winters has established policies and regulations concerning the generation and control of

noise that could adversely affect their citizens and noise-sensitive land uses. These policies and regulations will also be applied to the sections of Project Area that are beyond the City of Winters boundaries. According to the City's General Plan, a noise level of 60 A-weighted decibels (dBA) community noise equivalent level (CNEL) is considered normally acceptable for Outdoor Public Facilities, such as is proposed by the Project (City of Winters, 1992). In addition, the General Plan has established exterior noise level limits of 50 dBA between 7:00 a.m. and 10:00 p.m. for parks and recreation facilities, residential, and rural uses, wherein this noise level is not to be exceeded continuously during any five-minute period. If the noise level varies above and below the limit, the limit shall not be exceeded more than one-time interval in any five-minute period. Exterior noise levels higher than the applicable limit plus 15 dBA are prohibited at all times. The applicable exterior nighttime (10:00 p.m. to 7:00 a.m.) noise performance standard for recreational and residential uses is 45 dBA, while that for rural land uses is 40 dBA (City of Winters, 1992).

The interior noise limit for residential structures is 45 dBA (City of Winters, 1992). The City's Zoning Code contains a provision, which limits noise levels from construction activities to 90 dB, as measured at 50 feet from a single piece of equipment, provided that activities are limited to the hours of 7:00 a.m. to 7:00 p.m. on weekdays. Activities on weekends and holidays are subject to the applicable standards at the receiving land use. The City Code also prohibits vibration levels above the threshold of perception for an individual at or beyond the property boundary of the source if on private property, or at 150 feet from the source if on a public space or public right-of-way (City of Winters, 2001). According to the Federal Transportation Administration (FTA), the normal vibration threshold with respect to human response is 80 vibration decibels [(VdB) referenced to 1 microinch per second ($\mu\text{in}/\text{sec}$) and based on the root mean square (RMS) velocity amplitude] (FTA, 2006). Although restoration activities and equipment may cause a noticeable increase in ambient noise levels near the Project Area and construction staging areas, all Project-related noise increases are considered to be temporary and short-term in nature. Project-related noise would fluctuate, depending on restoration activity, equipment type, and duration of use, distance between noise source and receptor, and presence or absence of barriers (such as mature trees and fences) between noise source and receptor (Table 3). The nearest residences to the Project Area are located approximately 100 feet to the north of the Project Area along the north bank of Putah Creek within WPCNP (#19047 and #19047-1).

No Action Alternative

Because there would be no construction, no impacts to noise would occur under the no action alternative.

Requester's Preferred Alternative

The requester's preferred alternative would generate temporary construction noise and vibration resulting from bridge replacement/restoration activities. Construction activity noise levels at and near the Project Area would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment (see Table 3). The nearest existing noise-sensitive uses is a residential neighborhood, which is located adjacent to the northern site boundary. The majority of the rest of the

area surrounding the Project Area consists of agricultural farmland and orchards.

The Project will result in the generation of short-term noise impacts associated with construction and maintenance. These impacts are discussed below, and mitigation measures are recommended, as necessary, to reduce the degree of potential impacts.

According to the U.S. EPA, the noise levels of primary concern are typically associated with the site preparation phase because of the on-site equipment used for clearing, grading, excavation, and demolition (U.S. EPA, 1971). Depending on the operations conducted, individual equipment noise levels can range from 79 to 91 dBA at 50 feet.

The exact number and type of on-site equipment required for the construction activities is anticipated to include dozers, trucks, loaders, excavators, and graders. The simultaneous operation of such on-site construction equipment could potentially result in worst-case noise levels of approximately 91 dBA at 50 feet from the Project Area, without feasible noise control (e.g., mufflers) in place.

Based on these equipment noise levels and assuming a noise attenuation rate of 6 dBA per doubling of distance from the source to receptor, exterior noise levels at nearby sensitive receptors located at a nominal 100 ft. from the Project construction areas could potentially exceed 85 dBA without noise control. Consequently, the temporary construction noise associated with on-site equipment could potentially expose sensitive receptors to noise levels in excess of the applicable City noise standards, and/or result in a noticeable increase (5 dBA) in ambient noise levels. An indirect effect of this project on noise would be the weed and vegetation maintenance following completion of the project. SCWA will maintain the Project Area following construction by mowing, watering, and performing weed control until the 1600 permit success criteria is met. This effort is *de minimis* and a secondary, short-term effect on noise from the project.

Table 3 Typical Equipment Noise Levels Noise Level in dBA at 50 feet		
Type of Equipment	Without Feasible Noise Control	With Feasible Noise Control
Loader	79	75
Dozer or Tractor	80	75
Crane	83	75
Scraper	88	80
Excavator	88	75
Compactor	82	75

Environmental Assessment - Putah Creek Channel Restoration

USACE 408 Permission # 19027, 19047, and 19047-1 Winters, California

Backhoe	85	75
Grader	85	75
Generator	78	75
Truck	91	75

Source: U.S. EPA, 1971. Feasible noise control includes the use of intake mufflers, exhaust mufflers, and engine shrouds in accordance with manufacturers' specifications.

Implementation of the following mitigation measure would reduce potential impacts from construction noise to a less-than-significant level. Implementation of the required mitigation measure would not only avoid noise generation during the noise-sensitive nighttime hours, but also achieve consistency with the noise ordinance construction exemption criteria.

Mitigation Measures

Mitigation Measure NOISE-1:

All construction activities shall be limited to the daytime hours between 7:00 a.m. and 10:00 p.m., and all construction equipment shall be properly fitted with mufflers and maintained in good working order.

The acceptable Outdoor Public Facilities noise level shall not exceed a noise level of 60 A-weighted dBA for normal Project operational activities. If the noise level varies above and below the limit, the limit shall not be exceeded more than one-time interval in any five-minute period. Exterior noise levels higher than the applicable limit plus 15 dBA are prohibited at all times.

Successful implementation of mitigation measure NOISE-1 would reduce noise levels at the nearest existing sensitive receptors (residential site approximately 100 feet to the north at the closest location) to a maximum of 69 dBA. Limitation of construction operations to the less noise-sensitive hours of the day/week would prevent potential sleep disruption, and would be consistent with the provisions of the noise ordinance. Additionally, the City of Winters has been doing direct notification to City residents near the construction area, in addition to the Lower Putah Creek Coordinating Committee notifying nearby residents.

POLICE AND FIRE PROTECTION

Environmental Setting

The following public services are located in the vicinity of the proposed Project Area.

Fire Protection

The City of Winters Fire Department and rural volunteer fire departments provides first response to fires and other emergencies in the Project Area.

Police Protection

Solano and Yolo County Sheriff's Departments, respectively, have authority for police responses outside of the City of Winters. The City Police Department provides first response to criminal and other emergencies in the City's boundaries. Officers investigate crimes, alarms and suspicious incidents and persons, and provide supporting responses to medical and fire incidents. Winters' officers enforce local, state and federal laws as state officers, their police authority includes supporting nearby jurisdictions in the adjacent County lands per existing agreements.

No Action Alternative

Because there would be no construction, no impacts to fire or police services would occur under the no action alternative.

Requester's Preferred Alternative

Implementation of the requester's preferred alternative would have no likely impact on fire or police services. The proposed Project is not currently an access point for emergency vehicles and construction activities will not disrupt or delay response times for emergency responders. Therefore, the proposed Project would have no impact on the response time or service ratio of fire, police, or medical emergency responders. However, the City of Winters has established an additional environmental commitment, Mitigation Measure PUB-1 that applies to this Project (City of Winters, 2008).

Mitigation Measures

Mitigation Measure PUB-1:

Emergency vehicle access, and fire flow, shall be in accordance with requirements of the City of Winters Fire Department.

TRANSPORTATION AND TRAFFIC

Environmental Setting

The proposed Project is bordered to the south by rural Putah Creek Road, and by more urban roadways in the city of Winters to the north. Railroad Avenue/County Road 89 is a minor two-lane highway located to the west of the proposed Project, providing community circulation and connection to regional

roadways in the Project vicinity. I-505 serves as a regional connector in the Project Area.

Vehicle Circulation

The proposed Project does not reroute, change or otherwise modify vehicle traffic patterns or circulation. However, the Project could have minor, non-significant impacts to local roadways from construction associated traffic.

Pedestrian and Bicycle Circulation

The proposed Project contains pedestrian and bicycle routes within WPCNP (#19047 and #19047-1) only. The proposed project would improve circulation around WPCNP (#19047 and #19047-1) through a formal and informal network of opens spaces and trails that provide linkage to the community.

No Action Alternative

Under the No Action alternative, the restoration would not be constructed. The Project Area would continue to allow for pedestrian and bicycle access to the northern side of the Creek on the upper terrace within WPCNP (#19047 and #19047-1). However, there would be limited additional pedestrian or bicycle access at the southern side of WPCNP (#19047 and #19047-1). There are no trails or public access outside of WPCNP.

Requester's Preferred Alternative

Implementation of the requester's preferred alternative restoration Project would not result in significant new or cumulative sources of vehicle traffic. The proposed Project does not involve the construction of residential or commercial land uses that would generate additional, permanent vehicle trips in the City of Winters or region, therefore the proposed Project is consistent with these local levels of service regulations.

Implementation of the proposed Project would result in the completion of a pedestrian and bicycle access network to the limits of the WPCNP (#19047 and #19047-1). Construction vehicles would access the site via existing roads. Primary access to the site would be gained via Putah Creek road.

Bicycles and pedestrians would be benefitted by the completion of the Project as described earlier, but there would be a period of approximately 4 weeks, where access through the construction site would be restricted temporarily. Due to the short duration of these temporary impacts and the availability of other routes, temporary impacts related to construction do not qualify as a significant impact.

Construction workers (estimated at 5 to 10) associated with the proposed Project are assumed to come from the existing labor pool of residents in Winters and Solano County (and nearby communities) and

would not generate a large number of vehicle trips (5 to 10) that would degrade peak hour roadway/intersection level of service standards. Additionally, once restoration activities are complete, Project-related vehicle traffic would cease; returning nearby roadway peak hour traffic volumes to pre-Project conditions.

Project-related traffic would include a number of equipment/material deliveries (by heavy trucks) to the Project Area, which may result in minor, temporary roadway access conflicts Putah Creek Road during construction. WPCNP Phase I and II (#19047) had approximately 2,000 cy of spawning gravel imported to the site, but no material exported from the site. WPCNP Phase III (#19047-1) will have approximately 10,000 cy of soil imported from SCWA stockpile at PDD and 200 cy of spawning gravel imported. No material will be exported from WPCNP Phase III (#19047-1). NAWCA 3 (#19027) will have approximately 23,600 cy of clean fill imported to the site from SCWA's stockpile at PDD and 200 cy of spawning gravel imported and will not have material exported. The temporary traffic impacts related to the import of material and construction equipment to the Project Area are anticipated to be minor. Approximately 42 truck trips per day will occur for approximately 6 weeks of the construction period. Implementation of the proposed mitigation will further ensure that any potential roadway/access issues are reduced through adherence to a series of traffic control measures that would be outlined in a traffic control plan. An additional effect of this project on transportation and traffic would be the weed and vegetation maintenance following completion of the project. SCWA will maintain the Project Area following construction by mowing and performing weed control until the 1600 permit success criteria is met. This effort is *de minimis* and a secondary, short-term effect on transportation and traffic as the effort does not exceed baseline levels.

Mitigation Measures

SCWA will ensure that the Project contractor develop and implement a Traffic Control Plan, as needed, which would be reviewed and approved by the City of Winters prior to construction. This plan could include the following additional environmental commitments:

- Do not permit construction vehicles to block any roadways or private driveways.
- Designate specific parking areas for worker's personal vehicles.
- Provide access for emergency vehicles at all times.
- Obey all speed limits, traffic laws, and transportation regulations during construction. If speed limits are not posted, construction vehicles would not exceed 15 miles per hour on unpaved levee roads.
- Use signs and flagmen, as needed, to alert motorists, bicyclists, and pedestrians to avoid conflict with construction vehicles or equipment.
- Construction employee parking would be restricted to the designated staging areas.
- No road closures are anticipated; however, in the event that road closures are necessary, local agencies and affected organizations would be notified prior to construction.
- Closure of park trails, construction sites, and public access areas for construction use would be

clearly fenced and delineated with appropriate closure signage.

VISUAL RESOURCES

Environmental Setting

The proposed Project is located along the boundary of Yolo and Solano County and does not contain an identified scenic vista, and the Project Area is substantially below the line of sight from the surrounding area (City of Winters, 1998). The area surrounding the Project Area has not been designated as a scenic resources corridor or contain eligible state scenic highways (City of Winters 1998).

No Action Alternative

Under the No Action alternative, the restoration would not be constructed and therefore, no potential impacts to visual resources could occur.

Requester's Preferred Alternative

Implementation of the requester's preferred alternative restoration Project would restore the area to a more natural state. The proposed Project will have a more meandering form and will not have the large open graded areas. The large open graded areas will be restored to a natural floodplain. There may be short-term visual impacts with the removal of dense invasive weeds and opening up of the floodplain, but these would be temporary, non-significant impacts consistent with natural stream channels. Additionally, construction equipment and a small amount of materials will be present within the Project Area during construction activities. These are temporary and non-significant impacts to visual resources and will be removed following the completion of construction activities. The proposed Project does not contain any protected visual resources within the Project Area or surrounding area, and therefore there is no potential impact to visual resources.

CUMULATIVE EFFECTS

These projects are intended to improve impacts from the PDD, the former waste water treatment plant, and the overall impacts in invasive plants. This project is designed to reverse the prior historic activity effects. A cumulative impact refers to the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

A review of the Yolo County current projects list (<http://www.yolocounty.org/community-services/planning-public-works/planning-division/current-projects>) (viewed June 11, 2015) indicated no

County projects that may have impacts overlapping or in addition to those of the proposed Project. A review of Solano County active projects indicated no County projects that may have impacts overlapping or in addition to those of the proposed Project.

In March 2015 the Solano County Board of Supervisors approved funding for the following future projects in the Project area, to be conducted in 2015:

- The 2015 paving project, which will provide paved shoulder improvements on Winters Road from Allendale Road to Wolfskill Road, and on Midway Road from Timm Road to the Vacaville city limit. The improvement work to Midway Road is included in the English Hills Transportation Impact Fee. This project could impact the upper terrace on the south side of Putah Creek.
- Supervisors also authorized the director of Resource Management to solicit up to \$400,000 in federal funding for the Stevenson Road Bridge design. The Stevenson Road Bridge project is approximately 5 miles downstream of the Project. Significant structural design work is anticipated to rehabilitate the existing deficient structure, according to the staff report and could result in impacts to the bed or banks of Putah Creek.

The University of California, Davis (UC Davis) has a large number of “current projects” listed on its website, however many of these are old and have already been constructed (http://sustainability.ucdavis.edu/progress/commitment/environmental_review/current_projects.html, accessed June 11, 2015). The only relevant past, present, or future UC Davis project near the Project area is:

- The UC Davis Large Solar Power Plant (LSPP) project which is planned for up to 70 acres and would help the campus meet demand for electricity and achieve goals for reducing greenhouse gas (GHG) emissions. The site is along just north of Putah Creek Levee Road, the north levee of Putah Creek, approximately ½-mile east of Old Davis Road on land used for agricultural production. The project was completed in November 2015.

The City of Winters is currently implementing the following projects:

- Railroad Ave over Dry Slough 0.37 miles north of County Road 33, bridge replacement. The work generally consists of, but not limited to, the following: clearing, grubbing, temporary detour, bridge removal, bridge and roadway construction, temporary detour removal, signing and striping. This project is nearly complete and has impacts to the bed and banks of a tributary of Putah Creek.
- The Winters Road Bridge Replacement project, a joint effort between Solano County and the City of Winters, involves the replacement of a 420-foot-long, three-span, earth-filled concrete arch bridge that was constructed in 1907, and is eligible for inclusion in the National Register of Historic Places. The replacement structure consists of a 453-foot-long, three-span cast-in-place reinforced concrete box girder superstructure simulated arched spans. Construction began in 2013 and is nearly complete, and has impacts to the bed and banks of Putah Creek.

Environmental Assessment - Putah Creek Channel Restoration

USACE 408 Permission # 19027, 19047, and 19047-1 Winters, California

In 2011, the City of Winters completed the Winters Putah Creek Park Restoration Project Phase 1. The Phase 1 Project realigned 1,200 feet of stream channel, filled 3 acres of open water (previous gravel extraction site), added 1,200 lineal feet of north bank floodplains, graded 1,000 feet of existing floodplain on the south bank, constructed 2,400 feet of ten foot wide meandering trail for bicyclists and pedestrians (approximately 1,200 feet on both banks, constructed additional footpaths, restored a deep hole below the former percolation dam, reused boulder riprap for rock lined pool for fishing and swimming.

In 2011, the City of Winters completed the Winters Putah Creek Park Restoration Project Phase 2. The Phase 2 Project restored 1,350 linear feet of stream channel to natural channel form, created and revegetated three acres (1,350 linear feet) of new floodplains in what was previously open water, graded three acres of existing floodplains to functional elevations, removed three acres of eucalyptus trees and reused logs on site as revetments, created 2,700 linear feet of meandering longitudinal trails on north and south banks, constructed additional footpaths, and controlled priority invasive weeds: Arundo, Himalayan Blackberry, Tree-of-Heaven and domestic almond.

Both sites received supplemental native plantings in 2012 and 2013 due to the devastating drought experienced state-wide.

The proposed California Department of Fish and Wildlife Restoration Plan Project for the Yolo Basin Wildlife Area, at the terminal end of Putah Creek, would route a new stream channel through irrigated pasture, row crop or fallow ground within the YBWA. This proposed project is located approximately 18 miles downstream of the analyzed project. The new channel would bypass the last 2.3 miles of stream channel (a constructed irrigation canal) through which Putah Creek currently flows. The channel would be designed in a manner that will create a series of shallow, seasonal wetlands that would provide high quality rearing habitat. The Restoration Plan also would include a new water-control structure to divert water into the new channel alignment while also allowing continuation of the existing water supply operation along Lower Putah Creek. The project has impacts to the bed and banks of Putah Creek. This project has a late 2017 schedule date.

In 2011, the Solano County Water Agency completed the NAWCA 2 Floodplain Restoration project in Putah Creek, approximately 1.3 miles upstream of the Project. The NAWCA 2 project is approximately 51 acres, and included 6,500 linear feet of Lower Putah Creek's south bank and 1,500 linear feet of McCune Creek. This project created functional floodplain by sloping the channel banks back 100-150 feet a 2-10 percent grade. Approximately 168 native and non-native trees were removed to facilitate grading, and approximately 175,000 cubic yards (cy) of on-site material was graded. No in-water work occurred during Project activities. After construction, the floodplain was seeded with native grasses. After construction, approximately 1,200 native trees and 300 shrubs will be planted throughout the NAWCA 2 site, approximately 16-18 feet apart and in rows approximately 16-20 feet apart. A low-pressure drip system irrigates the new plantings. Plantings are being maintained for a 5-year period after planting, and need to meet a 75% success criterion.

Each resource topic analyzed in this EA includes an analysis of the cumulative impacts and identifies mitigation measures:

Air Quality – Per the Yolo-Solano Air Quality Management District (YSAQMD) CEQA Handbook for Assessing and Mitigating Air Quality Impacts, any proposed project that would individually have a significant air quality impact (exceed YSAQMD CEQA Significance Thresholds) would also be considered to have a significant cumulative impact (YSAQMD, 2007). All air quality impacts would be less than significant for the proposed Project through the implementation of AQ-1; therefore, the proposed project would have a less-than-significant contribution to cumulative impacts.

Biological Resources – As is described in detail in the proposed restoration Project, after mitigation, significant effects on biological resources within the Project Area or the vicinity are reduced to below significant. Impacts to special-status species, to migratory birds; to riparian, aquatic, and wetland habitat; and to water quality for fish within the Project Area would be either less than significant or mitigated to that level. These potential cumulative impacts would be reduced below significance through the implementation of Mitigation Measures BR-1 through BR-7, and HWQ-1.

Noise and Vibration – Potential project-related noise impacts would not result in any potentially significant cumulative impacts. Construction-related noise impacts are short-term and would cease upon completion of construction. No long-term noise would be generated as a result of the Project, which would result in the restoration of Putah Creek, and no concurrent major construction projects have been identified in the vicinity of Putah Creek of the Project. All noise impacts would be less than significant for the proposed Project through the implementation of NOISE-1, therefore, the Project would not contribute to cumulative noise impacts.

Cultural Resources – Cultural resources in the Project Area and surrounding region generally consist of early Native American habitation and resource processing sites, and buildings and structures associated with late 19th and early 20th century agricultural and transportation activities. Particularly from the latter half of the 20th century to the present, prehistoric sites and historic-era buildings and structures have been destroyed, disturbed, and modified. Research and surveys conducted for the Project indicates that the Project Area contains two potential prehistoric cultural resources, and undiscovered cultural resources might also be present in the Project Area. The cultural resources mitigation measures CR-1, discussed above would reduce impacts on prehistoric and historic-era resources and human interments to less-than-significant levels. Implementing these mitigation measures also would ensure that Project-related activities would not incrementally contribute to any significant cumulative impacts on important cultural resources in the Project area. Consequently, the proposed Project would not incrementally contribute to a significant cumulative effect on cultural resources.

Transportation and Traffic – As described in detail in Transportation/Traffic, the proposed Project would have no significant impact on transportation and traffic, but to ensure effective circulation a Traffic Control Plan would be implemented. In order for the Project to contribute to a significant cumulative

Environmental Assessment - Putah Creek Channel Restoration

USACE 408 Permission # 19027, 19047, and 19047-1 Winters, California

impact on transportation and traffic, it would have to create an impact that would combine with other projects to create that significant effect. Other cumulative projects may overlap Project traffic generation for short periods, but the overlap is very unlikely to significantly affect local or regional traffic conditions. Circulation measures identified in this analysis would further limit the Project's contribution to these temporary traffic effects; therefore, the proposed Project would have a less than cumulatively considerable impact on transportation and traffic.

RELATED LAWS AND POLICIES

- a. Section 7 of Endangered Species Act (ESA):** USACE initiated Section 7 consultation with the US Fish and Wildlife Service for the proposed Project and Biological Opinions (BO) have been secured. (# 19047 and # 19047-1 – BO # 81420-2011-I-0801-1, August 9, 2011), (# 19047-1, BO # 2014-

F-0471-1, August 6, 2014). BO # 81420-2011-I-0801-1, dated August 9, 2011 was originally written for all three (3) phases of WPCNP. Due to scheduling and budget, the WPCNP project was phased and Phase I & II occurred simultaneously as 408 Permit # 19047. Prior to WPCNP Phase III initiation, BO # 2014-F-0471-1, dated August 6, 2014 was prepared specifically for Phase III of WPCNP (# 19047-1). USACE reinitiated consultation under BO # 2014-F-0471-1 in April 2017, for effects to the western yellow-billed cuckoo (cuckoo). USACE received a revised BO # 2014-F-0471-R001 concurring with the determination that the project is not likely to adversely affect the cuckoo. USACE consulted with NMFS in February 2017, that the project is not likely to adversely affect Central Valley steelhead or critical habitat. USACE received a letter of concurrence #WRC-2017-6746 dated April 25, 2017, from NMFS. Work has been completed for Phase I & II of BO # 81420-2011-I-0801-1 (WPCNP Phase I & II, # 19047). Work has begun on WPCNP Phase III (# 19047-1) under BO # 2014-F-0471-1, but is currently inactive and is expected to resume in spring 2018.

The USFWS was acting as the lead federal agency and consulted with NMFS and USFWS on behalf of the USACE for NAWCA 3 (# 19027). The USFWS received a letter from USFWS dated December 15, 2016, concurring with the determination of may affect, not likely to adversely affect. USFWS received a letter from NMFS dated January 13, 2017, concurring with the determination of not likely to adversely affect Central Valley steelhead and there would be no adverse effects to EFH (Appendix 1). No work has begun under BO# 2016-I-1829-1 on NAWCA 3 (# 19027).

- b. Magnuson-Stevens Act - Essential Fish Habitat:** Adverse effects to Essential Fish Habitat (EFH) would not result from the proposed action. For 19047-1 the USACE received a letter #WRC-2017-6746 dated April 25, 2017, from NMFS concurring with the determination of no adverse effects to EFH. The USFWS was acting as the lead federal agency and consulted with NMFS and USFWS on behalf of the USACE for NAWCA 3 (# 19027). The USFWS received a letter from NMFS dated January 13, 2017, concurring with the determination of no adverse effects to EFH (Appendix 1).

Environmental Assessment - Putah Creek Channel Restoration

USACE 408 Permission # 19027, 19047, and 19047-1 Winters, California

- c. **Section 401 of the Clean Water Act:** The Project has obtained 401 Certifications from the Regional Water Quality Control Board. (WDID# 5A48CR00105, September 13, 2011), (WDID# 5A48CR00105A1, August 14, 2014), (WDID# 5A48CR00128, July 27, 2015)

- d. **Section 404 of the Clean Water Act:** WPCNP Phase I & II (#19047) was issued a Section 404 NWP-27 permit [SPK-2011-00371], September 12, 2011. WPCNP Phase III (# 19047-1) [SPK-2011-00371] was originally issued on September 12, 2011, and re-verified on August 12, 2014), but the work was not completed. The Section 404 permit for WPCNP Phase III (# 19047-1) has expired and will be re-verified under the March 2017, Nationwide permits if the Section 408 permission is approved. The Section 404 permit application for NAWCA 3 (# 19027) [SPK-2015-00307] has been submitted and will be issued if the Section 408 permission is approved.

- e. **Fish and Wildlife Coordination Act (FWCA):** The proposed restoration work involves impounding, diverting, deepening, controlling, or modifying a stream or other body of water. USACE requested consultation under the FWCA with the USFWS and CDFW. USACE received letters from USFWS dated April 17, 2018 (Appendix 3). CDFW responded by email stating they have no further comment on the projects.

- f. **Section 106 of the National Historic Preservation Act and Tribal Consultation:** For 19047-1 USACE received a letter from the SHPO (COE_2017_1215_002) dated March 30, 2018, concurring with the determination that no historic properties affected for this undertaking. USACE also sent letters to the appropriate Indian tribes and received one response from the Yocha Dehe tribe requesting a site visit in a letter dated January 23, 2018. A site visit was held on January 25, 2018 with the Yocha Dehe tribe and USACE. No other responses were received from other Indian tribes (Appendix 2).

For 19027 the USACE received a letter (COE_2015_1109_002) from the SHPO dated December 14, 2015, concurring with the finding of no adverse effect to historic properties (Appendix 2). USACE also sent letters to the appropriate Indian tribes and received one response from the Yocha Dehe tribe stating they were unaware of any cultural resources near the project site. No other responses were received from other Indian tribes (Appendix 2).

- g. **Coastal Zone Management (CZM):** The Project is outside of the CZM area.

- h. **Presidential Executive Orders:**

(1) **EO 11988, Floodplain Management:** Executive Order 11988 requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. The activity does not place buildings, residences or other structures within the floodplain. The Project design also does not significantly raise 100-year flood elevations.

Environmental Assessment - Putah Creek Channel Restoration

USACE 408 Permission # 19027, 19047, and 19047-1 Winters, California

(2) EO 12898, Environmental Justice: In accordance with Title III of the Civil Right Act of 1964 and Executive Order 12898, it has been determined that the Project would not directly or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin nor would it have a disproportionate effect on minority or low-income communities.

(3) EO 13112, Invasive Species: According to Executive Order 13112 and other pertinent statutes projects must prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause. The Project specifically removes or otherwise treats invasive species, and replants exclusively with native species.

(4) EO 13212 and 13302, Energy Supply and Availability: The action would not increase the production, transmission, or conservation of energy, or strengthen pipeline safety. The regional power and gas lines bisect the project area; however, the project will not have any effect on these features.

i. **Significant Issues of Overriding National Importance:** None.

COMPENSATION MITIGATION

The Project is self-mitigating and does not need any additional compensatory mitigation under the USACE 404 permits acquired for the Project. WPCNP Phase I & II, and Phase III (#19047 and 19047-1) were originally combined under 404 Permit SPK-2011-00371. WPCNP Phase I & II (#19047) was completed, but due to scheduling and budget, WPCNP Phase III (# 19047-1) was delayed. Prior to initiation of WPCNP Phase III (#19047-1), the 404 Permit SPK-2011-00371 was extended for WPCNP Phase III (#19047-1). WPCNP Phase III work began, however, due to seasonal restrictions for other permits, WPCNP Phase III (# 19047-1) was closed prior to the winter season in 2014. WPCNP Phase III (#19047-1) is currently not active, but will reinitiate in summer 2018. A 404 Permit for NAWCA 3 (#19027) has been submitted and is currently under review. No additional compensatory mitigation is required for the 408 permission.

CONCLUSIONS

This EA evaluated the environmental effects of the proposed Project on the usefulness of the Federal Project and whether it is injurious to the public. Results of this EA and coordination with the appropriate resource agencies determined that the Project would not have significant affects. Based on this evaluation, the projected Project meets the definition of a FONSI as described in 40 CFR 1508.13. A FONSI may be prepared when an action would not have a significant effect on the human environment and for which an environmental impact statement would not be prepared. Therefore, a draft FONSI has been prepared and accompanies this EA.

REFERENCES

Environmental Assessment - Putah Creek Channel Restoration
USACE 408 Permission # 19027, 19047, and 19047-1 Winters, California

BSK. 2011. Winters Putah Creek Nature Park Restoration Biological Assessment. June 13, 2011.

BSK. 2015. CalEEMod Screening Level Air Emission Analysis. August 2015.

California Department of Fish and Wildlife. 2016. CNDDDB RareFind 5 for Commercial Subscribers.

California Department of Fish and Game. 1994. Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California. Sacramento, CA.

California Native Plant Society. 2015. Inventory of Rare and Endangered Plants

City of Winters. 1992. General Plan Policy Document. Winters, CA.

City of Winters. 1998. Winters Putah Creek Nature Park / Floodplain Restoration and Recreational Access Project. Initial Study, Mitigated Negative Declaration.

City of Winters. 2001. Municipal Code, Section 8.20 Noise Control. Winters, CA.

City of Winters. 2008. Putah Creek Nature Park Draft Master Plan. Winters, CA.

EDAW. 2007a. Lower Putah Creek Watershed Management Action Plan Phase I – Resource Assessments. Prepared for Lower Putah Creek Coordinating Committee, December 2005 (available at: <http://www.cityofwinters.org/pdf/putahcreek/Lower%20Putah%20WMAP%20Vol%20I%2012-05.pdf>).

EDAW. 2007b. Draft Cultural Resource Investigation for the Solano County, California Winters Putah Creek Park Percolation Dam Removal and Floodplain Restoration Project. Sacramento, CA.

Federal Transit Administration. 2006. Transit Noise and Vibration Impact Assessment. Washington, DC.

National Oceanic and Atmospheric Administration 2014. Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter-Run Chinook Salmon And Central Valley Spring-Run Chinook Salmon And The Distinct Population Segment Of California Central Valley Steelhead. July 2014.

Southwest Learning. 2014. Species Fact Sheet: Western Yellow-billed Cuckoo. Available at: <http://www.fws.gov/sacramento/outreach/Public-Advisories/WesternYellow-BilledCuckoo/docs/WYBC-factsheet-southwestlearning.pdf>. Web accessed January 30, 2016.

State Water Resources Control Board (SWRCB). 2012. 2012 California 303(d) List of Water Quality Limited Segments.

State Historic Preservation Office. 2012. Notification of Compliance with Section 106 of the National Historic

Environmental Assessment - Putah Creek Channel Restoration
USACE 408 Permission # 19027, 19047, and 19047-1 Winters, California

Preservation Act (NHPA) 8/30/2011.

State Historic Preservation Office. 2012. Notification of Compliance with Section 106 of the National Historic Preservation Act (NHPA) 2/28/2012.

United States Environmental Protection Agency. 1971. Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, December 31, 1971.

U.S. Fish and Wildlife Service. 1999. *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. Sacramento, CA. July 9, 1999.

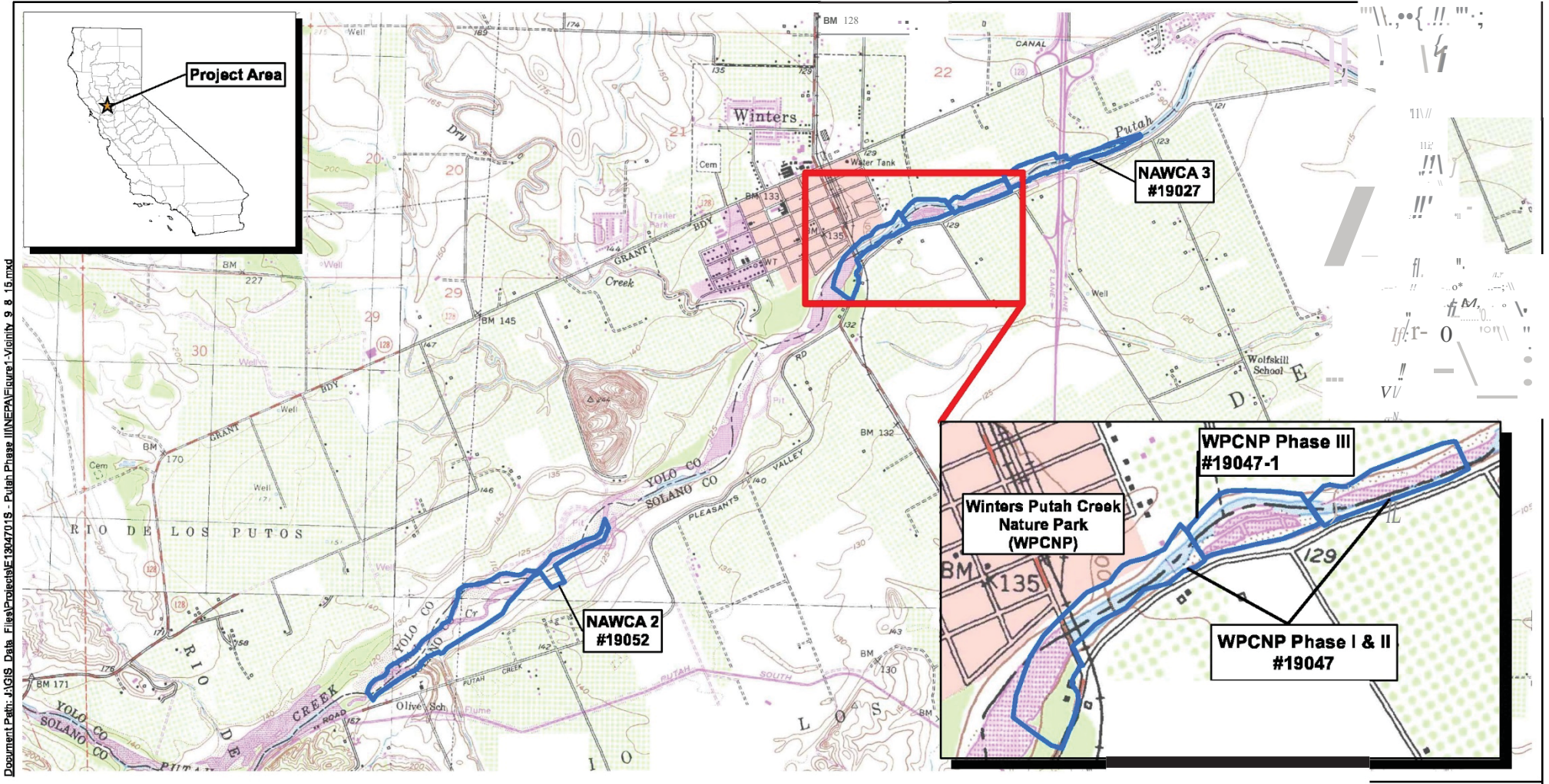
U.S. Fish and Wildlife Service. 2013. Federally Endangered and Threatened Species list for the Winters USGS 7.5-minute quad conducted April 29, 2010 at: http://www.fws.gov/sacramento/es/spp_list.htm. Endangered Species Program. Sacramento Fish and Wildlife Office. Sacramento, CA.

Yolo Basin Foundation. 2015. Habitat Assessment for the Lower Putah Creek Restoration Project – Upper Reach. June 2015.

Yolo-Solano Air Quality Management District (YSAQMD). 2015. Meeting Health Standards: Criteria Pollutant Attainment Status. (Available at: <http://www.ysaqmd.org/planning/status.php>) web accessed July 28, 2015.

YSAQMD. 2007. Handbook for Assessing and Mitigating Air Quality Impacts. Adopted July 11, 2007.

Environmental Assessment - Putah Creek Channel Restoration
 USACE 408 Permission # 19027, 19047, and 19047-1 Winters, California



Document Path: J:\GIS Data Files\Projects\19047-1 - Putah Phase II\NEPA\Figure 1_Vicinity 9.8.15.mxd

Date Saved: 11/11/2015
 By: KG

W+E

0 1,000 2,000 4,000
 Feet

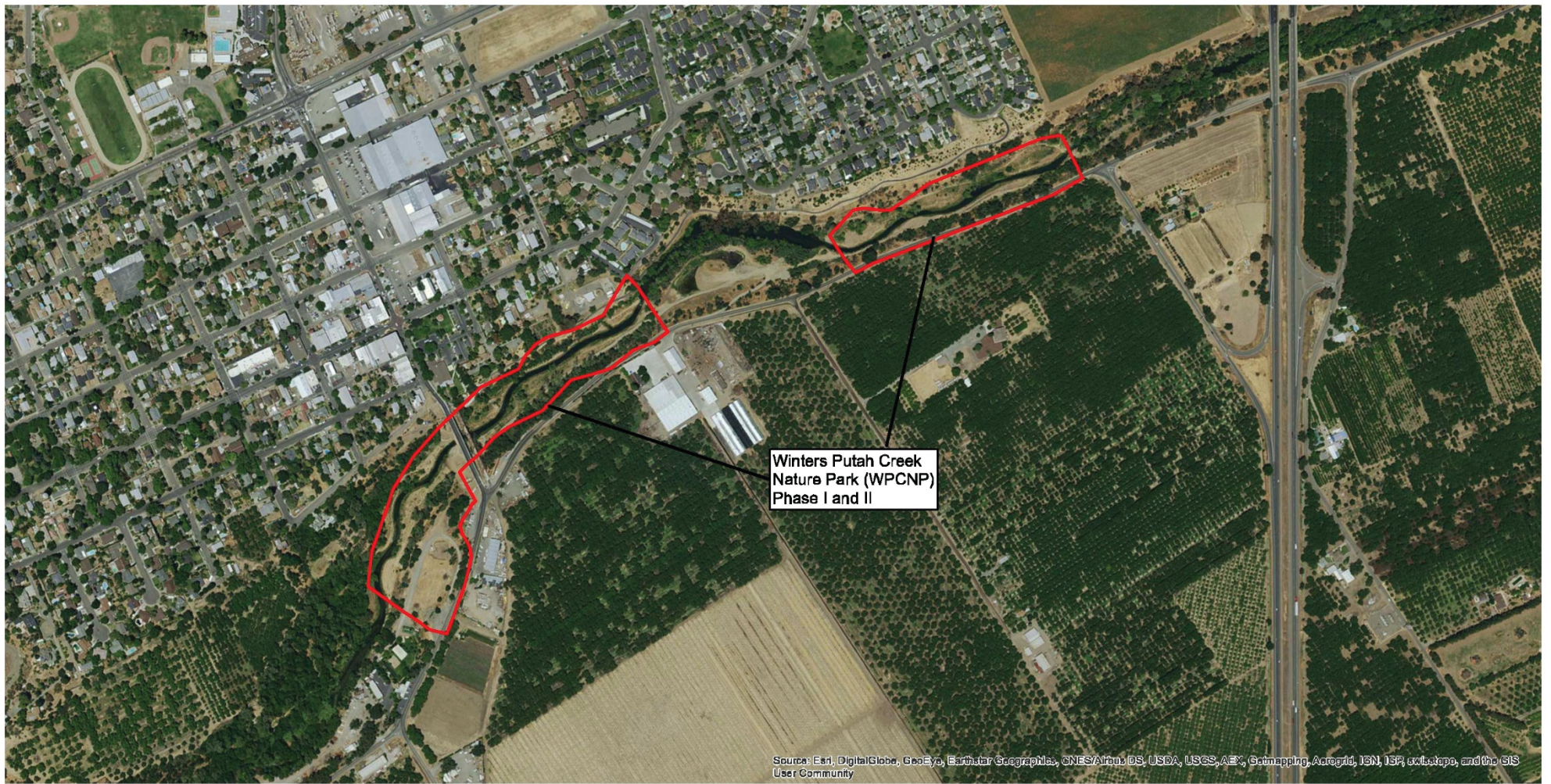
Source: Basemap - USGS Topo Winte! Quad - <http://etlas.ce.gov/queds/>
 *All localat>ns are approximate

Legend
 c:J Project Area

BSK
 Assg:::iates
 Engine...:boratories

Putah Creek Channel Restoration
 Winters, California

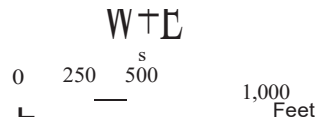
Figure 1
 Vicinity Map
 408 Permission 19027, 19047, and 19047-1



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Date Saved: 11/11/2015

*All location here approximate.



Legend

Winters Putah Creek Nature Park Phase I and II

Putah Creek Channel Restoration Winters, California	Figure 2b Winters Putah Creek Nature Park Phase I and II 408 Permission 19047
--	--



Winters Putah Creek
Nature Park (WPCNP)
Phase III

Date Saved: 11/11/2015

Source: Google Earth, 2015
*All locations approximate.

Legend

Winters Putah Creek Nature Park Phase III



Putah Creek Channel Restoration
Winters, California

Figure 2c
Winters Putah Creek Nature Park
Phase III
408 Permission 19047-1



Date Saved: 11/11/2015
 By: KG



W+E



Legend
C:J NAWCA 3

Putah Creek Channel Restoration
 Winters, California

Figure 2d
NAWCA 3
408 Permission 19027

Appendix 1 – Section 7 Consultation



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In reply refer to:
81420-2011-I-0801-1

Dr. Kathleen A. Dadey
Attn: Mark A. Fuglar
Chief, Delta Branch
U.S. Army Corps of Engineers
650 Capitol Mall, Suite 5-200
Sacramento, California 95814

Subject: Informal Endangered Species Consultation on the Proposed Winters Putah Creek Nature Park Channel Realignment Project, Yolo County, California
(Corps # SPK-2011-00371)

Dear Dr. Dadey:

This letter is in response to the U.S. Army Corps of Engineers (Corps) August 9, 2011 letter requesting initiation of informal consultation with the U.S. Fish and Wildlife Service (Service) for the proposed Winters Putah Creek Nature Park Channel Realignment Project (proposed project) in Yolo County, California. Your request was received by the Service on August 15, 2011. You requested our concurrence that the proposed project is not likely to adversely affect the federally-listed as threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (beetle). The applicants for the proposed project are the Solano County Water Agency and the City of Winters (applicants). Critical habitat has been designated for the beetle; however, the proposed project is not located within designated critical habitat for these species; therefore, none will be affected. This response is in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

The findings and recommendations in this informal consultation are based on: (1) your August 9, 2011 initiation letter and the enclosed *Biological Assessment for the Proposed Winters Putah Creek Nature Park Channel Realignment Project in Yolo County, California*; and (2) other information available to the Service.

Project Description

The proposed project will take place along a small stretch of Putah Creek, from approximately 500 feet west of the railroad bridge to approximately 500 feet east of the Interstate 505 crossing, within the City of Winters, Yolo County California. The project is located within portions of

Section 21 and 22, Township 8 North, Range 1 West, Mount Diablo Base Meridian; from approximately Latitude 38°31'71.33"N Longitude 121°58'8.52"W to 38°31'30.80"N 121°57'13.05"W on the Winters quadrangle topographic map.

The proposed project will rehabilitate a 2.0 mile stretch of Putah Creek from an incised and over widened channel into a self-maintaining natural channel form. The proposed project will reduce the current channel width from 60-150 feet to its hydrologically appropriate width (approximately 27-30 feet) and restore 9.8 acres of seasonally inundated flood plains. This multiphase project is intended to begin in the fall of 2011, and take an estimated 2 years until completion.

Putah Creek's current condition within the City of Winters Putah Creek Nature Park, of slow moving water and lack of shade, results in warm water temperatures and low dissolved oxygen. The proposed restoration will improve the riparian corridor and stream water quality through rehabilitation of the channel and floodplain, providing a foundation of self-sustaining fish and wildlife habitat. The proposed project will restore form and function in and along Putah Creek restoring floodplains and beaches to a functional elevation on both banks, maintaining low water temperatures and competent form to mobilize gravel substrate, eliminating invasive weeds, and planting native vegetation.

The intent of the proposed project is to systematically improve the quality and extent of the seasonally flooded riparian forest through the reductions of artificially widened channels that lack floodplains. The project is covered under the Corps Nationwide Permit 27 as a habitat restoration project with a net increase of 2.05 acres of seasonally flooded wetlands; therefore, no mitigation is required. Approximately 27.5 acres (waters and bank) will be temporarily disturbed by project activities. The proposed project will convert 7.95 acres of open water to 10 acres of open water and wetlands.

The over widened lower floodplain terrace will be narrowed and the mined channel made more shallow through mass grading of the floodplain in multi-phases. Grading will be accomplished with heavy equipment through a series of balanced cut (104,734 cubic yards) and fill (60,956 cubic yards) operations, using onsite native soils including the surplus overbank material deposited in the *Arundo* (*Arundo donax*) and Himalayan blackberry (*Rubus discolor*) thickets to provide the local channel fill needs within the ordinary high water mark. Earthmoving equipment will include; bull dozers, excavators, backhoes, and scrapers. Three existing locations, ramps used for the historic gravel mining and the closed rehabilitated waste water treatment ponds, can be used by the contractor to access the channel, and small staging areas are already available at each of those locations.

Avoidance and minimization was used extensively in project design. Excavated materials will be used onsite rather than end-hauling the excavated material from the reach. A culvert and/or lined bypass will be used to divert Putah Creek flows during construction to ensure no sediment enters the watercourse and disturbance is minimized. A Storm Water Pollution Prevention Plan (SWPPP) has been prepared for the project site and will be implemented prior to the commencement of construction. The SWPPP is designed for erosion and sediment control using

Best Management Practices (BMPs) for construction site activities (i.e., installation of silt fences and basins on slopes are used as a means to prevent sediment and pollutants from reaching waters).

The project intentionally avoided upper terrace impacts, where elderberry shrubs (*Sambucus* spp.) naturally predominate. However, some elderberry shrubs have established on the artificial terraces created by the historic mining roads and within the closed historic Winters percolation ponds. There were six elderberry shrubs, the sole host plant for the beetle, identified within 100 feet of construction activities during pre-project surveys in 2010. All of these shrubs occur in riparian systems but did not contain any exit holes. Avoidance fencing will be erected to protect these shrubs during construction, and no project work will occur within 20 feet of the dripline of these six shrubs. The project was designed to avoid elderberry shrubs. The access and equipment haul routes were relocated to avoid elderberry shrubs and grading was eliminated for several areas near shrubs. In an effort to minimize potential impacts, these plants will have the same protective fencing and signage. No direct impacts are anticipated with project activities given that these six shrubs have naturalized along these roads and have survived frequent traffic. Implementation of the following measures would avoid or minimize impacts on the beetle that may occur in elderberry shrubs within 100 feet of the proposed project. The proposed project will maintain a 20 foot buffer around all elderberry shrubs.

Due to the environmentally sensitive nature of stream restoration projects, the project will have both an independent construction manager onsite to ensure environmental compliance, as well as biological monitors to enforce the City of Winters Mitigation and Monitoring Plan and Worker Environmental Awareness Plan. The project was modified to minimize effects by using the minimum number of ingress points and staging areas necessary to complete the project. Vehicle traffic on existing access roads will avoid elderberry shrubs. By promoting fast-growing native species, the riparian restoration work will improve the current visual condition within two to three years. Project sequencing is specifically designed to reduce air impacts from the operation of the heavy equipment. Wait times for dump trucks and idle time shall be minimized to 5 minutes or less. All disturbed areas, which are not being actively utilized for construction will be covered with straw or equivalent to minimize stormwater runoff on any graded areas.

Proposed Conservation Measures

- Before any ground-disturbing activity, the applicants will ensure that a temporary metal chain-link or plastic mesh-type construction fence (Tensor Polygrid or equivalent), a minimum of 1.2 meters (4 feet) tall, is installed at least 6.1 meters (20 feet) from the driplines of all six elderberry shrubs adjacent to the study area. The fencing will be strung tightly on posts set at a maximum interval of 3.0 meters (10 feet). The fencing will be installed in a way that prevents equipment from enlarging the work area beyond the delineated area. The fencing will be checked and maintained weekly until all construction is completed. This buffer zone will be marked by signs stating, "This is habitat of the valley elderberry longhorn beetle, a threatened species, and it must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." Signs will be placed at

intervals of 15.2 meters (50 feet) and must be readable at a distance of 6.1 meters (20 feet). No construction activity, including grading, will be allowed until this condition is satisfied.

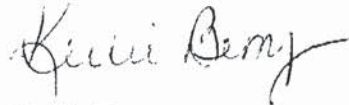
- Before any work occurs in the project area, including grading, a Service-approved wildlife biologist will conduct mandatory contractor/worker environmental awareness training for construction personnel. The training will be provided to all construction personnel to brief them on the need to avoid impacts on biological resources and the penalties for not complying with biological mitigation requirements. If new construction personnel are added to the project, the contractor's superintendent will ensure they receive the mandatory training before starting work. An environmental awareness handout that describes and illustrates sensitive resources (i.e., nesting birds, elderberry shrubs) that will be avoided during project construction, and that identifies all relevant permit conditions, will be provided to each person.
- The applicants will ensure that dust control measures are implemented for all ground-disturbing activities in the project area. These measures may include applying water to graded and disturbed areas that are unvegetated. To avoid attracting Argentine ants (*Linepithema humile*), water will not be sprayed within the driplines of elderberry shrubs at any time.
- No insecticides, herbicides, fertilizers, or other chemicals that may affect elderberry shrubs or the beetle will be used within 20 feet of any elderberry shrubs. Herbicides will be used to treat a stand of invasive weeds approximately 100 feet from the elderberry shrubs.

Based on the conservation measures listed above, and applicant's proposal to avoid direct impacts to all six elderberry shrubs, the Service concurs with your determination that the project, as proposed, is not likely to adversely affect the beetle.

No other listed species have been documented in the project area. Unless new information reveals effects of the proposed project that may affect listed species in a manner or to an extent not considered in this consultation, or a new species is listed or critical habitat is designated that may be affected by the proposed project, no further action pursuant to the Act is necessary for this project.

If you have questions regarding our response, please contact Michelle Tovar, Senior Fish and Wildlife Biologist (Michelle_Tovar@fws.gov) or myself, Chief, Sacramento Valley Division (Kellie_Berry@fws.gov), of my office at (916) 414-6645.

Sincerely,

A handwritten signature in cursive script that reads "Kellie Berry".

Kellie Berry
Chief, Sacramento Valley Division

cc:

Mr. Richard Marovich, Solano County Water Agency, Vacaville, California

Mr. Erik Ringleberg, BSK Associates, Rancho Cordova, California



United States Department of the Interior



In Reply Refer to:
08ESMF00-
2014-F-0471-1

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

AUG 06 2014

Dr. Kathleen A. Dadey
Chief, California South Branch
Regulatory Division
U.S. Army Corps of Engineers
1325 J Street, Room 1350
Sacramento, California 95814-2922

AUG - 8 2014

Subject: Consultation on the Proposed Winters Putah Creek Nature Park Restoration Project,
Yolo County, California (Corps File Number SPK-2011-00371)

Dear Dr. Dadey:

This letter is in response to the U.S. Army Corps of Engineers' (Corps), June 25, 2014, request for initiation of consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Winters Putah Creek Nature Park Restoration Project (proposed project), in Yolo County, California. Your request, which included the March 20, 2014, letter from BSK Associates and accompanying June 13, 2011, *Draft Biological Assessment, Winters Putah Creek Nature Park Channel Realignment, Solano County, California* (biological assessment), was received by the Service on June 30, 2014. On July 25, 2014, the Service requested additional information in order for consultation to be initiated. The additional information was received in our office on August 1, 2014. The biological assessment presents an evaluation of the proposed project's effects on species federally-listed under the Endangered Species Act of 1973, as amended (16 U.S.C. §1531 *et seq.*) (Act).

The federal action we are consulting on is the proposed restoration of a 2-mile stretch of Putah Creek from an incised and over-widened channel into a self-maintaining natural channel form. The proposed project will also restore approximately 9.8 acres of seasonally inundated floodplain. This response is provided under the authority of the Act, and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

Pursuant to 50 CFR §402.12(j), you submitted the biological assessment for our review and requested our concurrence with the findings presented therein, while also concurrently initiating formal consultation pursuant to 50 CFR §402.14(c). Based on the findings presented in the biological assessment, your consultation letter concludes that the proposed project may affect, and is likely to adversely affect the federally-listed as threatened valley elderberry longhorn beetle

(*Desmocerus californicus dimorphus*) (beetle). You requested that the proposed project be appended to the *Programmatic Formal Consultation Permitting Projects with Relatively Small Effects on the Valley Elderberry Longhorn Beetle within the Jurisdiction of the Sacramento Field Office, California* (beetle programmatic). The proposed project is not within designated or proposed critical habitat for any federally-listed species.

In considering your request, we based our evaluation of your findings on the following: (1) your June 25, 2014, letter requesting consultation; (2) the March 20, 2014, letter from BSK Associates; (3) the July 16, 2014, *Elderberry Planting and Relocation Technical Memorandum, Winters Putah Creek Nature Park Channel Realignment and Restoration Project*, prepared by BSK Associates; (4) the June 13, 2011, *Draft Biological Assessment, Winters Putah Creek Nature Park Channel Realignment, Solano County, California*, prepared by BSK Associates (biological assessment); and (5) other information available to the Service.

We concur with your findings that the proposed project may affect, and is likely to adversely affect the beetle. We also find that your written request and the accompanying biological assessment fulfills the requirements for initiation of formal consultation. We have determined that it is appropriate to append the proposed project to the beetle programmatic for effects to the beetle. Therefore, this document is an agreement by the Service to append the proposed project to the beetle programmatic.

Consultation History

<i>June 30, 2014</i>	The Service received the June 25, 2014, letter from the Corps requesting consultation, which included the March 20, 2014, letter from BSK Associates and the biological assessment.
<i>July 25, 2014</i>	The Service sent a letter to the Corps requesting clarification on whether the Corps was requesting formal or informal consultation with the Service.
<i>August 1, 2014</i>	The Service received the Corps' July 30, 2014, letter with a response to the July 25, 2014, letter and also requested formal consultation.

BIOLOGICAL OPINION

Description of the Proposed Action

This proposed project will convert former gravel extraction pits and a closed wastewater treatment plant into a restored stream channel and floodplain. A 9.8 acre project site will be restored to native riparian habitat as a result of the proposed project. The current channel configuration curves in an arc sharply to the north, creating the opportunity for higher velocity water to undercut the north bank. This is proposed to be filled and planted with native riparian vegetation. This channel alignment will require the relocation of seven elderberry bushes (*Sambucus* sp.), the host plant for the beetle. The elderberry shrubs will be transplanted from the middle of the proposed channel realignment area to the upper terraces of the southern bank of the proposed channel realignment area. Relocation of these seven bushes, the planting of additional elderberry shrubs, removal of invasive species, and the planting of additional native plant species will improve the habitat for riparian and aquatic species in the project area. As a component of reestablishing native riparian

cover, an irrigation system will be installed, operated, and maintained for a minimum of three years. Weed management, irrigation, and other maintenance would continue for a minimum of three years.

Once established, native plants will be expected to eventually out-compete non-native plants, limiting the potential for non-native plants to invade the site and reducing long-term maintenance efforts.

The biological assessment proposes avoidance and minimization measures to avoid effects to elderberry shrubs (pages 9-10 of the biological assessment). These measures include: (1) mandatory environmental awareness training for construction personnel; (2) implementing dust control measures; (3) transplanting the seven elderberry shrubs onsite, which will adhere to the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (Guidelines) (Service 1999); and, (4) planting elderberry seedlings and associated native plants within the restoration site, as described in the Guidelines. The avoidance and minimization measures proposed by the Solano County Water Agency are considered part of the proposed action evaluated by the Service in this biological opinion.

Action Area

The action area is defined in 50 CFR §402.02 as, "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action." For the proposed project, the Service considers the action area to include the entire 9.8 acre site, including the 7.4-acre restoration site footprint, as well as areas used for access and staging. The action area also includes all areas up to 30 feet from these areas in which dust deposition could exceed existing deposition rates and up to 500 feet from the construction footprint in which noise from construction activities is expected to exceed ambient levels.

Evaluation under the Programmatic Consultation

The Service has determined that it is appropriate to append the proposed Winters Putah Creek Nature Park Restoration Project to the beetle programmatic. This letter is an agreement by the Service to append the proposed project to the beetle programmatic for effects to the beetle and represents the Service's biological opinion on the effects of the proposed project.

Analytical Framework for the Jeopardy Analysis

In accordance with policy and regulation, the jeopardy analysis in the beetle programmatic relied on four components: (1) the *Status of the Species*, which evaluated the beetle's range-wide condition, the factors responsible for that condition, and its survival and recovery needs; (2) the *Environmental Baseline*, which evaluated the condition of the beetle in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the beetle; (3) the *Effects of the Action*, which determined the direct and indirect effects of federal actions and the effects of any interrelated or interdependent activities on the beetle; and (4) the *Cumulative Effects*, which evaluated the effects of future, non-federal activities in the action area on the beetle.

In accordance with policy and regulation, the jeopardy determination in the beetle programmatic was made by evaluating the effects of federal actions in the context of the beetle's current status,

taking into account any cumulative effects, to determine if implementation of the actions is likely to cause an appreciable reduction in the likelihood of recovery of the beetle in the wild.

The jeopardy analysis in the beetle programmatic placed an emphasis on consideration of the range-wide survival and recovery needs of the beetle and the role of the action area in the survival and recovery of the beetle as the context for evaluating the significance of the effects of federal actions, taken together with cumulative effects, for purposes of making the jeopardy determination.

Status of the Species

The status of the beetle is described in the beetle programmatic for the time the document was signed. For the most recent comprehensive assessment of the range-wide status of the beetle, please refer to the *Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus) 5-Year Review: Summary and Evaluation* (Service 2006). Since this review was published, the beetle has been proposed for delisting through the publication of the *Removal of the Valley Elderberry Longhorn Beetle From the Federal List of Endangered and Threatened Wildlife; Proposed Rule* (Service 2012).

Environmental Baseline

The majority of lands along Putah Creek are agricultural lands in private ownership. The status of the beetle and its habitat on most of these private lands is unknown (Service 2006). The beetle is now known from at least three locations along Putah Creek (California Natural Diversity Database [CNDDDB] occurrences 3, 12, and 131) (CNDDDB 2014). Suitable habitat for the beetle (i.e., elderberry shrubs) occurs throughout Putah Creek.

The seven elderberry shrubs in the action area represent an immeasurably small proportion of shrubs throughout the full range of the beetle. No exit holes were observed in the elderberry shrubs within the action area; however, the beetle is difficult to detect, so it is conceivable that beetles may have been present at the time of surveys and not detected. The closest known occurrence of the beetle in the CNDDDB is approximately 1.2 aerial miles to the west, along Putah Creek, west of the City of Winters (occurrence number 131) (CNDDDB 2014).

Effects of the Proposed Action

The seven elderberry shrubs will be transplanted within the 7.8-acre restoration site. The shrubs will be transplanted as described in the Guidelines, which will maximize their chances for survival. It is possible that some shrubs will not survive the transplanting process. If some of the shrubs do not survive the transplanting process, it is possible that any beetle larvae occupying the shrubs will still be able to exit the shrub as adults and successfully breed with other beetles. The project proponent has proposed to plant additional elderberry shrubs for the beetle that will be protected and managed as native riparian habitat. The Service believes that this will more than adequately compensate for the loss of any elderberry shrubs that do not survive the transplanting process.

The project will aid in the recovery of the beetle by accomplishing the following:

1. Planting elderberry shrubs will provide new habitat for the beetle as well as connect remnant patches of riparian habitat and increase landscape connectivity for valley elderberry longhorn beetles.

2. Allowing for the passive establishment of elderberry shrubs within newly created and remnant riparian corridors.
3. Removing non-native, invasive plant species such as Himalayan blackberry (*Rubus armeniacus*), tree of heaven (*Ailanthus altissima*), and arundo (*Arundo donax*). These plant species may out-compete elderberry shrubs.

Cumulative Effects

Cumulative effects include the effects of future state, tribal, county, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. The Service is not aware of any future actions reasonably certain to occur in the action area that could result in cumulative effects.

Conclusion

After reviewing the current status of the beetle, the environmental baseline in the beetle programmatic, the effects of the proposed project, the cumulative effects, and the proposed avoidance and minimization measures, it is the Service's biological opinion that the Winters Putah Creek Nature Park Restoration Project, as proposed, is not likely to jeopardize the continued existence of the beetle. The Service reached this conclusion because the proposed project fits within the parameters of the level of take anticipated in the beetle programmatic and the project-related effects to the species, when added to the environmental baseline and analyzed in consideration of the lack of cumulative effects, will not rise to the level of precluding recovery of the species or reducing the likelihood of survival of the species. Although there is the possibility that a few individual elderberry shrubs might not survive the transplanting process, the effects to the beetle will be small and discrete, relative to the range of the species. The proposed project will contribute to the long-term preservation and management of beetle habitat along Putah Creek.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by the Service regulations at 50 CFR 17.3 as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the same regulations as an act which actually kills or injures wildlife. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the Corps so that they become binding conditions of any grant or permit issued to contractors, as appropriate, for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this incidental take statement. If the Corps (1) fails to assume and implement the terms and conditions or (2) fails to require contractors to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the grant or permit, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Corps must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement. [50 CFR §402.14(i)(3)]

Amount or Extent of Take

The incidental take of the beetle anticipated for this project will result from the transplanting of the seven elderberry shrubs with 27 stems one inch or greater in diameter at ground level. The life stage affected by this action will be the beetle larvae living within the stems of the elderberry shrubs. The life cycle of the beetle takes one or two years to complete, during which it spends most of its life in the larval stage. Due to the fact that it is not possible to know how many beetle larvae are in the stems of any elderberry shrub, the Service cannot quantify the total number of beetles that we anticipate will be taken as a result of the proposed action. In instances in which the total number of individuals anticipated to be taken cannot be determined, the Service may use the amount of habitat impacted as a surrogate; since the take of individuals anticipated will result from the destruction of the elderberry shrubs, the quantification of suitable habitat serves as a direct surrogate for the beetles that will be lost. Therefore, the Service anticipates take incidental to this project as the seven elderberry shrubs with 27 stems one inch or greater in diameter at ground level that could potentially be destroyed.

Effect of the Take

The Service has determined that this level of anticipated take is not likely to result in jeopardy to the valley elderberry longhorn beetle.

REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the proposed Winters Putah Creek Nature Park Restoration Project, Yolo County, California. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary federal agency involvement or control over the action has been retained or is authorized by law and: (a) if the amount or extent of taking specified in the incidental take statement is exceeded; (b) if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (c) if the identified action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in the biological opinion; or (d) if a new species is listed or critical habitat designated that may be affected by the identified action.

Dr. Kathleen A. Dadey

7

If you have questions regarding the proposed Winters Putah Creek Nature Park Restoration Project, Yolo County, California, please contact Rick Kuyper, Senior Fish and Wildlife Biologist, or Kellie Berry, Chief, Sacramento Valley Division at (916) 414-6600.

Sincerely,



Kenneth D. Sanchez
Assistant Field Supervisor

cc:

Mr. Rich Marovich, Solano County Water Agency, Vacaville, California

Mr. Erik Ringleberg, BSK Associates, Rancho Cordova, California

LITERATURE CITED

- California Natural Diversity Database (CNDDDB). 2014. Biogeographic Data Branch, Department of Fish and Wildlife. Sacramento, California. Accessed 20 June 2014.
- U.S. Fish and Wildlife Service (Service). 1999. Conservation Guidelines for the Valley Elderberry Longhorn Beetle. Sacramento Fish and Wildlife Office, Sacramento, California. 15 pp.
- . 2006. Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*) 5-Year Review: Summary and Evaluation. Sacramento Fish and Wildlife Office, Sacramento, California. September 2006. 28 pp.
- . 2012. Removal of the Valley Elderberry Longhorn Beetle From the Federal List of Endangered and Threatened Wildlife; Proposed Rule. Federal Register 77:60238-60276. October 2, 2012.



United States Department of the Interior



In Reply Refer to:
08ESMF00-
2014-F-0471-R001

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

MAY 23 2017

Mr. Ryan T. Larson
Chief, Flood Protection and Navigation Section
U.S. Army Corps of Engineers, Sacramento District
1325 J Street
Sacramento, California 95814

Subject: Reinitiation of Formal Consultation on the Winters Putah Creek Nature Park Channel
Realignment Project, Solano County, California

Dear Mr. Larson:

This is in response to your April 25, 2017, request to reinitiate consultation with the U.S. Fish and Wildlife Service (Service) on the Winters Putah Creek Nature Park Channel Realignment Project (proposed project) in Solano County, California. We received your request in our office on April 27, 2017. The proposed project biological opinion (08ESMF00-2014-F-0471-1) was completed on August 6, 2014. The U.S. Army Corps of Engineers (Corps) has requested to reinitiate consultation in order to analyze effects to the federally listed as threatened western yellow-billed cuckoo (*Coccyzus americanus*). This biological opinion is issued under the authority of section 7(a)(2) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

This biological opinion is based on: (1) your April 25, 2017, biological assessment requesting reinitiation; (2) electronic mail sent from the Corps to the Service; and (3) other information available to the Service.

To provide ease of reading, language changed within a paragraph from the original biological opinion will be underlined. Therefore, the Winters Putah Creek Nature Park Channel Realignment Project biological opinion is now amended as follows:

Page 2: Add the following paragraph just before **Consultation History**:

Western Yellow-Billed Cuckoo

After reviewing all the available information, we concur with your determination that the proposed project is not likely to adversely affect the cuckoo. The proposed project reached the 'may affect' level due to the fact that the proposed project occurs within the known range of the cuckoo and riparian habitat is present in the action area. The cuckoo is currently known to breed along the Sacramento River, roughly between Colusa and Red Bluff (Service 2013), over 45 miles from the proposed project location. Cuckoos require large blocks of cottonwood/willow riparian habitat for breeding, covering 50 acres or more, with a minimum width of 100 meters, which is not represented in the proposed project area. Recent observations of this species in Putah Creek include a call heard in September 2012 (eBird.org, 2017) and a sighting in August 2013 (CNDDB, 2017; eBird 2017).

Both observations were over 8 miles away. The Solano County Water Agency is proposing to do the work in late summer/early fall, a period when cuckoos are beginning to migrate out of California or have migrated out of California. Due to the distance from known breeding localities, the limited acreage of existing riparian habitat within the proposed project area, and the timing of construction, the Service believes that any potential adverse effects to the cuckoo from the proposed project are extremely unlikely to occur, and are therefore discountable for purposes of this consultation. The proposed project, in conjunction with additional restoration along Putah Creek, is expected to benefit the cuckoo, providing cover and forage during migration and perhaps creating enough contiguous habitat to ultimately support breeding.

Page 2: Add the following under **Consultation History**:

April 25, 2017. The Corps reinitiated section 7 consultation to include an analysis for western yellow-billed cuckoo.

Page 48: Add the following to the **LITERATURE CITED**:

eBird. 2017. eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. Available: <http://www.ebird.org>. (Accessed: August 10, 2016).


U.S. Fish and Wildlife Service (Service). 2013. Proposed Threatened Status for the Western Distinct Population Segment of the Yellow-billed Cuckoo (*Coccyzus americanus*); Proposed Rule. Federal Register 78: 61622-61666. October 3, 2013.

The remaining portions of the August 6, 2014, biological opinion remain the same. This concludes formal consultation with the Corps on the Winters Putah Creek Nature Park Channel Realignment Project. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the proposed action may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in this opinion; or (4) a new species or critical habitat is designated that may be affected by the proposed action.

If you have any questions regarding this biological opinion on the Winters Putah Creek Nature Park Channel Realignment Project, please contact Jennifer Hobbs (Jennifer_hobbs@fws.gov), Senior Fish and Wildlife Biologist at (916) 414-6541.

Sincerely,



 Jennifer M. Norris
Field Supervisor



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
650 Capitol Mall, Suite 5-100
Sacramento, California 95814-4700

APR 25 2017

Refer to NMFS No: *WCR-2017-6746*

Ryan T. Larson
Chief, Flood Protection and Navigation Section
Department of the Army
United States Army Corps of Engineers
Sacramento District
1325 J Street
Sacramento, California 95814-2922

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response and Fish and Wildlife Coordination Act Recommendations for the Winters Putah Creek Nature Park Channel Realignment (19047-1)

Dear Mr. Larson:

On February 28, 2017, NOAA's National Marine Fisheries Service (NMFS) received your request for a written concurrence that the Winters Putah Creek Nature Park Channel Realignment proposed by the Solano County Water Agency is not likely to adversely affect (NLAA) species listed as threatened or endangered or critical habitats designated under the Endangered Species Act (ESA). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparation of letters of concurrence.

NMFS also reviewed the proposed action for potential effects on Pacific Coast Salmon essential fish habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination you made regarding the potential effects of the action. This review was conducted pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultations. Fall-run/Late Fall-run Chinook salmon have the potential to be present in the Action Area and are managed under the Pacific Coast Salmon Fisheries Management Program (FMP). The following habitat areas of particular concern (HAPCs), as designated under this FMP, are present in the Action Area: (1) complex channels and floodplain habitat, (2) spawning habitat, (3) thermal refugia. In this case, NMFS concluded the action would not adversely affect EFH. This is based on the following evaluation of project effects to the ESA-listed species and their habitat. Thus, consultation under the MSA is not required for this action.



This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). This concurrence letter will be available through NMFS' Public Consultation Tracking System at <https://pcts.nmfs.noaa.gov>. A complete record of this consultation is on file at the California Central Valley Office (CCVO) of NMFS.

Proposed Action and Action Area

The Winters Putah Creek Nature Park Channel Realignment (proposed project) is located in Lower Putah Creek, adjacent to the City of Winters, California and just west of Interstate 505. The proposed project will occur in cooperation between the following: Solano County Water Agency (project design, grant recipient and permitting), Lower Putah Creek Coordinating Committee (project planning), and the City of Winters (landowner). The purpose of the proposed project is to improve fish and wildlife habitat within the project area by improving the form and function of the creek's floodplain and low-flow channels. The primary actions of the project include: grading for the purpose of increasing the floodplain area that is suitable for the natural recruitment and growth of high value native plants for the benefit of wildlife, such as migratory birds; narrowing a wide segment of the low-flow channel to reduce water temperatures for the benefit of native aquatic life, such as fall-run Chinook salmon and rainbow trout; installing 200 cubic yards of clean spawning gravel for rainbow trout and fall-run Chinook salmon; and modifying an existing 15 inch culvert that drains runoff from Putah Creek Road and adjacent agricultural fields to decrease erosion of the south side embankment. These activities are described in greater detail below:

Floodplain recontouring (grading) - The floodplain or terraces adjacent to the flowing channel will be graded down to approximately 1.5 feet above the low-flow water surface elevation. This lowered floodplain elevation and gentle slope will maximize the surface area that is ideal for the natural establishment and growth of many different wetland dependent native plant species. The graded floodplain is designed to slope down towards the channel at a 1-2% slope, which will help to direct fish towards the channel as flood waters recede from the floodplain and prevent fish stranding.

Design channel - The existing low-flow channel within the project area will be completely filled and replaced by a design channel that is shallower and narrower than the existing channel. Up to 12,000 cubic yards of suitable fill material will be imported to fill the existing channel. The design channel be excavated from the recontoured floodplain and will be 1,050 feet long and 28 feet wide. Approximately 200 cubic yards of clean gravel suitable for spawning salmonids will be placed within the channel at designated riffle locations.

Vegetation removal and installation - Removal of up to 37 native and nonnative trees with a four inch or greater diameter at-breast-height is required to facilitate grading within the project area. Most of the existing native trees that are growing within one foot of the project's design elevation will not require removal. All invasive vegetation within the graded area will be removed. The recontoured floodplain will be revegetated with native grasses, trees, and shrubs that are endemic to Putah Creek. Native trees greater than four inches diameter at-breast-height that are slated for removal will be replaced at a 4:1 ratio with a combination of native trees

and/or appropriate understory and lower canopy plantings. Non-native trees greater than four inches in diameter will be replaced at a 1:1 ratio. The number of native shrub species to be planted will equal 25% of the number of native trees to be planted (excluding oaks). Oaks trees (trees of the genus *Quercus*) removed will be replaced at 6:1 replacement ratio.

All plants will be monitored and maintained as necessary for five years. Plantings will be monitored to ensure they have a minimum of 70% cover after three years, and 80% survival and 75% cover at the end of 5 years. Remediation will occur if these survival and cover goals are not met.

Culvert Outlet Modification – The outlet of an existing 15 inch culvert that drains runoff from Putah Creek Road and adjacent agricultural fields will be modified to cease erosion of the south side embankment. The current culvert terminates high on the bank with no energy dissipation features, leading to significant bank erosion. The project will trench and extend this culvert down the embankment and run it underneath a haul road that runs along the toe of the embankment. The culvert will daylight into a dissipation pool on the other side of the haul road, and then an exfiltration trench will extend from the pool to the design channel. In order to prevent bank erosion, approximately 300 square feet of rock slope protection (RSP) will be installed in the dissipation pool, 70 square feet of RSP in the exfiltration trench, and 70 square feet of RSP on the side of the bank where the trench terminates into the design channel.

Construction will start in August or September and is expected to be complete within 35 days. Heavy equipment (graders, excavators, water trucks, dump trucks, dozers, and scrapers) will be needed to recontour portions of the existing floodplain, fill or narrow segments of the existing low-flow channels, and excavate the design channel. The site will be accessed from the south side via an existing ramp that connects to Putah Creek Road. A staging area will be located on the south side of the project, adjacent to the base of the access ramp.

The Action Area encompasses all areas that will be directly or indirectly affected by construction. This includes the bed and banks of Putah Creek that will be restored (approximately 1,200 lf) and 500 lf downstream of the project footprint where water quality impacts may occur due to construction activities. There are no interrelated or interdependent activities present that would affect listed fish species.

Action Agency's Effects Determination

The United States Army Corps of Engineers (USACE) has concluded that the action is not likely to adversely affect listed species or critical habitat for the following reasons:

- In-water construction activities will begin during August or September and be completed within 35 days. California Central Valley steelhead are not expected to be present during this time period due to high water temperatures.
- Avoidance and minimization efforts, including the implementation of a Storm Water Pollution Prevention Plan, will protect water quality and avoid indirect impacts such as increased sedimentation or pollution in steelhead habitat. Water quality will be monitored during in-water work, and no equipment will operate within flowing water.

- If dewatering is necessary, all dewatering structures will be removed at the conclusion of the project. Fish and turtles will be removed from the area prior to it being dewatered. Only warm water fish species that are not under NMFS protective jurisdiction are expected to be found at the site during dewatering. If USACE determines listed fish will be present during dewatering, USACE will contact NMFS, as reinitiation may be required. If pumps are necessary for dewatering, they will be screened according to NMFS's fish screen criteria.
- The project will only remove the minimum amount of vegetation needed to complete the project, and removed vegetation will be fully replaced. Areas that are temporarily impacted during construction will be restored to baseline conditions following construction.

Status of the Species and Critical Habitat in the Action Area

The best available information indicates that the following Federally listed species may potentially occur in the proposed Action Area. Designated critical habitat does not occur in the proposed Action Area.

Table 1. ESA listing history

Species	Scientific Name	Original Final Listing Status	Current Final Listing Status	Critical Habitat Present in Proposed Action Area
California Central Valley steelhead DPS	<i>Oncorhynchus mykiss</i>	3/19/1988 63 CFR 13347 Threatened	1/5/2006 71 CFR 834 Threatened	Does not occur

There is a potential for Central Valley steelhead to occur within the Action Area during construction of the project, although this is highly unlikely due to elevated water temperatures during the construction period. Historically, steelhead were reportedly found infrequently and in small numbers within the creek. The last 25 years of fish monitoring in Putah Creek, conducted by the University of California, has not confirmed the presence of steelhead. The resident form of *O. mykiss* (rainbow trout) are known to occur in Putah Creek, although they are mostly found outside of the Action Area in the upper reach of the creek just below Putah Diversion Dam and the City of Winters, where water temperatures are lowest.

Consultation History

- On February 28, 2017, NMFS received a Biological Assessment (BA) and informal consultation initiation request letter from USACE.
- On April 14, 2017, NMFS requested additional information from the applicant.
- On April 17, 2017, the applicant submitted the requested additional information to NMFS.
- On April 17, 2017, NMFS initiated informal consultation.

ENDANGERED SPECIES ACT

Effects of the Action

Under the ESA, “effects of the action” means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is not likely to adversely affect listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

The effects of the proposed action could include:

Injury or Mortality from Construction-Related Activities

One potential effect to listed fish from construction activities is the possibility of being crushed by construction-related equipment, construction personnel, or otherwise disturbed by the construction. Central Valley steelhead could potentially be present in the project area, although their definitive presence in Putah Creek has not been confirmed for several decades and they are assumed rare or absent from the Action Area. Furthermore, the proposed project takes place in late summer when temperatures in the Action Area exceed those suitable for steelhead, and thus steelhead will likely not be present. Therefore, the potential for adverse effects to Central Valley steelhead due to construction-related activities is discountable because they are highly unlikely to be present.

Only non-listed warm water fish species are expected to be present during dewatering. If dewatering is necessary, these fish will be removed prior to dewatering of the site. If pumps are necessary for dewatering, they will be screened according to NMFS’s fish screen criteria. All dewatering structures will be removed at the conclusion of the project.

Impacts to Habitat

The clearing or destruction of riparian habitat for the recontouring of the floodplain and the creation of the design channel can harm listed fish by reducing the quality of their habitat. Vegetation removal may be included as part of the action, as needed, for equipment access. In order to ensure that aquatic habitat will not adversely affect listed fish species, the action agency has employed avoidance and minimization efforts, including revegetating areas impacted by equipment access and staging, clearly delineating project construction limits to prevent disturbance outside of the project area, and utilizing existing ingress and egress routes. Clearing disturbance outside of the project area, and utilizing existing ingress and egress routes. Clearing vegetation to facilitate construction activities will be confined to the minimal area necessary.

Grading and recontouring of the existing floodplain, upland terrace, and high banks is expected to promote natural establishment and growth of native plants species, particularly the non-dominant high value species that are currently challenged by the project area’s elevated

floodplain and terraces. Invasive weeds will be removed and native vegetation will be installed throughout the recontoured floodplain. Although the removal of up to 37 native and nonnative trees with a four inch or greater diameter at-breast-height is required to facilitate grading within the project area, the area will be completely revegetated with native trees and scrubs in the ratios described above in the *Project Action and Action Area* section. Plantings will be monitored to ensure they have a minimum of 70% cover after three years, and 80% survival and 75% cover at the end of 5 years. Remediation will occur if these survival and cover goals are not met.

Similarly, the installation of rock slope protection may harm listed fish by decreasing the amount of riparian habitat. However, amount of bank to be covered by RSP is very small compared to the size of the area to be restored by the project and the amount of available habitat in Putah Creek. Only 70 square feet of RSP will be installed on the banks of the design channel.

The potential for adverse effects to Central Valley steelhead due to destruction of aquatic habitat is insignificant, because the action agency is employing avoidance and mitigation measures, which are expected to minimize the amount of riparian habitat that must be removed. The project is expected to result in better quality habitat with fewer nonnative species, a more functional floodplain, and more suitable water temperatures.

Impacts to Water Quality

The proposed project also has the potential to impact water quality in a manner that harms listed fish present in the Action Area through increases in turbidity and sedimentation caused by regrading, and the spill of hazardous chemicals or other deleterious materials utilized by construction equipment. Project related chemical spills could potentially affect listed fish species by causing physiological stress, reducing biodiversity, interfering with fish passage, or causing direct mortality. Increased sedimentation and turbidity associated with construction has the potential to negatively impact fishes temporarily through reduced availability of food and reduced feeding efficiency. However, construction activities will follow best management practices (BMPs) for maintaining water quality in the Action Area, including the implementation of a Storm Water Pollution Prevention Plan and the usage of biodegradable hydraulic oil for all equipment used over water. Water quality will be monitored during in-water work, and all work areas will be isolated from flowing water so that no equipment is operated in-water. Upon completion of construction, temporarily disturbed sections will be revegetated with native species and restored to their original condition.

Due to the current presumed absence of steelhead from Putah Creek and the unsuitable habitat conditions present during the construction window (high temperatures), Central Valley steelhead are not expected to be present during the time of construction. Impacts to water quality are expected to be temporary in nature, and the site will quickly return to baseline conditions. Therefore the potential for adverse effects to Central Valley steelhead due to water quality impacts is discountable.

Conclusion

Based on this analysis, NMFS concurs with USACE that the proposed action is not likely to adversely affect the listed species and designated critical habitats.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by USACE or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA portion of this consultation.

Conservation Recommendations

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of threatened and endangered species. Conservation recommendations are discretionary agency activities intended to minimize or avoid adverse effects of a proposed project on listed species or critical habitat, to help implement recovery plans, or to develop information. USACE also has the same responsibilities, and informal consultation offers action agencies an opportunity to address their conservation responsibilities under section 7(a)(1). In order to fulfill the requirements of section 7(a)(1), NMFS recommends the following conservation measures:

- (1) USACE should recommend that the project applicant install interpretive signs near the restoration site to educate visitors to Putah Creek about salmonids present in the area and provide information on how visitors can avoid disturbing spawning fish.

Please direct questions regarding this letter to Tancy Moore at the WCR CCVO of NMFS at (916)930-3605 or via email at tancy.moore@noaa.gov.

Sincerely,



BT
Barry A. Thom
Regional Administrator

cc: California Central Valley Office
Division Chron File: 151422-WCR2017-SA00327



United States Department of the Interior



In Reply Refer to:
08ESMF00-
2016-I-1829-1

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

DEC 15 2016

Memorandum

To: Michael Dunphy, Coordinator, Central Valley Joint Venture, Pacific Southwest Region, U.S. Fish and Wildlife Service, Sacramento, California

From: Kellie J. Berry, Chief, Sacramento Valley Division, Sacramento Fish and Wildlife Office, U.S. Fish and Wildlife Service, Sacramento, California *Kellie Berry*

Subject: Informal Consultation on the Proposed NAWCA 3 Lower Putah Creek Restoration Project, Solano and Yolo Counties, California

This memorandum is in response to the Central Valley Joint Venture's (CVJV), December 7, 2016, request for initiation of informal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed NAWCA 3 Lower Putah Creek Restoration Project (proposed project), in Solano and Yolo Counties, California. Your request was received by the Service on December 7, 2016. At issue are the proposed project's effects on the federally-listed as threatened western distinct population segment (DPS) of the yellow-billed cuckoo (*Coccyzus americanus*) (cuckoo) and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (beetle). This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act) and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR §402).

The federal action we are consulting on is the issuance of a North American Wetlands Conservation Act (NAWCA) grant by the CVJV to the Solano County Water Agency (applicant) for activities associated with improvements to the form and function of Putah Creek in order to improve fish and wildlife habitat. The applicant is also pursuing a Department of the Army permit for the proposed project from the U.S. Army Corps of Engineers (Corps). In a letter dated October 18, 2016, the Corps designated the CVJV as the lead federal agency for purposes of this consultation. Pursuant to 50 CFR §402.12(j), you submitted a biological assessment and requested concurrence with the findings presented therein. These findings conclude that the proposed project may affect, but is not likely to adversely affect the cuckoo or the beetle. The proposed project is not within designated or proposed critical habitat for any federally-listed species.

In considering your request, we based our evaluation of your findings on the following: 1) your December 7, 2016, memorandum requesting initiation of informal consultation and the enclosed October 19, 2016, *North American Wetlands Conservation Act 3 – Lower Putah Creek Floodplain Restoration Project Biological Assessment* (biological assessment), prepared by the applicant; 2) email correspondence and meetings between representatives of the Service, the CVJV, the applicant, and the Corps; and 3) additional information available to the Service.

The proposed project is located on lower Putah Creek, adjacent to Interstate 505 (I-505) and the city of Winters, and spans the boundary of Yolo and Solano Counties. Proposed project activities include:

- Floodplain recontouring: Grading will occur throughout the proposed project area where the existing floodplain is more than 2 feet above the surface of the creek. The floodplain terraces will be graded down to approximately 1.5 feet above the low-flow water surface elevation and graded back from the channel at a 1-2% slope. Approximately 6.64 acres of existing riparian forest will be graded, including 178 trees with a 4-inch or greater diameter at breast height. Ninety-four of the trees to be removed are non-native species. All invasive plant species within the grading area will be removed;
- Channel filling: A segment of the existing creek channel will be narrowed to promote cooler water temperatures, including 0.12 acre of complete fill, 0.21 acre of narrowing, and conversion of 0.18 acre to backwater habitat;
- Design channel: A narrow side channel will be excavated within the recontoured floodplain. The channel will serve as a temporary bypass during work within the low-flow channel of the creek. Approximately 150 cubic yards of clean gravel will be placed in the channel; and
- Vegetation installation: The recontoured floodplain will be revegetated with native grasses, trees, and shrubs endemic to Putah Creek. Approximately 500 native trees and 70 shrubs will be planted and maintained for a minimum of 5 years to achieve a minimum 80% survival and 75% coverage.

Construction will require the use of heavy equipment, including graders, excavators, water trucks, dump trucks, bulldozers, and scrapers. Equipment will be staged along the embankments of the creek, outside of the floodplain. The north side of the creek will be accessed using an existing ramp accessible from an adjacent agricultural parcel. A temporary access ramp will be installed near the west side of the I-505 bridge in order to access the south side of the creek. The ramp will be removed and the embankment will be returned to its original condition after construction is complete. Construction will begin in August or September and is expected to be completed within 45 days.

The applicant has proposed the following conservation measures in order to avoid adverse effects to the cuckoo and the beetle:

- The project will only remove the minimum amount of vegetation needed to complete the project;
- The project construction limits will be clearly marked to prevent disturbance outside of the project area;
- Orange fencing and appropriate signage will be installed 20 feet from the dripline of all elderberry plants located within 100 feet of the project area. No work will occur within the protected 20-foot buffer area;

- The contractor will be required to implement dust abatement measures, including watering of disturbed soil areas and covering inactive storage piles;
- A biological monitor will be onsite daily during construction; and
- All workers will complete a project-specific environmental awareness training before starting work.

Yellow-billed Cuckoo

After reviewing all the available information we concur with your determination that the proposed project is not likely to adversely affect the cuckoo. The proposed project reached the 'may affect' level, and the subsequent requirement for a biological assessment, due to the fact that the proposed project occurs within the known range of the cuckoo and riparian habitat is present in the action area. The cuckoo is currently known to breed along the Sacramento River, roughly between Colusa and Red Bluff (Service 2013), over 45 miles from the proposed project location. Cuckoos require large blocks of riparian habitat for breeding, covering 50 acres or more with a minimum width of 100 meters, which is not represented within the proposed project area. There are two known observations of the cuckoo farther downstream along Putah Creek, in September 2012 and August 2013 (eBird 2016), likely representing individuals only migrating through. Due to the distance from the known breeding range of the cuckoo along the Sacramento River and the limited acreage of existing riparian habitat within the proposed project area, the Service believes that any potential adverse effects to the cuckoo from the proposed project are extremely unlikely to occur, and are therefore discountable for purposes of this consultation. The proposed project, in conjunction with additional restoration along Putah Creek, is expected to benefit the cuckoo, providing cover and forage during migration and perhaps enough contiguous habitat to ultimately support breeding.

Valley Elderberry Longhorn Beetle

We also concur with your determination that the proposed project is not likely to adversely affect the beetle. The proposed project reached the 'may affect' level, and the subsequent requirement for a biological assessment, due to the fact that the proposed project occurs within the known range of the beetle, elderberry plants are present in the action area, and beetles may be present in the action area. Due to the conservation measures proposed by the applicant, which involve avoidance of any elderberry plants by a minimum of 20 feet, the Service believes that any potential adverse effects to the beetle from the proposed project are unlikely to occur, and are therefore discountable for purposes of this consultation. In addition, due to the proposed conservation measures, particularly in regards to dust control, the Service believes that any potential indirect adverse effects to the elderberry host plants of the beetle are unlikely to result in take of the beetle itself, and are therefore insignificant for purposes of this consultation.

This concludes the Service's review of the proposed NAWCA 3 Lower Putah Creek Restoration Project. No further action pursuant to the Act is necessary unless new information reveals effects of the proposed action that may affect listed species in a manner or to an extent not considered; the action is subsequently modified in a manner that causes an effect to federally-listed species or critical habitat that was not considered in this determination; or a new species or critical habitat is designated that may be affected by the proposed action.

Mr. Michael Dunphy

4

If you have any questions regarding the proposed NAWCA 3 Lower Putah Creek Restoration Project, please contact Lily Douglas, Fish and Wildlife Biologist (lily_douglas@fws.gov), or myself (kellie_berry@fws.gov) at the letterhead address, (916) 414-6631, or by e-mail.

cc:

William Guthrie, U.S. Army Corps of Engineers, Sacramento, CA

LITERATURE CITED

eBird. 2016. eBird: An online database of bird distribution and abundance. eBird, Ithaca, New York. Available: <http://www.ebird.org>. Accessed 13 December 2016.

U.S. Fish and Wildlife Service (Service). 2013. Proposed Threatened Status for the Western Distinct Population Segment of the Yellow-billed Cuckoo (*Coccyzus americanus*); Proposed Rule. Federal Register 78: 61622-61666. October 3, 2013.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
650 Capitol Mall, Suite 5-100
Sacramento, California 95814-4700

JAN 13 2017

Refer to NMFS No: WCR-2017-6220

Michael Dunphy
Coordinator, Central Valley Joint Venture
United States Fish and Wildlife Service
Pacific Southwest Region
2800 Cottage Way, Suite W-1916
Sacramento, CA 98825

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response and Fish and Wildlife Coordination Act Recommendations for the Lower Putah Creek Floodplain Restoration Project

Dear Mr. Dunphy:

On December 14, 2016 NOAA's National Marine Fisheries Service (NMFS) received your request for a written concurrence that the Lower Putah Creek Floodplain Restoration Project proposed by the Solano County Water Agency is not likely to adversely affect (NLAA) species listed as threatened or endangered or critical habitats designated under the Endangered Species Act (ESA). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparation of letters of concurrence.

NMFS also reviewed the proposed action for potential effects on Pacific Coast Salmon essential fish habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination you made regarding the potential effects of the action. This review was conducted pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultations. Fall-run/Late Fall-run Chinook salmon have the potential to be present in the Action Area and are managed under the Pacific Coast Salmon Fisheries Management Program (FMP). The following habitat areas of particular concern (HAPCs), as designated under this FMP, are present in the Action Area: (1) complex channels and floodplain habitat, (2) spawning habitat, (3) thermal refugia. In this case, NMFS concluded the action would not adversely affect EFH. This is based on the following evaluation of project effects to the ESA-listed species and their habitat. Thus, consultation under the MSA is not required for this action.



This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). This concurrence letter will be available through NMFS' Public Consultation Tracking System at <https://pcts.nmfs.noaa.gov>. A complete record of this consultation is on file at the California Central Valley Office (CCVO) of NMFS.

Proposed Action and Action Area

The Lower Putah Creek Floodplain Restoration Project (proposed project) is located in Lower Putah Creek, adjacent to Interstate 505 and the City of Winters, California. The proposed project will occur in cooperation between the following: Solano County Water Agency (project design and permitting), Solano County (landowner), City of Winters (landowner), and California Waterfowl (awarded grant funding). The purpose of the proposed project is to improve fish and wildlife habitat within the project area by improving the form and function of the creek's floodplain and low-flow channels. The primary action of the project is grading for the purpose increasing the floodplain area that is suitable for the natural recruitment and growth of high value native plants for the benefit of wildlife, such as migratory birds; and narrowing a wide segment of the low-flow channel to reduce water temperatures for the benefit native aquatic life, such as chinook salmon and rainbow trout. These activities are described in greater detail below:

Floodplain recontouring (grading) - Grading will occur throughout the project area where the existing floodplain adjacent to the flowing channel is more than two feet above water surface elevation, and where the upland terrace is located between the flowing channel and active floodplain. The floodplain or terraces adjacent to the flowing channel will be graded down to approximately 1.5 feet above the low-flow water surface elevation, and graded back (perpendicular) from the channel at a positive 1-2 percent slope. This lowered floodplain elevation and gentle slope will maximize the surface area that is ideal for the natural establishment and growth of many different wetland dependent native plant species. A total of 1.92 acres of upland riparian forest will be converted to seasonally flooded riparian forest. The graded floodplain is designed to slope down towards the channel at a 1-2% slope, which should help to direct fish towards the channel as flood waters recede from the floodplain and prevent fish stranding. No depressions (i.e., wetlands) will be created on the floodplain that could strand fish.

Channel filling - A segment of low-channel will be narrowed to promote cooler water temperatures by increasing water velocity and reducing the surface area of water that is exposed to solar radiation. The portion of channel that is filled will be converted to floodplain that will promote the natural establishment and growth of native plants. This activity will narrow an over-widened 0.21 acre, 580 linear foot (lf) section of the low-flow channel, and completely fill a 0.12 acre (165 lf) segment of low-flow channel. This activity will convert 0.18 acre (263 lf) of the southern fork of the low-flow channel to backwater habitat. Work areas within the active channel will be isolated from flowing water and dewatered if necessary.

Design channel - A narrow side channel with a maximum width of 14 feet will be excavated within the recontoured floodplain. The side channel will have two segments, 0.08 acre (240 lf) and 0.11 acre (310 lf), that will connect to a portion of existing channel that is currently functioning as a backwater. This activity will convert 0.17 acre (260 lf) of the backwater to flowing channel. Approximately 150 cubic of clean gravel will be placed within the channel. The gravel size and composition will be suitable for spawning salmon. The design channel will also serve as temporary bypass channel during construction to facilitate narrowing of the existing low-flow channel.

Vegetation removal and installation - Removal of up to 178 trees with a four inch or greater diameter at-breast-height is required to facilitate grading within the project area. Ninety-four (94) of the trees that are scheduled for removal are non-native species, such as eucalyptus and black walnut. Most of the existing native trees that are growing within one foot of the project's design elevation will not require removal. All invasive vegetation within the grading area will be removed. The recontoured floodplain will be revegetated with native grasses, trees, and shrubs that are endemic to Putah Creek. Approximately 500 native trees and 70 shrubs be installed and maintained within the recontoured floodplain.

Construction will start in August or September and is expected to be complete within 45 days. Heavy equipment (graders, excavators, water trucks, dump trucks, dozers, and scrapers) will be needed to recontour portions of the existing floodplain, fill or narrow segments of the existing low-flow channels, and excavate the design channel. The north side of the creek will be accessed through a privately owned agricultural parcel that is adjacent to the creek and is accessible from Highway 128/E. Grant Avenue in Winters, CA. Equipment will use a pre-existing ramp that leads from the top of the creeks embankment to the creeks terrace. The south side of the creek may be accessed from the following two locations off of Putah Creek Road: (1) a preexisting maintenance trail runs through the Winters Putah Creek Nature Park and connects the west end of the proposed project area; (2) a temporary equipment access ramp consisting of suitable native fill material may be installed near the west side of the I-505 bridge. The ramp will be removed and the embankment returned to its original condition after construction is complete. The construction site will have one staging area on both the north and south sides of the creek, both of which will be located on the banks well outside of flowing water.

The Action Area encompasses all areas that will be directly or indirectly affected by construction. This includes the bed and banks of Putah Creek that will be restored (approximately 2,500 lf) and 500 lf downstream of the project footprint where water quality impacts may occur due to construction activities. There are no interrelated or interdependent activities present that would affect listed fish species.

Action Agency's Effects Determination

The United States Fish and Wildlife Service has concluded that the action is not likely to adversely affect listed species or critical habitat for the following reasons:

- In-water construction activities are anticipated to take place during August or September when California Central Valley steelhead are not expected to be present due to high summer water temperatures.
- Avoidance and minimization efforts to protect water quality would be implemented and would avoid indirect impacts such as increased sedimentation or pollution in steelhead habitat, including the implementation of a Storm Water Pollution Prevention Plan. Water quality will be monitored during in-water work, and no equipment will operate within flowing water.
- If dewatering is necessary, all dewatering structures would be removed at the conclusion of the project. Fish and turtles will be removed from the area prior to it being dewatered. If USFWS determines listed fish will be present during dewatering, USFWS will contact NMFS, as reinitiation may be required. If pumps are necessary for dewatering, they will be screened according to NMFS's fish screen criteria.
- The project will only remove the minimum amount of vegetation needed to complete the project, and removed vegetation will be fully replaced. Areas that are temporarily impacted during construction would be restored to baseline conditions following construction.

Status of the Species and Critical Habitat in the Action Area

The best available information indicates that the following Federally listed species may potentially occur in the proposed Action Area. Designated critical habitat does not occur in the proposed Action Area.

Table 1. ESA listing history

Species	Scientific Name	Original Final Listing Status	Current Final Listing Status	Critical Habitat Present in Proposed Action Area
California Central Valley steelhead DPS	<i>Oncorhynchus mykiss</i>	3/19/1988 63 CFR 13347 Threatened	1/5/2006 71 CFR 834 Threatened	Does not occur

There is a potential for Central Valley steelhead to occur within the Action Area during construction of the project, although this is highly unlikely. Historically, steelhead were reportedly found infrequently and in small numbers within the creek. The last 25 years of fish monitoring in Putah Creek, conducted by the University of California, has not confirmed the presence of steelhead. The resident form of *O. mykiss* (rainbow trout) are known to occur in Putah Creek, although they are mostly found outside of the action area in the upper reach of the creek between the Putah Diversion Dam and the City of Winters, where water temperatures are lowest.

Consultation History

- On September 12, 2016, the Army Corps of Engineers, the Federal action agency, contacted NMFS to discuss the proposed project.

- On October 11, 2016, the Army Corps of Engineers designated USFWS as the Federal action agency.
- On December 14, 2016, NMFS received a Biological Assessment (BA) and informal consultation initiation request letter from USFWS
- On December 30, 2016, NMFS requested additional information from the applicant.
- On January 3, 2017, USFWS submitted the requested additional information to NMFS.
- On January 3, 2017, NMFS initiated informal consultation.

ENDANGERED SPECIES ACT

Effects of the Action

Under the ESA, “effects of the action” means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is not likely to adversely affect listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

The effects of the proposed action are reasonably likely to include:

Injury or Mortality from Construction-Related Activities

One potential effect to listed fish from construction activities is the possibility of being crushed by construction-related equipment, construction personnel, or otherwise disturbed by the construction. Central Valley steelhead could potentially be present in the project area, although their definitive presence in Putah Creek has not been confirmed for several decades and are assumed rare or absent from the action area. Furthermore, the work window of the proposed action (August 1 through September 30) takes place when temperatures in the action area exceed those suitable for steelhead, and thus steelhead will likely not be present. Therefore, the potential for adverse effects to Central Valley steelhead due to construction-related activities between August 1 and September 30 is discountable because they are highly unlikely to be present.

Only non-listed warm water fish species are expected to be present during dewatering. If dewatering is necessary, these fish will be removed prior to dewatering of the site. If pumps are necessary for dewatering, they will be screened according to NMFS’s fish screen criteria. All dewatering structures will be removed at the conclusion of the project.

Impacts to Habitat

The clearing or destruction of riparian habitat for the recontouring of the floodplain and creation of the design channel can also harm listed fish. Vegetation removal may be included as part of the action, as needed, for equipment access. In order to ensure that aquatic habitat will not

adversely affect listed fish species, the action agency has employed avoidance and minimization efforts, including revegetating areas impacted by equipment access and staging, and using existing ingress and egress routes when possible. Clearing vegetation to facilitate construction activities will be confined to the minimal area necessary.

Grading and recontouring of the existing floodplain and upland terrace is expected to promote natural establishment and growth of all native plants species, particularly the non-dominant high value species that are currently challenged by the project area's elevated floodplain and terraces. Invasive weeds will be removed and native vegetation will be installed throughout the recontoured floodplain. Although the removal of 178 trees (four inch or greater diameter-at-breast height) is required to facilitate grading, more than half of these trees are non-native species, and the project will plant 500 native trees and 70 shrubs within the recontoured floodplain. These plantings will be maintained for a minimum of five years, at which point they should achieve a minimum of 80% survivability and 75% coverage. Remediation will occur if the plantings do not meet the survivability and coverage requirements at the end of the five year period.

The potential for adverse effects to Central Valley steelhead due to destruction of aquatic habitat is insignificant, because action agency is employing avoidance and mitigation measures, which are expected to minimize the amount of riparian habitat that must be removed and result in an increase in native trees, shrubs, and grasses.

Impacts to Water Quality

The proposed project also has the potential impact water quality in a manner that harms listed fish present in the Action Area through increases in turbidity and sedimentation caused by regrading, and the spill of hazardous chemicals or other deleterious materials utilized by construction equipment. Project related chemical spills could potentially affect listed fish species by causing physiological stress, reducing biodiversity, interfering with fish passage, or causing direct mortality. Increased sedimentation and turbidity associated with construction has the potential to negatively impact fishes temporarily through reduced availability of food and reduced feeding efficiency. However, construction activities will follow best management practices (BMPs) for maintaining water quality in the Action Area, including the implementation of a Storm Water Pollution Prevention Plan. Water quality will be monitored during in-water work, and all work areas will be isolated from flowing water so that no equipment is operated in-water. Upon completion of construction, temporarily disturbed sections will be revegetated with native species and restored to their original condition.

Due to the current presumed absence of steelhead from Putah Creek and the unsuitable habitat conditions present during the construction window (high temperatures), Central Valley steelhead are not expected to be present during the time of construction. Impacts to water quality are expected to be temporary in nature, and the site will quickly return to baseline conditions. Therefore the potential for adverse effects to Central Valley steelhead due to water quality impacts is discountable.

Conclusion

Based on this analysis, NMFS concurs with USFWS that the proposed action is not likely to adversely affect the listed species and designated critical habitats.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by USFWS or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA portion of this consultation.

Conservation Recommendations

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of threatened and endangered species. Conservation recommendations are discretionary agency activities intended to minimize or avoid adverse effects of a proposed project on listed species or critical habitat, to help implement recovery plans, or to develop information. USFWS also has the same responsibilities, and informal consultation offers action agencies an opportunity to address their conservation responsibilities under section 7(a)(1). In order to fulfill the requirements of section 7(a)(1), NMFS recommends the following conservation measures:

- (1) USFWS should recommend that the project applicant install interpretive signs near the restoration site to educate visitors to Putah Creek about salmonids present in the area and provide information on how visitors can avoid disturbing spawning fish.

Please direct questions regarding this letter to Tancy Moore at the WCR CCVO of NMFS at (916)930-3605 or via email at tancy.moore@noaa.gov.

Sincerely,



Barry A. Thom
Regional Administrator

cc: California Central Valley Office
Division Chron File: 151422-WCR2017-SA00302

Appendix 2 – Section 106 and Tribal Consultation



**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Lisa Ann L. Mangat, *Director*

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

March 30, 2018

In reply refer to: COE_2017_1215_002

Mark T Ziminske
Chief, Environmental Resources Branch
U.S. Army Corps of Engineers
Sacramento District
1325 J Street
Sacramento, CA 95814-2922

Re: Section 106 Consultation for the Central Valley Flood Protection Board Permit No. 19047-1 for the Phase 3 Floodplain Restoration Project along Lower Putah Creek in Solano County, California.

Dear Mr. Ziminske:

The California State Historic Preservation Officer (SHPO) received your letter on March 2, 2017 continuing consultation for the proposed Phase 3 floodplain restoration project along lower Putah Creek in Solano County, California. The Army Corps of Engineers (COE) is consulting with me pursuant to the 36 CFR Part 800 (as amended 8-05-04), the regulations implementing Section 106 of the National Historic Preservation Act. Along with your consultation letter, you provided the following documents:

- Letter Report titled *Re: Winters Putah Creek Nature Park Channel Realignment Phase 3 Archaeological Survey* (Tremaine & Associates June 23, 2017)

The COE is proposing to issue a permit for the proposed undertaking's activities that fall under Section 404 of the Clean Water Act to the Central Valley Flood Protection Board (CVFPB) (Applicant). The CVFPB is proposing to issue a permit to allow the Solano County Water Agency to carry out Phase 3 of a floodplain restoration project along Lower Putah Creek. The proposed project is located approximately 1,040 feet east of the Winters Railroad Bridge in Solano County. The COE has previously consulted with SHPO regarding the Area of Potential Effects (APE) for this undertaking, which includes the entire 7-acre project site.

Historic property identification efforts for the undertaking included a records search and pedestrian survey of the APE in June 2017. The records search did not identify any cultural resources within the APE or a 1/4-mile radius and the survey identified two prehistoric isolates within the APE. The isolates include a single boulder with a shallow mortar cup and a stone anvil with percussion scars. The anvil appears to have washed down to this location from further up the creek. The boulder was placed in the APE recently during an adjacent weir construction project. Neither isolate is eligible for listing on the National Register of Historic Places (NRHP). The Applicant's consultant evaluated the likelihood of encountering cultural resources during

construction as low due to the large amount of previous ground disturbance that has occurred within the APE.

The Applicant's consultant contacted the Native American Heritage Commission (NAHC) requesting a Sacred Lands File Search (SLF) and a Native American contacts list for the project locating in June 2017. The SLF Search was negative and a contacts list was provided. The COE sent consultation packages to the Native American contacts listed in December 2017 and received one response from the Yoche Dehe. The Yoche Dehe requested to conduct cultural sensitivity training, have tribal monitors present during ground disturbance, and for the boulder isolate to be moved out of the way of construction. The COE forwarded these comments to the Applicant, and no further comments have been received.

The COE has requested concurrence with their finding of *no historic properties affected* for this undertaking. After reviewing the submitted documentation, SHPO has the following comments:

- Pursuant to 36 CFR 800.4(d)(1), I do not object to the COE's finding of *no historic properties affected*. It is recommended that the COE and the Applicant work closely with the Yoche Dehe to address their concerns about this undertaking.
- Please be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the COE may have additional future responsibilities for this undertaking under 36 CFR Part 800.

If you have any questions, please contact Archaeologist Jessica Tudor of my staff at (916) 445-7016 or jessica.tudor@parks.ca.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Julianne Polanco', with a long horizontal line extending to the right.

Julianne Polanco
State Historic Preservation Officer



DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION

Lisa Ann L. Mangat, Director

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

January 9, 2018

In reply refer to: COE_2017_1215_002

Mark T Ziminske
Chief, Environmental Resources Branch
U.S. Army Corps of Engineers
Sacramento District
1325 J Street
Sacramento, CA 95814-2922

Re: Section 106 Consultation for the Central Valley Flood Protection Board Permit No. 19047-1 for the Phase 3 Floodplain Restoration Project along Lower Putah Creek in Solano County, California.

Dear Mr. Ziminske:

The California State Historic Preservation Officer (SHPO) received your letter on December 15, 2017 initiating consultation for the proposed Phase 3 floodplain restoration project along lower Putah Creek in Solano County, California. The Army Corps of Engineers (COE) is consulting with me pursuant to the 36 CFR Part 800 (as amended 8-05-04), the regulations implementing Section 106 of the National Historic Preservation Act. Along with your consultation letter, you provided the following documents:

- Letter Report titled *Re: Winters Putah Creek Nature Park Channel Realignment Phase 3 Archaeological Survey* (Tremaine & Associates June 23, 2017)

The COE is proposing to issue a permit for the proposed undertaking's activities that fall under Section 404 of the Clean Water Act to the Central Valley Flood Protection Board (CVFPB) (Applicant). The CVFPB is proposing to issue a permit to allow the Solano County Water Agency to carry out Phase 3 of a floodplain restoration project along Lower Putah Creek. The proposed project is located approximately 1,040 feet east of the Winters Railroad Bridge in Solano County. The COE has defined the Area of Potential Effects (APE) as the 7-acre project site. The maximum depth of ground disturbance for the undertaking is 11 feet below the ground surface.

Historic property identification efforts for the undertaking included a records search and pedestrian survey of the APE in June 2017. The records search did not identify any cultural resources within the APE or a 1/4-mile radius and the survey identified two prehistoric isolates within the APE. The isolates include a single boulder with a shallow mortar cup and a stone anvil with percussion scars. The boulder was placed in the APE recently during an adjacent weir construction project. Neither isolate is eligible for listing on the National Register of Historic Places (NRHP). The Applicant's consultant evaluated the likelihood of encountering cultural resources during construction as low due to the previous ground disturbance that has occurred within the APE.

Mr. Ziminske
January 9, 2018
Page 2

COE_2017_1215_002

JAN 23 2018

The Applicant's consultant contacted the Native American Heritage Commission (NAHC) requesting a Sacred Lands File Search (SLF) and a Native American contacts list for the project locating in June 2017. The SLF Search was negative and a contacts list was provided. The COE sent consultation packages to the Native American contacts listed in December 2017 and plans to seek SHPO comments on their finding of effect for the undertaking once they have concluded Native American consultation efforts.

The COE has requested comments on their APE delineation and historic property inventory results. After reviewing the submitted documentation, SHPO has the following comments:

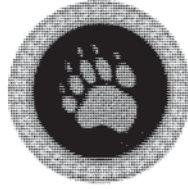
- Pursuant to 36 CFR 800.4(a)(1) the COE appears to have appropriately determined the scope of identification efforts for the proposed project and has documented the APE as defined in 36 CFR 800.16(d).
- Pursuant to 36 CFR 800.4(b), the COE appears to have appropriately identified historic properties within the APE for this undertaking.

If you have any questions, please contact Archaeologist Jessica Tudor of my staff at (916) 445-7016 or jessica.tudor@parks.ca.gov.

Sincerely,

A handwritten signature in black ink, consisting of a stylized 'J' followed by a horizontal line extending to the right.

Julianne Polanco
State Historic Preservation Officer



JAN 23 2018

YOCHA DEHE
CULTURAL RESOURCES

January 10, 2018

U.S. Army Corps of Engineers
Attn: Hope Schear, Env'tl. Resources
1325 J Street
Sacramento, CA 95814-2922

RE: Winters Putah Creek Nature Park Channel Realignment Project

Dear Mrs. Schear:

Thank you for your project notification letter dated, December 12, 2017, regarding cultural information on or near the proposed Winters Putah Creek Nature Park Channel Realignment Project, Winters, Yolo County. We appreciate your effort to contact us and wish to respond.

The Cultural Resources Department has reviewed the project and concluded that it is within the aboriginal territories of the Yocha Dehe Wintun Nation. Therefore, we have a cultural interest and authority in the proposed project area.

Based on the information provided, the Tribe has concerns that the project could impact undiscovered archaeological deposits. Please send us the cultural resource study for this project. Additionally, Yocha Dehe Wintun Nation requests a site visit to the project area to evaluate our cultural concerns.

Please contact the following individual to coordinate a date and time for the site visit.

Laverne Bill, Cultural Resources Department Manager
Yocha Dehe Wintun Nation
Office: (530) 723-3891
Email: lbill@yochadehe-nsn.gov

Please refer to identification number YD - 12192017-01 in any correspondence concerning this project.

Thank you for providing us with this notice and the opportunity to comment.

Sincerely,

James Kinter
Tribal Secretary
Tribal Historic Preservation Officer

Yocha Dehe Wintun Nation

PO Box 18 Brooks, California 95606 p) 530.796.3400 f) 530.796.2143 www.yochadehe.org



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

Environmental Resources Branch

Charlie Wright
Chairperson
Cortina Indian Rancheria of Wintun Indians
P.O. Box 1630
Williams, CA 95987

MAR 02 2018

Dear: Mr. Wright

The U.S. Army Corps of Engineers, Sacramento District (Corps) is writing you to continue consultation on the inventory and determination of effect for the issuance of Central Valley Flood Protection Board (CVFPB) Permit No. 19047-1. The applicant has requested permission from the Corps under Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 408) to alter a Federally-authorized flood control project (Project). The project also requires issuance of a 404 permit under the Clean Water Act of 1977 (33 U.S.C. § 1344). Both permissions are Federal undertakings, which requires compliance with Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108).

The applicant is proposing to begin Phase 3 of a floodplain restoration project along Lower Putah Creek. The project would realign eleven hundred feet of channel, grade four acres of high terrace to functional floodplains, reconcile channel dimensions to current flows, eliminate invasive weeds, and plant native vegetation. Previously, the Corps consulted on the Area of Potential Effects (APE) and the results of a cultural resources inventory in a letter dated December 12, 2017.

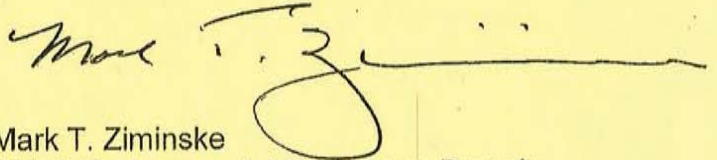
The applicant enlisted the services of Tremaine and Associates (Tremaine) to conduct a cultural resources identification study. A records search was conducted on June 06, 2017, at the Northwest Information Center, with a quarter-mile search radius around the APE. No cultural resources were identified within the APE. On June 16, 2017, a pedestrian survey was conducted by Tremaine. The APE was surveyed in transects parallel to the creek. Two prehistoric isolates were found within the APE. These were determined not in situ. Please see pages 5 and 6 of the enclosed report for a detailed description and explanation for the isolates.

The Native American Heritage Commission responded with negative results for the Sacred Land File Search in a letter dated June 12, 2017. Consultation packages dated December 12, 2017, were sent to Native American tribes interested in the project area.

Based on our review of the provided documentation and results of our tribal consultation the Corps makes the determination of *no historic properties affected* (36 CFR § 800.5 [d][1]) for this undertaking.

At this time we are requesting your comments on our finding of effect. Please provide any comments or questions to Attn: Mrs. Hope Schear, U.S. Army Corps of Engineers, Sacramento District, CESP-K-PD-RC, at the above address, within 30 days. Please refer to Permit No. 19047-1 in any correspondence concerning this project. Mrs. Schear can also be reached at (916) 557-7426 or email at Hope.C.Schear@USACE.Army.Mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark T. Ziminske", with a long horizontal line extending to the right.

Mark T. Ziminske
Chief, Environmental Resources Branch

Enclosure



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

Environmental Resources Branch

MAR 03 2018

Leland Kinter
Chairperson
Yocha Dehe Wintun Nation
P.O. Box 18
Brooks, CA 95606

Dear: Mr. Kinter

The U.S. Army Corps of Engineers, Sacramento District (Corps) is writing you to continue consultation on the inventory and determination of effect for the issuance of Central Valley Flood Protection Board (CVFPB) Permit No. 19047-1. The applicant has requested permission from the Corps under Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 408) to alter a Federally-authorized flood control project (Project). The project also requires issuance of a 404 permit under the Clean Water Act of 1977 (33 U.S.C. § 1344). Both permissions are Federal undertakings, which requires compliance with Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108).

The applicant is proposing to begin Phase 3 of a floodplain restoration project along Lower Putah Creek. The project would realign eleven hundred feet of channel, grade four acres of high terrace to functional floodplains, reconcile channel dimensions to current flows, eliminate invasive weeds, and plant native vegetation. Previously, the Corps consulted on the Area of Potential Effects (APE) and the results of a cultural resources inventory in a letter dated December 12, 2017.

The applicant enlisted the services of Tremaine and Associates (Tremaine) to conduct a cultural resources identification study. A records search was conducted on June 06, 2017, at the Northwest Information Center, with a quarter-mile search radius around the APE. No cultural resources were identified within the APE. On June 16, 2017, a pedestrian survey was conducted by Tremaine. The APE was surveyed in transects parallel to the creek. Two prehistoric isolates were found within the APE. These were determined not in situ. Please see pages 5 and 6 of the enclosed report for a detailed description and explanation for the isolates.

The Native American Heritage Commission responded with negative results for the Sacred Land File Search in a letter dated June 12, 2017. Consultation packages dated December 12, 2017, were sent to Native American tribes interested in the project area.

Based on our review of the provided documentation and results of our tribal consultation the Corps makes the determination of *no historic properties affected* (36 CFR § 800.5 [d][1]) for this undertaking.

A copy of this letter will be furnished with enclosures to Mr. James Kinter, Tribal Historic Preservation Officer.

At this time we are requesting your comments on our finding of effect. Please provide any comments or questions to Attn: Mrs. Hope Schear, U.S. Army Corps of Engineers, Sacramento District, CESP-K-PD-RC, at the above address, within 30 days. Please refer to Permit No. 19047-1 in any correspondence concerning this project. Mrs. Schear can also be reached at (916) 557-7426 or email at Hope.C.Schear@USACE.Army.Mil.

Sincerely,

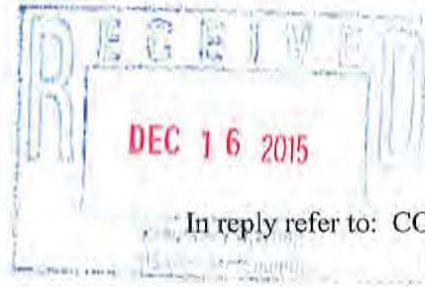
A handwritten signature in black ink, appearing to read 'Mark T. Ziminske', followed by a long horizontal line extending to the right.

Mark T. Ziminske
Chief, Environmental Resources Branch

Enclosure

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

1725 23rd Street, Suite 100
SACRAMENTO, CA 95816-7100
(916) 445-7000 Fax: (916) 445-7053
calshpo@parks.ca.gov
www.ohp.parks.ca.gov



In reply refer to: COE_2015_1109_002

December 14, 2015

Marc A. Fugler
Senior Project Manager, California South Branch
Regulatory Division
U.S. Army Corps of Engineers
Sacramento District
1325 J Street
Sacramento, CA 95814-2922

Re: Section 106 Consultation for the NAWCA 3-Lower Putah Creek Floodplain Restoration Project in the city of Winters, Solano County, California (SPK-2015-00307)

Dear Mr. Fugler:

Thank you for your letter received November 9, 2015, requesting my review and comment with regard to the proposed NAWCA 3-Lower Putah Creek Floodplain Restoration Project in Solano County, California. The Army Corps of Engineers (COE) is consulting with me Pursuant to 36 CFR Part 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act. Along with your consultation letter, you also provided the following documents:

- *Cultural Resources Inventory Report for the NAWCA Lower Putah Creek Floodplain Restoration Project Solano & Yolo Counties, California* (Tremaine & Associates 2015)

The COE would issue a permit for the proposed undertaking's activities that fall under Section 404 of the Clean Water Act and will allow the Solano County Water Agency (Applicant) perform floodplain restoration activities within the north and south branches of a split low-flow channel of Putah Creek in Winters, Solano County, California. The COE has defined the Area of Potential Effects (APE) as the permit area that encompasses 14 acres, extending 2,840 feet in length along Lower Putah Creek and varying in width from 130 to 370 feet. The maximum depth of disturbance is expected to be 12 feet below the current grade.

Historic property identification efforts for this undertaking included a records search, a pedestrian survey of the APE, and Native American consultation. The records search was completed in January, 2015 and did not identify any previously recorded sites within the APE. A survey of the entire APE was completed in January, 2015. No prehistoric materials were identified during the survey; however, two historic-era sites were recorded. The site recorded as PC-1 consists of the remnants of a collapsed domicile dating from the 1920's to 1940's and associated domestic refuse. The site recorded as PC-2 is a refuse burning site containing various historic-era and modern refuse. The COE has determined that PC-2 is not eligible for listing on the National Register of Historic Places (NRHP) under any criteria. The COE has indicated that site PC-1 cannot be evaluated for eligibility without conducting subsurface testing at the site. However, the COE has also indicated that no ground disturbing activities are planned in the location of the site. Therefore, the COE has proposed to treat the site as eligible for the purposes of this undertaking. The applicant contacted the Native American Heritage Commission (NAHC) in January, 2015 and sent consultation letters to the Native American contacts listed by the NAHC in their response letter on March, 8, 2015. To date, the applicant has received no responses. The COE contacted the NAHC in September, 2015 and sent out consultation letters to the contacts listed by the NAHC in October, 2015. The COE received one response from the Yoche Dehe Wintun Nation (YDWN) indicating that they are unaware of any known cultural resources in the APE and that a tribal monitor was not needed. They requested to be notified if any cultural materials were identified.

The COE is requesting my concurrence on their determination that the site recorded as PC-2 is not eligible for listing on the NRHP, and their proposal to treat the site recorded as PC-1 as eligible for listing on the NRHP under Criterion D for the purposes of this undertaking. Finally, the COE is requesting my concurrence on their finding of *no adverse effect* for this undertaking. After reviewing the submitted materials, I have the following comments:

- Pursuant to 36 CFR 800.4(c)(2), **I concur that the site recorded as PC-2 is not eligible** for listing on the NRHP. However, I recommend that the DPR 523 forms for this site, and site PC-1 be submitted and filed with the appropriate Information Center, along with a copy of this letter and that the COE request that the sites be assigned a trinomial and primary number in order to maintain accurate records of this consultation.
- I do not object to the COE's proposal to treat the site recorded as PC-1 as eligible for listing on the NRHP under Criterion D for the purposes of this undertaking alone.
- Pursuant to 36 CFR 800.5(b), **I concur** that a finding of *no adverse effect* is appropriate for this undertaking, on the condition that the avoidance measures be put into place in order to ensure that site PC-1 will not be disturbed by any of the activities associated with the undertaking.

Please be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the COE may have additional future responsibilities for this undertaking under 36 CFR Park 800. If you have any questions, please contact Jessica Tudor of my staff at (916) 445-7016 or jessica.tudor@parks.ca.gov.

Sincerely,



A

Julianne Polanco
State Historic Preservation Officer



YOCHA DEHE
CULTURAL RESOURCES



October 8th, 2015

Marc Fugler
U.S. Army Corps of Engineers
1325 J Street
Sacramento, CA 95814

RE: NAWCA 3 – Lower Putah Creek Floodplain Restoration Project

Dear Mr. Fugler:

Thank you for your project notification letter dated September 15, 2015 regarding cultural information on or near the proposed NAWCA 3 – Lower Putah Creek Floodplain Restoration Project, Solano County, CA. We appreciate your effort to contact us and wish to respond.

The Cultural Resources Department has reviewed the project and concluded that it is within the aboriginal territories of the Yocha Dehe Wintun Nation. Therefore, we have a cultural interest and authority in the proposed project area.

Based on the information provided, Yocha Dehe Wintun Nation is not aware of any known cultural resources near this project site and a Cultural Monitor is not needed. However, if any new information or cultural items are found, please contact the following individual:

Mr. Anthony Flores
Cultural Monitor Supervisor
Yocha Dehe Wintun Nation
Office: (530) 796-3400, Email: aflores@yochadehe-nsn.gov

Please refer to identification number YD – 03162015-01 in correspondences concerning this project.

Thank you for providing us the opportunity to comment.

Sincerely,

James Kinter
Tribal Secretary
Tribal Historic Preservation Officer



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

September 15, 2015

Regulatory Division (SPK-2015-00307)

Honorable Chairperson Charlie Wright
Cortina Band of Indians
P.O. Box 1630
Williams, CA 95987

Chairperson Wright:

The U.S. Army Corps of Engineers regulates certain activities in waters of the United States under Section 10 of the Rivers and Harbors and Section 404 of the Clean Water Act. Before a permit can be issued, we must evaluate the effects of the activity on the environment and ensure it is not contrary to the public interest. As part of the evaluation process, we coordinate and consult with potentially affected Tribal Nations.

We are requesting your review and comments for the proposed NAWCA 3 - Lower Putah Creek Floodplain Restoration project. The permit applicant, the Solano County Water Agency, is seeking authorization from our office to conduct a floodplain restoration project along portions of lower Putah Creek. The approximately 14-acre project site is located on Putah Creek, Latitude 38.5257°, Longitude -121.9527°, Winters, Solano County, California. We have enclosed a map to show the location of the project.

Project Description

Floodplain restoration activities will involve grading of the existing floodplain to a uniform 1-2 percent slope, starting from approximately 18 inches above low flow water surface elevation; filling the north and south branches of the split low-flow channel; creating a design channel with rock vanes and spawning gravels; controlling invasive plants; and installing native plants. Other construction related tasks required to complete this project include: reconditioning an abandoned ramp providing access to the floodplain from Putah Creek Road; removing existing vegetation that cannot be incorporated into the project; isolating and dewatering the split channel branches before filling; hauling approximately 22,000 cubic yards of suitable fill from an off-site location; obtaining approximately 2,400 cubic yards of fill from unstable portions of the north creek bank; grading portions of the north bank; and relocating the existing rock cross-vane.

We are currently reviewing an application for this project.

Cultural Resources Inventory

For the permit application, the applicant conducted a cultural resource inventory, which identified 2 historic period cultural resource sites located within the project area.

- PC-1: The ruins of a small domicile dating to the 1920s-1940s. The structure is roughly 20 feet long by 10 feet wide. Remnants of the collapsed plaster and chicken wire walls are evident along three of its sides. The southernmost side is partially dug into the hillside. Historic artifact scatter was found immediately around the structure, including a gas stove burner grill, bottles, mason jar fragments, brown duraglass fragments, ceramic fragments of tea cups, saucers, and bowls, tin cans, white porcelain cold cream jar, a leather shoe sole with tacks, along with miscellaneous metal items. These remains range in date from circa 1910s to the 1950s.
- PC-2: a periodic historic and modern trash-burning site with two loci. Artifacts and objects date from about the 1940s to the present-day. The eastern locus contained rusty cans of various sizes, a metal tray with enamel surface, a small medicine bottle with screw top, wire fencing mesh, a metal bucket, a 5-gallon oil can, thick brown glass, a 1947 license plate, several clear glass jars, bed springs, a coiled wire, and a drinking glass. The trees growing along this bench have been scorched from burning episodes. The western locus contained a greater variety of materials with a greater quantity of modern items: a pile of brick rubble, concrete rubble, burned lumber, tires, a car bumper, a crank shaft, a couple of rolls of wire fencing, seat springs, and an assortment of cans, jars, ceramics and glass fragments.

We would appreciate your review and any comments you have on this project, including potential impacts to any unidentified Native American Sacred Sites, Traditional Cultural Properties, or other cultural resources that you may be aware of within the project area. If you have any concerns about this proposed project and/or potential impacts on cultural resources, please provide us with your feedback by October 14, 2015.

U.S. Army Corps of Engineers Tribal Policy Principles

The United States has a unique legal and political relationship with Indian tribal governments. To learn more about the Corps Tribal Policy Principles of Tribal Sovereignty, Trust Responsibility, Government-to-Government Relations, Pre-Decisional and Honest Consultation, Self Reliance, Capacity Building and Growth and the protection of Natural and Cultural Resources, please reference the following link: <http://www.usace.army.mil/Missions/CivilWorks/TribalNations.aspx>.

We appreciate your input in this matter. Please refer to identification number SPK-2015-00307 in any correspondence concerning this project. If you have any questions,

please contact Noah Fulmer at Regulatory Division, U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, California 95814, by email at Noah.J.Fulmer@usace.army.mil, or telephone at 916-557-7094. For more information regarding our program, please visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,



Marc Fugler
Senior Project Manager
California South Branch
Regulatory Division

Enclosure



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

September 15, 2015

Regulatory Division (SPK-2015-00307)

Honorable Chairperson Leland Kinter
Yocha Dehe Wintun Nation
P.O. Box 18
Brooks, CA 95606

Chairperson Kinter:

The U.S. Army Corps of Engineers regulates certain activities in waters of the United States under Section 10 of the Rivers and Harbors and Section 404 of the Clean Water Act. Before a permit can be issued, we must evaluate the effects of the activity on the environment and ensure it is not contrary to the public interest. As part of the evaluation process, we coordinate and consult with potentially affected Tribal Nations.

We are requesting your review and comments for the proposed NAWCA 3- Lower Putah Creek Floodplain Restoration project. The permit applicant, the Solano County Water Agency, is seeking authorization from our office to conduct a floodplain restoration project along portions of lower Putah Creek. The approximately 14-acre project site is located on Putah Creek, Latitude 38.5257°, Longitude -121.9527°, Winters, Solano County, California. We have enclosed a map to show the location of the project.

Project Description

Floodplain restoration activities will involve grading of the existing floodplain to a uniform 1-2 percent slope, starting from approximately 18 inches above low flow water surface elevation; filling the north and south branches of the split low-flow channel; creating a design channel with rock vanes and spawning gravels; controlling invasive plants; and installing native plants. Other construction related tasks required to complete this project include: reconditioning an abandoned ramp providing access to the floodplain from Putah Creek Road; removing existing vegetation that cannot be incorporated into the project; isolating and dewatering the split channel branches before filling; hauling approximately 22,000 cubic yards of suitable fill from an off-site location; obtaining approximately 2,400 cubic yards of fill from unstable portions of the north creek bank; grading portions of the north bank; and relocating the existing rock cross-vane.

We are currently reviewing an application for this project.

Cultural Resources Inventory

For the permit application, the applicant conducted a cultural resource inventory, which identified 2 historic period cultural resource sites located within the project area.

- PC-1: The ruins of a small domicile dating to the 1920s-1940s. The structure is roughly 20 feet long by 10 feet wide. Remnants of the collapsed plaster and chicken wire walls are evident along three of its sides. The southernmost side is partially dug into the hillside. Historic artifact scatter was found immediately around the structure, including a gas stove burner grill, bottles, mason jar fragments, brown duraglass fragments, ceramic fragments of tea cups, saucers, and bowls, tin cans, white porcelain cold cream jar, a leather shoe sole with tacks, along with miscellaneous metal items. These remains range in date from circa 1910s to the 1950s.
- PC-2: a periodic historic and modern trash-burning site with two loci. Artifacts and objects date from about the 1940s to the present-day. The eastern locus contained rusty cans of various sizes, a metal tray with enamel surface, a small medicine bottle with screw top, wire fencing mesh, a metal bucket, a 5-gallon oil can, thick brown glass, a 1947 license plate, several clear glass jars, bed springs, a coiled wire, and a drinking glass. The trees growing along this bench have been scorched from burning episodes. The western locus contained a greater variety of materials with a greater quantity of modern items: a pile of brick rubble, concrete rubble, burned lumber, tires, a car bumper, a crank shaft, a couple of rolls of wire fencing, seat springs, and an assortment of cans, jars, ceramics and glass fragments.

We would appreciate your review and any comments you have on this project, including potential impacts to any unidentified Native American Sacred Sites, Traditional Cultural Properties, or other cultural resources that you may be aware of within the project area. If you have any concerns about this proposed project and/or potential impacts on cultural resources, please provide us with your feedback by October 14, 2015.

U.S. Army Corps of Engineers Tribal Policy Principles

The United States has a unique legal and political relationship with Indian tribal governments. To learn more about the Corps Tribal Policy Principles of Tribal Sovereignty, Trust Responsibility, Government-to-Government Relations, Pre-Decisional and Honest Consultation, Self Reliance, Capacity Building and Growth and the protection of Natural and Cultural Resources, please reference the following link: <http://www.usace.army.mil/Missions/CivilWorks/TribalNations.aspx>.

We appreciate your input in this matter. Please refer to identification number SPK-2015-00307 in any correspondence concerning this project. If you have any questions, please contact Noah Fulmer at Regulatory Division, U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, California 95814, by email at Noah.J.Fulmer@usace.army.mil, or telephone at 916-557-7094. For more information regarding our program, please visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,



Marc Fugler
Senior Project Manager
California South Branch
Regulatory Division

Enclosure

cc: (w/o encl)
Cynthia Clarke, Native Cultural Renewal Committee, P.O. Box 18, Brooks, CA 95606

Appendix 3 – Fish and Wildlife Coordination Act Consultations



United States Department of the Interior



In Reply Refer to:
08ESMF00-2018-
CPA-0011-1

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

APR 17 2018

Ryan Larson
Chief, Flood Protection and Navigation Section
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Subject: Putah Creek Channel Restoration Project Fish and Wildlife Coordination Act
Consultation, Yolo County, California

Dear Mr. Larson:

This letter is in response to the U.S. Army Corps of Engineers (Corps) March 28, 2018, request for consultation under Section 2(a) of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.). The U.S. Fish and Wildlife Service (Service) is providing comments to the Corps and their applicant for the Putah Creek Channel Restoration Project (proposed project), Yolo County, California. The Corps is granting Section 408 permissions to the Central Valley Flood Protection Board for Solano County Water Agency's (SCWA) proposed project.

Project Description

SCWA is proposing to convert former gravel extraction berms and pits, and a closed wastewater treatment plant into a river parkway. The project will realign the channel, re-contour the floodplain to allow more frequent floodplain activation, add spawning gravel and restore riparian habitat. This is the third phase of a project that has already completed phases 1 and 2.

Service Recommendations

The Service is supportive of a restoration project along Putah Creek. The project will allow natural geological processes within the channel, which is beneficial to the native riparian species in the Sacramento Valley. Removal of non-native vegetation and the addition of native vegetation provides benefits to wildlife species. The vegetation planting will be maintained for 5 years after installation. The Service completed section 7 consultation under the Endangered Species Act on the proposed project on August 6, 2014 and May 23, 2017. As the project is beneficial, the Service only has the following recommendation to add to the project:

1. Minimize project impacts by reseeding all disturbed areas, including staging areas, at the completion of construction with native forbs and grasses. Reseeding should be conducted just prior to the rainy season to enhance germination and plant establishment. The reseeding mix should include species used by and beneficial for native pollinators.

Thank you for the opportunity to review and provide comments on this project. If you have any questions about our letter please contact Jennifer Hobbs at (916) 414-6541 or jennifer_hobbs@fws.gov or myself at (916)414-6563.

Sincerely,

A handwritten signature in blue ink that reads "Doug Weinrich". The signature is written in a cursive style with a blue ink color.

Doug Weinrich
Assistant Field Supervisor

Appendix 4 – Public Comments and Responses

**July 2016, Public Notice
Comments Letters
Winters Putah Creek Nature Park Channel Realignment Project
Phase 3 (ID 19047-1)**

Jeff TenPas
Winters Friends of Putah Creek
24 East Main St
Winters, CA 95694

August 9, 2016

By email to: Brian.J.Luke @usace.army.mil

Attn: Brian Luke, Natural Resources Specialist
US Army Corps of Engineers, Sacramento District
1325 J Street, Room 1460
Sacramento, California 95814-2922

Re: Comments on Identification Number 19047-1, Putah Creek Restoration Project-Upper Reach Program

To US Army Corps of Engineers:

Please consider these comments on the Section 408 permit under review for the Winters Putah Creek Nature Park Channel Realignment Project Phase 3 (ID 19047-1)). These comments are submitted on behalf of Winters Friends of Putah Creek and Jeff TenPas. Commenters request that the Corps deny the permit because the project is injurious to the public interest and for lack of environmental compliance.

1. Purpose and Need: No Need to “Recontour the Floodplain to a Functional Elevation.” The basic premise of the Project proponent is that the floodplain is not functional, implying that the elevation is too high. This premise is faulty in Phase 3 as it was in Phases 1 and 2. In fact the floodplain in Phase 3 despite its highly disturbed state is functional. Much of it flooded this year, yet a part of the bank remained dry, providing diversity and refuge in the floodplain. For all the claims of a non-functional floodplain, there has never been any data or analysis presented to show how the floodplain is “non-functional”. The proponents should prepare a flood analysis comparing a pre-project and post-project section and showing at what flow the new and old would be flooded. We could then see the effect and value of the project on flood occurrence and duration. So much money and stream disturbance and floodplain leveling is justified by this claim, without any supporting analysis.

Moreover, the project design drawings show floodplain that is flat, featureless, filled with unsuitable fill, and compacted. Based on the evidence of Phases 1 and 2, the constructed floodplain would fail to grow a healthy riparian forest, not provide habitat, and would not transmit groundwater. It would be non-functioning.



Figure 1: As built floodplain in Phase 1

2. Replacement of an Artificial Channel with a Natural Channel, or Replacement of a Natural Channel with an Artificial Channel? The Proposed Action (as stated in the Public Notice) proposes the Project will replace an “artificial channel”. In comment, we submit the attached file (Attachment 1) showing the past 60 year history of the stream as it evolved after the construction of Monticello Dam. Aerial photos show that under the post-dam flood and flow regime, the floodplain and channel evolved, the floodplain stabilized, a floodplain riparian forest grew, and the channel and banks stabilized and developed in equilibrium with the new conditions. Phase 3 has in fact a natural channel that will be replaced with an artificial channel. Why?
3. The Floodplain Needs Restoration, the Channel Does Not. Quite obviously the floodplain in Phase 3 has been used and abused and needs restoration. It should be noted that the Phase 3 floodplain supported decent forest and floodplain habitat before Phases 1 and 2 began and used Phase 3 as a staging area. Phase 3 always could have used improvement, but the proponents disparagement of the area as “abandoned sewage ponds” is not a fair description of its condition 40 years on from the abandonment. You can see it in the aerial photos of Attachment A.
4. A Spoils Disposal Project in Fact. We recommend that the review team view this project critically as a project to “dispose of spoils in waters of the United States”. In fact, the Solano

County Water has literally disposed of excess spoils from construction of the South Putah Canal in Phases 1 and 2 of this project – in the amount of greater than 70,000 cubic yards. The fill was not good sandy material suitable for growing a riparian forest and supporting riparian groundwater conditions. Instead it was old, geologically old, highly weathered material from the Putah Creek fan, containing much clay, a far cry from fresh floodplain deposits. The fill material is a barrier to water and detrimental to floodplain groundwater movement and groundwater recharge. In Phases 1 and 2 the material has proved itself unsuitable soil for supporting a riparian forest. The same material is specified in plans and the contract as fill for Phase 3.

5. Benefits and Detriments and Injurious to the Public Interest Determination. There are minimal benefits and many detriments to the Project. You will find more comment on the detrimental impacts in the attachments to this comment letter.

The Benefits and Detriments

Project Work	Benefits	Detriment
Stream channel – old channel filled, new channel made narrower and deep pools eliminated	Small uncalculated decrease in stream temperature	Loss of deep pools Loss of cooler water refuge in bottom of deep pools Loss of the existing island Loss of the existing riffle, larger than any in Phase 1 or 2 Loss of channel habitat diversity Loss of downed trees in-channel
Stream channel moved across floodplain	None	Loss of views to the stream for people Loss of wildlife views for people on creekside trail
Banks – new, built at 2:1 slope, constructed of compacted fill	None	Loss of undercut bank habitat Loss of variation in bank form Loss of vegetated shallows Loss of existing beaver dens Loss of high banks suitable for future beaver dens
Hyporheos – wiped clean, replaced with veneer of gravel on a compacted stream bed, loss of structure and form like buried gravel bars	None	Loss of nutrient processing Loss of mixing and cooling groundwater Loss of biota Loss of groundwater connection

Project Work	Benefits	Detriment
Floodplains, new floodplains built of fill, compacted, sloped 1 -2% to the stream	None	Some remaining mature trees cut Loss of floodplain topographic complexity Lower soil productivity due to <ul style="list-style-type: none"> • Soils compacted • Fill with lower soil nutrient status • Fill with lower soil organic matter • Loss of groundwater supply Loss of floodplain permeability and hydrologic function
In-stream Wildlife Habitat – altered stream is narrower and without deep pools	More narrow faster stream habitat – may possibly benefit some native fish over other native fish	Loss of slow deep pool for turtles, beaver, nesting waterfowl, great blue heron Loss of long wide riffle - good prospect for increased salmonid spawning habitat Potential loss of mussels
Floodplain Habitat	None	Loss of cottonwood riparian forest habitat Loss of bird habitat Loss of mammal habitat Loss of turtle nesting habitat Loss of shade for people
Economic	Gain for SCWA – free disposal of fill Gain for committee members on City of Winters Putah Creek Committee who get contracts Gain for other subcontractors	Taxpayers pay for expensive project - \$1.2 million for 1200 feet of stream alteration Less funding available for better projects
Groundwater – smaller channel, compacted banks, clayey fill – all reduce groundwater recharge	More water is left to serve SCWA customers	Groundwater recharge is reduced for: <ul style="list-style-type: none"> • City of Winters • Local wells

6. What More Can We Say? The Project proponents propose a plan using heavy equipment to wipe the floodplain, banks, and channel clean of all their previous complexity, then construct a new channel to “perfect dimensions”, and do some rudimentary revegetation. Then they have faith that the stream will do geomorphic miracles with this “perfect” channel and floodplain and the whole will soon grow into a perfect state. We don’t share that blind faith.

We have seen the 5 year results in Phases 1 and 2. Outside of a 4 foot wide green line along the bank, conditions are poor, or very poor. Soil testing shows the imported and compacted fill is extremely hard when dry and has low permeability. The riparian forest is not coming back. We

know the soil conditions and riparian groundwater hydrology are drastically impaired and will not recover in our lifetime.

Now we grant that the floodplain in Phase 3 area looks bad. But underneath the surface, the stream banks and a part of the floodplain still retain their hydrologic function and suitable soils. This floodplain can be restored, if we go forward with a light touch and mind the soil and water and plant relations.

7. Environmental Compliance. The Public Notice identifies Environmental Compliance as a primary Evaluation Factors. We do not know what if any environmental assessment has been done. We can hardly comment on its adequacy. If NEPA is done, or drafted, we request opportunity to review and comment. If NEPA is being planned, we request that the scope of the NEPA include the potential impacts we raise here and in attachments. We request to be advised of opportunities for public involvement in the NEPA process.

What we can say about the environmental compliance is based on past experience with this and related SCWA projects. In the final analysis, this project should be considered together with its predecessor projects on Putah Creek by SCWA - Phases 1 and 2 of Putah Creek Realignment in Winters, the Dry Creek project, the Yolo Housing Project, the NAWCA 2 project, and projects on Kilkenny and Hasbrook private lands, and any others. Taken together, these projects have used heavy equipment and fill on a significant extent of Putah Creek already.

There are multiple ways to go about stream restoration, yet it seems the SCWA projects use the most aggressive and invasive methods - clearing large swaths of floodplain, bringing in massive amounts of fill, trafficking on and compacting near 100% of the floodplain in project areas, and moving stream channels. Whether or not one prefers this course of action to another approach, we all recognize that this level of disturbance comes with a high level of risk. This high level of risk should be addressed with a commensurately high level of scientific study, inventory, assessment, and environmental analysis.

But environmental analysis is what is lacking. Phases 1 and 2 were implemented based on the cursory CEQA done for a Master Plan, the CEQA document did not begin to disclose the clearing and filling to be done and in fact denied there would be significant clearing and filling. The Initial Study and Mitigated Negative Declaration did not disclose or assess the long list of impacts we have raised here and in previous comments on a proposed programmatic EIR for more work on the creek. The CEQA Mitigated Negative Declaration for the Master Plan promised project-specific CEQA when projects came up for implementation, but the SCWA reneged on that promise. It is time now for good in-depth CEQA and NEPA.

8. Consideration of Unauthorized and Immediately Adjacent Alterations in Phases 1 and 2. The Solano County Water Agency has done projects immediately upstream and downstream of the proposed Project ; these were called Phase 1 and 2 of realignment in Winters Putah Creek Nature Park. To the best of our knowledge these projects did not have Section 408 permits from the USACE. We wonder how the violation and permitting of these projects will be handled and we request to be informed. In any case, the NEPA compliance for this project should consider the previous projects and their cumulative impacts. There were detrimental impacts of the Phase 1 and 2 projects, and some of these impacts will be cumulative with Phase 3 impacts, the

cumulative effects include loss of riparian floodplain forest, loss of vegetated shallows, loss of pond turtle habitat, loss of beaver habitat, and loss of groundwater recharge.

9. Request for Reconsideration of Section 404 permit for the Project. The USACE has issued the Project a Section 404 Nationwide Permit 27 which should be cancelled. The USACE policy provides that a Section 404 permit should follow after a Section 408 permit per the guidance in EC-1165-2-216. Second, the project will result in fill and reduction of open waters of the US, and loss of open waters is an action beyond the scope of NWP 27. We request to be informed of the future course of action on a Section 404 permit for this project.
10. Request for access to files and additional time to comment. Although the Winters Friends of Putah Creek have been in contact with the USACE multiple times on this project, the Notice of this Project did not come to us directly and came to our notice late. The Notice also does not give public access to supporting documents. Under the circumstances, our review and depth of review was limited. We are submitting comments now, but request additional time for comment, and request public access to the NEPA analysis and the supporting file.
11. Attachments Are Additional Comments. Please consider the attached files as additional comment.
 - a. Attachment 1: Aerial photos and ground photos of Phase 3 channel and floodplain evolution and development, post-Monticello dam and post-sewage treatment use. Continues with a photos of implementation of Phases 1 and 2, depicting the scale and intensity of disturbance, loss of channel, banks, and floodplain complexity.
 - b. Attachment 2: Letter dated October 6, 2015 to Central Valley Flood Protection Board. The letter contains extensive comments on the potential negative environmental impacts of the Phase 3 Project. These comments should be considered as comments to the USACE on this 408 permit application. The impacts identified and comments:
 - i. Unhealthy unproductive riparian forest will be a product of floodplain fill and compaction and the soil conditions and soil permeability resulting from the project.
 - ii. Impacts to wildlife that occupy Phase 3
 - iii. Loss of open waters and wetlands
 - iv. Loss of recreation and aesthetic enjoyment to people of Winters
 - v. Deficiency of CEQA (and NEPA)analysis
 - vi. Scoping comments for CEQA/NEPA
 - c. Attachment 3: Letter dated December 8, 2015 to the Central Valley Flood Protection Board. This letter contains comments on the Phase 3 project and its impacts, in particular on the low permeability of the proposed fill for Phase 3, and the negative

effects that fill and compaction would have on the environment and groundwater recharge. These comments apply as well to the Section 408 permit.

- i. Comments and analysis of cumulative effect of Phase 3 and other projects on groundwater recharge and groundwater supply

- d. Attachment 4: Letter May 23, 2016 to the USACE. A letter with comments on Phase 3 and in particular the affects the project would have on people and their aesthetic enjoyment of the creek and wildlife. A project alternative is proposed. These comments apply as well to the Section 408 permit.
 - i. A project alternative is proposed
 - ii. Loss of recreation and aesthetic value to people who currently enjoy Phase 3

- e. Attachment 5: June 24, 2016. Letter of 60 day notice under the Clean Water Act to multiple parties. The letter includes comments on Phase 3 and bringing in of dirty fill, use of unsuitable fill, filling that occurred without 408 permit, applicants failure to meet mitigation requirements in Phases 1 and 2, and impossibility of meeting wetland mitigation requirements for Phase 3. These comments apply as well to the Section 408 permit.
 - i. Loss of wetlands
 - ii. Dirty fill already emplaced in Phase 3
 - iii. Use of unsuitable material for fill based on its texture and permeability
 - iv. Proponents history of violation of Section 408

- f. Attachment 6: May 20, 2016 comment letter to the Central Valley RWQCB on a draft programmatic Water Quality Certification for a proposed project to cover 24 miles of Putah Creek. The comments on negative impacts apply to Phase 3 as well, and these are impacts that should be considered in NEPA analysis for Phase 3.
 - i. Unsuitability of the fill
 - ii. Irreversible loss of riparian cottonwood forest
 - iii. Potential loss of mussel beds
 - iv. Impacts to other wildlife
 - v. Loss of vegetated shallows, which do currently exist in Phase 3
 - vi. Loss of groundwater recharge
 - vii. Loss of recreation and water contact recreation

- g. Attachment 7: June 11, 2015 comment letter to the Solano County Water Agency on an Initial Study and Mitigated Negative Declaration for the NAWCA 3 project about 2000 feet downstream of the Phase 3 project. The project is similar in all respects to Phase 3 and we include them as comments on Phase 3.
 - i. Impairment of riparian habitat due to unsuitable fill and compaction
 - ii. Cumulative loss of riparian forest
 - iii. Cumulative loss of recreation and opportunity for water contact recreation
 - iv. Impairment to aesthetic enjoyment of a more natural environment
 - v. Impairment to wildlife habitat

Conclusion.

This project springs from a faulty premise – that the existing floodplain is “non-functional”, a premise that is never examined. The project implementation plan springs from the next faulty premise – that all that is required to have a healthy “natural” stream and riparian ecosystem is to have a stream channel of “right” dimensions, and then the stream will take care of itself. The projects past and present have assumed that no amount of disturbance is too much, that there is no need for concern or intentional design of physical conditions or habitat requirements, and that geomorphic processes will make everything come out right and in a short time.

Unfortunately this is not the case. The stream and riparian ecosystems are incredibly complex and organized and diverse. A model that assumes that only stream dimensions are important is a far too simple a model to base a project on. This model leads to projects where mussel beds are obliterated unknowingly, turtle habitat disappears, cottonwood forest dies, youth lose the enjoyment of a swimming hole, and generally habitat diversity and sustainability suffers.

If there is one single defining element of a riparian forest ecosystem, it is the connection of the floodplain to surface and groundwater. This project and prior projects completely overlooked that element and then went awry by emplacing impermeable material in the stream bank and floodplain. Any future work on the stream channel, banks, or the floodplain needs to be screened for its effect on this surface and groundwater connection.

There are lessons learned to take away from Phases 1 and 2 about fill and compaction and floodplain permeability and groundwater movement. These lessons should be documented and disseminated to improve the science and practice of stream restoration.

It is time also for an open dialogue about Phase 3 that advances the science of restoration and considers new approaches and leads to a good new plan. The Winters Friends of Putah Creek are in favor of continuing stream and watershed restoration work and wish to see this work go forward in Phase 3 too. We see the absolute need to solve the problems in Phases 1 and 2.

Sincerely,


/Jeff TenPas/

Jeff TenPas, Winters Friends of Putah Creek

Putah Creek Restoration Gone Awry

From a Natural Channel to an Artificial Channel

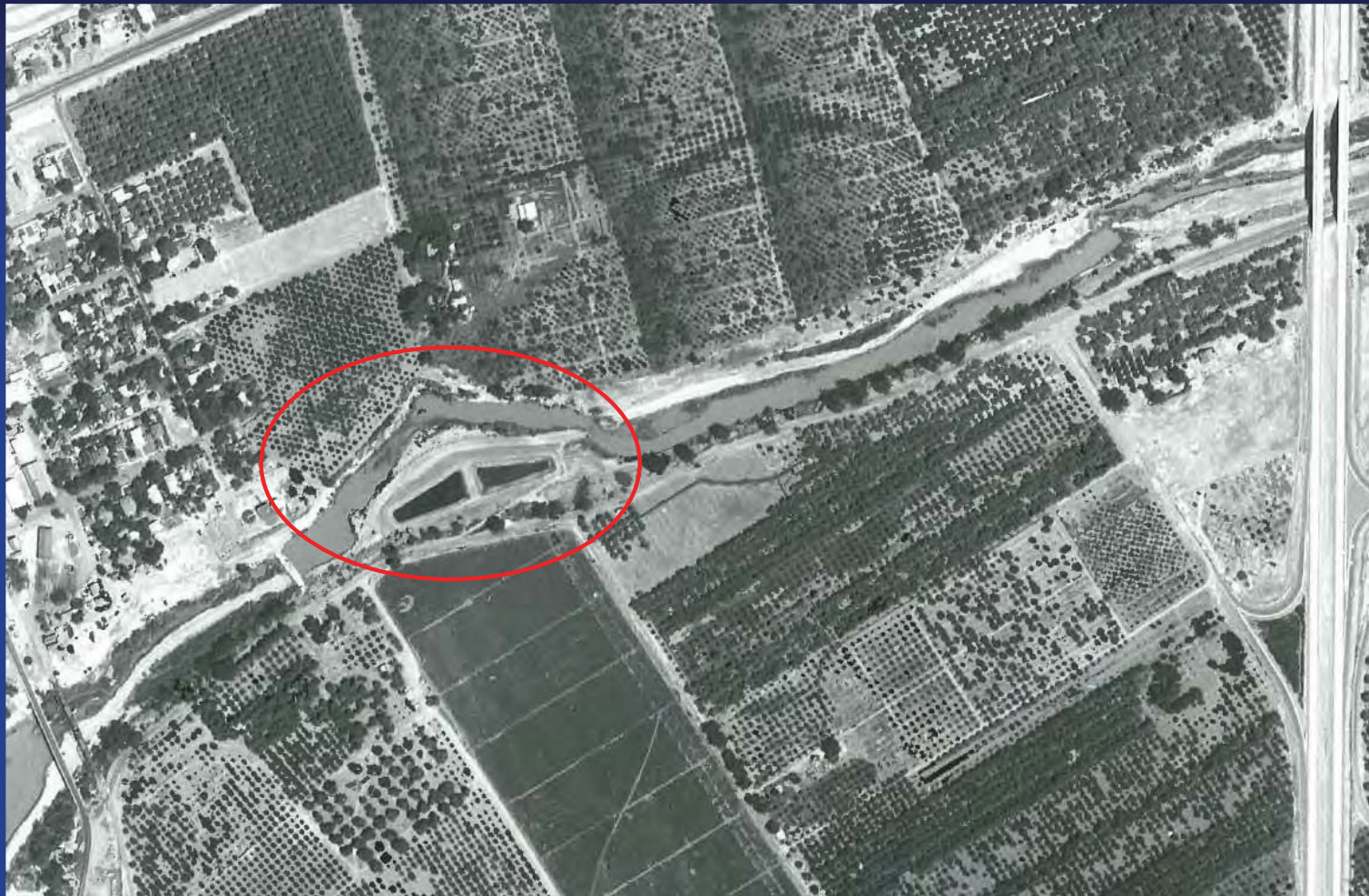
AFTER THE DAM – NATURAL EVOLUTION OF THE CHANNEL AND FLOODPLAIN



1952



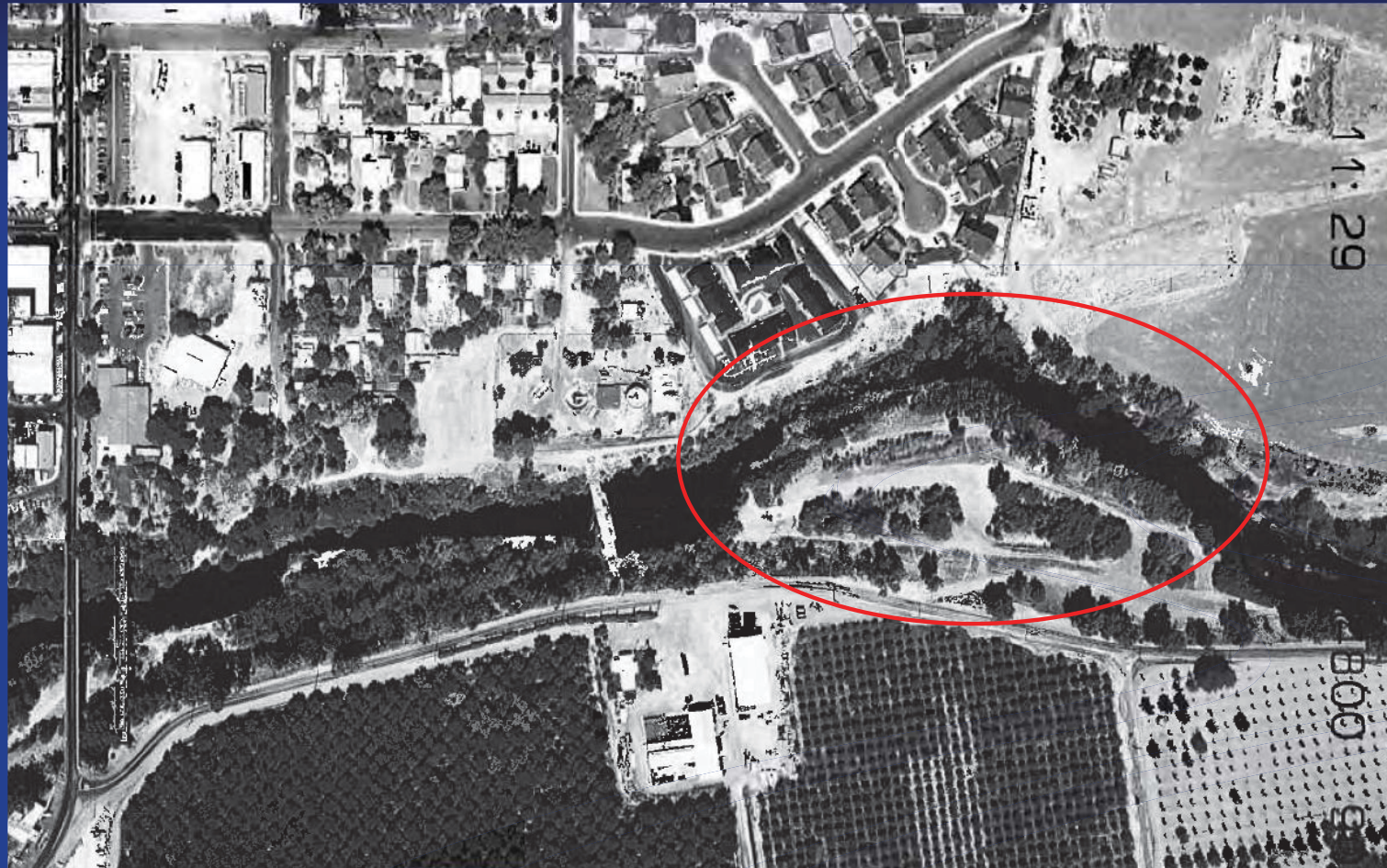
1962



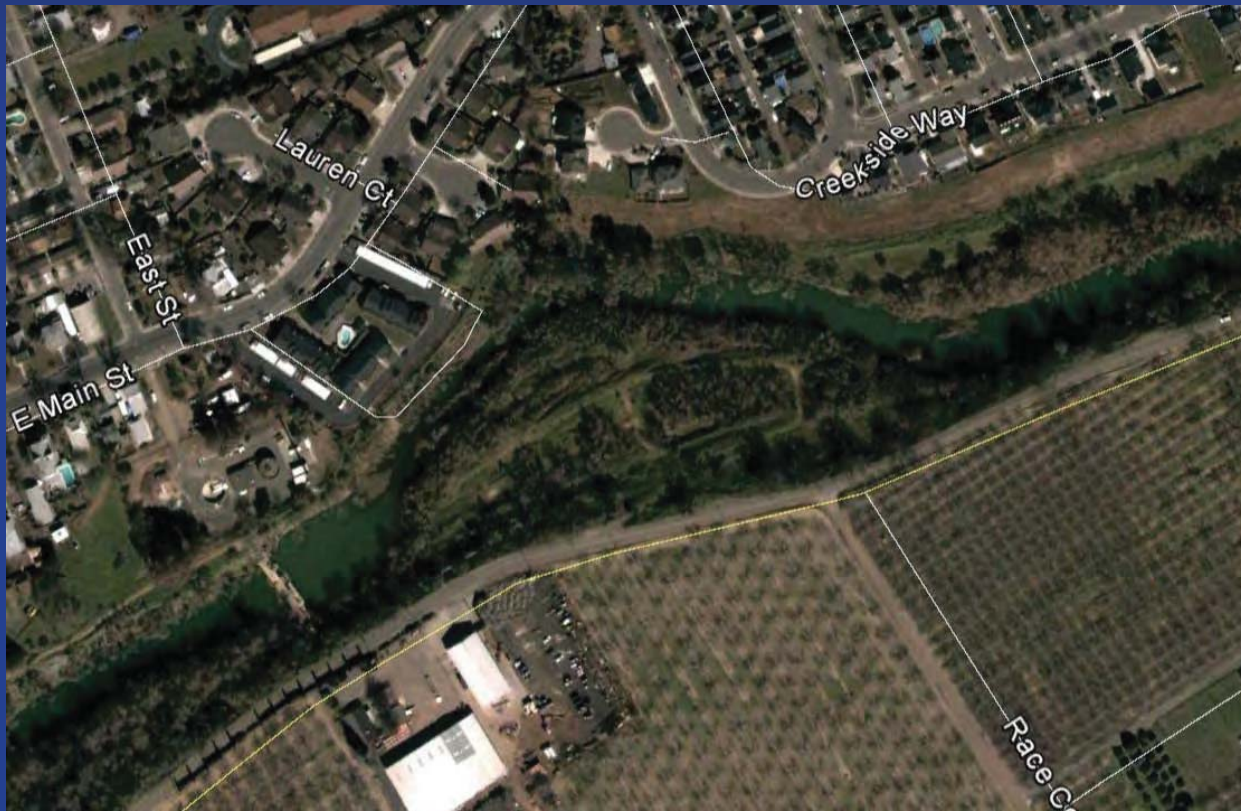
1970



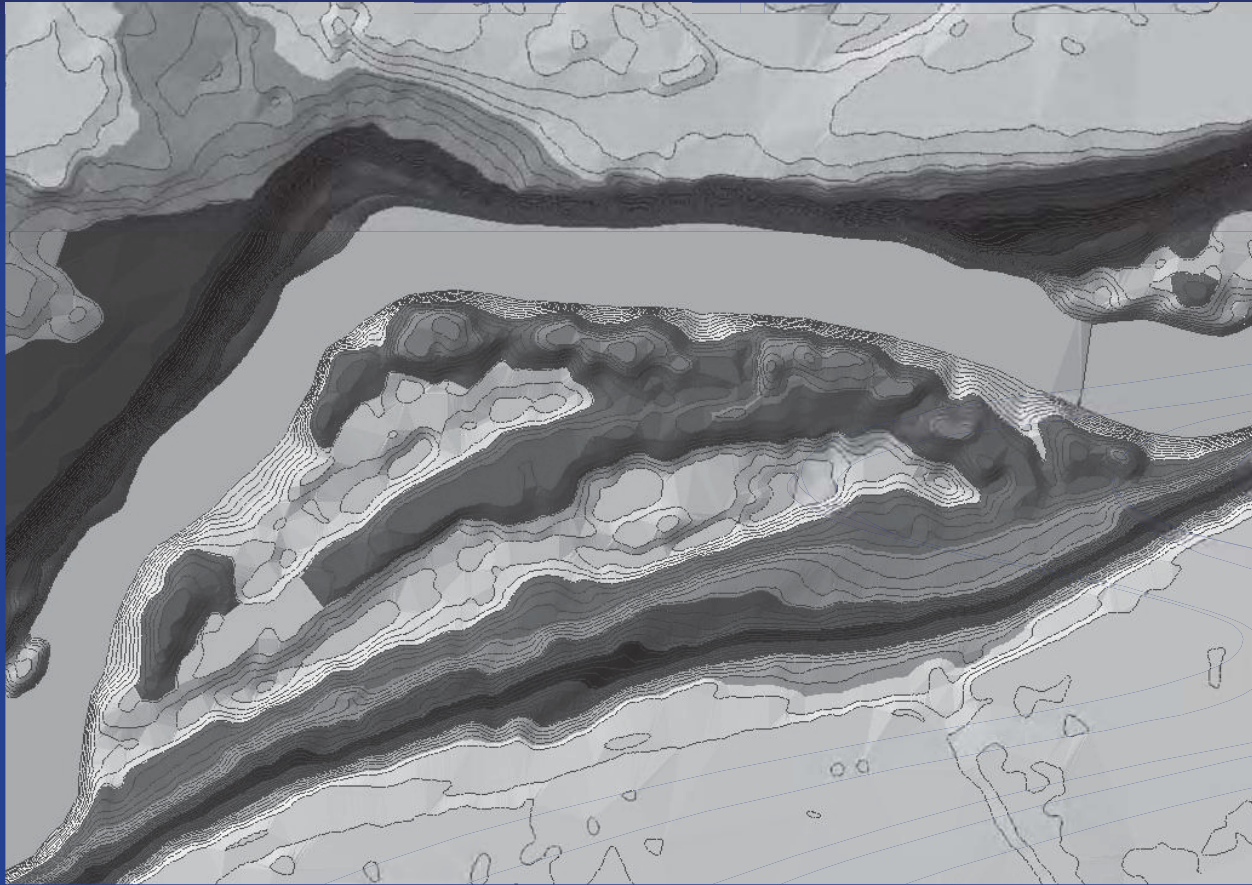
1990



2003



Phase 3 – 2008 – before Project



PHASE 3 STREAM - 2016



PHASE 3 STREAM – 2016



Channel Realignment

BUILDING AN ARTIFICIAL STREAM – PHASE 1 AND 2



















Design Channel



5 Years Post-Project Floodplain “Desert” Replaces Open Water



Winters Friends of Putah Creek
Jeff TenPas, 24 East Main St, Winters, CA 95694
530-795-3617, jtenpas@lycos.com
October 6, 2015

VIA ELECTRONIC MAIL
Leslie.Gallagher@water.ca.gov

Leslie Gallagher
Acting Executive Officer and Chief Counsel
Central Valley Flood Protection Board
3310 El Camino Avenue, Room 151
Sacramento, California 95821

Re: CEQA Non-Compliance and Negative Environmental Impacts of Phase 3 – Putah Creek
Floodplain Restoration Project

Dear Ms. Gallagher:

My name is Jeff TenPas. I am a resident of Winters, having lived here near Putah Creek in Winters for 19 years, and for most of that time having walked the dog along the creek almost daily. During this time I have been actively working to restore the creek, and privileged to be able to observe the creek for many years, and to have the professional and scientific background to understand what I see. I have a Masters in Soil Science from UC-Davis and related education in hydrology and ecology. I have worked for the US Forest Service for over 16 years and managed the watershed improvement program for the region for the last 9 years.

There are two main points to my comments on this proposed project. First, if the project were to be implemented as planned, it would have significant long term negative impacts on the environment. Secondly, this project and its impacts have not been given CEQA review, the project is not CEQA-compliant. On those grounds, the Solano County Water Agency's application for an encroachment permit should be denied. The project can then be redesigned, be given the appropriate and required environmental review, and significant environmental impacts can be avoided.

The Projects significant environmental impacts are foreseeable and must be avoided. Four of the most significant impacts would be these:

- The constructed floodplain would not and could not support a healthy riparian forest,

- The project would take the most diverse, most occupied, and most valuable instream wildlife habitat in Winters,
- The project will not provide replacement for the loss of open waters and wetlands, and
- There will be loss of enjoyment of view of the creek and wildlife to the people of Winters

I give the following as the expert opinion of a soil scientist and watershed restoration practitioner.

Adverse Environmental Impact – Unhealthy Unproductive Riparian Forest

Based on my knowledge and expertise, I give the expert opinion that there will be failure of the floodplain riparian forest if Phase 3 goes forward as planned. By failure, I mean that trees and other vegetation growing in the floodplain will be stressed, stunted, and/or die. A flourishing and healthy riparian forest will not grow. I say this because of the existing failure of the riparian forest in Phase 1 and Phase 2 of the project, because as a scientist I recognize the soil conditions that are causing the failure, and because the same design flaws causing failure in Phases 1 and 2 are repeated in the design and project specifications for Phase 3.

Phases 1 and 2 were completed four years ago. They included massive cut and fill operations that covered almost 100% of the project areas. They concluded with tree and shrub planting, planting of forbs, and seeding of grasses. Irrigation was supplied to the trees for the first season. By now four years later you would expect the planted trees to be well established and thriving. Instead the planted trees are stunted, distressed, or dead. There are large areas invaded by weeds and areas of barren ground. There are a handful of mature cottonwoods and willows remaining from the original forest that are also distressed, dying, or dead. Even the project proponents recognize the problems with Phases 1 and 2. They have hired a soil scientist and contractor to begin experimental treatments, and have contacted your agency for permission to do pilot tests in the floodplain.

Some have questioned if the vegetation failure is drought related, but it is not. The floodplain vegetation up and downstream continues to do well. As discussed below, the water supply of floodplain vegetation is not dependent on rainfall but depends on water from the stream.

One other condition in Phases 1 and 2 is very notable. Trees and vegetation are flourishing in a narrow three foot band of green along the stream bank, but not across the rest of the floodplain.

This failure of the riparian forest is due to soil conditions and explainable by soil science. In short, the problem is the use of unsuitable fill, around 50,000 cubic yards so far. I have examined the imported material. The fill is clayey, it was spoils from digging the Putah South Canal. This fill was placed in lifts, and compacted with a sheepsfoot roller. Clayey soil compacted like this is typically used for lining canal bottoms and landfills in order to make them impervious to water movement. These conditions are unsuitable for growing trees.

Riparian forest trees are different from upland trees, riparian forest trees such as cottonwood, willow, ash and alder require more water than the amount falling as rain. These trees get the additional water they need from the stream. Stream water infiltrates the stream bank, through the floodplain soils, across the floodplain, and to trees a hundred feet away, and from additional water infiltration during floods.

The soil conditions of the constructed floodplain do not permit water to move from the stream to the trees across the floodplain, nor to infiltrate rapidly during floods. First, the fill is too clayey. The native floodplain soil, a sandy loam, has a saturated hydraulic conductivity of an estimated $10 \mu\text{ms}^{-1}$ (Figure 1). A clay loam, like the imported fill, has a saturated hydraulic conductivity of an estimated $1 \mu\text{ms}^{-1}$. Second, the fill was intentionally compacted to a high degree according to specifications in the construction contract. Compaction closes pores in the soil, especially the larger pores. The largest pores are most important to water movement because according to Poiseuille's Law water moves in pores at a rate proportional to the pore radius raised to the 4th power. After the compaction, the clay loam has a saturated hydraulic conductivity of an estimated $0.1 \mu\text{ms}^{-1}$ or $1/100^{\text{th}}$ the water conductivity of the natural floodplain.

The result is that the constructed floodplain has soil conditions such that water from the stream only supports good riparian vegetation in a three or four feet band along the stream bank rather than all the way across the floodplain. The project proponent, recognizing the failure of the floodplain in Phases 1 and 2, has begun to recognize this is a soil problem and has started experiments to mitigate the problem, yet the proponent persists with the same faulty design plans for Phase 3.

There are additional soil properties and ways that the fill and compaction are affecting the vegetation. The fill is low in organic matter and therefore lower in nutrients. The water holding capacity is lower because of low organic matter and compaction. Because of compaction, the soil strength and resistance to root penetration are increased, and tree roots grow less and have access to less soil volume and less water.

The plans for Phase 3 call for the same fill and compaction as in Phases 1 and 2. The compaction standard is specified in the construction contract, and fill from the same source is specified in the contract. The contract includes a requirement for subsoiling the floodplain during finish grading to a depth of 24 inches, which can mitigate for the compaction, but only partially because it cannot alter texture. In any case, the two foot depth of subsoiling will not reach the normal water level, and therefore will not relieve the impediment to water movement from the stream to the floodplain. The project proponents contention that the fill is suitable because it is from alluvium ignores the fact that thousands and tens of thousands of years have passed since that alluvium was deposited and that time is a primary factor in soil formation. The outcome of current Phase 3 plans would be a floodplain with a distressed and failed riparian forest.

Adverse Environmental Impact - Take of Most Diverse and Most Occupied Instream Wildlife Habitat in Winters

As a local resident who walks daily along the creek, and an environmental scientist, I am in a position to know where wildlife is present along the stream. I know for a fact that the Phase 3 project site supports by far the most abundant and diverse wildlife population to be found along the creek in Winters.

- This reach is the home to a family of six or seven beaver with multiple dens in the bank. I have never seen these beaver outside this reach
- This spring three pair of geese and a pair of mallards raised young in this reach – I saw no nesting geese or ducks using other reaches
- This is the only reach where I have seen western pond turtles
- A pair of hawks nested on this reach for at least the second year in a row
- Great blue heron I see here ten times to every one time elsewhere
- There are two night heron that frequent the creek here, and are seen in this reach the vast majority of the times seen
- Kingfisher spend more time here than elsewhere
- Both mink and otter frequent this reach

If this reach is realigned per the Phase 3 design, there no longer be a part of the stream in Winters that has the channel and bank attributes that are supporting this wildlife population. The reach has the only large deep slow water pool, the only island, the only downed floating trees, and the only high stream banks in the mile long segment that includes Phases 1, 2, and 3.

Adverse Environmental Impact - Loss of Open Waters and Wetlands

It is a fact as shown by the Project's Grading Plans that the project will eliminate open water by narrowing the channel and will fill an existing off channel pond, and that the Project grading will not replace the loss. Previous disturbance of this site during Phase 1 and 2 has already eliminated other wetland features. The Phase 3 design plans show floodplains that slope continuously up from the stream bank at 1% slope without exception. These floodplains will drain rapidly by overland flow to the stream, these floodplains will provide no wetland habitat. Refer to 'Typical Channel Cross Section on Sheet 2 of Grading Plans' for a drawing of the floodplain. The grading plans include no depressions in the floodplain that will function as wetlands. This loss of wetlands diminishes the habitat value of the Project, it violates wetland preservation law, and it further reduces water infiltration and supply to the floodplain vegetation. The contract includes this specification for finish grading, emphasizing drainage not wetlands:

- e. Float to achieve uniform surface drainage from the bank toward the flow channel without ruts, potholes or low areas that trap water.

Adverse Environmental Impact - Loss of Enjoyment to People of Winters

As a daily walker and observer of people using the creek, it is clear to me that it is fact that the majority of people using the Nature Park keep to the paved trail on the north bank – less than 10% take the paths down to the creek and floodplain. Given this pattern of use, the majority of users enjoy close up views of the creek only where the paved trail dips within 10 feet of the creek in Phase 3. This stretch alone gets people near the stream and near the wildlife using the stream and riparian floodplain. By moving the channel as proposed in Phase 3, most walkers will lose this connection and enjoyment. Phase 3 includes a “north ramp” leading from the trail to the floodplain (not to the creek), but most people do not use the other ramps currently available and there is no reason to believe they would use this one. In addition, this is the only direct access to views of the creek and wildlife for those in wheelchairs or otherwise limited in mobility – the new “north ramp” is not ADA accessible (Rich Marovich, personal communication).

CEQA Inadequacy

A Board permit requires CEQA compliance. The Board may deny a permit application for non-compliance, or the Board may prepare an environmental impact report (EIR) or initial study and negative declaration.

For a review of the CEQA inadequacy, I refer you to the attached letter of June 24 from Donald Mooney representing the Winters Friends of Putah Creek to Thomas Pate, Solano County Water Agency. The letter describes the complete inadequacy of the CEQA compliance. This letter was previously copied to Andrea Buckley of the Board’s staff on July 1, 2015.

In Mr. Mooney’s letter, the point is made that the 2008 CEQA does not cover project specific work and the CEQA Response to Comments plainly affirmed that the Master Plan did not include and the IS/MND did not assess the impacts of the large quantities of imported fill or significant tree clearing. The point is also made that even if the IS/MND for the Putah Creek Nature Park covered this project when it was completed in 2008, there are now new circumstances and new information on project impacts that must now be considered.

Fill and CEQA

In 2008 in written comments on the Master Plan and IS/MND I raised a concern over earth-moving and plainly asked how much fill would be brought in for the project. The project proponents flatly affirmed that the entire project would involve “minor material moving within the floodplain”. That may have been the plan in 2008. Now in 2015 this Project alone calls for importing 10,000 cubic yards of fill, and there has very clearly been no disclosure or assessment of impacts (Sheet 3 of Grading Plans).

Written Comment on IS/MND in 2008 from Jeff TenPas:

The project description and information in the draft Winters Putah Creek Nature Park Master Plan and supporting documents are inadequate to assess the impacts of the project. For example the documents give no estimate on the amount of earth-moving or the construction traffic that the project may entail. How many days or weeks of construction traffic, noise, and dust will be created? How many truckloads of fill will be needed for the project?

Written Response to Comment – Response 1:

The various proposed restoration activities involve minor material moving within the floodplain and intermittent heavy equipment use.

Tree Clearing and CEQA

In 2008 in written comments on the Master Plan and IS/MND I raised a concern about the clearing of mature native riparian forest for the Nature Park plan. The project proponents flatly affirmed that for the entire project “short reaches with willow or sapling cover may be disturbed as part of the bank recontouring and these will be replanted immediately”. That may have been the plan in 2008. Now in 2015 this Project calls for retention of just eleven trees in the whole 11 acre footprint of the project, and removal of 80 trees over 4 inch DBH (per Updated Project Description). Greater than 50% of the site has been entirely cleared already. The eleven trees to remain would cover a few percent of the area of the Project and would be a fraction of the original 2008 riparian forest (Figure 2). All of the trees in the grading footprint per Sheet 2 of Grading Plans are native barring a few eucalyptus at the northern edge where the project plans are not disclose . There has very clearly been no disclosure or assessment of the clearing of mature native riparian forest on any wildlife species. As a person walking along the creek on a hot day, the effect of a lack of shade on humans is clearly evident.

Written Response to Comment – Response 7:

A native riparian forest is the goal of part of the project and there is no plan to significantly impact that or any other established reach with this project. As described in the WPCNP IS/MND short reaches with willow or minor sapling cover may be disturbed as part of the bank recontouring and these will be replanted immediately.

City of Winters Consideration of CEQA Compliance

The project proponent has asserted to Board staff (Chris Lee to Ilene Wellman-Barbree, email June 18, 2015) that the City of Winters reviewed and affirmed CEQA compliance of the Project. The City did not. The only attention given to this Project by the City Council in the last year was in a City Council meeting on April 21, 2015. At that meeting, Phase 3 was on the agenda as a discussion item only (not an action

item). The agendaized discussion was only to give citizens opportunity to voice their concerns on the project. The City has never reviewed or acted on the question of CEQA compliance for this Project.

The Winters Friends of Putah Creek believe that the project proponents must keep the promise given in 2008 of supplemental project-specific CEQA, that importing fill and clearing trees are clearly inconsistent with the 2008 IS/MND, and that the new circumstances and new information require new CEQA. Clearly CEQA review should include soil testing for texture and nutrient content, and testing and comparison of the hydraulic conductivity of compacted fill and native floodplain soils.

Scoping for Additional CEQA

If the Board were to do CEQA to cover this project, then these potential impacts should be included in the scope of review:

1. Impacts on floodplain ecology of the imported fill and compaction of it
2. Impacts and cumulative impacts of clearing 30 acres of riparian forest and failure to revegetate
3. Impacts on western pond turtle of eliminating occupied habitat and the last suitable habitat in the Winters reach of Putah Creek
4. Impacts on wetlands and waters of the United States
5. Impacts on peoples and especially ADA access to the views of creek and wildlife if the channel is moved

I am available to discuss this project further with your staff and look forward to a good outcome for Putah Creek.

Respectfully yours,

Jeff TenPas

Winters Friends of Putah Creek

Figure 1. Guide for Estimating Saturated Hydraulic Conductivity (K_{sat}) from Soil Properties. (U.S. Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. Available online. Accessed 09/18/2015.)

Follow the arrow to see the impact of change in soil texture and compaction on hydraulic conductivity.

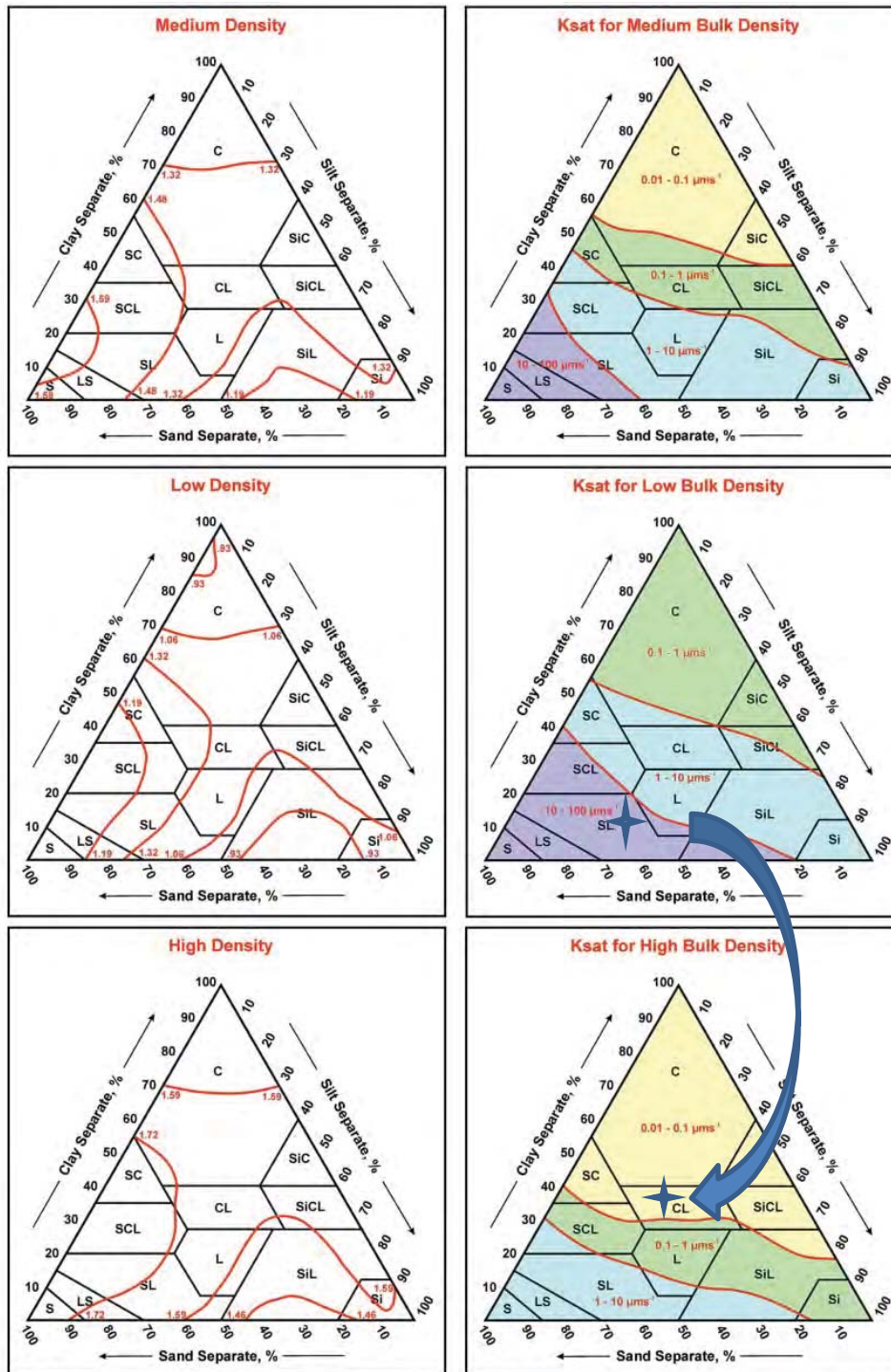


Figure 2 – Phase 3 area 2009



Jeff TenPas
24 East Main St.
Winters, CA 95694

Central Valley Flood Protection Board (by email to Ilene Wellman-Barbree)

Re: Phase 3 Putah Creek Channel Realignment Project in Winters

To All Parties Concerned:

There is a very significant potential negative effect to add to the environmental effects of the proposed Phase 3 Channel Realignment Project - the effect on groundwater recharge. This will be a highly significant negative effect if it affects Winters municipal water supply.

Given the short time before a decision is made by the Central Valley Flood Protection Board, I have done a rapid analysis of this. This is not a full and complete analysis, and I am not a groundwater expert. However, I am a professional soil scientist and expert on soil and water movement through soil, and the soil or fill used in project will be a critical limiting factor in groundwater recharge. With the available data and time, I have made a reasonable, factual, and scientific analysis of potential effects.

We know that a low permeability clayey fill material is being imported and used in the project. In addition, a high level of compaction is specified for the imported fill as well as the native floodplain soils. The specifications for fill and compaction are in a signed contract. Please note that these same specifications would satisfy the requirements for creating an impermeable liner to a landfill or a canal. The existing contract makes it certain what the result will be. And there is plain evidence in Phases 1 and 2 of the impacts, including test wells in the floodplain that are dry, and trees dead or dying due to the failure of water movement from the stream to the floodplain.

It is impossible that the proposed project will not affect groundwater recharge. An impermeable barrier is being created between the stream and groundwater. I've prepared an initial estimate of the effect. It is based on Solano County Water Agency data on water loss (to groundwater and evapotranspiration) from the stream for the months of May to Oct in the Diversion Dam to I-505 stream reach.

According to SCWA data, there is an average loss of 14.5 cubic feet per second (cfs) in the 4.2 mile reach from the Diversion Dam to I-505. Allowing a conservative one cfs for evapotranspiration, there is an average rate of recharge to groundwater of 3.2 cfs/mile of stream, and 3.2 cfs in the mile reach of the project in Winters. If the project is constructed as designed, the streambanks will be impermeable, and groundwater recharge will be cutoff. The cumulative effect in six months will be a reduction in groundwater recharge of 1155 acre feet.

The effect may not be 100%. But the estimate only takes into account the May to October period. The total effect may increase after taking into account that there will be additional effects on recharge from November to April, and a potentially large diminishment of recharge during flood events. At diminishment in recharge of just 1155 acre feet, the reduction in groundwater recharge is about 1.5 times the total estimated annual residential water use in Winters. Or it is sufficient water to irrigate hundreds of acres of land.

Jeff TenPas
24 East Main St.
Winters, CA 95694

Winters municipal water supply comes from groundwater. And the adjacent agricultural producers depend on groundwater. I cannot escape the conclusion that the project may significantly reduce groundwater recharge, permanently, beyond our lifetimes, and that ultimately it may affect the municipal water supply to the City of Winters and the adjacent ranches.

Yours truly,

Jeff TenPas

CC: Winters Friends of Putah Creek, Don Mooney
Attached: Attachment Dec 8 2015 Calculations for Diminution of Groundwater



Solano County Water Agency

Lower Putah Creek Riparian Water Availability Forecast: May 1, 2015
(Projected water availability in the absence of Monticello Dam)

Reach No. 1: Putah Diversion Dam to Hwy. 505 Bridge

Average Monthly Gain(-) or Loss(+) in Cubic Feet Per Second (cfs)
(projected Average gain or loss in the reach)

Percent Exceedance	Apr	May	Jun	Jul	Aug	Sep	Oct
5%	NA	10	13	16	15	17	14
10%	NA	10	13	16	15	17	15
15%	NA	10	13	16	15	17	15
20%	NA	10	14	16	15	17	15
25%	NA	10	14	16	15	17	15
30%	NA	10	14	16	15	17	15
35%	NA	10	14	16	15	17	15
40%	NA	10	14	16	15	17	15
45%	NA	10	14	16	15	17	15
50%	NA	10	14	16	15	17	15
55%	NA	10	14	16	15	17	15
60%	NA	10	14	16	15	17	15
65%	NA	10	14	16	15	17	15
70%	NA	10	14	16	15	17	15
75%	NA	10	14	16	15	17	15
80%	NA	10	14	16	15	17	15
85%	NA	10	14	16	15	17	15
90%	NA	10	14	16	15	17	15
95%	NA	10	14	16	15	17	15
100%	NA	10	14	16	15	17	15

Attachment Dec 8 2015 Calculations for Diminution of Groundwater

Average Loss from Diversion Dam to I-505, May to Oc	14.5
Evapotranspiration	1
Groundwater recharge	13.5
Miles between Diversion Dam and I-505	4.2
CFS/mile	3.2

RECHARGE DIMINUTION IN WINTERS

Miles of project in Winters	1
Recharge diminution in Winters	3.2 cfs
Time in a day, seconds	86400
CF/day	276480
Acre ft/day in Winters	6.347107
Acre ft/ 6 months in Winters	1155.174

Water Use in Winters

Gallons/ day / household	360
Residences	2000
Daily water use	720000
Annual water use in gallons	262800000
Annual water use in cubic feet	35040000
Annual water use in acre feet	804.407713

Winters Friends of Putah Creek
200 Madrone Court
Winters, CA 95694

May 23, 2016

Mr. William Guthrie
Senior Project Manager
Department of the Army, Corps of Engineers
1325 J Street
Sacramento, CA 95814-2922

Re: Winters Putah Creek Park Channel Realignment 3 – Ref 0540-R54125-0

Dear Mr. William Guthrie:

I am writing on behalf of those whose names are listed at the end of this letter as members of the Winters Friends of Putah Creek. Phase 3 of the River Parkways grant for Winters Putah Creek Nature Park calls for relocating a 0.25 mile length of Putah Creek 300 feet to the south and narrowing the channel. This section of creek hosts an abundance of wildlife, including beaver, otter, mink, pond turtles, egrets, herons, ducks, geese, and kingfishers that is rare in the previously restored creek sections.

We treasure this last, unaltered segment of the Putah Creek channel adjacent to the Winters Putah Creek Nature Park and are greatly concerned about the proposed plan to be implemented under the Phase 3 River Parkways grant. The existing oasis of biological diversity will be eliminated by the current plan.

We are also concerned that a healthy riparian forest is not re-growing in Phases 1 and 2 because the soil has been thoroughly compacted (as dictated in the contracts), and the filled and compacted creek bed and floodplain are impeding percolation and groundwater recharge. The same thing would happen if Phase 3 went forward given the current design.

With record numbers of salmon already spawning both above and below this section this year it is clearly not an impediment to Chinook and other salmonids. According to the USDA Natural Resources Conservation Service, “Good trout stream habitat is complex, consisting of an array of riffles and pools, submerged wood, boulders, undercut banks, and aquatic vegetation.”¹ Phases 1 & 2 are devoid of complexity and lack the large pools, fallen logs, islands, high undercut banks and habitat complexity of the Phase 3 unimproved section.

¹ <https://www.fws.gov/northeast/wssnfh/pdfs/RAINBOW1.pdf>

If the planned Phase 3 modifications are carried out, there will be a profound loss of wildlife habitat and of the unique opportunity for the people here to view animals living in their natural surroundings. Where else can beaver and otter be routinely observed from the safety of a fenced, paved nature trail that meets ADA standards?

Our group of local scientists and environmental advocates has collaborated to develop an alternative plan (see attached) for restoring this section of creek. Funds that would otherwise be spent on the costly plan to relocate the channel could and should be spent on clearing out invasive species, cleaning up and planting the former location of the sewage ponds, adding gravel for salmon spawning, and mitigating soil compaction. Attached are some photos of the narrowed and unaltered creek sections, and of the wildlife that would be affected.

Supporting this alternative plan would be a win-win for those who enjoy the creek, its animal residents, and the granting agency. We trust that the agencies involved will see that this is a great opportunity to achieve the goals of the grant program in a way that the Winters community would enthusiastically support.

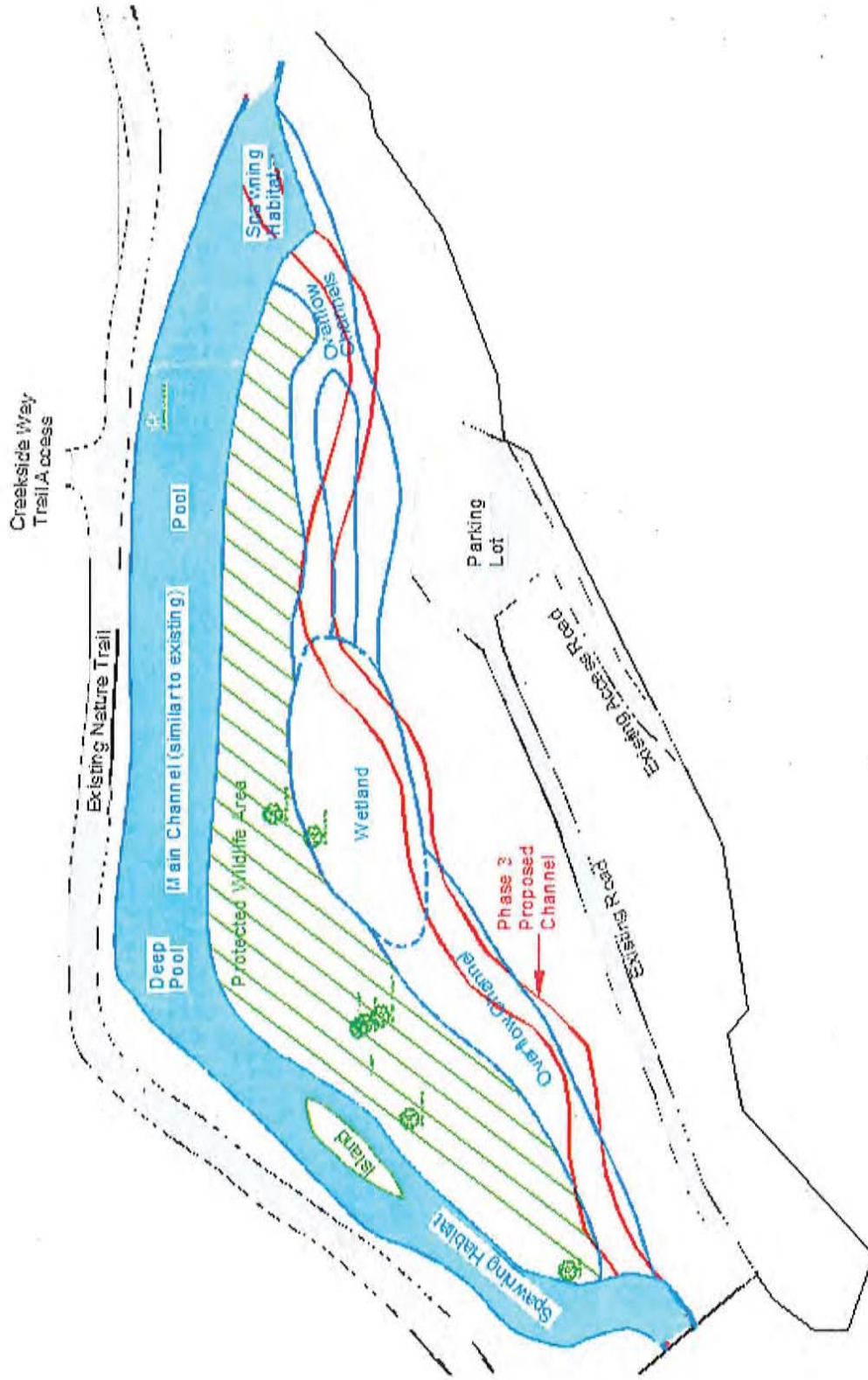
Sincerely,



David Springer
Committee Chair, Winters Friends of Putah Creek

David Springer	Winters, CA	Linda Hirst	Winters, CA
Alison Eldridge	Winters, CA	Nolan Curran	Winters, CA
Carol Brydolf	Winters, CA	Sally Brown	Winters, CA
Debbie Hemenway	Winters, CA	Stephanie Myers	Winters, CA
Debra DeAngelo	Winters, CA	Yolanda Platt	Winters, CA
Eric Doud	Winters, CA	Alan Pryor	Davis, CA
Garry Douglas	Winters, CA	Barbara King	Davis, CA
Jan Schubert	Winters, CA	Bessie Oakley	Davis, CA
Jeff TenPas	Winters, CA	Glen Holstein	Davis, CA
LaRae Shaw-Meadows	Winters, CA	Pam Nieberg	Davis, CA

ALTERNATIVE PLAN



Overlay of engineering plan showing what could be accomplished in Phase 3. The planned narrowed and relocated channel, outlined in red, appears unimaginative and sterile by comparison to what exists now and what could be done to improve this area.



These show the short sections of the creek that will be narrowed and moved to the far side of the channel under Phase 3 work. These sections serve as habitat for beaver, otter, turtles, and a variety of birds. The photos were taken from the paved nature trail. After relocation and rechanneling, the creek will be nearly out of sight from this point, which serves as a superb wildlife viewing area and great value to the community.



Close proximity of narrowed section of creek to Putah Creek Road. The Phase 3 realignment will also bring the creek close to the south levee.

Stagnant pond (see arrow) created to obtain fill for Phase 2 realignment. Phase 3 funds should be used to fill it and plant vegetation.



Contractually, soils are required to be compacted, which has inhibited the growth of many of the native plants that have been planted by volunteers. Efforts to amend soils are laudable but unlikely to solve the problem of deep soil compaction.



Invasive plants, including Arundo, Tree of Heaven, Himalayan Blackberry, and Eucalyptus have taken over sections of the creek that were realigned under Phases 1 & 2. Phase 3 funding should be used to complete the vegetation improvements that were supposed to have been implemented under those grants.



One of the inhabitants of the unimproved section of creek is a rare "piebald" beaver. Approximately six beaver occupy this stretch of creek, feeding mostly on native water plants.



A black-crowned night heron is one of the many birds that are more commonly seen in the unimproved section of creek that will be narrowed under Phase 3. Others include green heron, wood ducks, hooded mergansers, kingfisher, and snowy egret as well as pond turtles.

LAW OFFICE OF DONALD B. MOONEY

129 C Street, Suite 2
Davis, CA 95616
530-758-2377
dbmooney@dcn.org

June 24, 2016

**VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

Roland Sanford
General Manager
Solano County Water Agency
810 Vaca Valley Parkway #203
Vacaville, CA 95688

Colonel David G. Ray, District Commander
Sacramento District
U. S. Army Corps of Engineers,
1325 J Street
Sacramento, CA 95814-2922

Gina McCarthy, Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Thomas Howard, Executive Director
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

Jared Blumenfeld, Regional Administrator
US EPA, Pacific Southwest, Region 9
75 Hawthorne Street
San Francisco, CA 94105

Pamela C. Creedon, Executive Officer
Central Valley Regional Water
Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

***Re: 60 Day Notice of Intent: Winters Putah Creek Nature Park Channel
Realignment (SPK-2011-00371)***

To Whom It May Concern:

On behalf of the Winters Friends of Putah Creek ("WFPC") and other interested parties, I am writing to provide notice of WFPC's intent to sue the Solano County Water Agency for its violation of section 404 of the Clean Water Act, 33 U.S.C. § 1311. This letter is provided pursuant to the 60-day notice requirement of the citizen suit provision of the Clean Water Act, 33 U.S.C. § 1365. The reasons for this notice are set out in greater detail below.

At the March meeting of the Lower Putah Creek Coordinating Committee, SCWA announced that it intended to proceed with Phase 3 of the Winters Putah Creek Nature Park Channel Realignment (Project). Continuing the Project, particularly Phase 3 will result in irreparable harm to the environment and violates the Clean Water Act (CWA), 33 U.S.C., § 1311.

I. VIOLATIONS OF THE FEDEAL CLEAN WATER ACT

A. SCWA FAILED TO MEET THE WETLAND MITIGATION REQUIREMENTS IN PHASES 1 AND 2

Phases 1 and 2 of this Project allowed for the filling of 14.32 acres of waters of the United States, subject to a mitigation requirement for creation of 18.4 acres of riparian wetlands, emergent wetlands and open water. (See Permit SPK-2011-00371, Special Condition 1 (September 12, 2011)). In implementing Phase 1 and 2, SCWA failed to create the new wetlands. The floodplains, where the wetlands could have been created, were instead constructed as a planar surface sloping at 1 to 2 percent to the channel, draining water away rapidly, holding no water, and supporting no wetlands. Thus, there are no areas in Phase 1 and 2 that meet the wetland definition for wetland hydrology, soils, and plants.

B. WETLAND MITIGATION WILL UNAVOIDABLY BE UNMET IN PHASE 3

Phase 3 is designed to fill 1.8 acres of waters of the United States. The permit, however, requires that Phase 3 mitigate for the loss by the creation of 2.4 acres of new channel and active floodplain. (Permit SPK-2011-00371 (August 12, 2014).) The Project design does not include 2.4 acres of new channel or floodplain. As designed, Phase 3 fails to meet the mandatory mitigation requirements.

C. DIRTY FILL USED IN PHASE 3

SCWA placed dirty fill in the Phase 3 Project area during February and March 2016. Jeff TenPas for the WFPC notified the Army Corps of Engineers of the unlawful fill in the Phase 3 Project area. (Attachment A: Email dated February 15, 2016 from Jeff Tenpas to William H. Guthrie, with photos attached; and Attachment B: Email dated March 30, 2016, from Jeff TenPas to Carol Scianna and William H. Guthrie with photos attached.) Although the permit for Phase 3 requires the use of "only clean and nontoxic fill material", SCWA and its contractors used fill material that contains debris in the form of shreds of black plastic.

D. VIOLATION OF CONDITIONS FOR NATIONWIDE PERMIT NUMBER 27

Nationwide Permit (NWP) 27 is restricted from allowing the conversion of open channel stream habitat to another aquatic habitat type. In Phases 1 and 2, SCWA reduced the open channel area by 14.32 acres. Under NWP 27, the only allowable mitigation was in the form of at least 14.32 acres of open channel. In direct contravention of the terms of NWP 27, SCWA's Section 404 permit (SPK-2011-00371, Sept 12, 2011) allowed mitigation to be in the form of "seasonally flooded riparian wetlands, emergent wetlands, and open water channel". In Phase 3, there is a proposed loss of 1.8 acres of waters of the United States, which is the result of narrowing the stream channel, and the permit allowed mitigation to be in the form of "new channel or active floodplain." (Permit SPK-2011-00371 (August 12, 2014).) Again, NWP 27 allows only for direct replacement of open channel with open channel.

E. VIOLATION OF NATIONWIDE PERMIT GENERAL CONDITION 6 - SUITABLE MATERIAL.

General Condition 6 requires that “no activity may use unsuitable material” as fill. In contradiction to General Condition 6, SWCA and its contractor used fill in Phases 1 and 2 (and proposed in Phase 3) that was a heavy clayey material, low in nutrients, and organic matter. The fill is too high in clay, too compacted, and has such low permeability that it does not allow water to move through it. Material of this texture is not normally found in a floodplain soil, and it is not suitable material for floodplain fill. Because the fill was used to narrow the channel, it essentially lines the channel, and cuts off the stream from the floodplain and the groundwater. Three highly detrimental effects result for the use of this bad fill: 1) water flow from the stream to the riparian forest has been cut off, as evidenced by the mature trees on the floodplain that are dying for lack of water; 2) the hyporheic zone, the ecosystem zone where stream and groundwater meet, has been eliminated along with the ecosystem services and aquatic life that occupy that zone; and 3) the movement of water from the stream and into groundwater has been impaired, probably severely. Using this material results in a failure to maintain a “critical characteristic” of the streambed, stream banks, and floodplain of the fill site. (See 40 C.F.R. §230.5(f)).

F. FILL IN VIOLATION OF 33 U.S.C. SECTION 408.

Fill has been placed in Phase 3 without the authorization required by 33 U.S.C. section 408. This violation of section 408 has been documented and reported to the Army Corps on at least two occasions. (See Attachments A and B.)

II. RELIEF SOUGHT

Pursuant to Section 309(d) of the Clean Water Act, 33 U.S.C. § 1319(d), and the Adjustment of Civil Monetary Penalties for Inflation, 40 C.F.R. §19.4, each separate violation of the Clean Water Act subjects the violator to a penalty for all violations occurring during the period commencing five years prior to the date upon which WFPC serve their notice of intent to file suit. These provisions of law authorize civil penalties of up to \$32,500 per day per violation for all Clean Water Act violations.

In addition to civil penalties, WFPC will seek injunctive relief preventing further violations of the Clean Water Act, 33 U.S.C. §1365(a) and (d), declaratory relief, and such other relief as permitted by law. Lastly, the CWA, 33 U.S.C. § 1365(d), permits prevailing parties to recover costs, including attorney’s fees and expert’s fees associated with this enforcement action.

III. PARTY GIVING NOTICE

Winters Friends of Putah Creek
c/o Donald B. Mooney
Law Office of Donald B. Mooney
129 C Street, Suite 2
Davis, CA 95616

IV. CONCLUSION

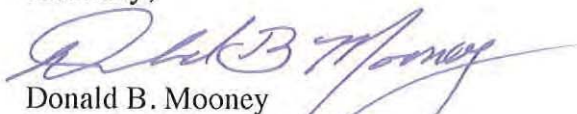
Upon expiration of the 60-day notice period, WFPC intend to file a citizen suit under the Clean Water Act for the above-referenced violations, and for any similar violations that occur after the date of this notice letter.

During the 60-day notice period, however, WFPC are willing to discuss effective remedies for the violations noted in this letter, and actions that might be taken to ensure future compliance with the Clean Water Act. Moreover, the 60-day notice period would be the appropriate time for SCWA to inform WFPC and the Army Corps of Engineers of any steps they have already taken to remedy the violations discussed in this notice. If any party named in this 60-day notice wishes to pursue such discussions in the absence of litigation, it is suggested that such party initiate those discussions immediately. If good faith negotiations are not occurring, at the close of the 60-day notice period WFPC will move forward expeditiously with litigation.

Counsel representing WFPC in this matter is listed below. Please direct all communications to WFPC at:

Donald B. Mooney
Law Office of Donald B. Mooney
129 C Street, Suite 2
Davis, CA 95616
530-758-2377
530-304-2424
dbmooney@dcn.org

Sincerely,


Donald B. Mooney
Attorney for Winters
Friends of Putah Creek

Attachments

cc: Jeff TenPas

ATTACHMENT A

ATTACHMENT A

Subject: Fill occurring, Friday Feb 12, 2016, on Putah Creek, Phase 3
Date: Monday, February 15, 2016 at 8:32 PM
From: Jeff TenPas <jtenpas@lycos.com>
To: "William.H Guthrie" <William.H.Guthrie@usace.army.mil>, "Marc.A Fugler" <Marc.A.Fugler@usace.army.mil>, "Wellman-Barbree, Ilene@DWR" <Ilene.Wellman-Barbree@water.ca.gov>
Cc: Donald Mooney <dbmooney@dcn.org>

To: USACE and CVFPB

Re: Fill occurring in Winters - presumably without 408 permit, or CVFPB permit

Hello All, on Wednesday or Thursday last week I saw a lot of fill was being brought into the Putah Creek Realignment Project - Phase 3 - in the area currently under consideration for a 408 permit and CVFPB permit. There were dump truck loads of soil stacked row upon row across a large area.

I checked into this on Friday to see what was happening. Most of the fill had already been leveled across a half acre or more, there were about 15 piles remaining (photo 2496) covering what I estimate was less than 10% of the original area of fill piles. Another concerned person sent me a photo of a dump truck unloading (photo "dumping")

I went to see Disney Construction, the firm currently completing construction of the bridge, and talked to Charles Mason (707 315-1638, cmason@disneyconstruction.com) to find out what was happening. It appeared to me and Charles confirmed that Disney was unloading the fill there. I asked if Disney had permission, and Charles said they had permission from Rich Marovich and Solano County Water Agency to put the fill there. I called the City as the property owner, left a message, and got a message back from Carol Scianna confirming that the City was aware, and had been advised by Rich that the permits were in place to allow this.

I advised Charles Mason for Disney Construction that the permits were to the best of my knowledge not in place to allow this. This was late Friday afternoon, so I called the USACE and left a message.

I would have to estimate over 500 cubic yards of fill, and maybe 1000 to 2000 or more. Disney Construction should know how much.

The fill appears to be in violation of USACE and CVFPB permit requirements. Since this fill has probably not been sampled and tested, it may be just as unsuitable for use in the floodplain as the earlier fill.

On another subject. Downstream in the NAWCA 3 project area, a dozen or more large eucalyptus trees have been cut in the floodplain. The cutting has greatly reduced the overstory and the stream shading in this reach. The trees. The trees were cut in rounds, and the rounds and limbs and tops remain piled in the floodplain.

List of photos:

2496 - Mounds of fill remaining on Friday

2502 - Depth of fill

2504 - Filling wetlands, mounds in background

2507 - Already filled area in the foreground, mounds of fill in background

2522 - Excavator working on Friday

Dumping - Photo from Wednesday showing one dump load

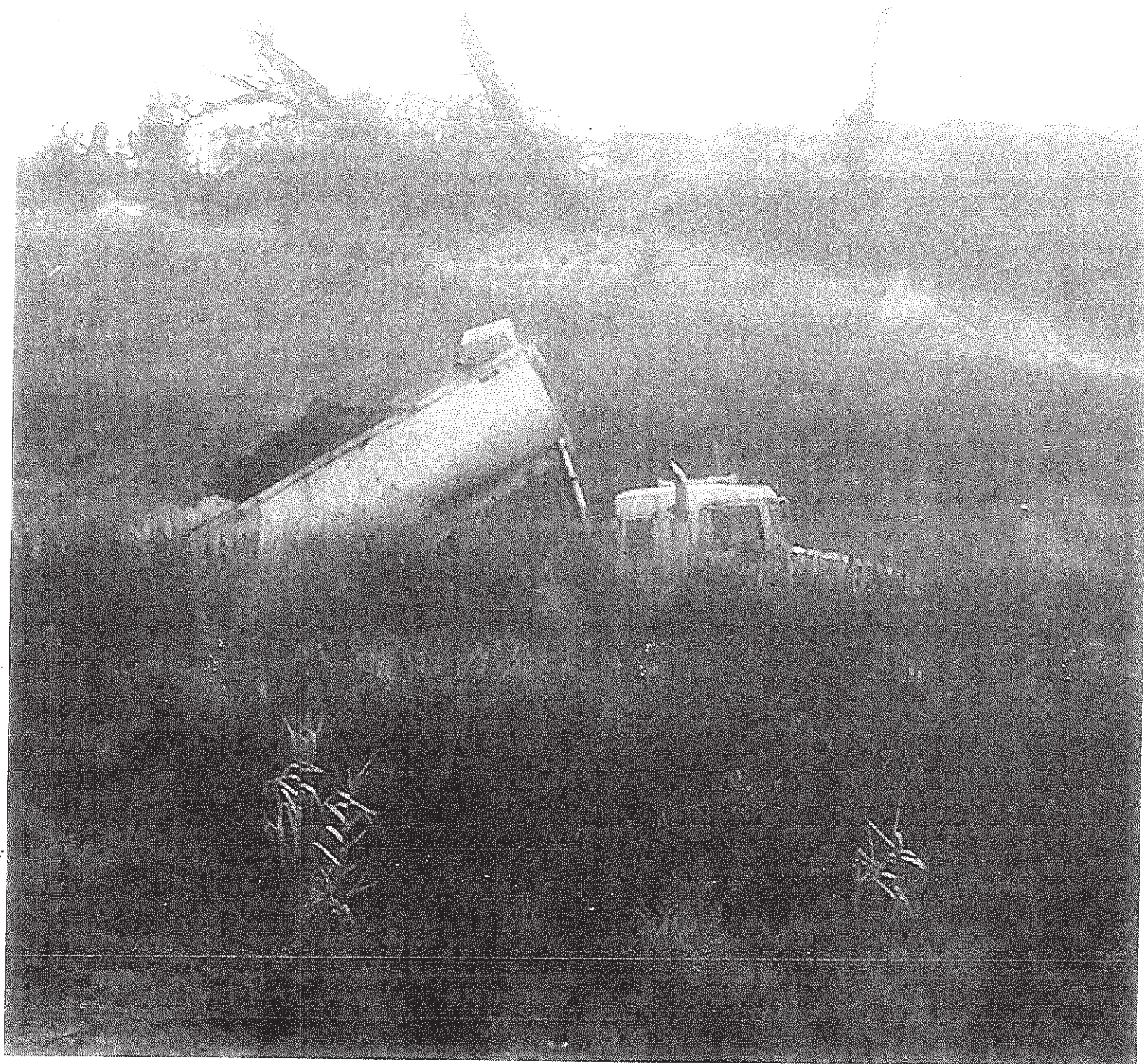
--
Please call or email if I can answer any questions, using work number from 7-4.

Sincerely yours,

Jeff TenPas
24 East Main St
Winters, CA 95694

530 795-3617 home, 707 562-8955 work













ATTACHMENT B

ATTACHMENT B

Subject: Fill currently going in Phase 3

Date: Wednesday, March 30, 2016 at 1:40 PM

From: Jeff TenPas <jtenpas@lycos.com>

To: Carol Scianna <cosmozz@sbcglobal.net>, <William.H.Guthrie@usace.army.mil>, "Wellman-Barbree, Ilene@DWR" <Ilene.Wellman-Barbree@water.ca.gov>

Hello All, there is new fill going on in Phase 3, and to the best of my knowledge there are no permits from the CVFPB or COE 408 for this. This is similar to the filling that went on last month.

I am wondering what is the story here.

Carol, does the City approve of this?

Is this legal? Where was the fill from? Was the fill tested? Is the fill suitable for the floodplain, sandy and not clayey?

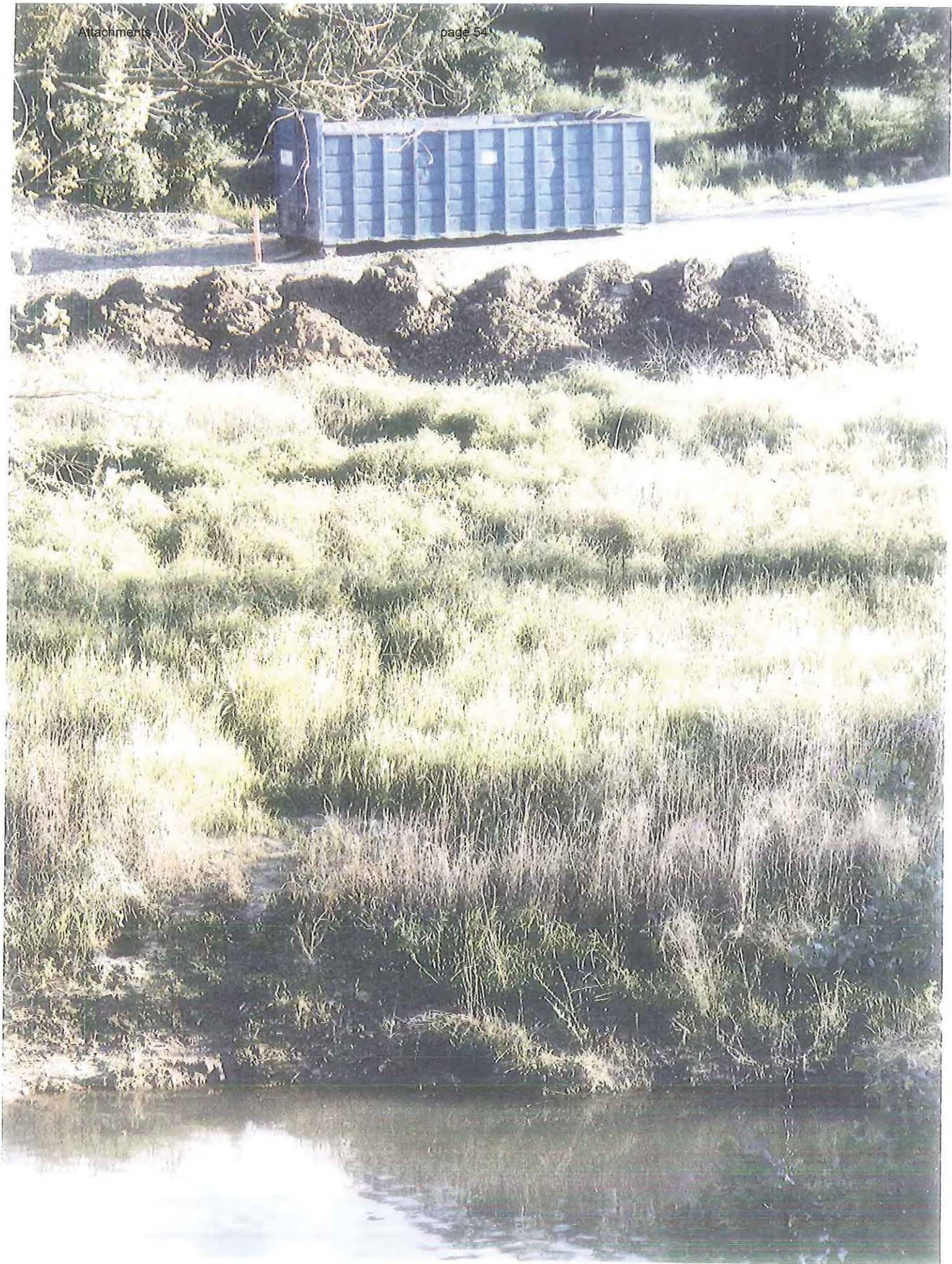
Was the site surveyed for western pond turtle and nests and nesting birds before starting work?

It seems as if filling will be done before permits are in place, presuming that CEQA and NEPA issues and wetland mitigation issues are resolved. If this and last months fill is unsuitable, will it be removed?

See photos attached:

1. New fill
2. Last months fill. The photo shows that fill had trash and debris in it, just the surface layer is showing.

--
Winters Friends of Putah Creek
Jeff TenPas, Chair
24 East Main St
Winters, CA 95694





Jeff TenPas
24 East Main St
Winters, CA 95694

May 20, 2016

By email to: CentralValleySacramento@waterboards.ca.gov.

Attn: Stephanie Tadlock, Environmental Scientist
401 Water Quality Certification Unit
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

Re: Comments on 5A48CR00145, Putah Creek Restoration Project-Upper Reach Program

To the Central Valley Water Quality Control Board:

Please accept these comments on the Clean Water Act ("CWA") 401 certification for 5A48CR00145, Putah Creek Restoration Project-Upper Reach Program). These comments are submitted on behalf of Winters Friends of Putah Creek and Jeff TenPas. Commenters request that the Water Board deny the 401 certification for Solano County Water Agency's Putah Creek Restoration Project-Upper Reach Program.

Our overriding concern is that the project will harm existing beneficial uses and water quality of Putah Creek. Our comments will show how the project fails to consider or avoid potential affects.

To put the proposed project in context, compare the past disturbance of Putah Creek and what is now proposed. We know that in its past Putah Creek has experienced some disturbance, especially gravel mining. The project proponent bases the need for the project on this disturbance, but does not show its extent.

Now the SCWA proposes channel modification work along 24.2 miles of Putah Creek with channel modification in 16 of 17 stream segments. The application proposes a maximum of over nine million cubic yards of fill. Channel modification imposes extreme disturbance on the channel and floodplain. The proposed project will exceed all previous disturbance of the creek and floodplain.

The DEIR does not paint a clear picture of the proposed project, the tree-cutting, clearing and grading, filling and earthmoving, and work with heavy equipment. But we can anticipate what project construction work would proceed like previous work in Winters Putah Creek Nature Park where the SCWA did a channel modification project. The work in Winters began with clearing a mile of floodplain of over 90% of the trees and other vegetation, then bulldozers cleared stumps, and earthmovers scraped the floodplain flat. Next the stream was dried up and rerouted through a pipe. Then earthmovers pounded over almost ever inch of the floodplain, going round and round and back and

forth spreading fill, compacting the ground. In the end the floodplain was transformed to a flat hard compacted impervious plain with a few standing cottonwood trees.

We are dismayed by this approach with its uncontrolled use of heavy equipment and drastic disturbance. Some use of heavy equipment may sometimes be needed. But earthmovers and bulldozers are blunt and crude tools to use in a creek and floodplain and can never reproduce the complexity of undercut stream banks, complex channel form, and complex floodplain topography. Earthmoving equipment can only build a grossly simplified floodplain and channel while severely compacting the project area. To spread this treatment over miles of stream is hard to conceive.

How much disturbance will come from the proposed project? How many miles of stream will be disturbed, what percent disturbed, how many trees cut down, how many acres of riparian forest cleared? Based on the application, it appears 640 acres will be cleared and graded and filled or otherwise disturbed.

Following are specific comments with citations to the CWA, state and regional water quality standards, and the Section 404(b)(1) Guidelines for the CWA:

1. Section 404(b)(1) Guidelines for the Clean Water Act provide guidance as to the steps to be taken to maintain beneficial uses during fill of the waters of Putah Creek. The overarching principle of the Guidelines is that the applicant must show the project will not have adverse impacts. According to the Guidelines “dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact” and “destruction of special aquatic sites, such as filling operations in wetlands, is considered to be among the most severe environmental impacts (Section 230.1 (c) and (d)). The application fails in ways listed in the following comments to show the project will not have adverse impacts.
2. The project will use unsuitable fill in violation of Section 230.5 (f) and (h), Section 230.11 (a), and Section 230.20. These sections of the Guidelines require that the proposed fill should be suitable to the proposed fill site. A critical characteristic of floodplains is the permeability of the soils and channel substrate. A vast amount of imported fill is proposed in this project. The SCWA proposes to use spoils of the South Putah Canal project, the same source that was used for prior work in Putah Creek with detrimental results. The spoils are clayey and placement with heavy machinery compacts this material to a nearly impermeable state. The use of these spoils for the Winters project resulted in a drastic lowering of permeability of the channel bed and banks and the floodplain, a drastic reduction in groundwater movement, and effectively sealed the floodplain off from the stream, and sealed the stream off from the groundwater. The clay loam fill has permeability that is an order of magnitude lower than native floodplain soils. Heavy compaction reduces permeability by another order of magnitude. Any fill must be matched to the critical characteristics of the project sites (230.11 (a)). The application must be revised to include an assessment of the critical permeability and texture and density characteristics of the floodplain soils and channel bed and banks and a plan to preserve the critical characteristics.

3. If the proposed project is allowed to proceed with imported clayey fill and earthmoving equipment running all over acres of floodplain, it will irreversibly alter the floodplain habitat. We have seen in Winters what this manner of project produces, where parts of the floodplain were permanently converted from healthy riparian forest habitat to poor unproductive floodplain without topsoil and without groundwater, where the remnant of cottonwood trees left are dead and dying. Given that the same source of fill and same manner of heavy equipment work are proposed, the same outcome is expected. A loss of good riparian forest habitat is expected, and practically speaking it would be an irreversible effect. What funder would pay to undo it? And what agency would work on restoring the “restored” floodplain?

This irreversible commitment of resources requires analysis according to CEQA and NEPA, and that analysis is missing. CEQA and NEPA are not being complied with. State CEQA Guidelines (14 California Code of Regulations [CCR] 15126.2[c]) and NEPA (40 Code of Federal Regulations [CFR] 1502.16) require analysis of significant irreversible and irretrievable effects. CEQA requires evaluation of irretrievable resources to ensure that their use is justified. NEPA requires an explanation of which environmental impacts are irreversible or would result in an irretrievable commitment of resources.

4. Section 230.11 (b) of the Guidelines requires that consideration shall be given to project effects on the hydrologic regime, including the hydrology of the floodplain and groundwater. The DEIR does not consider the effects of channel narrowing, clayey fill, and compaction from equipment traffic. These factors are all certain to reduce streambank and bed and floodplain permeability and groundwater movement and recharge.
5. Subpart D of the Guidelines requires that potential impacts on biological characteristics of the aquatic system must be considered. Mussels are particularly at risk from any in-channel work, and effects on mussels were not considered at all. Mussels are in general decline across California, and channel filling and realigning projects will surely kill any that are present. Given the scale of the project, it is possible that the project could destroy all or a large percentage of native mussels in Putah Creek. Mussels should be considered in the application and DEIR (Section 230.31).
6. Other wildlife must be considered (Section 230.32) and have not been. The DEIR study did not include surveys for wildlife, their habitat, or distribution. The project plan does not include a strategy to avoid impacts except to say there will be pre-project surveys and avoidance. It is too late to plan and mitigate or avoid impacts when the project is already planned and contracted. The scale of the project and intensity of disturbance of channel realignment risks cumulative effects. The proponent must assess effects of the project on the habitat of beaver, otter, western pond turtle, migratory water fowl, and song birds, consider what the project affects might be, and include plans to avoid or minimize disturbance and assess how the alternatives might lower disturbance. This is required before issuance of a permit.

7. Inadequacy of Wetland Delineation. The draft wetland delineation attached with the application is based on a mere 40 transects for a 24.2 mile segment of Putah Creek, or one transect every 3200 feet. It is hardly surprising that the delineation identified only 0.4 acres of wetlands above the stream high water mark, but this is not a likely event. A project that includes so much channel realignment, such extreme site disturbance, and such a commitment of natural and financial resources, must have a thorough wetland delineation commensurate with the level of disturbance.
8. Subpart E of the Guidelines requires assessment of potential Impacts on special aquatic sites. Special aquatic sites must be considered in projects affecting waters of the United States (Section 230.41, 230.43, and 230.45). This includes wetlands, pool and riffle complexes, and vegetated shallows. The DEIR fails to identify and map these sites, and thus cannot avoid or plan for avoidance or mitigation. The cursory wetland delineation is wholly inadequate.
9. Project effects on municipal and private water supplies (Section 230.50). Groundwater recharge will be affected by filling gravel pits, narrowing channels, reducing the wetted channel boundary, and by importing low permeability fill, and compacting the floodplain soils by construction activities. Filling the gravel pits alone will make a dramatic reduction in groundwater recharge. The City of Winters depends entirely upon groundwater for its water supply. The impact of the project on groundwater must be analyzed and disclosed.
10. The DEIR and application for certification should include a map of the past disturbances that are the purported basis for the project. The DEIR should disclose the location of past disturbance and their size and location relative to the proposed work sites.
11. Effects on recreational use and aesthetics are required to be considered and are not assessed and disclosed (Sec 230.52, Sec 230.53). The SCWA currently plans a Phase 3 realignment project in Winters that will affect recreational use in Winters by moving the stream channel. The current location of the channel affords walkers the closest and best views of the creek and great views of wildlife. Moving the channel will move it out of sight of people walking on a popular trail. This will deprive walkers of the existing views of the creek and wildlife.
12. Effects on water contact recreation need to be considered in order to maintain this beneficial use (Sec 230.52). There are swimming holes on Putah Creek that should be identified, mapped, and avoided in order to maintain this beneficial use. There is one such site in the City of Winters a few hundred feet upstream of I-505. Impacts on swimming holes should be avoided, and if adversely affected should be mitigated by construction of a compensatory swimming hole.
13. Testing Fill Materials (Sec 230.61). The application does not disclose information on the physical testing of the fill materials as needed based on Sec 230.61. Testing of the fill materials is needed in order to assess the project effects on permeability of the project area and the project's potential effects on groundwater movement. Fill should be tested for texture, for compaction,

and for permeability after compaction.

14. Actions to Minimize Adverse Effects (Part 230, Subpart H). Subpart H provides for taking actions to minimize adverse effects of projects in accordance with 230.10 (d). The applicant has not identified actions to minimize adverse effects, nor even taken the prerequisite step of adequately assessing potential adverse effects. Using clayey fill has potential adverse effects on the hyporheic zone, groundwater supply to the floodplain, groundwater recharge to a municipal water supply: these effects can be minimized by choice of a more suitable fill material. Effects on floodplain and channel permeability and groundwater movement can be avoided by limiting the use of large machines, by running machines on mats to avoid compaction, and by mitigation with actions to decompact the fills. Effects on special aquatic sites can be minimized by surveying to identify the sites and avoiding or mitigating. Effects on groundwater recharge can be avoided by changing fill, maintaining wetted area, adding wetlands. Effects on aesthetics and recreation can be avoided by keeping the creek in its current location in Phase 3 in Winters.
15. Failure to maintain and support beneficial uses of Putah Creek. The DEIR and the Programmatic 401 Water Quality Certification Application - Putah Creek Restoration Project – Upper Reach Program, Solano and Yolo Counties, California do not demonstrate that the project will support existing beneficial uses. State policy for water quality includes the policy contained in State Water Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California). This policy requires that wherever the existing quality of surface or ground waters is better than the objectives established for those waters in a basin plan, the existing quality will be maintained. Beneficial uses for Putah Creek are defined in the Basin Plan for the Sacramento River Basin. The beneficial uses to be maintained in Putah Creek include municipal water supply, agricultural supply, water contact recreation, non-contact water recreation, warm freshwater habitat, warm spawning, reproduction, and early development habitat, and wildlife habitat. The proposed project fails to maintain these existing beneficial uses.
16. The application is incomplete (23 CCR § 3856). The application does not include a complete project description. The application does not contain a description of steps taken to avoid, minimize, or compensate for loss of or significant adverse impacts to beneficial uses of waters of the state. The application does not include a description of the adverse impacts of other projects by the applicant in the last five years, including the adverse impacts of the projects in Winters on the riparian forest, groundwater recharge, wetlands, water contact recreation, and wildlife.

The Winters Friends of Putah Creek request to be informed of future correspondence and additions to the application file and decisions on the application. If ever the application is resubmitted or completed, we request to be given notice and opportunity to comment on the complete application.

Yours truly,

Jeff TenPas
Winters Friends of Putah Creek
24 East Main Street
Winters, CA 95694

To: Solano County Water Agency, 810 Valley Parkway, Suite 203, Vacaville, CA 95688

From: Jeff TenPas, 24 East Main St, Winters, CA 95694

Re: Comments on Initial Study and Mitigated Negative Declaration, NAWCA 3 – Lower Putah Creek Floodplain Restoration

I am a resident of Winters, live in close proximity to the creek, and spend time walking along the creek almost daily. I am also an environmental scientist with training in soils, hydrology, wetland and riparian ecology, stream ecology, and restoration ecology (MS-Soil Science, UC-Davis). I have worked for the US Forest Service as a leader in its watershed restoration program for the last nine years.

Following are comments submitted for the NAWCA 3 project.

1. I note that the SCWA has inexplicably scheduled the adoption of the Negative Declaration for its Consent Calendar for the agency's board meeting on June 11, 2015, the same day as the deadline for public comment. The SCWA Board cannot meet its duty under CEQA to consider public comment and respond to public comment without time for consideration comments, response to comments, and discussion(CEQA Guidelines 15002(j)).

15002 (j) Public Involvement. Under CEQA, an agency must solicit and respond to comments from the public and other agencies concerned with the project. (See: Sections 15073, 15086, 15087, and 15088.)

2. Soils Impact and Biological Resources -Riparian Habitat. The project will have the effect of degrading the soil and permanently suppressing and interfering with the natural growth of riparian vegetation. The project proposes the import of 21,200 cubic yards of fill (Figure 2 -Area of Potential Effects Map). Figure 2 tabulates the project impacts in terms of area disturbed, cut material produced, fill material needed, and net import material. The proposed import material is spoils from the Putah South Canal (Initial Study, Draft Cultural Resources Report, and pers comm. Rich Marovich, at Winters Putah Creek Committee Meeting, May 2015). Tree, shrub, and plant growth will be stunted if this fill is used.

The earlier phases of this project used the same fill. As a soil scientist and expert on the subject, I have examined this soil material. It is clayey, highly weathered, low in nutrients, and has very low permeability. It is very poor medium for riparian plant growth. The inhibitory effect of this fill on riparian plant growth and riparian ecosystem health is clear to see in the earlier phases. There are large areas where trees planted over two years ago are no taller than when planted and desiccated in summer, the ground cover is dried grass and invasive weeds. This should not be so in a floodplain, but is so because of the soil, because of low water storage and permeability and negligible nutrient supply, an unnatural situation for riparian forest. This effect will last indefinitely, leaving an unhealthy forest, stressed trees, and significantly lower cover and riparian habitat value for riparian and aquatic species – including habitat value that

currently exists for special status species, Swainson's hawk, valley elderberry longhorn beetle, and northwestern pond turtle. There will also be aesthetic impacts from the loss of habitat health and resilience. These impacts are significant because they affect so many people and will exist essentially to perpetuity.

There is no reasonable mitigation for this. The alternative is to bring in a more suitable topsoil material with a balance of silt, sands, and clays so as to mimic the riparian soils that naturally exist there now. The only other mitigation for using this spoil material would be to mix it extensively with additional silt and sand and organic matter so that the mix would constitute a suitable riparian soil. Volumetrically, the spoils would need to be less than half the total mix.

3. Biological Impact - Riparian Habitat. According to the MND and attachments, this project will cut 214 riparian trees, and the trees are almost exclusively native hardwoods. This will severely reduce cover, wildlife habitat, and stream shading. The importation of unsuitable fill will forever retard the reestablishment and recovery of the forest. This is significant for wildlife and for aesthetic reasons.
4. Recreation Impact – Loss of Swimming Hole. The proposed project will have the effect of destroying the sole remaining swimming hole in the creek in Winters – completely depriving the public and especially the youth of Winters of the pleasure of a swimming hole. The existing swimming hole is a deep wide spot in the channel along the north bank about midway between the upstream end of the project and the I 505 overpass, and the "Project Channel Work Map shows this segment of the stream is to be filled and bypassed with a new channel. The swimming hole has the depth and width and slow current to be swimming hole and an overhanging eucalyptus tree for a rope swing. The proposed new and altered channel does not include a new swimming hole.

The impact is significant. There is large youth and disadvantaged youth population in Winters that can and does use the swimming hole. The disadvantaged youth especially may not have the municipal pool as an alternative. And in any case an artificial pool is no substitute for a natural swimming hole. Based on personal observation from almost daily walks, the swimming hole is often used by ten to twenty youth per day on many summer days so there may be almost a thousand recreational user days a year, and with a little improvement the swimming hole has the potential to increase to several thousand user days a year. This is no small contribution to the recreation opportunity, and especially water contact recreation. Without the swimming hole the youth of Winters will be deprived of their best opportunity for swimming in the creek, contact with nature, and a prime and scarce opportunity for healthy outdoor recreation. Would this not be a significant impact to you if you were young and it was a hot summer day?

In order to mitigate this impact, the project if it goes forward should provide a new and even better swimming hole. It would not be complete with a mature tree for a rope swing, so would need to be designed next to a good tree or two.

5. Aesthetics Impact - The project will ruin the aesthetics of the floodplain. A natural floodplain has a heterogenous assemblage of geomorphic components including natural levees, undercut banks, flood overflow channels, and back swamps. These different niches support a variety of trees, shrubs, grasses and forbs, insects, birds, and mammals. The different habitats and flora and fauna provide variety and interest for people exploring the environment.

The proposed project proposes to cut a mature native riparian forest, bring in fill, compact it with heavy equipment, and build an artificial flat floodplain. The plan is to “grade the existing floodplain to a uniform 1-2 percent slope, starting from approximately 18 inches above the low-flow water surface elevation.” The homogeneity of such a floodplain is so unnatural it defies any concept of restoration ecology and working to a reference condition.

The loss of variety in all aspects of the environment is a great loss, a significant loss, to humans. It will take longer than several lifetimes for natural geomorphic processes to reproduce the natural floodplain features that the project will obliterate.

This could be mitigated by applying restoration ecology or simply taking a much lighter approach and maintaining the existing variety in the riparian environment.

6. Biological Resources Impact - The project will degrade the habitat for wildlife and sensitive species. I repeat from the comment above that a natural floodplain has a heterogenous assemblage of geomorphic components including natural levees, undercut banks, flood overflow channels, and back swamps. These different niches support a variety of trees, shrubs, grasses and forbs, insects, birds, and mammals. Some of the plants and animals that may be affected are special status species including Chinook salmon and northwestern pond turtle.

Natural floodplain habitat provides a variety of opportunities for shelter and refugia for salmon or turtle during flood events. Loss of the refugia risks the loss of individuals of these sensitive species, as well as for other non-sensitive species. The overall homogenization of the riparian habitat risks losing part of the natural assemblage of flora and fauna and the resilience of the habitat to disturbance.

This effect can be mitigated by taking a very light hand in floodplain alteration, or by restoring any loss of habitat diversity.

Alan Pryor
2736 Brentwood Pl.
Davis CA 95618

August 9, 2016

Brian Luke, Natural Resources Specialist
US Army Corps of Engineers, Sacramento District
1325 J Street, Room 1460
Sacramento, California 95814-2922

Sent via email: Brian.J.Luke@usace.army.mil

Re: Comments on for Putah Creek Restoration Project-Upper Reach Program - Number 19047-1

Mr. Luke:

These comments pertain to the proposed Putah Creek Restoration Project-Upper Reach Program – Phase III by the applicant Solano County Water Agency (SCWA).

This proposed project will include restoration activity for rechannelization using massive amounts of imported and aged dredged soils that are inappropriate for use as riparian soil. It will also extensively use very large earth-moving equipment to reconfigure the creek channel and compact the new floodplain in the same manner as recently done in the Phases I and II in the Winters Putah Creek Parkway Project. This has resulted in extensive waterways and floodplain habitat degradation which has not been mitigated nor is it expected to be mitigated in any reasonable time-frame due to the nature of the degradation as more fully discussed below.

I have both general and specific concerns about the Phase III project based on the lack of adequate disclosures and the paucity of detailed information about the project.

My general concern is that a full EIR has never completed for the project that adequately meets disclosure standards imposed by NEPA/CEQA. Instead the entire Winters Putah Creek Parkway project has been planned under a non-project specific Master Plan:

1) Unjustified Use of a Master Plan vs a Project Specific EIR

Firstly, I do not believe the standard for the use of a Project Master Plan (in lieu of an EIR) has been met under NEPA/CEQA in this instance. The Master Plan clearly stated that additional studies and disclosures would be provided for the projects envisioned under the Master Plan consistent with NEPA/CEQA. These additional studies and disclosures must include a more exhaustive consideration of cumulative effects, alternatives, and project-wide mitigation measures to properly account for the greater variability in site considerations over the range of individual projects considered in the Master Plan. Unfortunately, rather than meeting this higher

bar, the current project continues the pattern of insufficient disclosures and considerations followed for Phases I and II.

More specifically, many of the specific features and practices proposed in the current Phase III project have already been recently unsuccessfully implemented in the ongoing industrial scale restoration project undertaken by the SCWA for channel realignment in Phases I and II by the Solano County Water Agency as more fully discussed below.

Although, applicant is acutely aware of these problems, applicant has not disclosed in the current application that the results of these recent efforts in the Winters project have been demonstrably poor with respect the successful re-vegetation of the newly developed floodplain in the Winters project as a result of the rechannelization of the creek. For instance, thousands of new native plantings at the Winters project have died or are stunted or in the process of dying despite repeated replantings and this information is not disclosed in the current application.

Further, applicant is directly aware that these past failures are caused by the specific type and compaction of the alien imported dredged soil used as fill in the Winters project Phases I and II. Unfortunately, the current application for Phase III does not adequately disclose these shortcomings nor are alternatives or mitigations discussed as is required under NEPA/CEQA. Nor is there any discussion or quantitative analysis in the current Phase III application that discusses why these failures have occurred and how they be prevented in the Phase III project. This is inconsistent with the requirements under NEPA/CEQA.

The Winters project failures and shortcomings have been publicly explained by Dr. Peter Moyle (a project consultant) who stated that these restoration activities are experimental in nature and have not been implemented before except in the failed Phases I and II. The experimental nature of these proposed activities in the Phase III of the project has not been adequately discussed in the application which otherwise functionally proposes to use the same rechannelization methodology with the same soils and compaction techniques that have previously used in the failed revegetation in Phases I and II. This lack of disclosure and proposed mitigation is inconsistent with the requirements under NEPA/CEQA.

More specifically, the existing Phases I and II rechannelization project shortcomings have heightened community concerns about the viability and advisability of the projects proposed in the current Phase III application which proposes to use many of the same failed techniques and methods as used in the earlier phases of the Winters project. These specific concerns not addressed in the Phase III application before the ACOE as more fully discussed below:

2) Insufficient evidence has been provided demonstrating that the new proposed projects will not adversely impact existing plant and animal species

There are literally dozens of plant and animal species that could be adversely affected by the type of radical industrial-scale transformation of the creek and new floodplain as have been demonstrably shown to have occurred in Phases I and II of the Winters Putah Creek Parkway

realignment project. Unfortunately, there has been no quantitative pre-and post-project assessment of the populations of almost all affected species ranging from mussels to insects to fish to song and migratory birds to numerous mammals including mink, otters, and beavers in the Phase III project making such assessments impossible to estimate in the rechannelization sub-sections.

Indeed, the only conclusive assessments that can be made about the project impacts on habitat in the Winters project have shown the re-vegetation efforts on the newly constructed floodplain have miserably failed. Unfortunately, these failures and the attendant adverse environmental impacts are not reported in the project application and, by NEPA/CEQA standards, the application should be rejected on this basis alone.

Further, as discussed above, many other plant and animal impacts have NOT been adequately identified nor has proper mitigation been completely and adequately proposed to minimize such impacts as required under NEPA/CEQA. As a result, substantial harm may be imposed on the plant and animal communities in the proposed project areas to their detriment. Under NEPA/CEQA, a careful inventory of all such potentially affected species must be taken and potential adverse effects must be identified with proposed mitigations for each affected species. In this absence, this application should be rejected for insufficient information under NEPA/CEQA standards.

Additionally not discussed are the number of trees and plants that are expected to be removed and the number of animals that are expected to be killed due to habitat destruction including special species of interest such as mussels and the Western Pond Turtle.

3) Insufficient evidence has been presented demonstrating that the project will not adversely impact existing Putah Creek water quality

Applicant has claimed in the past that water quality will be improved with cooler temperatures prevailing by eliminating pools of water where, it is claimed, the direct sunlight and slow moving water allows temperatures to rise to unacceptable levels. Unfortunately, there has been insufficient evidence to support this claim. In contrast, other stream temperature measurements have been taken upstream and downstream of some preexisting stream pools by other parties that show, contrary to applicant's claims, that there is very little temperature differential in the water passing through these pools and less than that observed in the reconfigured open stream bed itself. This is likely due to the shading over existing pools by the riparian canopy and the depths of the pools allowing temperature buffering.

Additionally, the larger surface area size of the pools allows for extensive nighttime evaporative cooling and black body radiation cooling in those pools. In contrast, the water in the reconfigured channel is directly exposed to the sunlight because the riparian canopy has been destroyed thus allowing increased sunlight to strike the exposed water on a per square ft of surface area basis. This can result in increased rather than decreased water temperature rises compared to preexisting conditions.

Compliance with NEPA/CEQA requires that an extensive survey of temperatures along the length of the proposed project must be taken, analyzed based on upstream flow and volume characteristics, and fully reported in the application. Additionally, quantitative projections of newly resultant temperatures post-project must be made with substantiation as to the methodology employed consistent with information already obtained at the Winters Putah Creek Parkway Project Phases I and II and other disturbed and undisturbed areas of the creek. In the absence of disclosure of this information, this application should be rejected due to the absence of sufficient information as otherwise required by NEPA/CEQA.

4) Insufficient evidence has been provided demonstrating that the project will not adversely impact existing ground water quantity and quality

Putah Creek is an undeniably important source for groundwater regeneration along the entire length of the stream and particularly where gravel pools have formed allowing for extensive infiltration into underground aquifers through the porous soils. By contrast, newly configured stream beds have had such water percolation almost eliminated because of the extensive hard pan created by the alien clayish, and heavily-compacted dredging spoils. There has been no analysis by the project proponents of the impacts on groundwater by the proposed project and this application cannot be properly approved until this information is provided and fully analyzed by experts.

Because this soil will be heavily compacted and virtually impermeable as evidenced by the floodplain fill used in the Winters project Phases I and II, this would have a qualitatively enormous but quantitatively unspecified adverse impact of the percolation of water through the fill to the original stream bed (adversely affecting existing riparian growth) and below to underground aquifers. However, there is absolutely no assessment in the application by a qualified engineer of these potential adverse impacts.

Further, the applicant does not provide any details as to the nature of the soil, its chemical and mineral composition, or its hydrologic characteristics such as water permeability and moisture retention once the fill is compacted. This lack of specificity is not consistent with NEPA/CEQA demands for proper certification and this application thus cannot be properly approved based on the lack of this sufficient information alone.

5) Insufficient evidence has been provided demonstrating that the project will not adversely impact other existing human beneficial uses

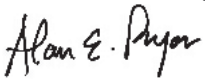
There has been no discussion or quantitative information provided identifying other human beneficial uses of the proposed project particularly including swimming, fishing, and rafting or canoeing. In the absence of such identification and proposed mitigations, the project's impact on such beneficial uses by humans cannot be evaluated and this application cannot be properly approved until such information is provided.

As an example, a recent email was sent out by the Putah Creek Council extolling the opportunities for summer recreation on Putah Creek (see below). All of the pictures of the creek in this newsletter show broad expanses of the creek such as pools or wide and deep slow moving sections of the creek. The activities proposed in the application indicate that these broad expanses and slow moving sections of the creek will not be possible after the channel realignment process. This would clearly adversely affect these beneficial human activities on Putah Creek in the future which adverse impacts have not been properly analyzed in the application nor mitigations proposed such that approval in this absence would be unlawful.

In summary, this application is long on suggested or claimed qualitative benefits that the applicant proposes will be realized by this project but short on substantiation and documentation of mitigations and any quantitative proof is completely missing. Indeed, comparison with the damage wrought in the Winters Putah Creek Parkway project Phases I and II suggests the proposed benefits will not be realized for decades, if ever, and the applicant has not otherwise provided any quantitative information to the contrary. As such, this application cannot be lawfully approved under NEPA/CEQA law in its current form

Please inform me of future correspondence and resubmissions or additions to this file and decisions rendered on the application. Thank you in advance of this courtesy.

Respectfully submitted,



Alan Pryor
ozone21@att.net
916-996-4811 (cell)



Excerpts and Photos from July – August, 2016 Putah Creek Council Newsletter

..."It is summertime on Putah Creek and folks are out *floating, boating, (emphasis added)* hiking and *swimming (emphasis added)* along public sections of the creek like the Inter-Dam Reach (IDR), Lake Solano, Winters Putah Creek Nature Park, UC Davis' Putah Creek Riparian Reserve, and the City of Davis' South Fork Preserve.



...
...



...

...



July 31, 2016

Brian Luke
Natural Resources Specialist
US Army Corps of Engineers, Sacramento District
1325 J Street, Room 1460 Sacramento, California 95814-2922
Brian.J.Luke @usace.army.mil

Subj: Identification Number 19047-1

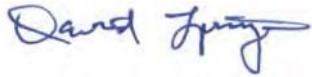
Dear Mr. Luke:

Thank you for the opportunity to reply to your public notice. I previously copied Marc Fugler and William Guthrie in your office on a letter I provided to SCWA regarding the proposed work, but will respond to you regarding this latest notice to directly and concisely address the areas of concern.

- The proposed channel modifications have no impact on flood control, and modifications to the SRFCP should not be justified on those grounds.
- The section of the channel in question cannot be classified as “natural” because of the two upstream dams and regulated flows, and no “rehabilitation” short of removal of the dams will make it so.
- The proposed rechanneling should not be referred to as “restoration”, since it will remove more habitat than it will replace.
- The existing elevation of the flood plane is entirely functional as has been demonstrated during previous high flows, and is well below the top of levees. As shown by bores drilled by SCWA in prior phases, compaction of soils used to create a flood plain have significantly impeded percolation and ground water recharge, as well as vegetation growth.
- The two prior phases of River Parkways grants have not been successful at removing or controlling invasive vegetation, including Eucalyptus, Arundo, Tree of Heaven, Himalayan Blackberry, Star Thistle, and Milk Thistle. It will require decades for planted trees to reach the height of existing native trees that are planned to be removed. To their great credit, the Putah Creek Council has led volunteer efforts to enhance the compacted soils and plant natives in those reaches.
- There is ample spawning gravel both upstream and downstream, as evidenced by the successful salmon spawning last winter.
- The proposed construction will be injurious to the public interest by eliminating existing beaver habitat and moving the creek approximately 100’ away from the existing protected public viewing area. Educators have used this area for school field trips. Beaver activity can be observed nearly every day, and otters, mink, herons, and migratory birds have also been observed.
- If the pending protected species status for the Western Pond Turtle is approved, the proposed work would likely violate NEPA. Pond turtles have been captured and classified by a local wildlife biologist and have been seen laying eggs in this area.

As a member of the citizen-based Winters Friends of Putah Creek, former chair of the City of Winters Putah Creek Committee, and creek restoration volunteer, I would appreciate your adding my contact information to your mailing list so I may receive future announcements directly. It was only through the diligence of one of the WFPC members that I was made aware of this public notice; I did not see it posted in the Winters Express.

Sincerely,

A handwritten signature in blue ink that reads "David Springer". The signature is written in a cursive style with a long horizontal stroke at the end.

David Springer
200 Madrone Ct.
Winters, CA 95616

From: [Glen Holstein](#)
To: [Luke, Brian J SPK](#)
Subject: [EXTERNAL] Comments on Winters Putah Creek Project !D 19047-1
Date: Friday, August 5, 2016 5:52:06 PM
Attachments: [Comments on Putah Creek PEIR.doc](#)

Dear Mr. Luke,

These comments on the Winters Putah Creek Nature Park project ID 19047-1 are submitted per the request of USACE. This project does not come close to fulfilling its claims. It doesn't "rehabilitate" and it doesn't "restore". Planting native riparian vegetation in earlier phases of the project has utterly failed for over five years because the project is used as a dumping ground for the Solano County Water District's dredge spoils, material on which native riparian vegetation can't grow. Such disposal may actually be the project's unstated primary purpose. This project does not protect and utilize important resources. It diminishes them significantly. Its detriments so far out way any potential benefits that a citizen's group in Winters harmed by previous phases of the project has indicated intent to litigate, if necessary, to stop the harm earlier phases of the project have already caused their community. Recently comments were solicited on a Programmatic EIR regarding a proposal by Solano County Water District to expand their dredge spoil dumping and riparian vegetation removal far beyond Winters along Putah Creek. Detailed comments on that PEIR are attached because they are very relevant to Winters Project 19047-1.

Yours sincerely,

Glen Holstein, PhD

Botanist

California Native Plant Society Sacramento Valley Chapter

COMMENTS ON PUTAH CREEK PROGRAMATIC ENVIRONMENTAL IMPACT REPORT (PEIR)

Submitted by: Glen Holstein, PhD

Consulting Landscape Ecologist

29 years professional experience in wetland and riparian restoration and conservation biology.

Phone: (530) 758-6787

holstein@cal.net

1. Page ES-2: In paragraph 1 habitat is called “degraded” without evidence.
2. P. ES-2: In Paragraph 1 “natural” is used without definition.
3. P. ES-2: Paragraph regarding enhanced wildlife viewing calls for “enhance habitat for “delta native fishes and wildlife” but the Project is mostly not in the Delta and consequently its native wildlife are dismissed.
4. P. ES-5, Paragraph 1: The Project has already caused “long term impacts to geology and soils” by replacing native soil and substrate with with exotic fill.
5. P. ES-5, Paragraph 2: There is no good evidence that there will be no long term impact to biological values, and these have already occurred at Winters, where riparian habitat has disappeared because the Project replaced native riparian soils with exotic fill.
6. P. ES-5, Paragraph 3: Long term impacts on green house gas emissions have already occurred at Winters, where the Project essentially permanently destroyed riparian forests that rapidly absorb CO₂.
7. P. ES-6, Paragraph 3: Aesthetics have already suffered long term impacts at Winters, where the Project has essentially permanently eliminated riparian habitat.
8. P. ES-6: Recreation has already suffered a long term adverse impact at Winters because the Project turned a popular riparian recreation area into a barren desert-like area that has not changed in 5+ years.
9. P. ES-8, Paragraph 2: Negative impacts of the Project at Winters would multiply and accumulate if it were extended downstream.
10. P. ES-8, Paragraph 4: The No Project Alternative is not adequately described because it erroneously asserts the present creek is “degraded” with no adequate evidence.
11. P. ES-10, Paragraph 5: The environmentally superior alternative is No Project because of evident environmental degradation already caused by the Project at Winters.
12. P. ES-23. 3.4.9: Monitoring of what was formerly riparian habitat at Winters for 5+ years after the Project’s implementation there clearly indicates it has already failed, a very significant impact.

13. P. ES-31. 3.9.1: Contrary to the claim there will be less than significant impact to views, negative impacts to aesthetics have continued for 5+ years at Winters.
14. P. ES 31. 3.10.1: There is already a very significant impact on recreation from the Project at Winters that has existed for 5+ years.
15. P. 2.8: Figure 2.3 Does not accurately portray what the Project has done at Winters. To do that the pictures should be reversed to reflect the Project's replacement of trees there with weeds.
16. P. 2.11: The PEIR Explicitly states that 10,000 cubic yards/year of the same exotic fill causing riparian restoration failure at Winters is planned to be extended downstream by the Project, which would extend the same problems evident at Winters downstream as well.
17. P. 2.21: Planting native vegetation for the Project at Winters has failed completely for 5+ years. There is no mention or discussion of this in the PEIR and no indication of plans to remedy this failure.
18. P. 2.25: The PEIR says existing native vegetation will be protected by the Project. That was not done at Winters, where it was destroyed and not replaced. The PEIR does not acknowledge this happened and consequently provides no assurance it will not happen again and again.
19. P. 2.26,27: With regard to construction access, following Project construction at Winters the site was not re-vegetated by native species and remains barren after 5+ years, which is not acknowledged and discussed in the PEIR.
20. P. 2.27: The above also is true of construction staging areas.
21. P. 2.31,32: There is no stated guarantee that vegetation management and habitat enhancement will be successful, especially since they weren't at Winters, and there are no stated consequences if they aren't successful.
22. P. 2.34,36: Project goals for fishes only concern salmonids and "delta fishes", but since the Project isn't in the Delta, non-salmonid native fishes are ignored.
23. P. 1.36: Promises of maintaining wildlife habitat and maintenance and enhancement of native riparian vegetation were not kept at Winters, but that isn't acknowledged here. Consequently there is no evidence goals stated here will be met and no consequences provided if they're not.
24. P. 3.1-12: The "Winters Putah Creek Nature Park" reach is where the Project's methodology was implemented. There is no acknowledgment in the PEIR that the Project's goals have not been achieved there after 5+ years and may never be.
25. P. 3.1-20: The Project as implemented in Winters is in violation of Yolo County General Plan Action CO-427: Protect the habitat value and biological function of riparian areas. Avoid activities that remove or degrade these habitats. The Project at Winters significantly destroyed the habitat value and biological function of riparian areas and removed and degraded these habitats.

26. P. 3.1-21: The Project as implemented in Winters is in violation of Yolo County County Code Section 8-3.104 because it altered stream channels that help accommodate and channel flood waters and did filling and grading which may increase flood damage.
27. P. 3.1-22: At Winters the project proceeded without without a Flood Hazard Development Permit in violation of Yolo County Code Section 8-3.302.
28. P. 3.1-24: Significance criteria from CEQA Guidelines: Criterion # 2 refers to substantially increasing the rate of surface runoff. A Project goal is increasing the runoff rate (=stream flow rate). Whether this will result in flooding can't be known until the drought ends.
29. P. 3.1-28,29: An erosion control best management practice (bmp) is preserving existing non-invasive and native vegetation. The Project did not do this at Winters and consequently is unlikely to do it if implemented in other parts of Putah Creek.
30. P. 3.1-31: The PEIR asserts but does not satisfactorily prove the Project will not increase flood hazard. Elevations in the stream channel are not the only factors since elevation changes across the whole floodplain, which are not quantified here, are likely to be significant.
31. P. 3.1-34: Completion of the Project at Winters is acknowledged here even though its Phase 3 was not permitted and consequently was completed illegally. This record of ignoring environmental law is not acknowledged explicitly in the PEIR and calls into question all of its assumptions including impacts on flooding.
32. P. 3.2-8: The 3rd Paragraph claims discussion of 404 Permits and USACE is in the PEIR's Section 3.1, but it isn't. Since a major proposed activity of the PEIR is depositing fill in Putah Creek, this needs a thorough discussion, but that is not present.
33. P. 3.2-13:: Solano County General Plan Policy S.P. 72 calls for preserving riparian vegetation along county waterways. Since the Project did not do this in the Winters reach, it is unlikely to be done elsewhere on the creek.
34. P. 3.2-16: The water temperature section doesn't address water temperature rise caused by reduction in shade after riparian vegetation is removed, a well-known phenomenon. Such vegetation was permanently removed by the Project in the Winters reach and consequently is likely to be removed in other reaches.
35. P. 3.2-17: The 3rd Paragraph is incoherent and meaningless but seems to claim without clear evidence that the Project would reduce bioavailable mercury. Nowhere is this quantified in the PEIR and the problem is repeated in the subsequent discussion of other reaches.
36. P. 3.3: This "Geology and Soils, and Mineral Resources" section of the PEIR includes a plethora of material irrelevant to the Project but nothing about what is relevant: the use of exotic fill on which riparian vegetation needed to replace the native vegetation destroyed by the Project in the Winters reach is unable to grow. This factor, critical for the Project's success in achieving its goals, is ignored in the PEIR.

37. P. 3.3-31: In Paragraph 3 dredge and fill, which has already caused Project failure when deposited in the Winters reach, is mentioned but with a referral back to Section 3.2 for discussion, but that discussion is not present in 3.2. That is a critical PEIR failure because handling of fill will determine the Project's success or failure.
38. P. 3.4-3: The 1st Paragraph doesn't mention that removal of shading riparian vegetation in the Winters reach by the Project is a factor in increasing water temperature.
39. Figures 3.4-1 and 3.4-2: These maps are useless because they don't identify species occurrences, the relevant information.
40. P. 3.4-12: Contrary to Paragraph 1, habitat in the Project area is suitable for northern harrier and western red bat.
41. P. 3.4-12: Contrary to Paragraph 4, Modesto song sparrow is present throughout the Project area, not just downstream of I-80.
42. P. 3.4-14: The Project will reduce habitat for western pond turtles by increasing stream velocity and reducing depth.
43. P. 3.4-15: Contrary to Paragraph 2, the Project area currently provides suitable habitat (still or slow moving water with emergent and overhanging vegetation) for California red-legged frogs. The Project would eliminate or greatly reduce such habitat. Putah Creek is within the historic range of this species despite its current extirpation so it would be a good candidate for restoration there.
44. Biological Resources Section: It does not evaluate the potential presence of ringtails despite the presence of suitable habitat along Putah Creek.
45. P. 3.4-15: With regard to Paragraph 3, the Project has also caused water temperatures to increase at Winters by removing shading riparian vegetation.
46. P. 3.4-16: The Paragraph regarding steelhead is contradictory since if they are in freshwater from August to April why could they only be in the Project area from December 1 to April? That needs explaining.
47. P. 3.4-18, 21: The fish section does not discuss the peer-reviewed finding of Peter Moyle and Michael Marchetti that native fish were most abundant and diverse in the Project area at Winters before the Project.
48. P. 3.4-30: Project removal of riparian vegetation at the Winters reach violated Policy CO-2.3 of the Yolo County General Plan.
49. P. 3.4-31: It also violated Policy CO-2.9 of the Yolo County General Plan.

50. P. 3.4-31: The Project at Winters also violated Yolo County General Plan Policy CO-2.25 by decreasing rather than increasing vegetation shading streams.

51. P. 3.4-32: The Project at Winters also violated Yolo County General Plan Policy CO-2.34 by reducing rather than enhancing the habitat value of the wildlife migration corridor along Putah Creek, Policy CO-2.37 by doing the Project in a riparian zone without required permits, and Policy CO-2.38 by destroying breeding ponds for beaver and other native wildlife.

52. P. 3.4-33: The Project reaches significance criteria because at Winters it has already had a substantial adverse impact on a riparian habitat. It has also had a substantial adverse impact effect on federally protected wetlands as defined by Section 404 of the Clean Water Act by their filling and direct removal. Additionally it has interfered substantially with movement of native resident wildlife like beaver, their migratory corridors, and their nursery sites. It has also substantially adversely modified habitat factors like deep slow-moving water necessary for western pond turtle, a California Department of Fish and Wildlife Species of Special Concern, and is in conflict with numerous Yolo County General Plan Policies protecting Biological Resources.

53. P. 3.4-34: The Project at Winters did not “promote the growth of native wetland and riparian plants”, it destroyed them and has been unable to replace them for 5+ years.

54. P. 3.4-35: The PEIR contradicts itself regarding western pond turtle since in other sections it says it will decrease water depth and flow velocity, for example on P. 3.4-14, which is the opposite of the deep slow-moving aquatic conditions they species needs. The Project’s proposed mitigation measures for this species are temporary but its adverse impact would be permanent.

55. P. 3.4-36,37: The Project completed in Winters destroyed elderberries and was unable to move or replace them because it replaced the normal riparian soil they require with fill toxic to them and other riparian plants. Since the PEIR plans to continue using the same fill unsuitable for riparian vegetation, its valley elderberry long-horned beetle (VELB) mitigation measure is unworkable based on how the Project was implemented at Winters.

56. P. 3.4-38,39: The PEIR claims it will improve nesting bird habitat by favoring native riparian vegetation, but as implemented at Winters its methods, which the PEIR proposes to continue, have significantly reduced native riparian vegetation. Consequently its temporary mitigation measure is insignificant relative to its demonstrated permanent destruction of nesting bird habitat. A bird issue the PEIR doesn’t address is the importance of the creek’s riparian vegetation for the neotropical migrant birds that utilize it each spring and fall. The Project’s demonstrated permanent demonstration of riparian vegetation if continued downstream could significantly negatively impact neotropical migrant birds.

57. P. 3.4-39: The Project has already demonstrated through the removal of large native trees and snags at Winters that it may negatively impact special status bats. Extending the same methods downstream as is proposed in the DEIR will increase the likelihood of impacting special status bats.

58. P. 3.4-41, 42. Contrary to the PEIR, the Project as implemented at Winters has already demonstrated it has decreased rather than increased riparian vegetation. Extending the same methods

downstream as the PEIR proposes would continue to decrease, not increase, riparian vegetation. Consequently the PEIR's statements about impacts on riparian vegetation here are entirely erroneous. They are explicitly "based on field observations of the Putah Creek Streamkeeper", but unfortunately I know from personal experience that assertions by the present Putah Creek Streamkeeper are not credible. He is not academically qualified to do such a complex and important job as "keeping" and "restoring" Putah Creek, but that would be less important if he did his job well and behaved honestly and honorably in dealing with the community and its many stakeholders that live on and near Putah Creek. He has not done that. Instead he has habitually made false statements about Putah Creek and his activities there. Two examples particularly relevant to the PEIR are:

1. "Temporary" loss of riparian trees and shrubs does not last 5-10 years as he claims; it lasts two years at the most. If it lasts more than 5 years as it has at Winters, it is likely to last forever, which can be demonstrated by 30+ year old projects in our region that promised riparian restoration but have similarly failed.

2. The absurd statement that his activities at Winters affected less acreage than natural disturbance. Anyone who has been there knows this is false like so many other claims by the Streamkeeper.

The Streamkeeper has demonstrated through his activities and statements that he is an unqualified and unreliable source. Consequently a PEIR based on his assertions is similarly untrustworthy including its claim here of less than significant impact on riparian habitat. Performance standards suggested in the riparian habitat mitigation measure have already demonstrably not been met at Winters, but the PEIR proposes extending the same failed methods to the rest of Putah Creek.

59. P. 3.4-42,43,44. The PEIR claims to improve fish habitat but does not address the peer-reviewed finding by Peter Moyle and Michael Marchetti that the supposedly degraded reach of Putah Creek before the Project had the highest diversity of native fish of anywhere below the creek's major dams. The Project has presumably already destroyed the conditions causing this diversity, but the Moyle-Marchetti study provides a quantitative baseline that should be repeated before it can be assumed the Project helps native fish, which consist of more than just one run of salmon.

60. P. 3.4-44. The PEIR promises less than significant impact on wetland habitats by balancing loss of wetlands one place with creation of better ones elsewhere, but at Winters there has only been net loss of wetlands that were filled. Based on the PEIR's unreliable claims discussed above, its promises of new wetland creation are questionable at best.

61. P. 3.4-44,45. Instead of restoring and enhancing habitat for native wildlife, it was apparently permanently destroyed by the Project at Winters. Mitigation calls for monitoring during Project construction. If that was actually done during Project construction at Winters, evidence for such monitoring should be provided.

62. P. 3.4-58,59. The Winters Nature Park section of the Biological Resources chapter of the PEIR discusses the Project in this reach as if it is still to be done along with appropriate mitigation measures, but as stated elsewhere in the PEIR, the Project there is essentially complete and any mitigation measures, if actually applied, were unsuccessful. Consequently its significant negative impact on riparian habitat, wetlands, special status species, and wildlife species movement is plain to even casual observers and may also extend to fish habitat.

63. P. 3.9-6. Figure 3.9-8 demonstrates that riparian habitat is absent 5+ years after the Winters “restoration” that is the model for this PEIR’s Project. Its failure to fulfill its promises is evident in this photo showing a barren plain where a green riparian forest with interspersed wetlands was once present before the Project. Unfortunately there is no comparable pre-Project photo of the same area in this PEIR to illustrate what was destroyed even though they are potentially available from stakeholders. The closest approach in the main part of the PEIR is Figure 3.9-5.
64. P. 3.9-9. The claim in the first paragraph that the Project will result in a “naturalistic creek channel with riparian vegetation” is disproved by the PEIR’s Figure 3.9-8.
65. P. 3.9-15. Contrary to the construction impact to views claim presented here, these are not temporary but have lasted for 5+ years as demonstrated by Figure 3.9-8. Consequently the change from “dense vegetation to more barren areas” has become essentially permanent.
66. P. 3.9-16. The section on “long term impacts on views” mischaracterizes pools destroyed by the Project at the Winters reach and its riparian vegetation as “weedy”. Neither characterization is accurate. As described above, Figure 3.9-8 shows the post-Project creek at Winters with its barren lack of riparian vegetation. The claim the Project was only “recently completed” there is only accurate if 5+ years is recent.
67. P. 3.10-4. The Winters Nature Park reach of the PEIR’s recreation section fails to state that the detailed plan for the Project includes filling and destroying “the large pool at the eastern edge of the park” used for recreation as were other similar pools already filled by the Project.
68. P. 3.10-9. The last paragraph’s claim that removing pools used for recreation would not impact it significantly is not adequately explained.
69. P. 3.12-5. No “separated bicycle lane” is evident at Stevenson Bridge.
70. P. 3.12-23. That fill to replace native riparian soil will be derived from a “quarry or borrow pit” is mentioned here in the transportation/traffic chapter but not in the soils/geology chapter where it would be most appropriate.
71. P. 4.2. As discussed above, the Project as planned does not meet its own Objective 5 and possibly other objectives as well.
72. P. 4.4. The last paragraph mischaracterizes Putah Creek as “degraded” when it is not, and implicitly acknowledges this Project is really about funding.
73. P. 4.7. As is evident in Paragraph 5, Alternative 1 would better address the Project’s Objective 5 than the Project, which has already reduced riparian habitat at Winters and will reduce much more if implemented as presently planned. That’s the real degradation, not that of the existing creek, which the PEIR mischaracterizes. Consequently Alternative 1 is the Preferred Alternative for protecting Putah Creek’s great environmental values.

74. P. 5.6,7. Contrary to the last paragraph here, the Project would have a significant long term impact on soils and geology by replacing native riparian soil with exotic fill incapable of supporting riparian habitat as has already been demonstrated at Winters.

75. P. 5.7. The mitigation measures for impacts on biological resources are grossly inadequate because they are typically short term and only operable during construction. As already implemented at Winters, however, the Project demonstrates that it causes long term unmitigatable degradation of biological resources.

76. P. 5.8. Impacts of the Project are significant and unmitigatable since at Winters it has already permanently converted what was once a beautiful landscape of green forest and blue water to a brown desert-like area of permanently bare soil as illustrated in the PEIR's Figure 3.9-8.

77. P. 5.9. Impacts to pools that the PEIR elsewhere acknowledges are used for recreation would be permanent and unmitigatable since the Project would remove them.

78. P. 5.11. Once again the PEIR asserts that its Project will cause "degraded creek habitat to become more ecologically productive" but never provides actual evidence it can do that. The evidence it has already provided at Winters clearly suggests it will do exactly the opposite.

79. P. C.7. Here it is acknowledged that the Project including planting native vegetation was done at Winters in 2011. These plantings overwhelmingly failed and died because of unsuitable growing conditions on the sterile exotic fill the Project substituted for productive native riparian soil. The barren result after 5+ years is illustrated by the PEIR's Figure 3.9-8. How the floodplain looked at Winters before the Project is illustrated by the upper photo on Page 8 of the Stillwater Sciences report attached to the PEIR.

End of comments.