NORTHERN LIBERTY ISLAND
FISH CONSERVATION BANK

FINAL INITIAL STUDY /
MITIGATED NEGATIVE DECLARATION
SCH#2010122078

Lead Agency:

Reclamation District 2093
c/o The Trust for Public Land
1107 9th Street, Suite 1050
Sacramento, CA 95814
Attn: Erik Vink
(916) 557-1673
erik.vink@tpl.org

February, 2011

Initial Study

1. **Project Title:** Northern Liberty Island Fish Conservation Bank

2. **Lead Agency Name and Address:**
   Reclamation District 2093 (RD 2093)
   c/o The Trust for Public Land
   1107 9th Street, Suite 1050
   Sacramento, CA 95814

3. **Lead Agency Contact Person, Phone Number, and Email Address:**
   Erik Vink
   (916) 557-1673
   erik.vink@tpl.org

4. **Project Location:**
   The project site is located on the northern tip of Liberty Island, approximately 5 miles west of Courtland and 10 miles north of the City of Rio Vista. The project is located in a rural, unincorporated area of Yolo County, within the southern area of the Yolo Bypass (Bypass) where it flows into the northwest Sacramento–San Joaquin River Delta (Delta). The project site corresponds to Sections 29, 30, 31, and 32, Township 6 North, Range 3 East of the Liberty Island U.S. Geological Survey (USGS) 7.5-minute quadrangle.

   Assessor Parcel Numbers: 033-280-01, 033-280-14, 033-280-15, 033-280-16, 033-270-05 and 033-280-07

5. **Project Sponsor's Name and Address:**
   Liberty Island Holdings II, LLC
   c/o Wildlands, Inc.
   3855 Atherton Road
   Rocklin, CA 95765
   Attn: Mahala Guggino mguggino@wildlandsinc.com
   (916) 435-3555
   Fax: (916) 435-3556

6. **Land Owner's Name and Address:**
   Reclamation District 2093
   c/o The Trust for Public Land
   1107 9th Street – Suite 1050
   Sacramento, CA 95814
   Attn: Erik Vink erik.vink@tpl.org
   (916) 557-1673
   Fax: (916) 557-1675

   The Trust for Public Land
   1107 9th Street – Suite 1050
   Sacramento, CA 95814
   Attn: Erik Vink erik.vink@tpl.org

(916) 557-1673
Fax: (916) 557-1675

7. **General Plan Designation:**
   Designated as "Agriculture" (AG) with a Delta Protection Overlay (DPO) in the 2030 Yolo Countywide General Plan

8. **Zoning:**
   Zoned Agriculture General (A-1) and Agricultural Preserve (A-P)

9. **Description of the Project:**
   Preserve, enhance and restore 808.76 acres of habitat for native fish species. See "Project Description" on the following pages for details.

10. **Surrounding Land Uses and Setting:**
    Located in the Yolo Bypass, surrounded primarily by lands used for conservation and agriculture. Details provided below.

11. **Other Public Agencies whose Approval Is Required:**
    - National Marine Fisheries Service: approval of Conservation Bank, informal consultation pursuant to section 7 of the Endangered Species Act (ESA), consultation pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, and consultation under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act of 1934
    - U.S. Fish and Wildlife Service: approval of Conservation Bank and informal consultation pursuant to section 7 of the ESA
    - California Department of Fish and Game: approval of Conservation Bank, streambed alteration agreement under Fish and Game Code Section 1602, and Incidental Take Permit or Consistency Determination under Section 2081 of the California ESA
    - U.S. Army Corps of Engineers: Clean Water Act Section 404 permit and Rivers and Harbors Act Section 10 permit
    - State Office of Historic Preservation: concurrence under the regulations implementing Section 106 of the National Historic Preservation Act
    - Central Valley Flood Protection Board: encroachment permit
    - Central Valley Regional Water Quality Control Board: Clean Water Act Section 401 Water Quality Certification
    - State Water Resources Control Board: Notice of Intent to comply with the terms of the general permit for storm water discharges associated with construction activity

- Yolo County: grading permit, flood hazard development permit and possibly a Surface Mining and Reclamation Act (SMARA) permit, if determined necessary

- Solano County: grading permit, if determined necessary

12. Other Project Assumptions:

The Initial Study assumes compliance with all applicable State, Federal and Local Codes and Regulations including, but not limited to, County of Yolo Improvement Standards, the State Health and Safety Code, and the State Public Resources Code.

13. Additional Environmental Review:

The analysis contained in this Initial Study concludes that although the project could have a significant environmental effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A Mitigated Negative Declaration is the appropriate environmental document for this project.

In the event that that comments received on the Initial Study identify any potentially significant impacts that cannot be mitigated or require additional analysis in an environmental impact report (EIR), this Initial Study shall be considered notice of preparation of an EIR and the EIR shall focus on those areas deemed potentially significant by the lead agency.

14. Review of the Draft IS/MND:

The Draft Initial Study/Mitigated Negative Declaration (IS/MND) was made available for review for 30 days, beginning December 27, 2010 to January 26, 2011, at the State Clearinghouse, 1400 Tenth Street, Sacramento, California. Copies of these documents were also available for review during normal business hours at Wildlands' office located at 3855 Atherton Road, Rocklin, CA 95765.or by accessing via the internet at: https://wildlands.egnyte.com/h-s/20101221/abd496eb17804141.

Comment letters were received from Caltrans, Solano County, and the Central Valley Flood Protection Board. The letters and the response to comments are provided in Appendix A.

15. Preparation of the Final IS/MND:

The comment letters were reviewed, comments were identified, and responses were prepared. Only minor edits were made to the Draft IS/MND and all changes from the Draft document are double underlined in the Final IS/MND. Edits to the Final IS/MND resulting from comment letters are identified in the responses in Appendix A.

A Mitigation Monitoring and Reporting Program was prepared and is provided as Appendix B.

Purpose of and Need for the Project

The purpose of the project is to preserve, enhance, restore, and create habitat beneficial to Delta native fish species (including Chinook salmon, Central Valley steelhead, and smelt) in the northern portion of Liberty Island in order to provide compensatory mitigation for approved projects affecting special-status Delta fish species within the region. The restoration of fish habitat in the legal Delta is consistent with the County of Yolo General Plan and the Bay Delta Conservation Plan (BDCP) proposal for the Yolo Bypass Restoration Opportunity Area (ROA).

The project is needed because local growth and development in the Delta and throughout the State, and ongoing water withdrawals have resulted in dramatic declines in special-status fish species which can be expected to worsen if habitat for these species is not improved. Several regional plans including the California Department of Water Resources' (DWR's) Delta Levees Program (developed to improve the flood control system of the Delta) and the U.S. Army Corps of Engineers (Corps) Sacramento River Bank Protection Project (developed to improve the levees of the lower Sacramento River Flood Control Project) will require offsite compensation for many years to come. Compensation needs of these programs will be met by preserving, restoring, and creating habitats under guidance of local and regional agency and stakeholder groups with mandates to protect the Delta native fishes.

The federal and state conservation banking program is a collaborative incentive-based approach to threatened and endangered species conservation. Conservation banks are one of the tools used to meet the goals and objectives of listed species recovery plans and other plans focused on recovery of special-status species and their habitat. The goal of conservation banking is to not only offset adverse impacts to targeted species, but contribute measurably to recovery.

Without the project, the restoration of over 800 acres would be delayed indefinitely.

Project Description

The "Project" Under CEQA

This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA). The term "project" is defined by CEQA as the whole of an action that has the potential, either directly or ultimately, to result in a physical change to the environment (CEQA Guidelines Section 15378). This includes all phases of a project that are reasonably foreseeable, and all related projects that are directly linked to the project.

RD 2093 will need to review and approve the project that will modify reclamation works under RD 2093's supervision and land within RD 2093's jurisdiction; therefore RD 2093 has been identified as the lead agency for CEQA purposes.

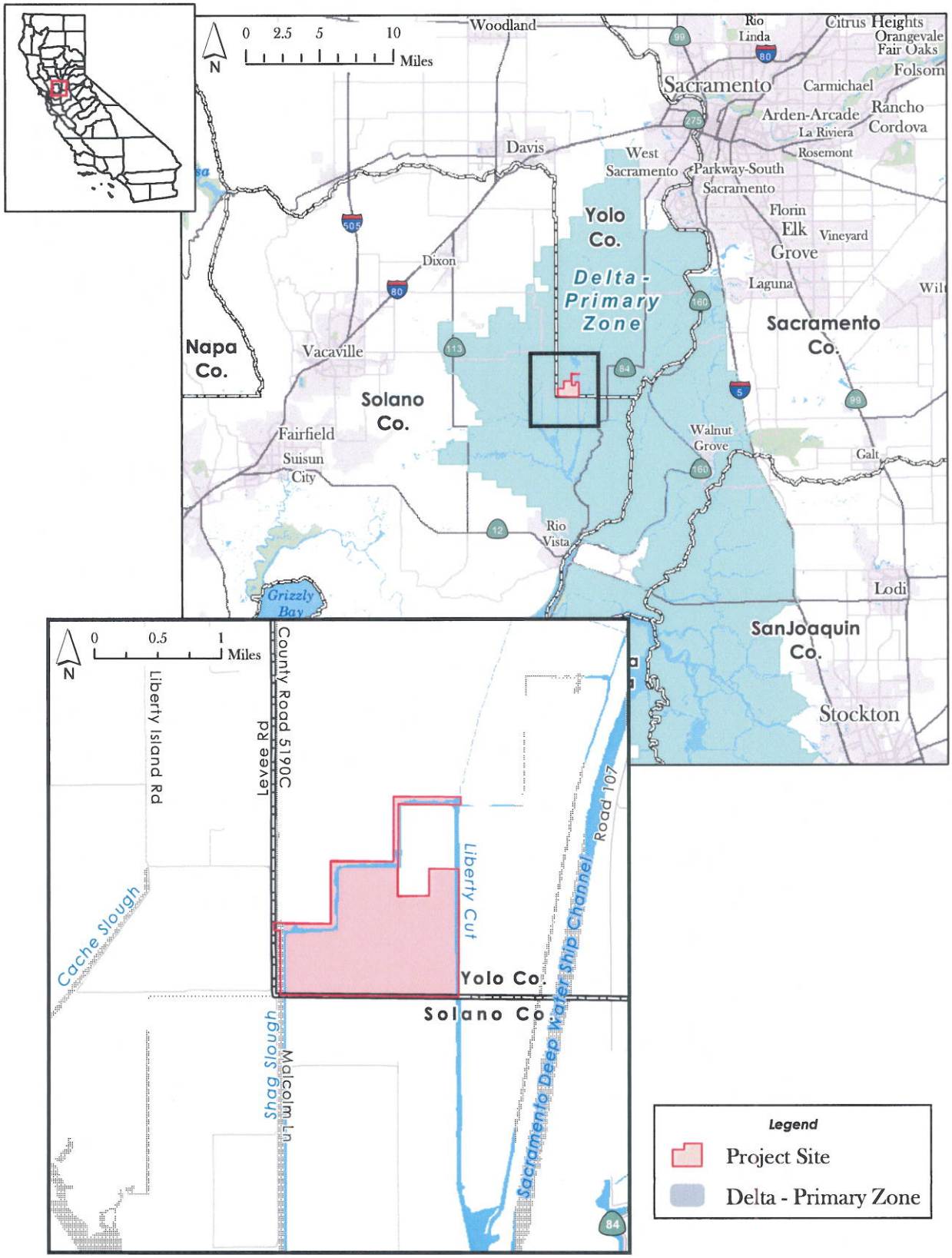
The project sponsor has been working with Yolo County on a Memorandum of Agreement (MOA) that outlines their role in the CEQA review process, and Yolo County shall act as a responsible agency as defined in CEQA Guidelines section 15381 and shall follow the procedures set forth in CEQA Guidelines section 15096.

Project Location

The 808.76-acre Conservation Bank is located on the northern tip of Liberty Island, approximately 5 miles west of Courtland and 10 miles north of the City of Rio Vista (Figure 1). The project occurs in a rural, unincorporated area of Yolo County, within the southern area of the Bypass where it flows into the northwest Delta.

Liberty Island is located south of the 16,000-acre Vic Fazio Yolo Wildlife Area managed by the California Department of Fish and Game (CDFG). The project location corresponds to Sections 29, 30, 31, and 32, Township 6 North, Range 3 East of the Liberty Island USGS 7.5-minute quadrangle (Figure 2). The project involves land owned by RD 2093 and The Trust for Public Lands (TPL) (Figure 3) on the following six contiguous Assessor Parcel Numbers (APNs) (Figure 4):

- 033-270-07 owned by RD 2093,
- 033-280-01 owned by TPL,
- 033-280-05 owned by TPL,
- 033-280-14 owned by RD 2093,



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Northern Liberty Island Fish Conservation Bank
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Figure 1
Regional Vicinity

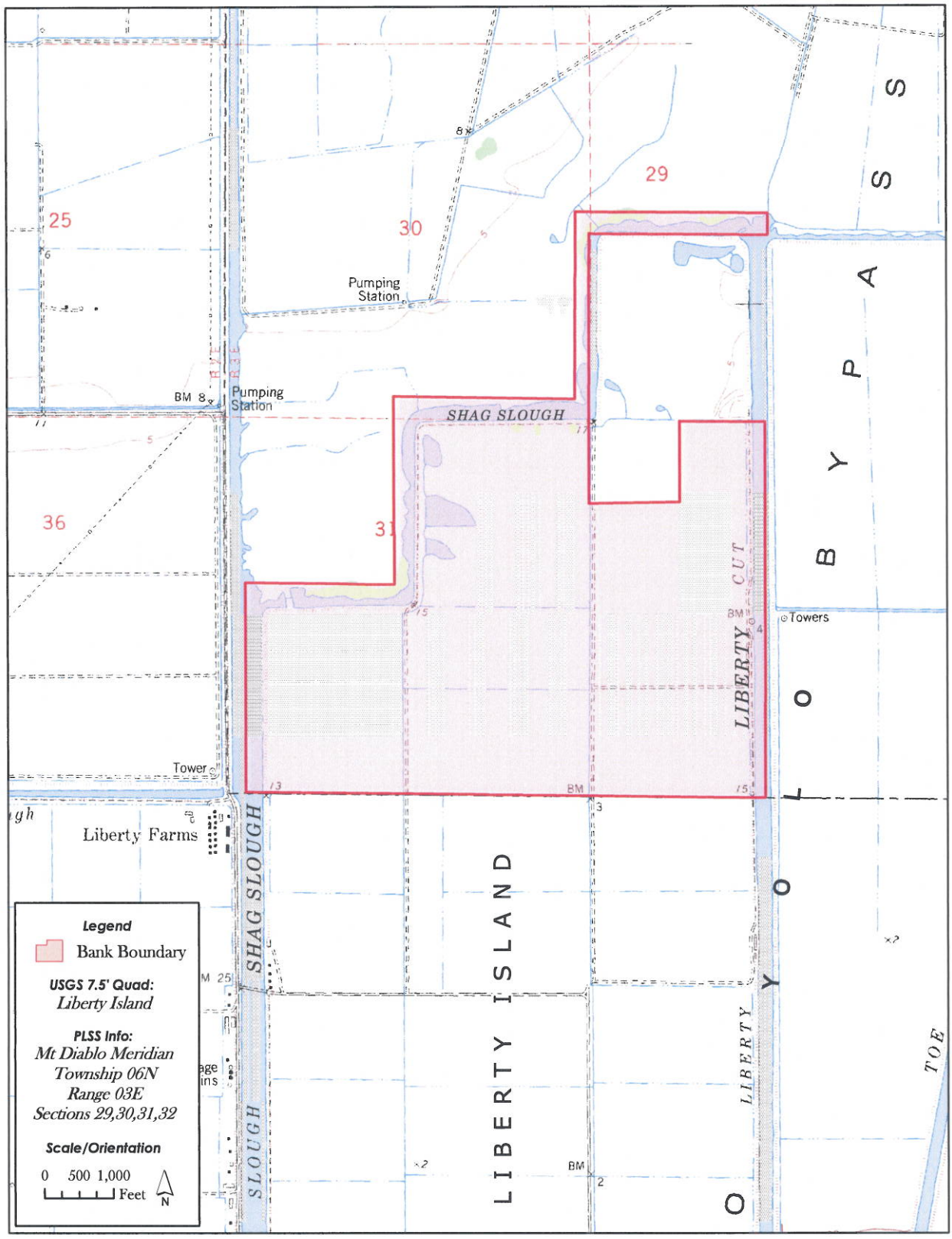

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Figure 2
Project Location

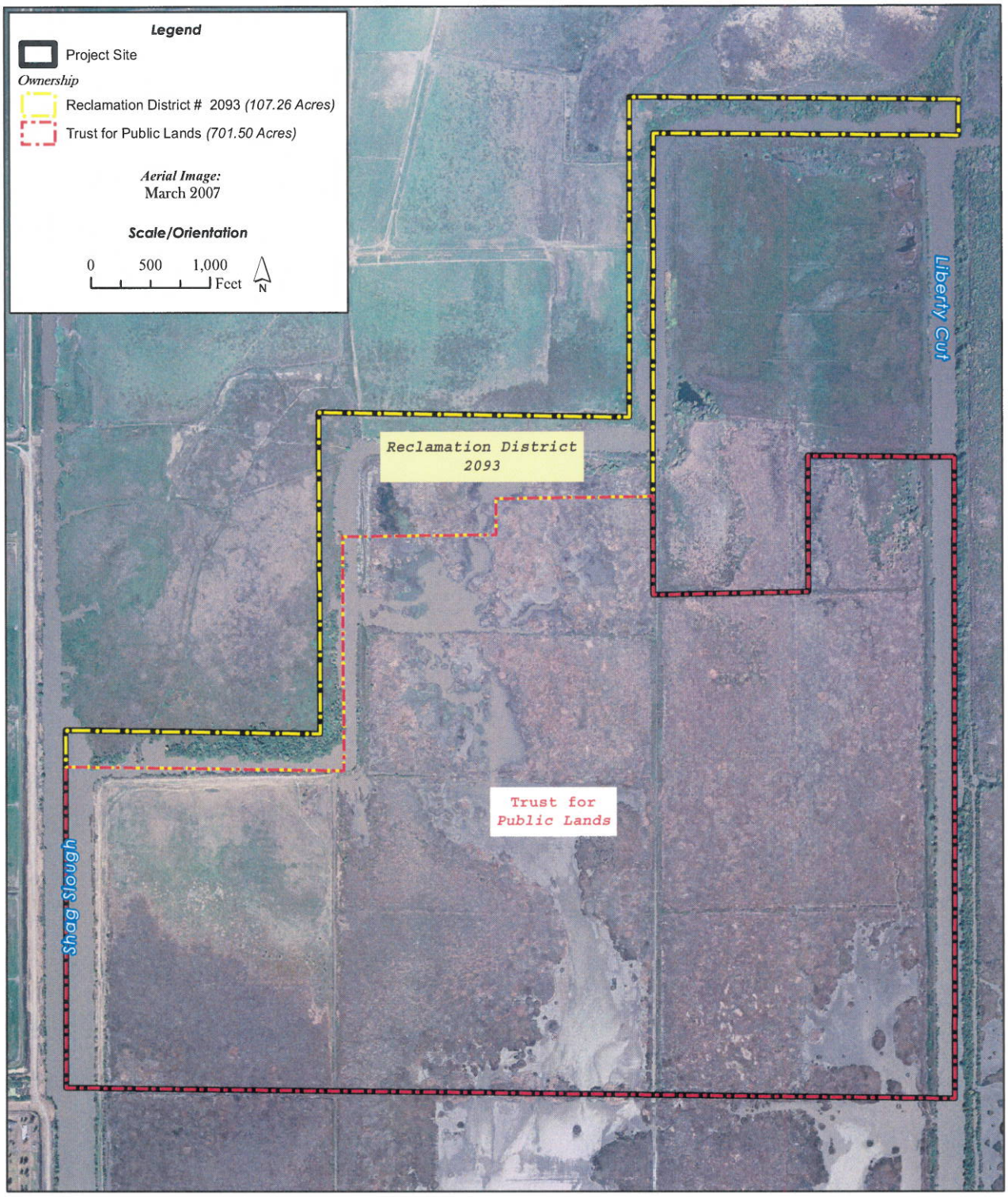

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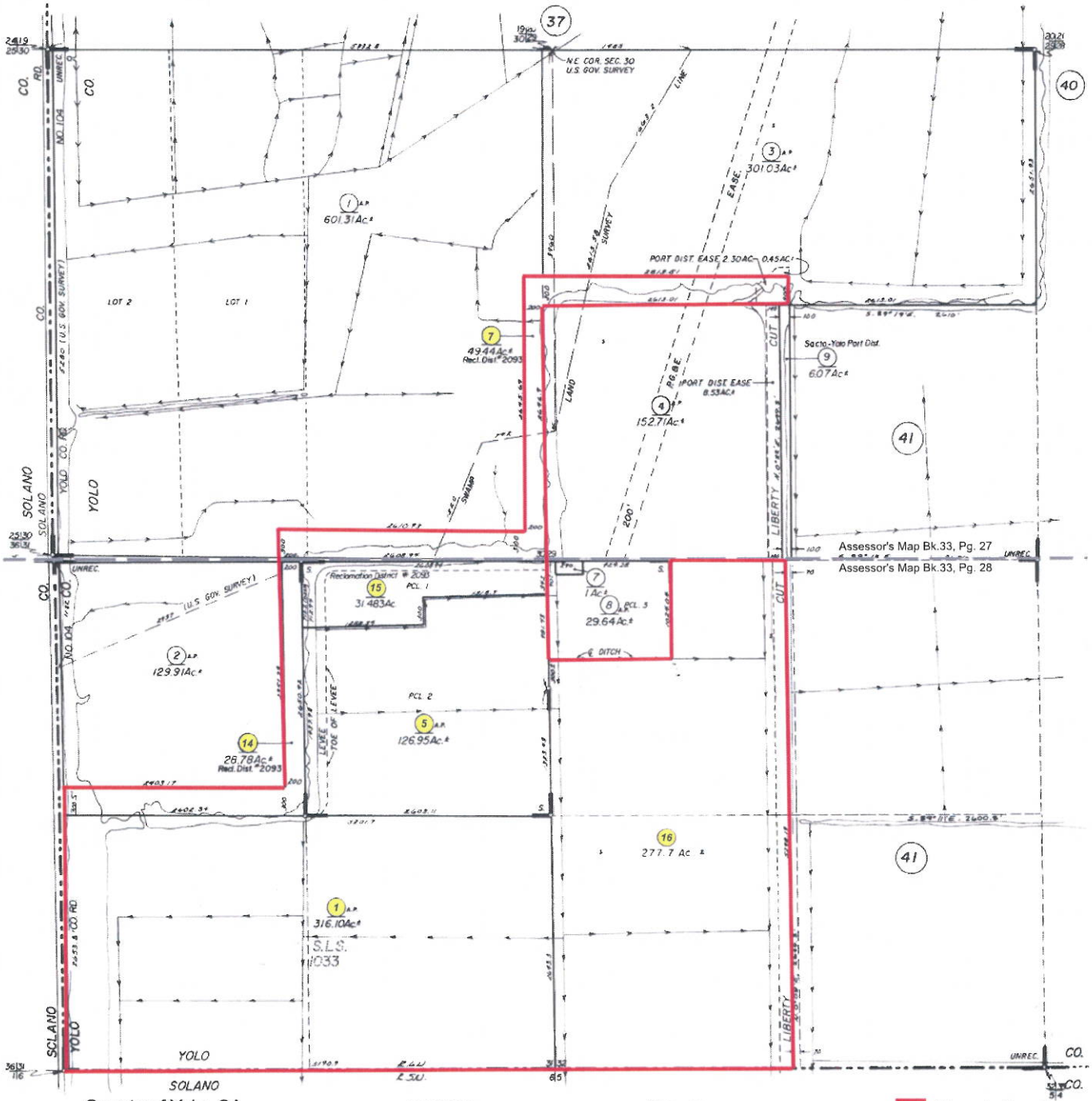
Figure 3
Property Ownership



County of Yolo, CA
Assessor's Map Book 33
Page 27 and 28

CAUTION -
These maps ARE NOT to be used for legal descriptions

Parcels:
033 - 270 - 07 (RD 2093)
033 - 280 - 01 (TPL)
033 - 280 - 05 (TPL)
033 - 280 - 14 (RD 2093)
033 - 280 - 15 (RD 2093)
033 - 280 - 16 (TPL)

Property Boundary

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Figure 4
Assessor Parcels

- 033-280-15 owned by RD 2093, and
- 033-280-16 owned by TPL.

Liberty Island is centrally located at the lower end of the Yolo Bypass just west of the Sacramento Deep Water Ship Channel in the Primary Zone of the Legal Delta (Figure 5). An aerial overview of the project site is provided as Figure 6. Additional areas outside of the project boundaries that are necessary to construct the project are depicted on Figures 7 and 8.

The "project" that is the subject of this Initial Study involves approval of the Conservation Bank Agreement, construction of a fisheries enhancement project, and long-term operation and maintenance of the Conservation Bank. Each of these components is described below.

Conservation Bank Agreement

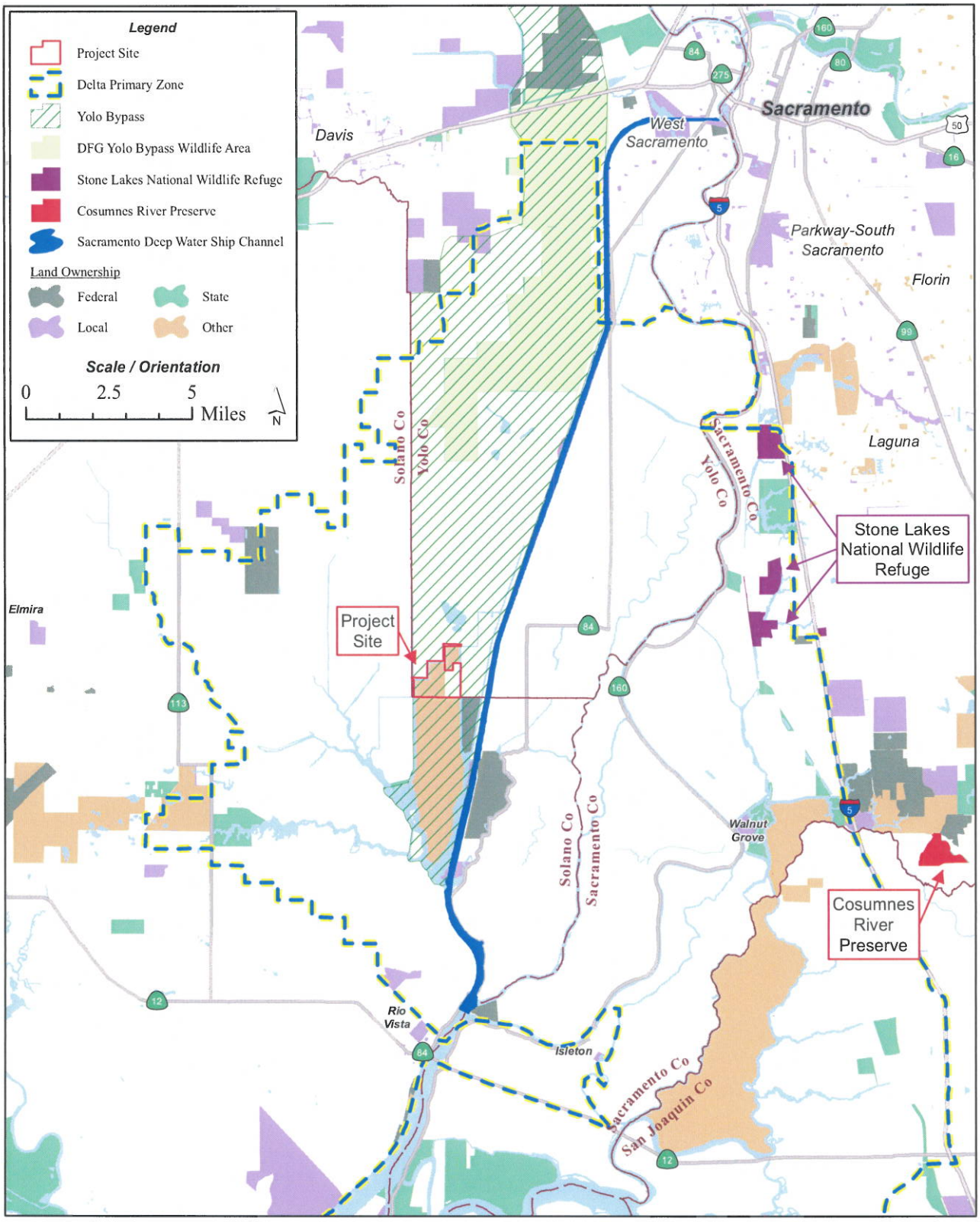
Liberty Island Holdings II, LLC (Project Sponsor or Wildlands) is proposing to implement a fisheries enhancement project hereby referred to as the Northern Liberty Island Fish Conservation Bank (project). The project will preserve, restore and enhance 808.76 acres of habitat for native fish species.

In September 2010, the Project Sponsor submitted a Conservation Bank Agreement (CBA) to the approving regulatory agencies which consist of: National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), and CDFG (collectively referred to as Signatory Agencies). The CBA includes several exhibits including a Development Plan, a Long-term Management Plan (Management Plan) and a Conservation Easement as described below.

The Development Plan details the baseline conditions at the site including soils, biological resources, hydrology, and special-status species. The Development Plan also details the proposed design of the project. This design has been reviewed by several agencies and outside consultants and was refined and vetted by H.T. Harvey & Associates (2010); however, the design may be slightly modified during environmental and agency review to provide the highest quality fisheries habitat as deemed appropriate and necessary by the permitting and regulatory agencies including the Signatory Agencies. The conceptual design of the project is discussed below.

The Development Plan also identifies the short-term management, monitoring and reporting activities to be conducted from the time the Bank is established, construction is complete, the Endowment Fund is fully funded for one year, and all the performance standards have been met. The primary management activities include maintenance of the site and monitoring of the development of created, enhance, and restored habitats and features. The site is intended to function with minimal human intervention.

The Management Plan details the maintenance and monitoring activities planned for the project site beginning after the establishment period (which is expected to extend approximately five years). The annual costs of monitoring and management described in the Management Plan will be funded through the interest generated on an endowment



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Northern Liberty Island Fish Conservation Bank
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Figure 5
Project Location within Delta Primary Zone

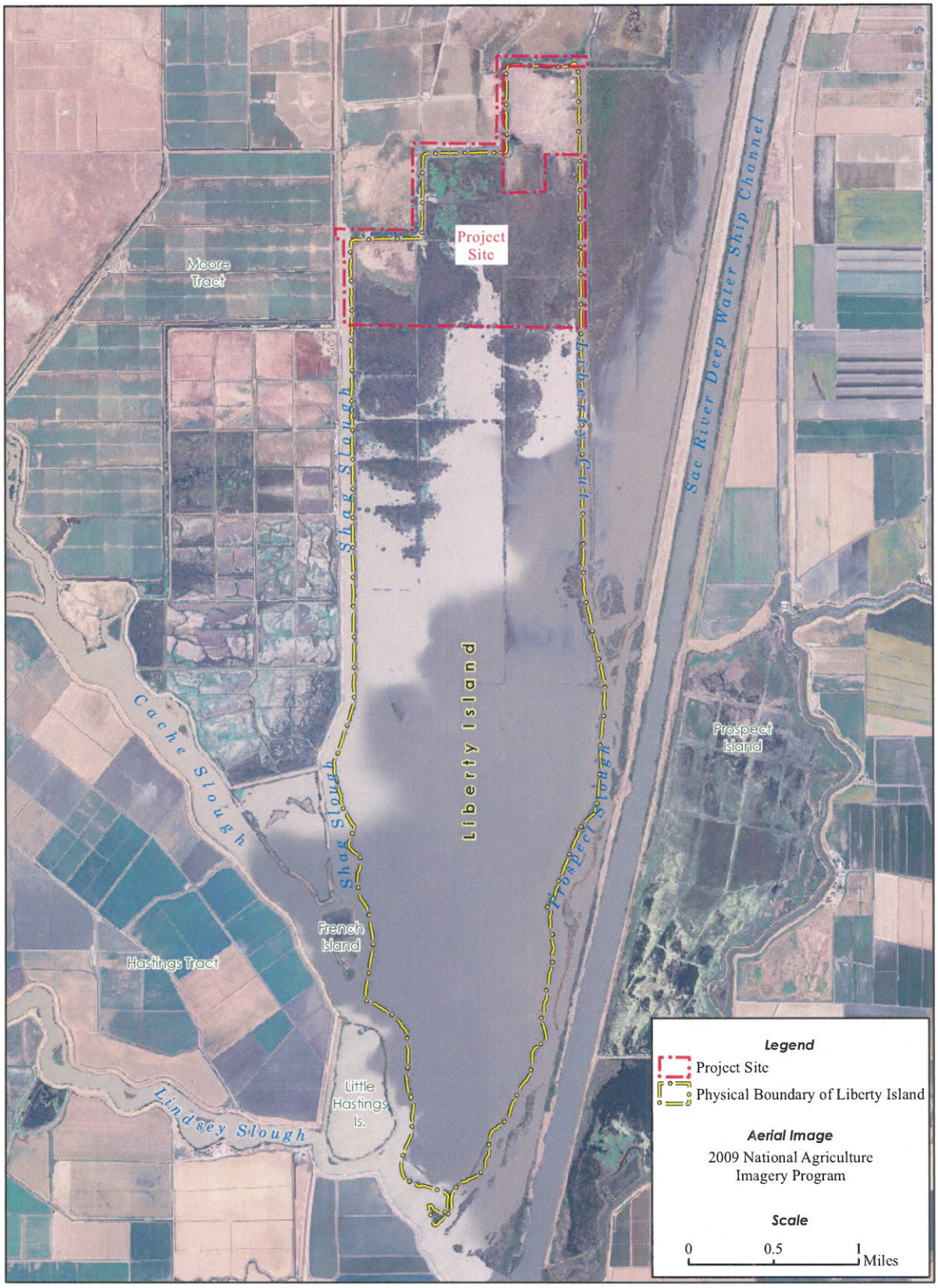

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Figure 6
Aerial Photo

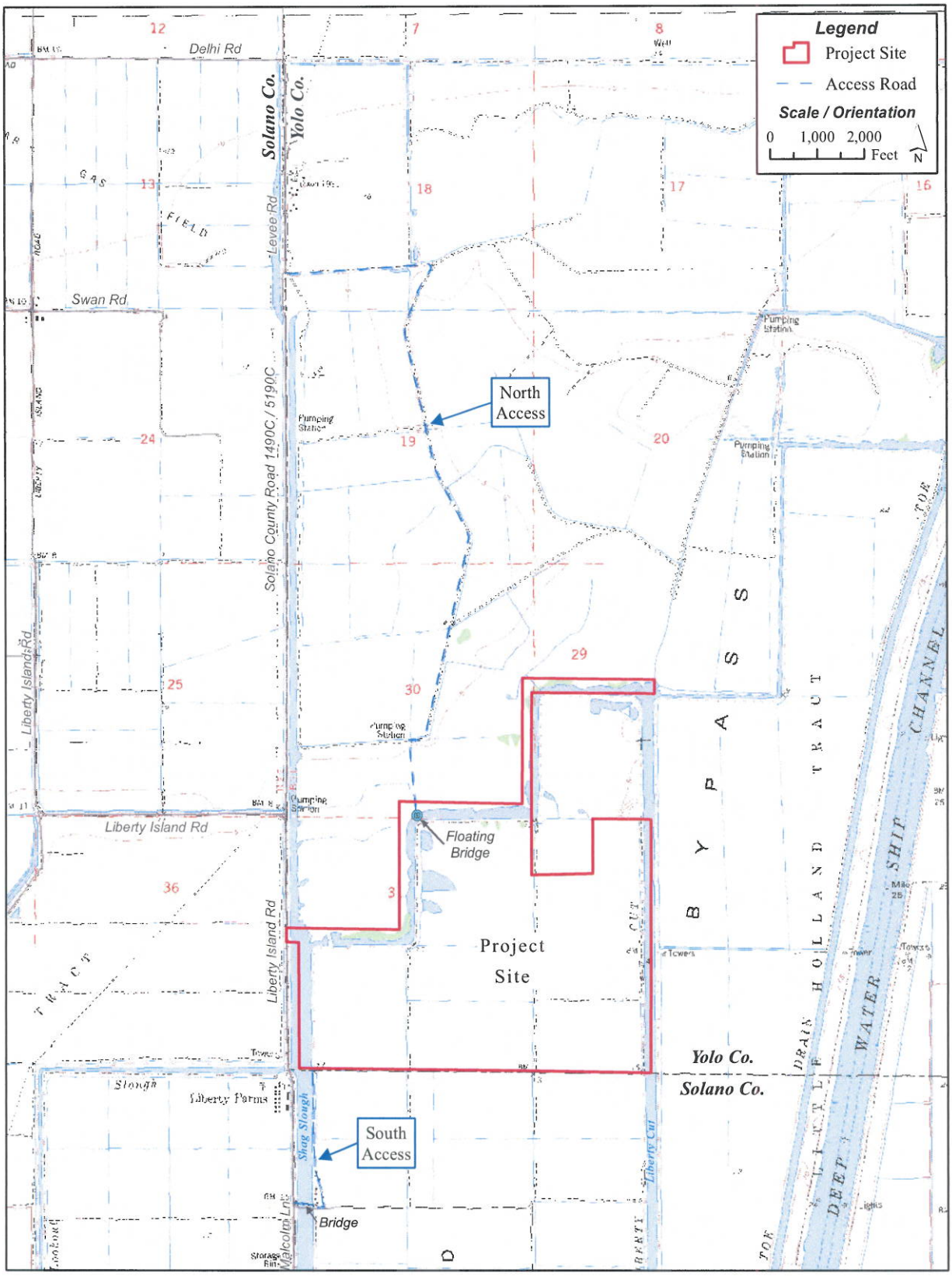

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Figure 7
Construction Access Options

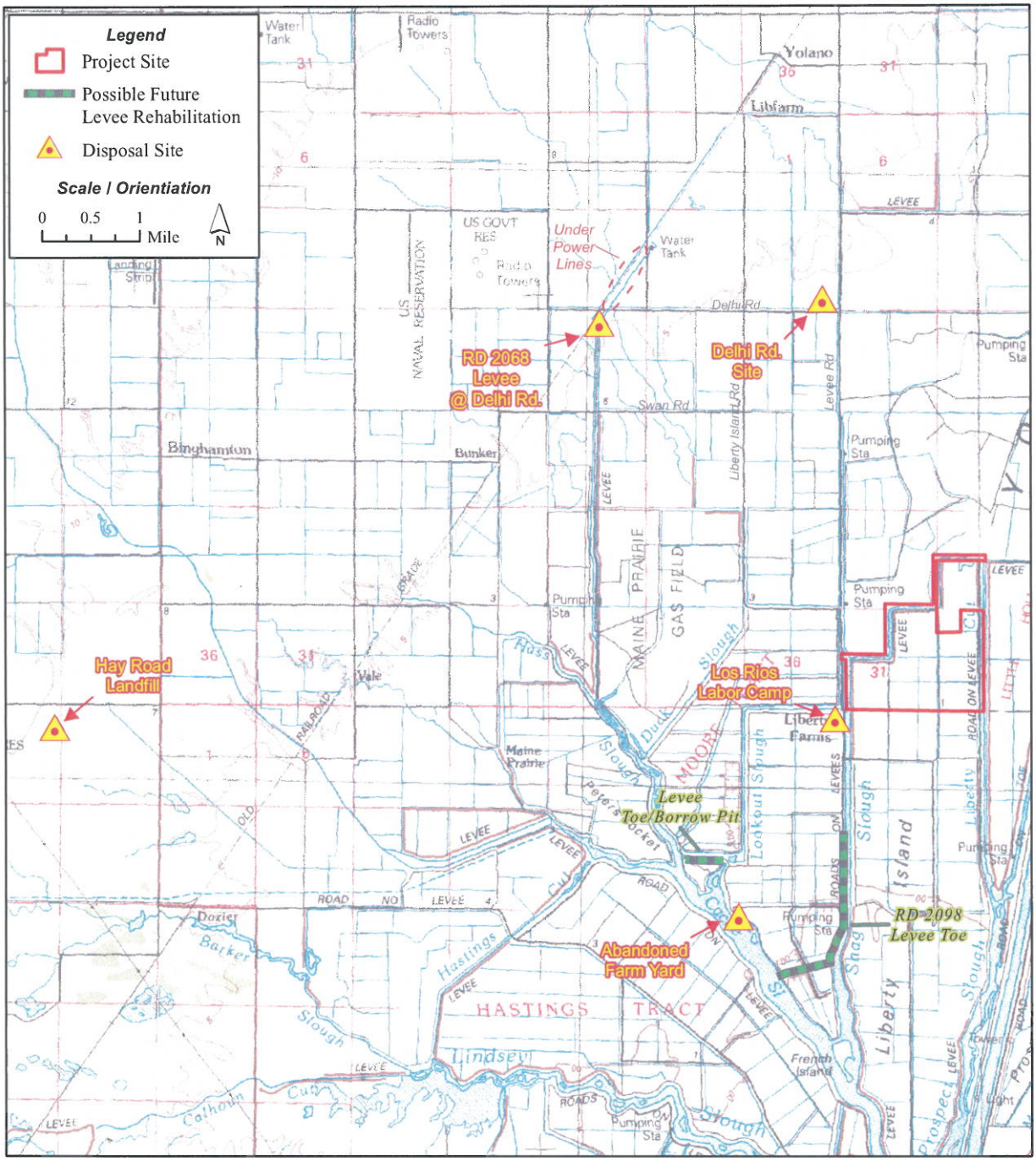

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Figure 8
Spoils Disposal Options

fund account, which will be established through the sale of conservation credits. The target value of the endowment fund is based upon the projected costs necessary to manage and maintain the project site in perpetuity.

Monitoring will be conducted during the establishment period (the first five years following construction). In years 6 and beyond, long-term monitoring will be conducted to determine if the conservation values are being adequately maintained. The specific terms of both the establishment period monitoring and the long-term monitoring are detailed in the CBA.

The CBA also includes a conservation easement which will be recorded on the project site after construction is complete. The conservation easement will restrict future uses of the site to prohibit any uses in conflict with the conservation values of the site.

Project Design

The proposed project is the restoration, enhancement and preservation of 808.76 acres of habitat for native fish species consisting of:

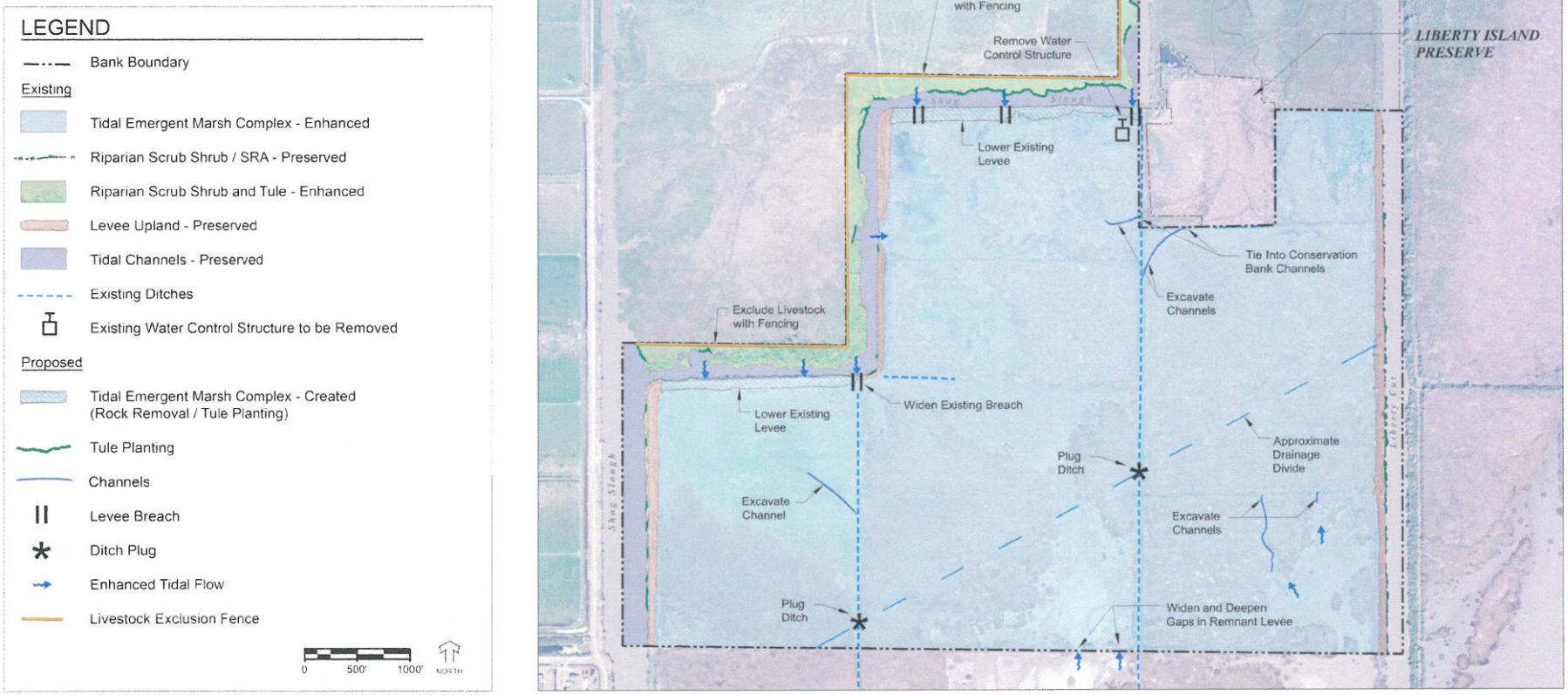
- 657.66 acres of tidal marsh complex (including tidal emergent marsh, seasonal wetland, riparian scrub shrub and open water);
- 69.1 acres of tidal channel;
- 50.9 acres of riparian scrub shrub;
- 19.2 acres of upland habitat (levee);
- 10.5 acres of tidal emergent marsh; and
- 1.4 acres of riparian scrub shrub.

Within these habitats, there will be approximately 4,307 linear feet of shaded riverine aquatic (SRA) habitat created by the degradation of the levee, 18,753 linear feet of SRA habitat enhanced through the exclusion of livestock and planting of tule, and 5,323 linear feet of SRA habitat preserved along existing levees.

The project has been designed to provide improvements to flood capacity and levee stability while enhancing and creating habitat for native Delta fish (including salmon and smelt). A hydraulic analysis conducted by MBK Engineers was prepared to show the effects of the degradation of east-west oriented levees along the northern boundary of Liberty Island on the flow of water, including flood conveyance, in the Bypass. Additional hydraulic analysis may be conducted to provide further detail during the encroachment permitting process.

The primary actions being proposed to implement the project include the following (Figure 9):

- Degradation of east-west oriented levees to provide improved tidal connectivity and enhanced water circulation.



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Initial Study

Figure 9
Concept Plan

- Excavation of several channels strategically located throughout the project site to promote connectivity between aquatic habitat.
- Installation of plugs within existing agricultural ditches to further promote tidal circulation.
- Exclusion of livestock and limited planting of tule (*Scirpus* spp.) along the northern boundary of the project site to promote the restoration of floodplain habitat currently degraded by cattle grazing and trampling.
- Planting of tule plugs along remaining levees to improve SRA habitat.
- Planting of tule plugs to promote the restoration of emergent marsh habitat following the degradation of the east-west oriented levees.

The enhancement of tidal circulation will be provided by the degradation of approximately 4,200 linear feet of levee (10.5 acres). The east-west oriented levees will be brought down to a sub-tidal elevation in the four locations identified as levee breaches and the remaining portion will be excavated down to elevations that support tidal emergent marsh.

A small interior levee along the southern project boundary will be further degraded in two areas to widen and deepen the existing gaps to further support water circulation and tidal connectivity to the southern portion of Liberty Island.

To create the ditch plugs, soil will be placed in the existing north-south ditch system at two locations to enhance existing water circulation patterns and promote natural tidal channel evolution.

Construction Information

It is anticipated that the project will take approximately 60 to 90 days to construct. The construction season will be restricted to protect sensitive environmental resources and occur between May and October during the dry season.

While the majority of restoration and enhancement areas are expected to quickly regenerate by volunteer plants, some active planting is proposed. As mentioned above, areas restored to emergent marsh (where the levee has been degraded) will be planted with tule plugs. Tule plugs also will be planted along the toe of north-south oriented levees on the western boundary where elevations are appropriate to support the species. The levees along Liberty Cut (on the eastern project boundary) do not have areas appropriate for infill planting of emergent marsh species. Where appropriate, upland areas disturbed by construction activities will be seeded with an upland seed mix. The Project Sponsor is currently evaluating several options for construction site access and disposal of excess materials. These options are discussed below.

Construction Site Access. Temporary access to the construction site for construction equipment is required to complete construction activities; however, permanent access to

the site will be by boat. The following options for temporary construction access have been identified (Figure 7):

1. Access from the south using Liberty Island Road Bridge. Construction equipment would access the site using the existing Liberty Island Road bridge across Shag Slough and travel north along the levee road to the project site. This option would require the following:

   a. Temporary construction easement agreement with TPL (property owner).

   b. Repair of the existing levee road to accommodate truck traffic.

   c. Installation of temporary culverts and fill across the existing levee breaches.

   If feasible, a barge may also be used to provide construction equipment access from Liberty Island Bridge up Shag Slough to the project site.

2. Access from the north using a floating bridge across Shag Slough. Construction equipment would access the site via Levee Road (also known as County Road 5190C) to a private road and travel east and south and cross Shag Slough to the project site. This option would require the following:

   a. Temporary construction easement agreement with Westlands (property owner).

   b. Construction of a temporary haul road across the neighboring Westlands Water District property and use of a temporary floating bridge to bring equipment and trucks across Shag Slough.

Disposal of Excess Materials. Construction of the project is anticipated to generate an estimated 130,000 cubic yards of material from lowering the levees and widening the existing breaches. The spoils material is anticipated to be a mix of soil and large rock. Some of the spoils may be used to plug the north-south ditches; however, most of the material will be removed from the Bypass floodway and deposited on nearby property(ies) in Solano County. The following disposal options have been identified (Figure 8):

Option 1: Disposal on some or all of the spoils on private property located at the southwest corner of Levee Road and Liberty Island Road (this site is referred to as Los Rios Labor Camp or Liberty Farms),

Option 2: Disposal of some or all of the spoils on private property located at the southeast corner of Delhi Road and Levee Road (this site is referred to as the Delhi Road site).

Option 3: Disposal of some or all of the spoils on property controlled by Reclamation District 2068 located on Delhi Road (this site is referred to as the RD 2068 Levee at Delhi Road).

Option 4: Disposal of some or all of the spoils at an abandoned farm yard on land controlled by Reclamation District 2068.

Option 5: Disposal of some or all of the spoils at the Hay Road Landfill located at the intersection of Hay Road and State Route 113.

Depending on the amount of spoils and the dimensions of the pile, it is estimated that the placement of 130,000 cubic yards would require approximately five to ten acres. Excess materials will be used for agricultural purposes including but not limited to levee maintenance. Reclamation Districts 2068, 2093 and 2098 have all expressed interest in future use of the soil and rock for levee rehabilitation projects within the reclamation districts. Two possible future levee rehabilitation project sites are shown in Figure 8. Temporary stockpiling of excess material may be required. If temporary stockpiling is necessary, it will occur on parcels zoned for agriculture and will be consistent with approved land uses. Future use of the soil and rock at a levee rehabilitation site would be subject to separate environmental review. Therefore, no further analysis of stockpiling or future use of the excess material is provided.

The export and disposal of agricultural soils from the project site to another location could require the issuance of an agricultural mining permit and the application of State Mining and Reclamation Act regulations. However, Yolo County has determined that if soils were transported and disposed by one or more adjacent Solano County reclamation districts for use as levee improvements, a mining permit would only be required if the soils were sold to the reclamation districts.

Long-term Operation and Maintenance

After construction is complete and the Conservation Bank is established, the Project Sponsor will record a conservation easement to restrict future uses of the site, thereby establishing Northern Liberty Island Fish Conservation Bank. The conservation easement will restrict future land uses and prohibit future grading or development of the site. Long-term management of the site in accordance with the requirements of the CBA and permits will be funded through interest generated on an endowment fund established as a requirement of approval of the Conservation Bank.

Environmental Commitments

All habitat development and management activities will be managed by the Project Sponsor to ensure that the mitigation habitats are constructed as designed, and that any existing wetland or water features in the surrounding area are not impacted by construction activities. The Project Sponsor has incorporated the following Environmental Commitments into the proposed project to avoid, minimize, and reduce the environmental impacts of the project.

1. Set construction limits that do not encroach on preserved wetlands or other water features. Preserved aquatic resources and riparian habitat will be marked on the construction drawings. If needed, a visual or physical barrier

will be installed along the perimeter of these features in order to avoid disturbance.

2. Attend pre-construction meetings and conduct environmental trainings regarding the location of wetland or other water features as well as other sensitive resources.

3. Conduct a post-construction inspection to determine if any post-construction remediation is needed. If remediation actions are necessary, Wildlands will ensure that those actions are performed by the construction personnel.

4. A qualified biologist will conduct preconstruction surveys to locate all active raptor nest and rookery sites within one-half mile of construction activities for Swainson's hawk and within 600-feet for all other raptors and rookery sites. Direct disturbance, including removal of new trees and activities in the immediate vicinity of active nests, will be avoided during the breeding season (March through August). No-disturbance buffers will be established around any identified active nest to avoid disturbing nesting birds. The size and configuration of buffers will be based on the proximity of active nests to construction, existing disturbance levels, topography, the sensitivity of the species, and other factors and will be established through coordination with CDFG representatives on a case-by-case basis.

5. Due to the location of the project site in the Yolo Bypass floodway and its' marginal giant garter snake (GGS) habitat, it is unlikely that GGS will be utilizing the site during the construction period. However, the following standard avoidance measures recommended by USFWS (1997) will be used to minimize any potential disturbance to GGS.

    a. Conduct construction activities during GGS active period (May – October).

    b. Implement a workers' awareness program wherein construction personnel are provided instruction on recognition of GGS and their habitats, and the legal protection afforded GGS by the Endangered Species Act.

    c. Conduct a GGS survey 24 hours prior to commencement of habitat maintenance activities.

    d. Observe a 20 mile per hour speed limit within the construction zone.

    e. Complete construction within one season.

6. Prior to construction of the project, the Project Sponsor shall submit construction drawings to Reclamation District 2093, Yolo County, Corps, NMFS, USFWS, CDFG, and Central Valley Flood Protection Board (CVFPB), together referred to as the Resource Agencies, showing all haul routes, staging areas, spoils areas, and wetland creation sites.

7. A Restoration Ecologist will observe and manage habitat creation on a weekly basis. If situations arise that could be detrimental to the existing aquatic resources, the Restoration Ecologist will have the authority to stop construction activities until corrective actions have been taken.

8. Erosion control best management practices (BMPs) will be implemented during excavation to ensure that substances, such as run-off generated by dust control activities, do not enter other aquatic resources during or following construction. BMPs include, but are not limited to, grading during the dry season, compaction of berms and upland spoils, and seeding and mulching areas of disturbed/exposed soil.

9. When feasible, soil stockpiles will be located more than 50 feet from existing aquatic resources, and will be surrounded with erosion control (i.e., silt fencing or sterile straw wattles). Stockpiles and other exposed soil will be watered for dust control and soil compaction, where necessary. The amount of water applied to the site will be monitored to prevent erosion and surface runoff due to excessive watering. The water will be applied to exposed soil by using a water truck. The water will be pumped from existing onsite drainage features. Water application will be directed away from other aquatic resources.

10. All construction staging activities will occur within a designated staging area. The staging area will be marked in the field and on the construction plans. All refueling and maintenance activities will occur within the staging area.

11. Any hazardous materials spill will be cleaned up immediately, in accordance with all federal, state, and local regulations. The contractor will be required to develop and implement a toxic materials control and spill response plan to regulate the use of hazardous materials associated with construction. The contractor will be required to:

    a. prevent oil or other petroleum products, or any other substances that could be hazardous to aquatic life from contaminating the soil or entering watercourses;

    b. establish a spill-prevention and countermeasure plan before construction that includes strict on-site handling rules to keep construction and maintenance materials out of drainages and waterways;

    c. clean up all spills immediately according to the spill prevention and countermeasure plan, and notify CDFG immediately of any spills and cleanup activities;

    d. develop a spill prevention plan that includes the following information:

        i. A list of immediate containment response actions and extended response actions if necessary;

ii. A list of responsible agencies to contact in the event of a spill emergency within 24 hours;

iii. A list of spill containment equipment held on site as well as the location of the equipment on site;

iv. Identify a contact and location of a professional clean up company; and

v. Designate an onsite incident commander in the event of an emergency. This person will immediately inform CDFG-OSPR in the event of an emergency. The incident commander will have complete control of construction and cleanup activities throughout the emergency and the eventual containment.

e. provide areas located outside the ordinary high water mark (OHWM) for staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants; and

f. remove vehicles from the normal high-water area of the waterway before refueling and lubricating.

12. A stormwater pollution prevention plan (SWPPP) will be prepared and implemented prior to the initiation of construction. Additional measures and BMPs identified in the SWPPP to minimize potential impacts to water quality shall be implemented.

13. Upland areas disturbed by construction will be seeded with native and naturalized upland plant species as soon as feasible after construction to minimize dust and erosion.

14. Offsite disposal areas will be seeded with native and naturalized upland plant species as soon as feasible after construction to minimize dust and erosion.

Related Projects

Related projects include past projects and future projects. There is one related past project in the project vicinity, the Liberty Island Conservation Bank and Preserve, and there are several potential future restoration projects in the project vicinity. These related projects are discussed below.

Liberty Island Conservation Bank and Preserve

The Liberty Island Conservation Bank and Preserve project is a 186-acre fisheries enhancement project constructed in 2010 (Figure 9). This project included a CBA with NMFS, USFWS and CDFG, construction and long-term operation and maintenance. This project is very similar to the proposed project. Both are fisheries enhancement

projects constructed for the purpose of providing compensation for impacts to listed fisheries habitat within the region.

Yolo Ranch

Westlands Water District, a Fresno-based irrigation district, purchased a 3,450-acre ranch located just north of Liberty Island. According to a December 15, 2007 article published by the Davis Enterprise, the acquisition will enable the restoration of wetlands and wildlife habitat. The following brief overview of the project and project consultant's activities was presented at the Lower Yolo Bypass Planning Forum on August 26, 2010:

- Westlands Water District owns the majority of the Yolo Ranch Area habitat restoration/development lands;
- The project is funded by the State and Federal Contractors Water Agency (SFCWA);
- The project could include excavating 150,000 to 500,000 cubic yards of materials;
- The consultants are working on at least two conceptual design alternatives to improve habitat.
- The consultant team has completed initial meetings with applicable resource agencies at the state and federal levels. Meetings with the Central Valley Flood Protection Board and Yolo County are being scheduled. The environmental documents are expected to be released in 2011.

Little Hastings Island

Little Hastings Island is a small inundated island roughly 160 acres in size located immediately southwest of the southern tip of Liberty Island. Coordination with various regulatory agencies has been ongoing regarding the possibility of preserving and potentially restoring habitat for native Delta fish species within the island.

Bay Delta Conservation Plan

The BDCP is a multi-year, multi-agency plan that sets out comprehensive near-term and long-term conservation strategies for the Delta designed to advance the co-equal planning goals of restoring ecological functions of the Delta and improving water supply reliability to large portions of the State of California. The BDCP planning process started prior to 2006 and will continue through 2012 at a minimum. The BDCP is expected to result in long-term regulatory authorizations under State and federal endangered species laws for the operation of the State Water Project (SWP) and the Central Valley Project (CVP), as well as the operations of certain power plants owned by Mirant Delta LLC. The goal of the BDCP is to serve as a Habitat Conservation Plan (HCP) under

section 10 of the federal ESA and a Natural Community Conservation Plan (NCCP) under the State's Natural Community Conservation Planning Act (NCCPA).

The BDCP covers the Sacramento-San Joaquin Delta, as defined by California Water Code Section 12220 ("statutory Delta"), as well as certain additional areas in which conservation measures will be implemented. There have been a number of "Working Draft" BDCP chapters released for public review; however, the actual publication of the Draft BDCP is not anticipated until 2011.

The BDCP will provide the basis for regulatory compliance with ESA and the NCCPA for a range of activities related to the operation of the SWP, CVP, and the Mirant power plants, including the diversion and export of water from the Delta and its tributaries.

The BDCP will support the issuance of incidental take authorizations from USFWS and NMFS pursuant to section 10 of the ESA and take authorizations from CDFG under section 2835 of the NCCPA to the non-federal applicants. The BDCP also has been designed to meet the standards of section 2081 of the California Endangered Species Act (CESA). The BDCP will further provide the basis for biological assessments to support the issuance of incidental take authorizations from USFWS and NMFS to Reclamation pursuant to section 7 of the ESA, for its actions in the Delta.

The BDCP and the actions described in it will need to conform to the requirements of various other State and federal laws and regulations not specifically addressed by the BDCP. Prior to implementation of many of the actions set out in the BDCP, regulatory authorizations and approvals will be required including authorizations under:

- Section 404 of the Clean Water Act
- Section 401 of the Clean Water Act
- Section 10 of the Rivers and Harbors Act
- California Fish and Game Code Section 1600 et seq.
- Water Rights under the California Water Code
- Central Valley Flood Protection Board Encroachment Permit

The BDCP will identify a range of actions that will be implemented over the term of the BDCP to meet the biological goals and objectives described in the Conservation Strategy and to comply with the requirements of the federal ESA and the NCCPA. These actions include the cost of water facilities construction and operation; conservation measures associated with the preservation, restoration and protection of 65,000 acres of tidal wetland and associated estuarine habitat, 5,000 acres of riparian habitat, 2,000 acres of grassland, 400 acres of non-tidal wetlands and associated aquatic habitat, 200 acres of vernal pool complex, up to 5,000 acres of managed wetlands, and 10,000 acres of floodplain habitat; the enhancement of 20 linear miles of channel margin habitat, and the protection of over 40,000 acres of existing habitat. Low and high estimates of total capital and operating costs over the 50-year permit period range between $20.0 and $25.8 billion in 2009 dollars. Of this total, water facilities and operations account for roughly 72 percent, habitat restoration conservation measures 19 percent, other stressor conservation measures 7 percent, and program management and changed circumstances 2 percent.

For purposes of CEQA, it is considered likely that Little Hastings Island and Yolo Ranch may proceed to implementation within the next 2 to 5 years; however, it is considered unlikely that the BDCP will be adopted and any projects or actions implemented within the next 2 to 5 years.

Related Projects Timeline

For purposes of CEQA, these projects are considered separately as they have separate utility and one is not dependant upon the other. These projects will not be caused by the construction of the project; rather, each of these projects provide mitigation and compensation that may ultimately be required by regional and statewide water resource and environmental planning activities, federal and state permitting requirements, and pending and potential lawsuits. The project will be built to meet anticipated near-term mitigation demand, has independent utility from the other projects, and would be implemented regardless of whether the related projects are implemented or not.

Environmental Setting and Surrounding Land Uses

This section summarizes the environmental setting of the project site. Additional information for the environmental setting is provided under the individual resources sections, as applicable.

Liberty Island is located in the southern Yolo Bypass, which is a 59,000-acre flood bypass that protects Sacramento and other Central Valley communities from flooding. The Yolo Bypass is characterized by a low gradient, wide floodplain confined by federal project levees to the east and west. The channels and sloughs surrounding the island have streambeds of fine sediment material. Remnant historic levees dominate the topography on the perimeter of the site, reaching elevations of up to 20 feet. Levees on the margins of the lower two-thirds of the island are severely degraded with many breaches. Topography generally slopes from northwest to southeast. Water depths reach 8 to 10 feet in the south end of the island.

Prior to 1998, Liberty Island was a 10-square-mile leveed island in agricultural production. At its development peak, the island had paved roads, power and telephone lines, homes, farm buildings, and a school. The private levees protecting the island failed during the floods of 1997 and were never restored. As a result, Liberty Island flooded and all but the upper 1,000 acres were permanently inundated. The lower portion of the island, approximately 4,000 acres, has remained predominantly sub-tidal open water.

The hydrology at Liberty Island is dominated by tidal freshwater flows of the southern Yolo Bypass, agricultural drainage from Bypass canals, and winter-spring flood flows of the Yolo Bypass. Currently, water flows over the entire site (excluding the east and west levees) once every three years, on average when the Bypass floods. The majority of the site is permanently inundated. Currently, tidal circulation within the project site is restricted as water exchange with the tidal sloughs is limited to the narrow openings of the two existing breaches. In addition, there appears to be a drainage divide in the southeastern portion of the site (Figure 9) that acts as a minor watershed break and a

remnant internal levee in the southern portion of the project site that restrict water circulation with the southern region of Liberty Island.

Land uses surrounding the project site are similar in character to the site itself. A 1964 aerial photograph shows the adjacent properties were used as pasture or row crops. After the levee failures in 1997, the area south of the project site reverted back to tule marsh and tidal open water. Major tidal sloughs (Shag Slough and Liberty Cut) border the north, east, and west of the project site. The tidal open-water reach of Liberty Island, which is owned by TPL, occurs immediately to the south of the project site. All of Liberty Island is under a flood easement, as part of the Yolo Bypass, which is complementary with the proposed project.

List of Separately Bound Technical Studies

This document relies on a number of site-specific technical studies were conducted to verify the condition and feasibility of the site for establishing a habitat conservation bank. The following documents are available for review during normal business hours at the RD 2093 offices and copies of these reports also can be obtained from the Project Sponsor.

- *Northern Liberty Island Fish Restoration Project Assessment* prepared by H.T. Harvey & Associates Ecological Consultants, January 2010.
- *Phase 1 Environmental Site Assessment, APN 033-270-07, APN 033-280-14, and APN 033-280-15, Yolo County, California* prepared by VESTRA Resources, Inc., December 2008 (Revised January 2009).
- *Phase 1 Environmental Site Assessment, APN 033-280-01 and APN 033-280-05, Yolo County, California* prepared by VESTRA Resources, Inc., December 2008 (Revised January 2009)
- *Phase 1 Environmental Site Assessment, APN 033-280-16, Yolo County, California* prepared by VESTRA Resources, Inc., January 2010.
- *Biological Resources Report, Northern Liberty Island Fish Conservation Bank, Yolo County, California* prepared by Wildlands, Inc., April 2010.
- *Preliminary Wetland Delineation Trust for Public Land 440-Acre Property, Yolo County, California* prepared by Wildlands, Inc., July 2009.
- *Preliminary Wetland Delineation Reclamation District 2093 120-Acre Property, Yolo County, California* prepared by Wildlands, Inc., November 2009.
- *Preliminary Wetland Delineation West Property 274-acre Property, Yolo County, California* prepared by Wildlands, Inc., March 2010.
- *Cultural Resources Inventory & Evaluation Liberty Island 120-Acre Reclamation District 2093 Property, Yolo County, California* prepared by Analytical Environmental Services, January 2009.

- *Cultural Resources Inventory & Evaluation Liberty Island 440-Acre Trust for Public Lands Property, Yolo County, California* prepared by Analytical Environmental Services, January 2009.
- Cultural Resources Inventory & Evaluation Liberty Island 274-Acre Trust for Public Lands, Yolo County, California *prepared by Analytical Environmental Services, January 2010.*
- Hydraulic and Hydrologic Analysis of the Liberty Island Levee Degradation Project *prepared by MBK Engineers, March 2008.*
- Supplemental Hydraulic Analysis for the Liberty Island Conservation Bank Project *prepared by MBK Engineers, June 2010.*

Anticipated Permits and Consultations

The following permits and consultations are anticipated to construct the project (Table 1).

Table 1. Permits and Consultations

Agency	Approval or Permit	Approval or Permit Status
National Marine Fisheries Service	Approval of Conservation Bank	CBA submitted to Interagency Review Team (IRT consisting of NMFS, USFWS and CDFG) on September 15, 2010
	Informal consultation pursuant to section 7 of the ESA	Biological information is being prepared for submittal to NMFS
	Consultation pursuant to the Magnuson-Stevens Fishery Conservation and Management Act	
	Consultation under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act of 1934	
U.S. Fish and Wildlife Service	Approval of Conservation Bank	CBA submitted to IRT on September 15, 2010
	Informal consultation pursuant to section 7 of the ESA	Biological information is being prepared for submittal to USFWS
California Department of Fish and Game	Approval of Conservation Bank	CBA submitted to IRT on September 15, 2010
	Streambed Alteration Agreement under Fish and Game Code Section 1602	Streambed alteration agreement is being prepared for submittal to CDFG

Table 1. Permits and Consultations		
Agency	**Approval or Permit**	**Approval or Permit Status**
	A CDFG Incidental Take Permit or Consistency Determination under Section 2081 of the CESA	Construction activities are being evaluated to determine if ESA consultation is required
U.S. Army Corps of Engineers	Clean Water Act (CWA Section 404 nationwide permit.	Wetland delineations have been verified (Corps file numbers SPK-2008-00115 and SPK-2010-00755). Section 404 Nationwide Permit is being prepared for submittal
	Rivers and Harbors Act Section 10 permit	Section 10 Permit may be required if a floating bridge is necessary.
State Office of Historic Preservation	Concurrence under the regulations implementing Section 106 of the National Historic Preservation Act	Cultural resources documentation is being prepared for submittal
Central Valley Flood Protection Board	Encroachment permit	Permit application is being prepared for submittal
Central Valley Regional Water Quality Control Board	Clean Water Act Section 401 water quality certification for discharge of dredged and/or fill materials	Permit application is being prepared for submittal
State Water Resources Control Board	Notice of Intent to comply with the terms of the general permit for storm water discharges associated with construction activity	Permit application is being prepared for submittal
Yolo County	Grading permit	Permit application is being prepared for submittal
	Flood Hazard Development Permit	Permit application was submitted November 10, 2010.
	Surface Mining and Reclamation Act Permit	Need for permit will be determined by Yolo County
Solano County	Grading permit	Need for permit will be determined by Solano County
Reclamation District 2093	Project approval	Anticipated in 2011

Mitigation Measures

The Project Description includes Environmental Commitments that are part of the proposed project. The Initial Study includes various mitigation measures that have been identified to reduce impacts to a less-than-significant level. The Project Sponsor has reviewed and agreed to implement both the Environmental Commitments and the mitigation measures as part of the project. If the project is approved, these Environmental Commitments and mitigation measures will be included as Conditions of Approval and implemented, as required by CEQA, per Public Resources Code Section 21081.6.

Environmental Factors Potentially Affected

The environmental factors checked below could potentially be affected by this project, involving at least one impact that is still a "Potentially Significant Impact" (after any mitigation measures have been required and agreed to by the project proponent).

☐ Aesthetics	☐ Agricultural and Forest Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology / Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality
☐ Land Use / Planning	☐ Mineral Resources	☐ Noise
☐ Population / Housing	☐ Public Services	☐ Recreation
☐ Transportation / Traffic	☐ Utilities / Service Systems	☐ Mandatory Findings of Significance

Determination

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 to 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 an impact on the environment that is "potentially significant" or "potentially significant unless mitigated" 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 ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the project, nothing further is required.

Signature — Date: 2/10/11

Erik Vink

Printed Name

Purpose of this Initial Study

This Initial Study has been prepared consistent with CEQA Guidelines Section 15063, to determine if the project as described herein may have a significant effect upon the environment.

Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained if it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. A "Less Than Significant with Mitigation Incorporated" applies when the incorporation of mitigation measures has reduced an effect from a "Potentially Significant Impact" to a "Less than Significant Impact". The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level.

5. A determination that a "Less Than Significant Impact" would occur is appropriate when the project could create some identifiable impact, but the impact would be less than the threshold set by a performance standard or adopted policy. The initial study should describe the impact and state why it is found to be "less than significant."

6. Earlier analyses may be used where, pursuant to tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [Section 15063(c)(3)(D) of the California Government Code]. In this case, a brief discussion should identify the following:

   a. Earlier Analysis Used. Identify and state where earlier analyses are available for review.

   b. Impacts Adequately Addressed. Identify which effects from the checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and state whether such effects were addressed by mitigation measures based on the earlier analysis.

c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

7. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, when appropriate, include a reference to the page or pages where the statement is substantiated.

8. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

9. The explanation of each issue should identify:

a. the significance criteria or threshold, if any, used to evaluate each question, and

b. the mitigation measure(s) identified, if any, to reduce the impact to a less-than-significant level.

I.	AESTHETICS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	☐	☐	☒	☐
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d.	Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☐	☒

Discussion

a. *No Impact.* The project area is located within a flat, agricultural and open space area. On a clear day, distant views can be seen of the coastal mountains to the west, and the Sierra Nevada Mountains to the east. Implementation of the project would result in no impact on views in the area.

b. *Less than Significant Impact.* The project would not substantially damage scenic resources. Liberty Island Road is not designated as a scenic highway by Yolo County. No rock outcroppings or historic buildings that would be affected by the project. While limited scrub-type vegetation will be either pruned or removed to accommodate the degradation of levees, this impact is temporary as the overall character of the area will be retained and the area will be allowed to revegetate.

c. *Less than Significant Impact.* The project site is located in a very remote area. Scenic vistas in the project vicinity generally consist of views of riparian or wetland vegetation along the surrounding sloughs and within the existing marsh. The presence of construction equipment on the levee crown and on the landside and waterside of the levee would temporarily degrade the existing views at the project site; however, it is anticipated that construction equipment would only be present up to 90 days. Although a minimal amount of riparian vegetation would be removed during construction activities and along existing east-west levees to restore tidal hydrology, disturbed areas will be revegetated and the remaining riparian vegetation will be preserved.

d. *No Impact.* No temporary or permanent nighttime lighting is proposed. Construction activities would occur during daytime hours.

II. AGRICULTURAL AND FOREST RESOURCES		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
In determining whether impacts on 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 Department of Conservation. 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 Project; and the forest carbon measurement methodology provided in the 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?	☐	☐	☐	☒
b.	Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	☐	☐	☐	☒
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220 (g)) or timberland (as defined in Public Resources Code section 4526)?	☐	☐	☐	☒
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e.	Involve other changes in the existing environment that, 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?	☐	☐	☐	☒

Environmental Setting

The Yolo County General Plan (2010) designates land use on the project site as AG with a DPO. An Agriculture land use designation is typically applied to lands best suited for agriculture, to preserve them from the encroachment of nonagricultural uses. It is intended to include lands in contracted agricultural preserves. The Agriculture land use designation includes the full range of cultivated agriculture, such as row crops, orchards, vineyards, dryland farming, livestock grazing, forest products, and confined animal facilities and equestrian facilities. It also includes agricultural industrial uses as well as agricultural commercial uses serving rural areas. Agriculture also includes farmworker housing, surface mining, and incidental habitat. (County of Yolo 2030 Countywide General Plan, page LU-14.)

The DPO applies to the State designated "primary zone" of the Sacramento-San Joaquin Delta, as defined in the Delta Protection Act. Land uses consistent with the base designation and the Delta Protection Commission's Land Use and Resource Management Plan are allowed. (County of Yolo 2030 Countywide General Plan, page LU-16.)

The Yolo County zoning classifications for the project site are Agricultural General and Agricultural Preserve. The purpose of the Zone A-1 shall be to provide uses on lands best suited for agriculture. The purpose of the Zone A-P shall be to preserve land best suited for agricultural use from the encroachment of nonagricultural uses. The A-P zone is intended to be used to establish agricultural preserves in accordance with the California Land Conservation Act of 1965, as amended. Uses approved on contracted land shall be consistent with the provisions of the Act.

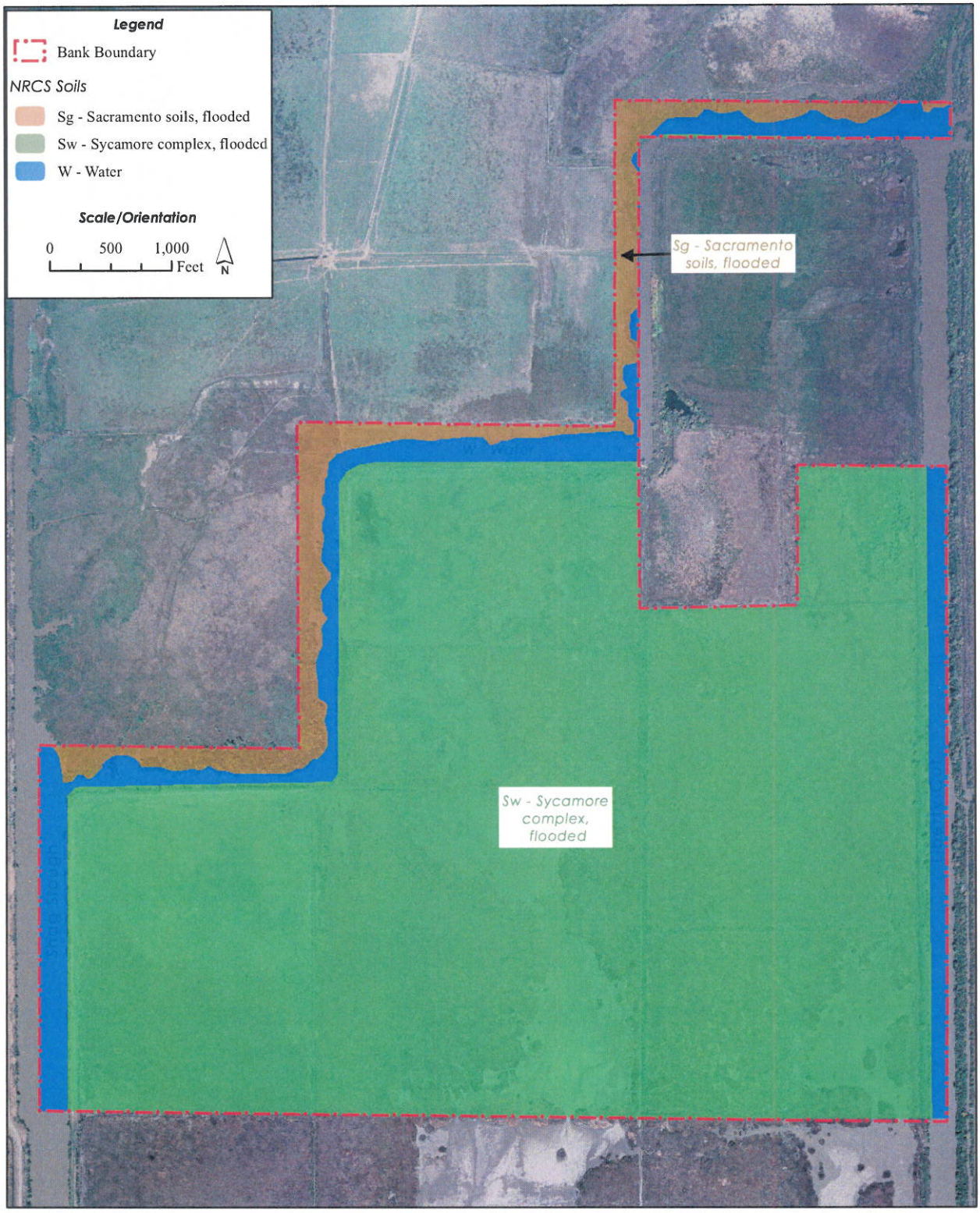
The California Department of Conservation Division of Land Resource Protection maintains a Farmland Mapping and Monitoring Program (FMMP) that has developed Important Farmland Maps for the state. The FMMP is a classification system that combines technical soil ratings and current land use ass the basis for the Important Farmland Maps. The Important Farmland Maps identify prime farmland, farmland of statewide importance, unique farmland, farmland of local importance, grazing land, urban and built-up land, other land and water. The designation for the project site is Other Land. The Other Land category covers land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres.

The Soil Survey of Yolo County, California (Soil Conservation Service 1972) indicates that the project site is composed of two soil types: Sycamore complex, flooded and Sacramento soils, flooded (Figure 10). These soils are underlain by silty clay at a depth of 40 to 60 inches. These soils are subject to flooding 1 year out of 3 because of flowage easements. Typically the soil is used for sugar beets, grain sorghum, and rice. Other uses include dry farmed safflower, wildlife habitat and recreation.

Sacramento soils, flooded, consist of poorly to very poorly drained soils with slow to very slow runoff and slow permeability. The water table fluctuates between a depth of 34 inches to below 60 inches. Sacramento soils are subject to frequent overflow where not protected by levees or located within flood control systems.

Historic farming operations on Liberty Island included potatoes, asparagus, beans, zucchini, onions, peas, and tomatoes. At its development peak, the island had paved roads, power and telephone lines, homes, farm buildings and a school. Between 1918 and 1973, Liberty Island flooded 27 times and each time reclamation activities continued, until 1997 when the levees breached and the island was never reclaimed. The majority of Liberty Island has reverted back to natural tidal habitats following the levee failures in 1997.

Two of the parcels within the project site (APN 033-280-01 and APN 033-280-05) are under Williamson Act contract. Williamson Act contract #80-50 on APN 033-280-01 was


Legend
Bank Boundary
NRCS Soils
Sg - Sacramento soils, flooded
Sw - Sycamore complex, flooded
W - Water
Scale/Orientation
0
500
1,000
Feet
N
Sg - Sacramento soils, flooded
Sw - Sycamore complex, flooded

entered into in 1980, and Williamson Act contract #72-294 on APN 033-280-05 was entered into in 1972. The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners to restrict the use of the property to agricultural uses and those uses determined to be compatible with agricultural use.

Discussion

a. *No Impact.* The project site is designated "Other Land" by the Farmland Mapping and Monitoring Program of the California Resources Agency. Approval of the project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.

b. *No Impact.* The project includes recordation of a conservation easement to protect the conserved lands in perpetuity. Yolo County Planning staff has previously determined that the proposed Conservation Easement is consistent with the implementation of the Williamson Act in Yolo County.

c. and *d. No Impact.* The project does not conflict with existing zoning for forest land or timberland. The project also would not result in the loss of forest land or conversion of forest land to non-forest uses.

e. *No Impact.* The project is consistent with the General Plan designation and zoning classification. Yolo County Code Section 8-2.403(j) and Section 8-2.603(j) state that an "accessory use" to A-1-zoned property and AP-zoned property allow privately-owned reservoirs and/or water retention basins, with associated on-site water transmission facilities, provided that such reservoir or retention facility is found to have a potential either to provide flood control, fire suppression, water supply, wildlife habitat improvement, groundwater recharge, or tailwater enhancement.

III. AIR QUALITY		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Where applicable, 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?	☐	☐	☐	☒
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
d.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e.	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Environmental Setting

The project site is within the Sacramento Valley Air Basin under the jurisdiction of the Yolo-Solano Air Quality Management District (YSAQMD), which regulates air quality conditions within Yolo County. Yolo County is classified as a non-attainment area for several air pollutants, including ozone (O_3) for both federal and state standards, particulate matter 10 microns or less in diameter (PM10) for the state standards, and is classified as a moderate maintenance area for carbon monoxide (CO) by the state.

Development projects are most likely to violate an air quality plan or standard, or contribute substantially to an existing or projected air quality violation, through generation of vehicle trips. Construction projects, by their very nature, generate temporary air emissions and are not as likely to violate an air quality plan or standard.

The YSAQMD sets threshold levels for use in evaluating the significance of criteria air pollutant emissions from project-related mobile and area sources in the Handbook for Assessing and Mitigating Air Quality Impacts (YSAQMD 2007). The handbook identifies quantitative and qualitative long-term significance thresholds for use in evaluating the significance of criteria air pollutant emissions from project-related mobile and area sources. These thresholds include:

- Reactive Organic Gases (ROG): 10 tons per year
- Oxides of Nitrogen (NOx): 10 tons per year
- Particulate Matter (PM10): 80 pounds per day

- CO: Violation of State ambient air quality standard

The emissions from the construction of the project were analyzed using the latest version of Urbemis which is version 9.2.4. Daily and total project emissions were calculated based on the following information provided by the project applicant:

- 2 Caterpillar 330 excavators model year 2007
- 1 Caterpillar D6T bulldozer model year 2007
- 12 18-wheel trucks model year 2001 or newer
- Minimum 45-day construction schedule
- Soil disposal options have the following round trip distances
  i. Option 1: 5 miles
  ii. Option 2: 13 miles
  iii. Option 3: 16 miles
  iv. Option 4: 10 miles
  v. Option 5: 30 miles

Table 2 shows the results from the Urbemis calculations.

Table 2. Construction Emissions - Mitigated

	Tons/Year			Pounds/Day	
	ROG	**NOx**	**CO2**	**PM10**	**PM2.5**
Disposal Option 1	0.06	0.6	80	73	17
Disposal Option 2	0.10	1.2	160	75	18
Disposal Option 3	0.12	1.4	190	76	19
Disposal Option 4	0.09	1.0	130	74	18
Disposal Option 5	0.20	2.4	331	79	22

Discussion

a. *No Impact.* A project is deemed inconsistent with air quality plans if it would result in population and/or employment growth that exceeds growth estimates included in the applicable air quality plan. The project would result in temporary construction employment only. The addition of this temporary construction employment is within the amount of growth anticipated by the YSAQMD in unincorporated Yolo County. The project would be consistent with the adopted air district plan.

b. *Less than Significant Impact with Mitigation Incorporated.* Potential short-term impacts may occur from equipment exhaust emissions and dust during excavation and grading. Vehicle emissions of ozone, ozone precursors, and PM10 will not

contribute significantly to local violations of regulatory standards; however, PM10 would contribute significantly to local violations of regulatory standards. To mitigate this impact, the following standard measures to reduce construction dust and reduce construction equipment emissions are recommended by the YSAQMD.

Mitigation Measure AIR-1:

The project shall incorporate the following standard construction dust mitigation measures recommended by the YSAQMD.

a. Water active construction sites at least twice daily as needed. Frequency should be based on the type of operation, soil, and wind exposure.

b. Haul trucks shall maintain at least 2 feet of freeboard.

c. All trucks hauling dirt, sand, or loose materials will be covered or wetted to minimize dust.

d. Plant vegetative ground cover in disturbed areas as soon as possible.

e. Cover inactive storage piles.

f. Treat accesses to a distance of 100 feet from the paved road with a 6- to 12-inch layer of wood chips or mulch, or a 6-inch layer of gravel.

Mitigation Measure AIR-2:

The project shall incorporate the following standard NOx reduction requirements recommended by YSAQMD.

a. Construction equipment exhaust emissions shall not exceed District Rule 2-11 Visible Emission limitations.

b. Construction equipment shall minimize idling time to 5 minutes or less.

c. The primary contractor shall submit to the District a comprehensive inventory (i.e., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used an aggregate or 40 or more hours for the construction project. District personnel, with assistance from the California Air Resources board, will conduct initial Visible Emission Evaluations of all heavy duty equipment on the inventory list.

d. An enforcement plan shall be established to weekly evaluate project-related on- and off-road heavy-duty vehicle engine emission opacities, using standards as defined in California Code of Regulations, Title 13, Sections 2180-2194. An Environmental Coordinator, CARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate project-related off-road and heavy on-road equipment emissions for compliance with this requirement. Operators of vehicles and equipment found to exceed opacity limits will be notified and the

equipment must be repaired within 72 hours. Construction contracts shall stipulate that at least 20% of the heavy-duty off-road equipment included in the inventory shall be powered by CARB-certified off-road engines, as follows:

- 175 hp – 750 hp 1996 and newer engines
- 100 hp – 174 hp 1997 and newer engines
- 50 hp – 99 hp 1998 and newer engines

In lieu of or in addition to this requirement, other measures may be used to reduce particulate matter and nitrogen oxide emissions from project construction through the use of emulsified diesel fuel and/or particulate matter traps. These alternative measures, if proposed, shall be developed in consultation with District staff.

c. *Less than Significant Impact with Mitigation.* Construction of the project would lead to a temporary increase in ozone and ozone precursors, as they are primarily the result of emissions from combustion engines of construction equipment require to construct the project. These types of equipment would emit hydrocarbons, oxides of nitrogen, carbon monoxide, and particulate matter (consisting of windblown dust and diesel particulate matter).

   Based on the information provided, the project's NOx emissions are considered less than significant. However, it is possible that the construction schedule, types and pieces of equipment and hours of daily use may change once the project is bid. For the details of the proposed mitigation, see Mitigation Measure AIR-2 above.

d. *Less than Significant Impact.* The project is located in a rural agricultural area and there are no sensitive receptors or substantial numbers of people within the vicinity of the project. ("Sensitive receptors" refer to those segments of the population most susceptible to poor air quality, i.e., children, elderly and the sick, and to certain at-risk sensitive land uses such as schools, hospitals, parks or residential communities.) The proposed grading and construction are not expected to generate pollutant concentrations at a sufficient level to be noticed by any rural residences, particularly given the agricultural nature of the project area.

   The nearest rural residences in the project vicinity are located west of the project site at the west end of Liberty Island Road bridge. The air pollutants generated by construction would be primarily dust and particulate matter. Dust will be controlled through effective management practices, such as water spraying during construction activity.

e. *Less than Significant Impact.* The project is not anticipated to create objectionable odors. The project would be constructed using diesel-powered heavy equipment. Diesel exhaust from construction activities may generate temporary odors while project construction is underway; however, there are no sensitive receptors or substantial numbers of people within the vicinity of the project. ("Sensitive receptors" refer to those segments of the population most

susceptible to poor air quality, i.e., children, elderly and the sick, and to certain at-risk sensitive land uses such as schools, hospitals, parks or residential communities.)

IV.	BIOLOGICAL RESOURCES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☒	☐	☐
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
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?	☐	☐	☒	☐
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Environmental Setting

Habitat Types

After breaching and permanently flooding in 1997-98, Liberty Island has reverted to tidal and upland habitats. While most of the levees remain intact and functional in the north, a large portion of the levee system in the south has degraded and washed away. Patches of riparian habitat grow on the water and land sides of the levees, but the levee tops primarily support ruderal, nonnative upland habitat. Over half of the interior of the 5,000-acre Liberty Island is now intertidal and has reverted to seasonal and perennial marsh.

Some of the higher areas on the island are in various stages of reverting to supratidal seasonal wetlands.

The dominant habitat types within the project site are tidal marsh complex, seasonal wetland, riparian scrub shrub, and tidal channel/open water. The majority of the interior of the project site is tidal emergent marsh that has developed as a result of levee breaches that occurred in early 1997. This habitat is tidally influenced via hydrological connectivity to the adjacent Shag Slough and the predominantly tidal open water remainder of the southern end of Liberty Island. Habitats that occur within the project site include: tidal marsh complex, seasonal wetland, riparian scrub shrub, tidal channel (open water), and levee upland (Figure 11). These habitats provide nesting and foraging habitat for raptors and migratory birds as well as small mammals, reptiles, and amphibians. Aquatic habitats (tidal marsh complex and tidal sloughs) support fish and invertebrates. Each habitat type is described below.

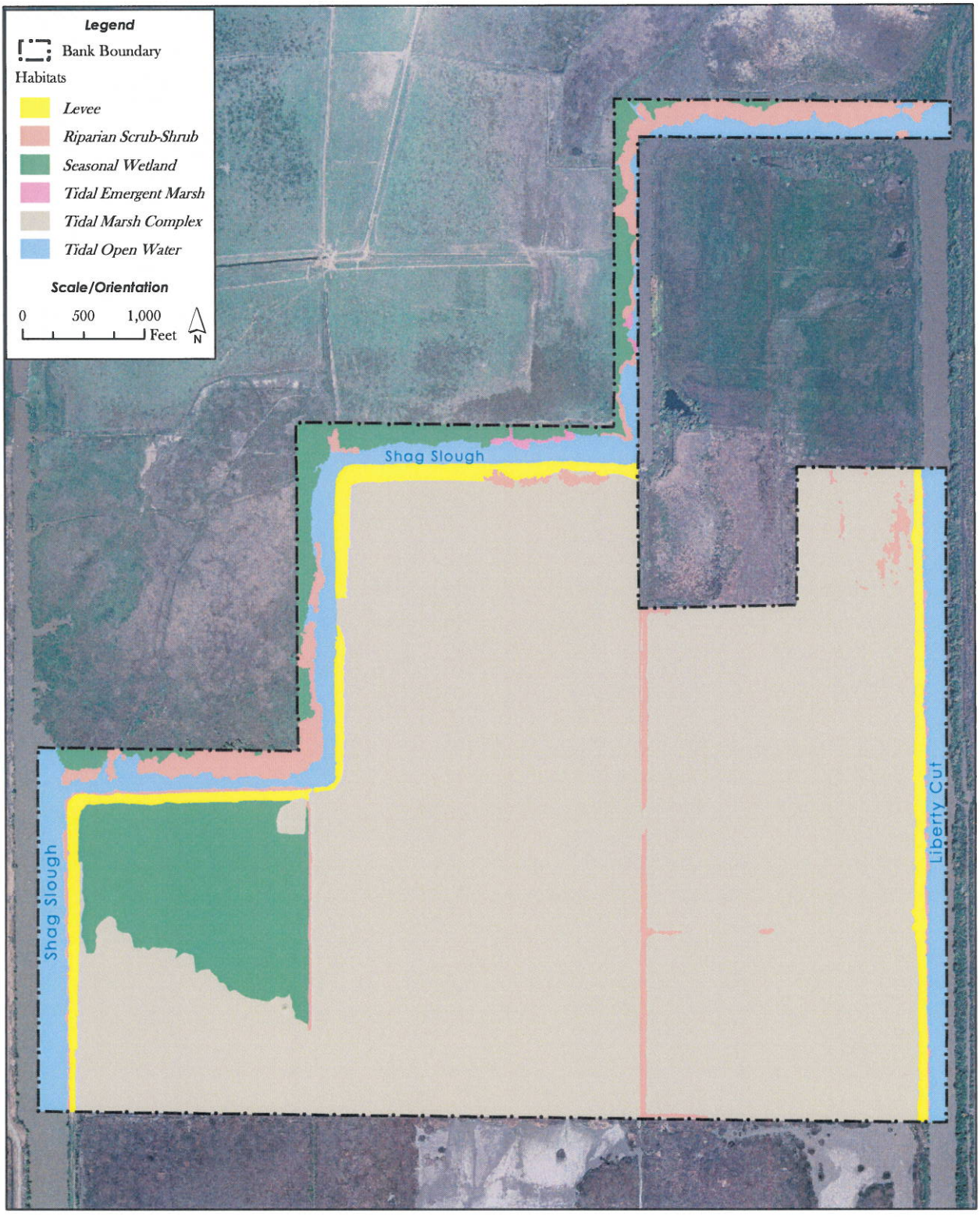
Tidal Marsh Complex. Tidal marsh complex is located throughout the project site and has developed as a result of levee breaches that occurred in early 1997. This habitat is tidally influenced via hydrological connectivity to the adjacent Shag Slough and the predominantly tidal open water areas of the southern end of Liberty Island. Tidal marsh complex includes a mosaic of emergent marsh and open water habitat. Vegetated areas within the complex are dominated by common tule (*Scirpus acutus*), American tule (*Scirpus americanus*), saltmarsh tule (*Scirpus robustus*), and broad-leaf cattail (*Typha latifolia*).

Tidal Emergent Marsh. Patches of tidal emergent marsh are located along the shoreline of Shag Slough across from the stair-step levees. Tidal emergent marsh is generally dominated by large emergent vegetation including those listed above for Tidal Marsh Complex.

Seasonal Wetland. Seasonal wetland habitat is located in a corner of the project site adjacent to marsh habitat and along the northern bank of the portion of Shag Slough bisecting the project site. This habitat is only seasonally flooded and consists of a mix of upland and wetland associated species. The seasonal wetlands are dominated by Bermuda grass (*Cynodon dactylon*), Fitch's tarplant (*Hemizonia fitchii*), Italian ryegrass (*Lolium multiflorum*), bird's-foot trefoil (*Lotus corniculatus*), rabbits foot grass (*Polypogon monspeliensis*), curly dock (*Rumex crispus*), and saltmarsh bulrush.

Riparian Scrub Shrub. The riparian scrub shrub habitat occurs around the perimeter of the project site between the restricted height levees and the tidal channels/open water (Shag Slough and Liberty Cut). This habitat is dominated by black willow sandbar willow (*Salix exigua*), *(Salix gooddingii*), box elder (*Acer negundo ssp. californicum*), white alder (*Alnus glutinosa*), Santa Barbara sedge (*Carex barbarae*), Oregon ash (*Fraxinus latifolia*), creeping wildrye (*Leymus triticoides*), wild rose (*Rosa californica*), Himalayan blackberry (*Rubus discolor*), American tule, saltmarsh tule, and broad-leaf cattail.

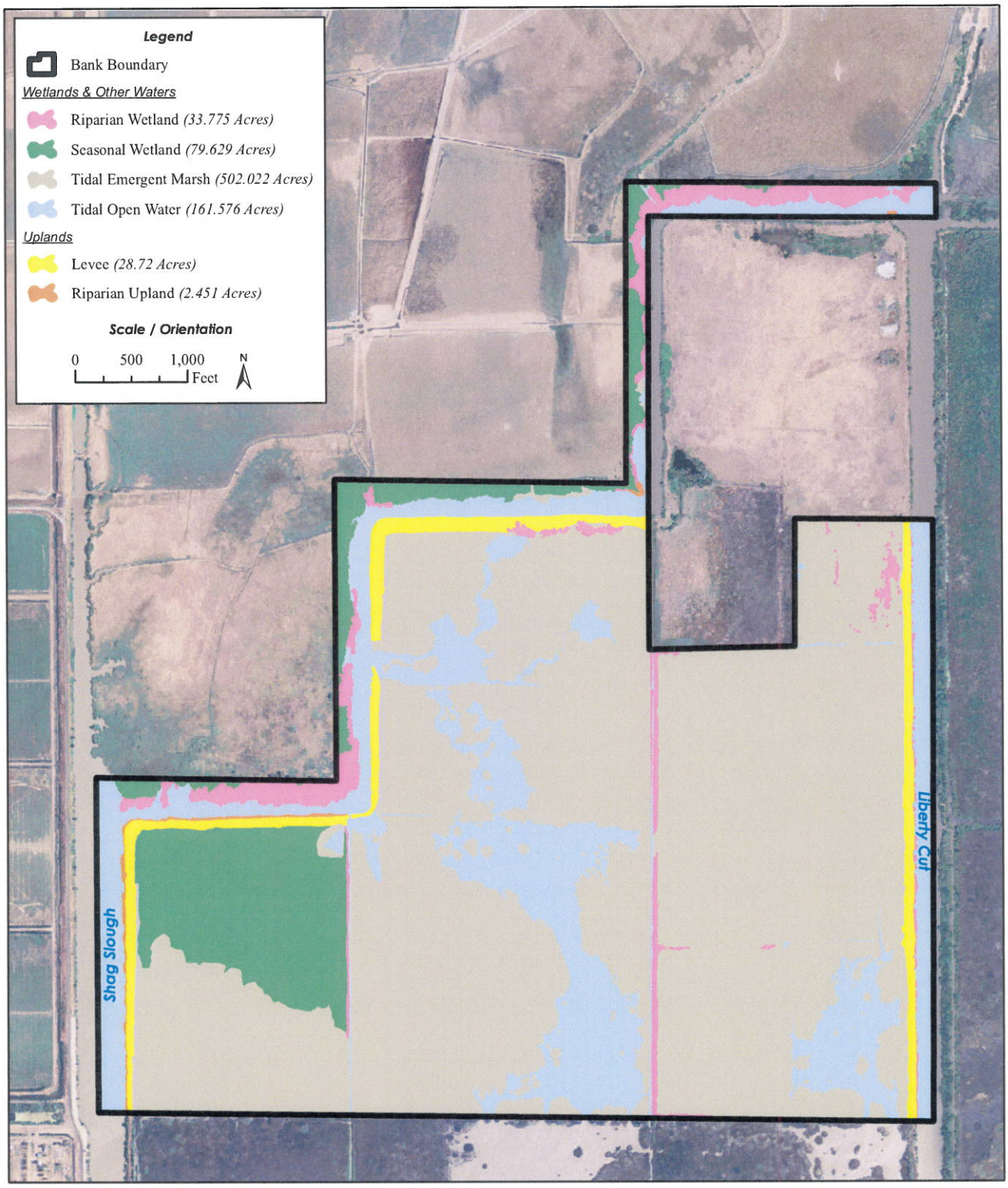
Tidal Channel (Open Water). The tidal channel/open water habitat at the project site includes Shag Slough and Liberty Cut. Other open water habitat occurs within the tidal marsh complex in permanently inundated areas, but is considered part of the tidal marsh complex. Tidal channel/open water is tidally influenced and is mostly unvegetated.



WILDLANDS

Northern Liberty Island Fish Conservation Bank
Initial Study

Figure 11
Habitats



WILDLANDS

Northern Liberty Island Fish Conservation Bank
Initial Study

Figure 12
Existing Wetlands

Levee Upland. The levee upland habitat occurs around the east, west, and north edges of the project site. This habitat has moderately convex topography and was historically used as a barrier to tidal flow and winter flood events. This habitat is dominated by nonnative annual grasses and forbs.

Special-Status Plant Species

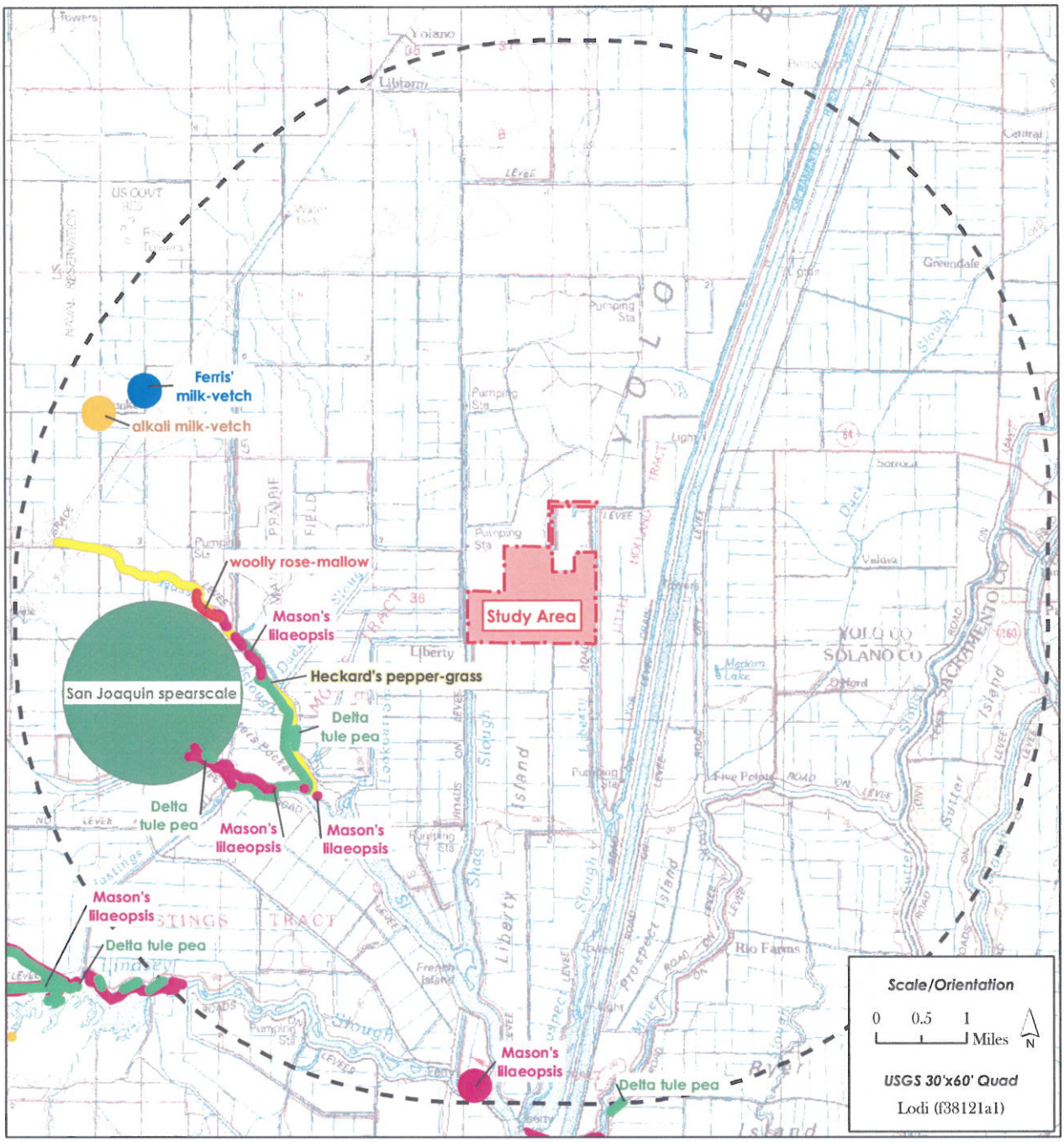
Special-status plants are species that are legally protected under the California and federal endangered species acts or other regulations or are species considered sufficiently rare by the scientific community to qualify for such listing. The 2010 California Native Plant Society (CNPS) Online Electronic Inventory of Rare and Endangered Plants record search for the Liberty Island 7.5-Minute USGS quadrangle and a five-mile radius search of the CDFG California Natural Diversity Data Base (CNDDB) (CDFG 2010) (Figure 13) were used to compile a list of special-status plant species with potential to occur on the project area. The database searches identified eight plant species with potential to occur. Of these, three have potential to occur because suitable habitats are present within the project site: Mason's lilaeopsis (*Lilaeopsis masonii*), rose mallow (*Hibiscus lasiocarpus var. occidentalis*), and Delta tule pea (*Lathyrus jepsonii var. jepsonii*). Suitable habitat is not present for the other five species including Ferris' milk-vetch (*Astragalus tener* var. *ferrisiae*), alkali milk vetch (*Astragalus tener* var. *tener*), San Joaquin spearscale (*Atriplex joaquiniana*), dwarf downingia (*Downingia pusila*), and Heckard's peppergrass (*Lepidium latipes* var. *heckardii*).

No observations of special-status plant species have been recorded on the project site (CDFG 2010) and no special-status plant species were found on the project site during focused surveys conducted on July 9 and 22, 2008, and September 15 and 16, 2010. Additional surveys will be conducted in early summer 2011 to confirm the absence of special-status plant species prior to construction.

Special-Status Wildlife Species

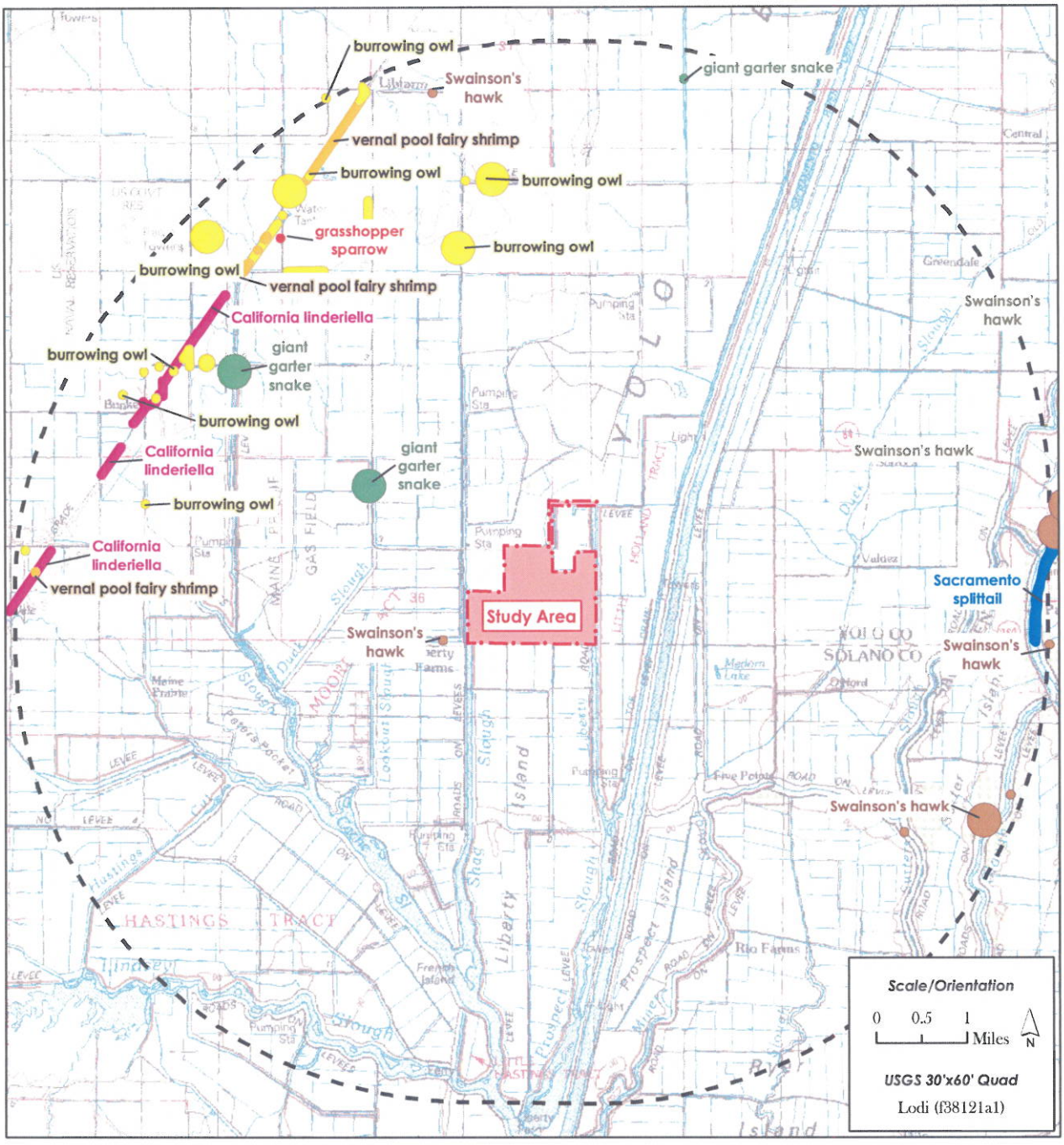
Ten special-status wildlife species have the potential to occur in the project area. These species were identified in the CNDDB record search with a five-mile radius (Figure 14), the USFWS list for the USGS Liberty Island 7.5 minute quadrangle, observed during site visits, or are expected to occur because suitable habitat occurs on or near the project site. These species include:

- Green sturgeon (*Acipenser medirostris*)
- Delta smelt (*Hypomesus transpacificus*),
- Central Valley steelhead (*Oncorhynchus mykiss*),
- Central Valley spring-run Chinook salmon (*Oncorhynchus tshawytscha*),
- Sacramento splittail (*Pogonichthys macrolepidotus*),
- Longfin smelt (*Spirinchus thaleichthys*),
- Giant garter snake (*Thamnophis gigas*),
- Swainson's hawk (*Buteo swainsonii*),



Legend

- Study Area
- 5-mile Study Area Radius
- *CNDDB - Plants*
- Delta tule pea
- Ferris' milk-vetch
- Heckard's pepper-grass
- Mason's lilaeopsis
- San Joaquin spearscale
- alkali milk-vetch
- woolly rose-mallow



Legend

- Study Area
- 5-mile Study Area Radius
- *CNDDB - Animals*
- California linderiella
- Sacramento splittail
- Swainson's hawk
- burrowing owl
- giant garter snake
- grasshopper sparrow
- vernal pool fairy shrimp

- Western pond turtle (*Clemmys marmorata*), and
- Great blue heron (*Ardea herodias*), and other wading bird rookeries.

In addition to the special-status species listed above, the project site provides suitable nesting and foraging habitat for other raptor species as well as migratory birds.

Several other wildlife species were identified in the CNDDB record search and the USFWS list but are not expected to occur on the project site because suitable habitat is not present. No elderberry shrubs or burrowing owl habitat were found on the project site during surveys conducted in 2007 and 2008. The species not expected to occur due to lack of suitable habitat include:

- Conservancy fairy shrimp (*Branchinecta conservatio*),
- Vernal pool fairy shrimp (*Branchinecta lynchi*),
- Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)
- Delta green ground beetle (*Elaphrus viridis*),
- Vernal pool tadpole shrimp (*Lepidurus packardi*),
- California linderiella (*Linderiella occidentalis*)
- California tiger salamander (*Ambystoma californiense*),
- California red-legged frog (*Rana aurora draytonii*)
- Burrowing owl (*Athene cunicularia*), and
- Grasshopper sparrow *(Ammodramus savannarum*).

Jurisdictional Wetlands and Other Waters of the United States

The majority of the project site has been verified as jurisdictional wetland and other waters (Figure 12). Three separate wetland delineations were submitted that encompasses the overall project site:

- Preliminary Wetland Delineation Trust for Public Land 440-Acre Property, Yolo County, California prepared by Wildlands, Inc., July 2009; verified on January 13, 2010 (SPK-2008-00115).
- Preliminary Wetland Delineation Reclamation District 2093 120-Acre Property, Yolo County, California prepared by Wildlands, Inc., November 2009; verified on January 13, 2010 (SPK-2008-00115).
- Preliminary Wetland Delineation West Property 274-acre Property, Yolo County, California prepared by Wildlands, Inc., March 2010; verified on September 15, 2010 (SPK-2010-00755).

The project site includes approximately 777 acres of jurisdictional wetlands and other waters. Wetlands include 502.022 acres of tidal emergent marsh, 33.775 acres of riparian wetland, and 79.629 acres of seasonal wetland. Other waters include 161.576 acres of tidal open water, including Shag Slough and Liberty Cut. A summary of jurisdictional habitats within the project site is provided in Table 3 below.

Table 3. Jurisdictional Wetlands and Other Waters of the United States within the Project Site

Habitat Type	Cowardin Classification	Acreage
Wetlands		
Tidal Emergent Marsh	Palustrine Emergent	502.022
Seasonal Wetland	Palustrine Emergent	79.629
Riparian Wetland	Palustrine Scrub Shrub	33.775
	Wetlands Subtotal	**615.426**
Other Waters		
Tidal Open Water	Open Water	161.576
Jurisdictional Wetlands and Other Waters Total		**777.002**

Discussion

a. *Less than Significant with Mitigation Incorporated.* The primary goal of the project is to enhance habitat for the benefit of delta native fishes, including those that are federally and state listed. The proposed project would also provide habitat for a number of common and special-status wildlife species including raptors, waterfowl, and migratory songbirds. While there is potential for temporary impacts to wildlife, fisheries, and sensitive wetland habitats during construction, this project will provide a net benefit to wildlife, fisheries, and sensitive habitat.

As described under the Project Description, several Environmental Commitments have been integrated into the project to prevent adverse impacts to biological resources including nesting raptor and giant garter snake surveys during construction. Additionally, the project will be implemented in conformance with regulatory requirements including agreements and permits with the following agencies: CDFG, USFWS, NMFS, USACE, RWQCB, and SWQCB.

Special-Status Plants. No special-status plant species were observed during focused botanical and reconnaissance-level surveys. Additional surveys will be conducted in spring 2011 to confirm the lack of presence in areas that will be subject to construction activities. Potential impacts to special-status plants will be reduced to a less than significant level by implementing Mitigation Measure BIO-1.

Mitigation Measure BIO-1:

Prior to construction, additional special-status plant surveys will be conducted in all construction areas to confirm the lack of presence. If special-status plants are located within construction areas, the plants will be avoided as feasible. If not all plants can be avoided, affected plants will be transplanted within the project area.

Swainson's Hawk. Swainson's hawk is state-listed as threatened. The Swainson's hawk is a summer resident in the project site region. Swainson's hawks prefer to nest in mature trees within riparian corridors near open foraging habitats. Annual grasslands and prairies are traditional foraging grounds, but hay, grain, and row crops may also be used. Marginal to low quality foraging habitat exists within the seasonal wetlands on site. Suitable nesting habitat exists within mature trees located within riparian habitat along perimeter of the project site. Although nests have not been detected, riparian habitat at the project site provides suitable nesting habitat. There are several recorded CNDDB occurrences within 5 miles of the project site. In addition, foraging Swainson's hawks were observed on the adjacent property during wildlife surveys in 2008.

Construction of the proposed project has the potential to temporarily impact nesting habitat in the project vicinity. Noise and other construction-related disturbances may adversely affect nesting Swainson's hawks in the vicinity of the construction corridor during the breeding season (March through August) As described in the Project Description, several Environmental Commitments have been incorporated into the project as well as compliance with regulatory permits and agreements. Commitments have been made to conduct pre-construction surveys within a half-mile of the project site to document nesting Swainson's hawks, to conduct contractor/worker awareness training, and to retain a biologist to monitoring construction activities. By implementing these commitments, which are described below as Mitigation Measures BIO-2, BIO-3, and BIO-4, as well as conforming with regulatory requirements, the potential to temporarily impact Swainson's hawk foraging and nesting habitat will be reduced to a less than significant level.

Mitigation Measure BIO-2:

Before any work occurs in the project area, a qualified biologist will conduct mandatory contractor/worker awareness training for construction personnel. The awareness training will be provided to all construction personnel to brief them on the need to avoid impacts on biological resources including special-status species and habitats and the penalties for not complying with the biological mitigation requirements.

If new construction personnel are added to the project the contractor will ensure that the personnel receive the mandatory training before starting work.

Mitigation Measure BIO-3:

Biologists will monitor construction activities in areas where special-status wildlife species could be affected. The biologists will assist the construction crew, as

needed, to comply with all project implementation restrictions and guidelines. In addition, the biologists will be responsible for ensuring that the contractor maintains areas that are restricted from construction activity to protect sensitive biological resources. The biologist shall have the authority to stop all construction, if necessary.

Mitigation Measure BIO-4:

A biologist will conduct preconstruction surveys to locate all active Swainson's hawk nest sites within a 0.5-mile radius of the construction area. A 600-foot buffer zone will be established, if feasible, around all known and suspected Swainson's hawk nests and the Project Sponsor will coordinate with CDFG to identify appropriate and acceptable buffer zones and construction procedures. Whenever construction occurs within 600 feet of an active nest, a biological monitor will observe the nesting hawks for stressed/detrimental behavior that may threaten nest success. If there appears to be a threat to nesting success resulting from construction activity within the 600-foot buffer, work will be halted until the hawk's behavior normalizes and the threat has dissipated.

Giant Garter Snake. The project site provides marginal aquatic and upland habitat for giant garter snake. While open water and emergent marsh vegetation within the project site does provide suitable habitat, it is unlikely that snakes utilize this habitat because of it's location in the Delta and the minimal upland refugia within 200 feet of marsh habitat. The only uplands within 200 feet of Shag Slough and Liberty Cut suitable for upland GGS habitat (i.e., basking and refugia habitat) are the levees because the remainder of the project site floods when the bypass floods (approximately 1 of every 3 years). However, the levees support riparian vegetation, which is not ideal habitat. Shag Slough and Liberty Cut provide only marginal habitat because they contain predatory fishes, they lack substantial emergent marsh vegetation, and have very swift tidal currents.

Construction of the proposed project has potential to affect aquatic and upland habitat including the temporary disturbance of habitat, the potential to cause erosion to enter aquatic habitat, and for a chemical or petroleum spill. Potential adverse affects to giant garter snake will be reduced to a less-than-significant level by implementing Mitigation Measure BIO-5 and the Environmental Commitments, including erosion control measures and toxic materials control and spill response plan, as described in the project description.

Mitigation Measure BIO-5:

The following standard avoidance measures recommended by USFWS (1997) will be used to minimize any potential disturbance to GGS.

- Conduct construction activities during the GGS active period (May –October).

- Conduct a GGS survey 24 hours prior to commencement of habitat maintenance activities. A monitor will be available if a snake is encountered during construction activities, and the monitor will stop construction activities until appropriate corrective

measures have been completed or it is determined that the snake will not be harmed. GGS encountered during construction activities will be allowed to move away from the construction area on their own. A new inspection will be conducted whenever construction activity lapses for two weeks or more.

- Observe a 20 mile per hour speed limit within the construction zone.

- Complete construction within one season.

- Remove all temporary fill and construction debris, and restore all disturbed areas not targeted for habitat enhancement to pre-construction conditions.

Non-Special-Status Raptors. Suitable nesting habitat for non-special-status raptors including white-tailed kite, red-shouldered hawk, and redtail hawk, and great horned owl occurs in and adjacent to the project site. The loss of nesting habitat as well as noise and other construction-related disturbances may adversely affect nesting raptors in the vicinity of the project area during the breeding season (March through August). This impact would be reduced to a less-than-significant level with implementation of Mitigation Measures BIO-2, BIO-3 and BIO-6.

Mitigation Measure BIO-6:

A qualified biologist will conduct preconstruction surveys to locate all active nest sites within 600 feet of the construction area. Direct disturbance, including removal of nest trees and activities in the immediate vicinity of active nests, will be avoided during the breeding season (March through August). No-disturbance buffers of 500 feet will be established around each active nest to avoid disturbing nesting birds, where feasible. The size of the buffers may be adjusted provided a qualified biologist monitors the behavior of any nesting hawks and determines that project-related activities are not affecting the bird's reproductive effort.

Northwestern Pond Turtle. The Northwestern pond turtle is a California species of special concern that occurs in aquatic habitats throughout California west of the Sierra Nevada and in parts of Oregon and Washington. Pond turtles are found near a wide variety of wetlands, including ponds, marshes, lakes, streams, irrigation ditches, and vernal pools, and they will utilize these aquatic habitats when they provide adequate vegetative cover and exposed basking sites. Mating occurs in April and May, after which females build nests along wetland margins or in adjacent uplands.

Construction activities within open water habitat is expected to have minimal to no impact on the pond turtle. Potential adverse impacts will be minimized and avoided by implementing Mitigation Measures BIO-2 and BIO-3, complying with Environmental Commitments and environmental regulations, and implementation of habitat features associated with the project.

Tricolored Blackbird. Suitable nesting habitat for tricolored blackbird occurs in the emergent marsh and riparian scrub habitat on the project site and adjacent property. The loss of nesting habitat as well as noise and other construction-related

disturbances may adversely affect tricolored blackbirds. This potential impact would be reduced to less than significant with implementation of Mitigation Measures BIO-2 and BIO-3, performing preconstruction surveys, complying with Environmental Commitments and environmental regulations, and implementation of habitat features associated with the project.

Active Rookeries. An active great blue heron rookery was observed on the adjacent Liberty Island Conservation Bank and Preserve in 2010. The project will not result in the loss of nesting habitat; however, noise and other construction-related disturbances may adversely affect nesting great blue herons and other rookery nesting species, if present. These potential impacts would be reduced to a less-than-significant level with implementation of Mitigation Measures BIO-2, BIO-3, BIO-7, and BIO-8.

Mitigation Measure BIO-7:

Preconstruction surveys for great blue heron rookeries will be conducted within and adjacent to all locations to be disturbed by construction. Preconstruction surveys will consist of surveying all potential nest sites within 600 feet of proposed construction features. Surveys will be performed several times during the breeding season to avoid and minimize effects on late-nesting birds. Rookery locations will be marked on an aerial photograph, and the position will be recorded using GPS.

Mitigation Measure BIO-8:

To the greatest extent practicable, major construction activities that will occur within 600 feet of an active rookery will be avoided during the breeding season. A no-disturbance buffer zone with a 500-foot radius will be established around each active nest to avoid disturbing nesting birds. The size of the buffer may be adjusted provided a qualified biologist monitors bird behavior at the rookery and determines project-related activities are not affecting the bird's reproductive effort.

Special-Status Fish. Contaminants associated with construction activities related to heavy equipment operation, soil excavation, and levee breaching and degradation, could be accidentally introduced into Delta channels and could adversely affect special-status fish species and their habitat. Contaminants include uncharacteristically high sediment loading and toxic substances, such as metals, petroleum products, and other toxic compounds. Excessive sediment transported to waterways can degrade aquatic habitats. Sediments can smother developing eggs, degrade spawning habitat, and decrease food production. Excessive turbidity can increase fish mortality, reducing feeding opportunities for fish, and cause fish to avoid biologically important habitat. Toxic substances can limit fish production, abundance, and distribution by reducing egg survival and causing direct mortality of fish or their prey. Environmental commitments, including an erosion and sediment control plan, SWPPP, hazardous materials management plan, spoils disposal plan, and environmental training and restoration of disturbed uplands, will be developed and implemented before and during construction activities. These Environmental Commitments would eliminate the likelihood of any substantial contaminant input. In addition:

1. Construction would be completed within one construction season, and

2. Construction would occur during the dry season (May 1 to October 1), thereby avoiding or minimizing the potential for contaminants, including sediment, from entering waterways.

In addition, temporary construction impacts to special-status fish would be less than significant because the project will be constructed during a time of the year when it is unlikely that Delta native fishes will be utilizing the site. The lower Delta typically becomes too warm during summer months to support pelagic fishes, and generally this time of year attracts more predatory non-native fishes. Furthermore, if present in small numbers, the degradation of the levee, excavation of channels, and the potential installation of a culvert in the breached levee for construction access purposes would be conducted in a manner to limit impacts, including:

- limiting the construction season to May through October, when fewer special-status fish species be present;
- in-water construction would proceed at a relatively slow rate and occur over a very short period (i.e., about 5 days); and
- fish would be expected to move away from areas of disturbance in response to noise associated with heavy equipment operation, thereby avoiding injury.

While construction of the project will remove a limited amount of riparian SRA habitat when the east-west levee is degraded, this loss is temporary as the degraded levee area will re-vegetate with riparian scrub shrub and tule SRA. At completion, the proposed project would result in the following SRA enhancements:

- restoration of 4,307 linear feet of tule SRA (levee lowering and rock removal),
- enhancement of 18,753 linear feet of tule and riparian scrub shrub SRA, and
- preservation of 5,323 linear feet of riparian scrub shrub SRA.

b. *Less than Significant.* Construction of the project will result in the removal of limited riparian habitat where the levees are degraded. All other potential impacts to riparian habitat for construction access purposes will be temporary. The loss of riparian habitat will be offset by fencing off of livestock and allowing the natural regeneration of riparian scrub shrub habitat along the northern boundary of the project site. The Project Sponsor will implement the best management practices identified in this document to avoid and minimize effects on riparian and wetland communities and other sensitive habitat resources.

c. *Less than Significant.* Construction of the project would result in temporary impacts to emergent marsh and seasonal wetland. Emergent marsh may be disturbed during the installation of ditch plugs, the excavation of channels, the widening of the levee breach, and the widening and deepening of gaps in the existing remnant levees. These temporary impacts would be offset by the implementation of the habitat enhancement and restoration features of the project. At completion, the proposed project would result in the following wetland enhancements:

- restoration/creation of 10.5 acres of tidal emergent marsh associated with soil and rock removal (levee lowering),
- enhancement of 657.7 acres of tidal marsh complex,
- enhancement of 50.9 acres of tule and riparian scrub shrub shoreline habitat, and
- enhancement of 69.1 acres of tidal channel/open water.

The Project Sponsor would implement the best management practices identified in this document to avoid and minimize affects on riparian and wetland communities and other sensitive habitat resources. Because the impacts are temporary and the project would create, enhance, and preserve a large, continuous expanse of habitat, this impact is considered less than significant.

d. *Less than Significant.* The project may temporarily disrupt use of the project site by resident or migratory fish or wildlife species; however, any disruption would be temporary.

e. *No Impact.* The proposed project would not conflict with any local policies or ordinances protecting biological resources.

f. *No Impact.* The Yolo County HCP/ NCCP is in preparation by the Natural Heritage Program with an anticipated adoption sometime in 2011. The proposed project would not conflict with the HCP/NCCP effort or any conservation plan protecting biological resources.

V.	CULTURAL RESOURCES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	☒
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☐	☒
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Discussion

a. *No Impact.* A cultural resources study of the project was conducted to inventory and evaluate the significance of cultural resources relative to the criteria for the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR). One previously identified historic-period resource, the earthen levee initially constructed during the 1920s, was identified and recorded. The levee is ineligible for listing on the NRHP or the CRHR and does not qualify as a historic resource pursuant to federal or state criteria.

b. *No Impact.* The project site has been extensively cultivated and no cultural resource are known or suspected to occur on the project site.

c. *No Impact.* No paleontological resources are known or suspected and no unique geologic features exist on the project site.

d. *Less than Significant Impact.* No human remains are known or predicted to exist in the project area. However, the potential exists during construction to uncover previously unidentified resources. Any development that uncovers cultural resources is required to follow procedures and recommendations as set forth in the CEQA Guidelines, Section 15064.5.

In addition, Section 7050.5 of the California Health and Safety Code states that, when human remains are discovered, no further site disturbance shall occur until the county coroner has determined that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, in the manner provided in Section 5097.98 of the Public Resources Code. If the coroner determines that the remains are not subject to his or her authority, and the remains are

recognized to be those of a Native American, the coroner shall contact the Native American Heritage Commission within 24 hours.

VI. GEOLOGY AND SOILS		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	1. 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 other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
	2. Strong seismic groundshaking?	☐	☐	☐	☒
	3. Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
	4. Landslides?	☐	☐	☐	☒
b.	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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 an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☒
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?	☐	☐	☐	☒
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Discussion

a. *No Impact.* The project would not expose people or structures to earthquakes, groundshaking or liquefaction. The project includes the degradation of existing levees and would reduce the number or people and structures subject to earthquakes in the project area.

The project site has gentle topography and no potential for major landslides.

b. *Less than Significant Impact.* The Soil Survey of Yolo County, California (Soil Conservation Service 1972) indicates the project site is composed of Sycamore complex, flooded, and Sacramento soils, flooded (Figure 10). These soils are located

in the Yolo Bypass, and because of flowage easements, they are subject to flooding that last more than 48 hours at least 1 year in 3. Erosion is a slight hazard. However, ground disturbance caused by project activities has the potential to increase erosion and sedimentation during and immediately after construction.

The Project Sponsor is required to prepare and implement a SWPPP to address erosion, stormwater runoff, sedimentation, and other construction-related pollutants during project grading and construction until all areas disturbed during construction have been permanently stabilized. Implementation of a SWPPP would substantially minimize the potential for project-related erosion and associated adverse effects on water quality. In addition, all disturbed areas would be seeded and/or planted following construction to prevent soil erosion, and natural regeneration within the Bypass is very high.

c. *No Impact.* The project would not be subject to significant hazards associated with landslides, lateral spreading or collapse.

d. *No Impact.* The project does not involve the construction or placement of structures on expansive soils.

e. *No Impact.* The project would not generate wastewater.

VII.	GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b.	Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐
c.	Be affected by climate change impacts, e.g., sea level rise, increased wildlife dangers, diminishing snow pack and water supplies, etc.?	☐	☐	☒	☐

Environmental Setting

The issue of combating climate change and reducing greenhouse gas emissions (GHG) has been the subject of recent state legislation (Assembly Bill 32 and Senate Bill 375). The Governor's Office of Planning and Research (OPR) has recommended changes to the CEQA Guidelines, and the environmental checklist which is used for Initial Studies such as this one. The recommended changes to the checklist, which have not yet been approved by the state, are incorporated above in the two questions related to a project's GHG impacts. A third question has been added by RD 2093 to consider potential impacts related to climate change's effect on individual projects, such as sea level rise

and increased wildlife dangers. To date, specific thresholds of significance to evaluate impacts pertaining to GHG emissions have not been established by local decision-making agencies, the Yolo Solano Air Quality Management District, the state, or the federal government. However, this absence of thresholds does not negate CEQA's mandate to evaluate all potentially significant impacts associated with the proposed project.

The following discussion of GHG/climate change impacts relies upon, and "tiers off" the analysis, conclusions, and measures included in the Final Environmental Impact Report (FEIR) of the 2030 Yolo Countywide General Plan. While the FEIR analysis concluded that the severity of impacts related to planned urban growth and GHG/climate change could be reduced by some policies and some available mitigation measures, the overall impact could not be reduced to a less-than-significant level. The impacts of countywide cumulative growth on GHG emissions, and the impacts of climate change on cumulative growth, are considered significant and unavoidable at this time.

The adopted 2030 Yolo Countywide General Plan contains several policies and implementation programs that require proposed development projects to reduce GHG emissions and conserve energy, as follows:

Policy CO-8.2: Use the development review process to achieve measurable reductions in greenhouse gas emissions.

Action CO-A115-1: In the interim until the GHG Emissions Reduction Plan/Climate Action Plan is in effect, the following significance thresholds shall be used for project analysis:

- Projects consistent with the General Plan and otherwise exempt under CEQA – assumed to be de minimus.
- Projects consistent with the General Plan and subject to CEQA – Net zero threshold to be achieved by the applicant as follows:
    - Apply practical and reasonable design components and operational protocols to reduce project GHG emissions to the lowest feasible levels.
    - Use verifiable offsets to achieve remaining GHG reductions to the greatest feasible extent, offsets shall be: locally based, project relevant, and consistent with other long term goals of the County (implements Policy CO-8.9).

Discussion

a. *Less than Significant Impact.* The project could affect GHG emissions through vehicle trips generated, as well as physical changes in the vegetation of the land.

Construction of the project would involve transporting construction equipment to the site prior to construction, removal of approximately 100,000 cubic yards of excess

material during construction, and transporting construction equipment offsite when construction is complete.

Five possible disposal options have been identified for the disposition of the estimated 100,000 cubic yards of excess material. Grading and exportation of fill would require approximately 100 to 150 truck trips per working day, or a total of 5,000 truck trips over a period of eight weeks. The carbon monoxide emissions (the main GHG associated with auto and truck trips) generated by 150 truck trips would be a temporary impact. The CO2 emissions were calculated using the Urbemis model; Table 4 shows the results of the calculations compared to existing levels.

Table 4. Percent Contributed from Project Compared to Existing CO2 Emissions (tons/year)

Countywide Emissions from	2008 CO2 Emissions	Option 1	Option 2	Option 3	Option 4	Option 5
		80	160	190	130	331
Construction	29,271	0.27%	0.55%	0.65%	0.44%	1.13%
All Sources	651,740	0.01%	0.02%	0.03%	0.02%	0.05%
Source:						

There are no long-term GHG impacts associated with the project because there is no traffic generated by the project.

The project is not considered to have an individually significant or cumulatively considerable impact on global climate change. Such a conclusion is supported by a finding that none of the thresholds described above in the Environmental Setting section would be triggered.

b. *Less than Significant Impact.* The project would not conflict with any applicable plan, policy or regulation adopted to reduce GHG emissions, including the numerous policies of the 2030 Yolo Countywide General Plan.

c. *Less than Significant Impact.* The project could be affected by climate change impacts, specifically sea level rise. The project is located in the Yolo Bypass area and portions of the project site are currently flooded. Projections of the sea level rise caused by global warming and climate change have been prepared by the USGS, and are included in the FEIR of the 2030 Yolo Countywide General Plan. The USGS projections show that areas within the one meter average daily tidal range will be inundated by sea level rise by 2100. These inundated areas include large portions of the southern portion of Yolo County including the project site.

A one meter rise in sea level by 2100 would have no affect on the project. Assuming the project is approved and goes to construction in 2011 or 2012, conditions on the project site would naturally respond to changes in sea level over time.

VIII.	HAZARDS AND HAZARDOUS MATERIALS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c.	Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d.	Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e.	Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the Project area?	☐	☐	☐	☒
f.	Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the Project area?	☐	☐	☐	☒
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency 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?	☐	☐	☐	☒
i.	Increase the potential exposure of the public to disease vectors (*i.e.*, mosquitoes)?	☐	☐	☐	☒

Discussion

a. *Less than Significant Impact.* The project would require the short-term use of construction equipment and the storage of fuel and oil for equipment. Construction equipment used on the site could include excavators, bull dozers, and dump trucks. The routine use of construction equipment and vehicles to and from the site would not create a significant hazard to the public or the environment.

b. *Less than Significant Impact.* The construction equipment associated with this project typically uses only a minor amount of hazardous materials, primarily motor vehicle

fuels and oils. Small volumes of fuel and engine oil (considered hazardous materials) would be temporarily used and handled to operate the construction equipment. Refueling of all equipment would be limited to the designated staging area. There is a slight possibility that these materials may be released in accidental spills and result in harm to the environment. Implementation of a SWPPP, as described under the Environmental Commitments in the Project Description, would ensure that the risk of accidental spills and releases into the environment would be minimal.

c. *No Impact.* No schools exist or are proposed within 0.25 miles of the project site.

d. *Less than Significant with Mitigation Incorporated.* The project applicant hired VESTRA Resources, Inc. to complete Phase 1 Environmental Site Assessments on the project site. The purpose of conducting an Environmental Site Assessment is to identify, to the extent feasible, recognized environmental conditions in connection with a specific property. A recognized environmental condition refers to the presence, or likely presence, indicating an existing release, past release, or material threat of a release, of any hazardous substances or petroleum products into structures on a property or into the ground, groundwater, or surface water of a property.

   VESTRA Resources, Inc. concluded that there are potential areas of concern, or recognized environmental condition including parts sheds, large capacity tanks, debris piles and abandoned equipment. By implementing Mitigation Measure HAZ-1, this impact would be considered less than significant.

   Mitigation Measure HAZ-1

   The applicant shall conduct soil sampling beneath the parts sheds, large capacity tanks and abandoned equipment if soil staining or odors are encountered. The contents and extent of the debris piles should also be determined and soil samples conducted if the contents of the debris piles deem it necessary. If necessary, the applicant shall remove any contaminated soil and dispose of it at a license facility.

e. *No Impact.* The project site is located more than 2 miles from a public airport. The project would not result in a safety hazard for people residing or working in the project area.

f. *No Impact*. The project is located more than 2 miles from any private airstrips. The project would not result in a safety hazard for people residing or working in the project area.

g. *No Impact.* No emergency response plans will be affected by the project during or upon completion of construction.

h. *No Impact.* The project site is not located in a hazardous fire zone and the project would not expose people or structures to any wildland fires.

i. *No Impact.* The project site currently supports open water and emergent marsh features. One of the primary goals of the project is to increase tidal circulation and reduce stagnant water; therefore, the proposed project will reduce mosquito habitat and provide a benefit to the public.

IX.	HYDROLOGY AND WATER QUALITY	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in 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 that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
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 that would result in substantial erosion or siltation onsite or off-site?	☐	☐	☒	☐
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 that would result in flooding onsite or off-site?	☐	☐	☒	☐
e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f.	Otherwise substantially degrade water quality?	☐	☐	☒	☐
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?	☐	☐	☐	☒
h.	Place within a 100-year flood hazard area structures that would impede or redirect floodflows?	☐	☐	☐	☒
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?	☐	☐	☐	☒
j.	Contribute to inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Environmental Setting

The project is located in the southernmost portion of the Bypass, which is a major component of the Sacramento River flood control system. This flood control feature is approximately 59,000 acres and approximately one mile wide in the vicinity of the project. Major inputs to the Bypass include floodwaters from the Sacramento, Feather, and American Rivers as well as Knights Landing Ridge Cut, Cache Creek, Willow Slough, and Putah Creek. Stormwater runoff is generated by the nearby cities of Davis, Woodland, and West Sacramento and wastewater discharges are generated by the University of California Davis campus (LWA 2005). Beneficial uses of water within the Bypass most notably include agriculture and wildlife habitat. Water discharged by the Bypass also is used for regional drinking water supplies.

Implementation of the proposed project including the degradation of existing east-west levees, establishment of construction staging areas, and excavation of channels would potentially discharge sediments or pollutants and alter drainage patterns. However, this project will be conducted in conformance with regulatory requirements for erosion and sediment control, flooding, and water quality protection. The Project Sponsor will coordinate the implementation of this project with the DWR, reclamation districts, USACE, CDFG, the Regional Water Quality Control Board, and the County. The project will obtain approvals in the form of agreements and permits to conduct this work. In addition to the goals of improving fisheries habitat, the project also has parallel goals for improving water quality and providing for improvements to the flood control system, as discussed in the Project Description.

Additionally, the Project Sponsor will be required to coordinate with the DWR, the CVFPB, the USACE, Yolo County, and local reclamation districts regarding the design and operation of this fisheries enhancement project to ensure there are no conflicts with necessary flood flow conveyance requirements. The project has been designed and will be operated to continue to have no impact on existing flood flow conveyance requirements of the Yolo Bypass.

Discussion

a. *Less than Significant.* Construction activities have the potential to affect water quality in the Liberty Cut and Shag Slough receiving waters as well as within the existing marsh and open water habitat. The degradation of existing levees, levee breach widening, and excavation of channels have to potential to discharge sediments or pollutants. However, the project would be conducted in conformance with regulatory requirements regarding erosion and sediment control, flooding, and water quality protection, and would be implemented with a goal of a net improvement in water quality, as described under the Project Description.

   Ground Disturbance. Ground disturbing activities could result in a slight increase in the potential for erosion and sedimentation into Liberty Cut and Shag Slough and within open water areas of the marsh. However, the project requires preparation and implementation of a SWPPP (described under the Environmental Commitments in the Project Description) to control stormwater runoff, erosion, sedimentation, and

other construction-related pollutants during excavation and until construction is complete and all disturbed areas are permanently stabilized. This would substantially minimize the potential for project-related erosion and sedimentation and the violation of applicable water quality standards.

Small volumes of petroleum products (fuel, engine oil, and hydraulic line oil) would be temporarily used and handled to operate construction equipment. There is a slight possibility that these materials may be released in accidental spills and result in harm to people or the environment. The implementation of a SWPPP (described under the Environmental Commitments incorporated into the Project Description), which would include methods to protect water quality in response to emergency spills, would minimize potential effects.

Dissolved Organic Carbon. Dissolved organic carbon (DOC) is one of the primary variables that influence the formation of disinfection byproducts (DBPs) (Chow et al. 2006; Fujii et al. 1998). The suspected risk to humans from DBPs containing carcinogens has led some communities to revise their methods of disinfecting drinking water. DBP levels in drinking water can be reduced through the use of alternatives to chlorination in treating water for human consumption (i.e., ozonation or chloromines), although other potentially harmful DBP compounds may be formed during these other disinfection processes. Total organic carbon (TOC) is the refractory (hard to decay) dissolved organic molecules produced by the biochemical degradation (bacterial decay) of organic carbon originally produced through photosynthesis. Production of biomass from wetlands, peat soils, and agriculture are known sources of TOC. Although most of the organic carbon produced by agricultural crops or wetlands is decomposed to produce CO2, a small residual (1–5%) is released as complex organic molecules and these molecules are resistant to further decomposition. Because the proposed project does not involve major changes to flooding or existing land use, TOC levels are not expected to change.

Methylmercury. Methylmercury (MeHg) is produced by sulfate reducing bacteria that live in anoxic (low dissolved oxygen) environments, such as a wetland or lake and river bottom sediments. The activity of these bacteria and the availability of reactive inorganic mercury (Hg) are the two primary factors affecting MeHg production (Marvin-DiPasquale et al. 2005; Yee et al. 2005). Studies have shown that there is no localized increase in biotic MeHg concentration (in fish) in wetland tracts than in adjacent aquatic habitats (Yee et al. 2005; Slotton et al. 2002).

Speculation of the possible effects of tidal wetlands on MeHg in the Delta and fish tissue mercury concentrations has been widespread, as it is generally thought that tidal wetlands contribute to MeHg production (Davis et al. 2003). However, empirical studies have shown that there is no localized increase in biotic MeHg concentration (in fish) in wetlands compared with adjacent aquatic habitats like open water channels (Yee et al. 2005; Slotton et al. 2002). While the project may attract fish to spend a portion of their life cycle within the project's tidal wetlands, their exposure to MeHg would be similar to that of the baseline environment of the Delta's existing tidal wetlands and open channels.

Beyond production and release of MeHg from tidal wetlands, one prevalent general concern is the possibility of bio-accumulation of MeHg in the food-chain. However, based on the rationale and studies cited above, MeHg levels found in larger game fish that feed on smaller fish associated with tidal wetland habitat should be comparable to baseline levels and would not be substantially changed by the project. No evidence is known that indicates restoring tidal wetlands would increase concentrations of MeHg in invertebrates, zooplankton, fish, or wildlife to be any greater than what is currently measured in these organisms within the various Delta habitats.

In regard to bird species, because there are no measurements of MeHg in the managed wetlands and no measurements of MeHg in the ducks or waterfowl found on the managed wetlands of the marsh, it is speculative to evaluate whether the proposed project would change the MeHg incorporated into the waterfowl food-chain. However, the results of the studies cited above allow interpretation that birds would be affected no differently than fish species, meaning there is no substantial effect.

Research from the Delta and tributaries suggests that the interaction of MeHg and the environment is a highly dynamic process that varies substantially depending on the habitat, regional location, and a multitude of other factors that contribute to MeHg interactions. Because the project will not create extensive areas of new wetlands and based on the cited studies and rationale indicating there is no substantial increase in biotic MeHg concentration, no link to substantial bio-accumulation of MeHg, and no link to substantial increase of MeHg in fish and wildlife species, the potential effects of the project from release of MeHg are considered less than significant. Furthermore, the project will contribute to future research and understanding of the relationship between wetland restoration, MeHg production, and fish as it is anticipated that post-project MeHg monitoring will be conducted at the request of the Regional Water Quality Control Board's water quality certification.

b. *No Impact.* The project would not have an effect on groundwater.

c. *Less than Significant.* Sedimentation occurs following inundation by Yolo Bypass flows under existing conditions. The project would alter the course of the drainage pattern. Sedimentation within the excavated channels is expected to reach equilibrium within the first year, where the tidal energy reaching the channels will provide a dynamic balance between erosion and sedimentation.

d. *Less than Significant.* The breaching and degradation of the east-west levees along the northern boundary of Liberty Island would improve tidal connectivity, tidal circulation, and flood water access throughout the project site as a way to increase habitat values for native fish. However, the overall frequency of flooding on the project site would remain the same (approximately a 3-year frequency).

A hydraulic analysis of the project along with the Liberty Island Conservation Bank and Preserve was conducted by MBK Engineers (MBK Engineers 2008 and MBK Engineers 2010) to assess the potential for impacts to the flood control system and adjacent properties. This analysis was conducted by comparing the computed water surface elevations and velocities of a baseline condition to a post-project condition.

The hydrologic condition used for these simulations was the Sacramento River Flood Control Project (SRFCP) 1957 design flood. A flow of 490,000 cubic feet per second (cfs) was simulated for this reach of the Yolo Bypass.

According to the Hydraulic and Hydrologic Report (MBK Engineers 2008) and the supplemental memorandum (MBK Engineers 2010), when the proposed project and the recently constructed Liberty Island Conservation Bank and Preserve are evaluated simultaneously, the water surface changes generated post-project would be localized to the immediate vicinity of the areas where the levees are degraded. The localized water surface elevation was modeled to increase up to a maximum of 0.2 feet where the levee is degraded as compared to existing conditions (Figure 15). This change is likely the result of the removal of the levee, which currently restricts water flow. There are also minor decreases in water surface elevations on the order of 0.1 to 0.05 feet (Figure 16). There are no hydraulic impacts along the State-Federal Project levees of the Yolo Bypass. Changes to water velocities are very minor and would also be localized to the project area and immediate vicinity. Water velocities would slow slightly (decrease in the range of 1.5 to 0.5 feet per second) in the slough bisecting the project site (referred to as an extension of Shag Slough) just north of the degraded levees and would slightly increase (increase in the range of 0.5 to 2 feet per second) south of the degraded levees. Following further refinement of the project design details, additional hydraulic analyses will be conducted to confirm these results and provide data to support the encroachment permit process with the CVFPB and the findings need to support issuance of a Flood Hazard Development Permit by Yolo County.

Furthermore, provisions in the project's Long-term Management Plan allow for remedy if it is determined that the long-term operation of the project negatively impacts the adopted plan of flood control. These provisions include the management of large woody riparian trees (all oaks and cottonwoods over 4 inches diameter breast height will be routinely removed) and coordination with the CVFPB. If the CVFPB finds evidence that woody vegetation is interfering with the successful execution, functioning, maintenance, or operation of the adopted plan of flood control, then the Project Sponsor will be required remove the woody vegetation specified for removal on the project site in accordance with Title 23, California Code of Regulations (CCR), Section 131. In the event that this request is not complied with, the DWR or the CVFPB shall have the right to restore the site to baseline project design conditions using monies from the established endowment fund.

The project requires the issuance of a flood permit by Yolo County. According to Section 8-3.401 of the Yolo County Code, a Flood Hazard Development Permit shall be obtained before any construction or other development begins within any area of special flood hazards. According to Section 8-3.403(a) of the County Code, the Floodplain Administrator shall review all Flood Hazard Development Permits to determine that:

1) The permit requirements of the chapter have been satisfied;

2) All other required state and federal permits have been obtained;

3) The site is reasonably safe from flooding; and

4) The proposed development does not adversely affect the carrying capacity of areas where base flood elevations have been determined but a floodway has not been designated. For purposes of this chapter, "adversely affects" means that the cumulative effect of the proposed development when combined with all other existing and anticipated development will increase the water surface elevation of the base flood more than one foot at any point."

Additionally, Section 8-3.403(c)(2) requires that "Whenever a watercourse is to be altered or relocated," the Administrator shall "assure that the flood carrying capacity of the altered or relocated portion of said watercourse is maintained."

The findings for issuance of the Flood Hazard Development Permit by Yolo County can be met by the conclusion of the MBK Engineers report and memorandum that only minor increases in water surface elevations of less than one foot would be caused by the project, and that the flood carrying capacity of the Yolo Bypass would be maintained.

In summary, the project would not increase the water surface elevations on adjacent properties, the minor changes in water surface elevations and velocities would remain localized, and provisions are afforded to the DWR and CVFPB for operation of the project.

e. *Less than Significant.* The proposed project would not create or contribute runoff water that would exceed the capacity of the stormwater drainage system (the Bypass). The project also would not provide substantial additional sources of polluted runoff. Implementation of Environmental Commitments including the SWPPP and BMPs as described in the Project Description and compliance with the RWQCB Section 401 Water Quality Certification would limit additional sources of polluted runoff.

Figure 15
Water Surface Elevation Difference
(Source: MBK Engineers)

WILDLANDS

Northern Liberty Island Fish Conservation Bank
Initial Study

Figure 16
Velocity Difference
(Source: MBK Engineers)

f. *Less than Significant.* The proposed project includes habitat enhancement of natural communities (e.g., seasonal wetlands, emergent marsh, riparian woodlands, and grasslands). Enhancement of natural communities and associated physical, chemical, and biological processes generally has beneficial effects on water quality.

   Implementation of the SWPPP and BMPs described under the Environmental Commitments in the Project Description would substantially reduce the potential for construction-related erosion and sedimentation to adversely affect water quality in Liberty Cut and Shag Slough.

g. *No Impact.* The proposed project would not place any housing within the 100-year floodplain.

h. *No Impact.* The project does not involve the construction of any new structures that would impede or redirect floodflows.

i. *No Impact.* The proposed project does not include housing or structures and the project site is not populated. The proposed project will not expose people or structures to a significant risk of loss, injury or death involving flooding.

j. *No Impact.* Seiche and tsunami hazards occur only in areas adjacent to a large body of water. The project site is not located in such an area. There are no steep slopes in the project area; the landslide potential of the project site is minimal and the mudflow hazard is minimal.

X.	LAND USE AND PLANNING	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Physically divide an established community?	☐	☐	☐	☒
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion

a. *No Impact.* The project site is located in a rural area, well outside any established community.

b. *No Impact.* As already noted above in the Project Description and Agriculture section, the proposed project would not conflict with any Yolo County General Plan policies.

The proposed conservation bank project, in conjunction with other current projects and probable future projects that mitigate for out of county impacts, have the potential to result in impacts that are individually limited but cumulatively considerable, in terms of loss of agricultural lands or habitat due to widespread conversion of lands in the county to wetlands and/or habitat mitigation banks. On October 12, 2010, the Yolo County Board of Supervisors enacted a temporary moratorium on the issuance of permits for certain habitat and wetland conversion projects in part to concerns of this nature. Exempted from this moratorium are projects that have signed a Memorandum of Understanding with the County. On December 14, 2010, Board of Supervisors approved a Memorandum of Understanding for the proposed project, exempting it from the moratorium.

The project is located within the Primary Zone of the Delta, which is regulated by the Delta Protection Commission (DPC) through its adopted Land Use Resource Management Plan (LURMP). The DPC is a state agency that was created by enactment of the Delta Protection Act of 1992. Consistency with the LURMP is ensured through the policy framework of the 2030 Yolo Countywide General Plan, approved by Yolo County in November 2009. The CPD is currently engaged in a process to update the LURMP. Once the LURMP update is adopted by the DPC, Yolo County will review the General Plan for consistency with the LURMP update and will make amendments as necessary.

The DPC staff reviewed and responded to the 2030 Yolo Countywide Draft General Plan and its accompanying Draft Environmental Impact Report and did not note any inconsistencies with the updated General Plan policies as they relate to the Primary Zone of the Delta. The project is consistent with the Yolo County General Plan and the General Plan is consistent with the current LURMP.

c. *No Impact.* The county does not have an adopted HCP or NCCP, although a draft plan is now being prepared by the Yolo County Natural Heritage Program (the Joint Powers Agency).

XI.	MINERAL RESOURCES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Discussion

a. and b. No Impact. The project area has not been identified as an area of significant mineral resources.

XII. NOISE		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	☐	☐	☒	☐
b.	Expose persons to or generate excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c.	Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d.	Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e.	Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f.	Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion

a. *Less than Significant Impact.* Construction of the project would temporarily increase noise in the vicinity of the project area. Noise increases would result from on-site construction activities. Temporary construction noise associated with the grading activities is similar to existing noise associated with ongoing agricultural activities in nearby agricultural areas.

The proposed grading and construction is not expected to generate noise levels at the boundaries of the property that will significantly impact the nearest neighbors, since the residences are located so far away from the noisiest construction activities. Noise levels diminish or attenuate as distance from the noise source increases. The project is located in a rural agricultural area and there are no sensitive receptors in the vicinity. After construction is complete, noise levels will drop to existing levels.

b. *No Impact.* There is no pile driving associated with the project and construction is not expected to generate groundborne vibration.

c. *No Impact.* Upon completion of construction, temporary noise activities would cease. There is no noise associated with operation of the project.

d. *Less than Significant Impact.* As described above, temporary construction activities could result in temporary increases in ambient noise levels, but would be attenuated at the property boundaries to acceptable levels and there are no sensitive receptors near the project site. There are no noise levels associated with operation of the project.

e. *No Impact.* The project is located more than two miles from the nearest public airport. The project would not expose people residing or working in the project area to excessive noise levels.

f. *No Impact.* The project is located more than two miles from the nearest private airstrip. The project would not expose people residing or working in the project area to excessive noise levels.

XIII.	POPULATION AND HOUSING	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	☒
b.	Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c.	Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion

a. *No Impact.* The project would not induce any population growth.

b. No Impact. The project would not displace any existing housing units.

c. No Impact. There are no housing units on the project site, and implementation of the project would not displace any housing units or people.

XIII. PUBLIC SERVICES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a 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 following public services:				
Fire protection?	☐	☐	☐	☒
Law enforcement?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Discussion

a. and *b. No Impact.* The project would not require fire protection services or law enforcement services.

c, d., and *e. No Impact.* The project would not increase the need for schools parks or other public facilities and services.

XIV. RECREATION	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. 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?	☐	☐	☐	☒
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion

a. *No Impact.* The project would not require the construction of additional recreational facilities nor substantially increase the use of existing recreational facilities.

b. *No Impact.* The project would not require the construction of nor include additional recreational facilities.

XV.	TRANSPORTATION/TRAFFIC	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	☐	☒	☐	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
d.	Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e.	Result in inadequate emergency access?	☐	☐	☐	☒
f.	Result in inadequate parking capacity?	☐	☐	☐	☒
g.	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

Environmental Setting

The project site would be accessed from Solano County either from the north using an existing private road or the south using Liberty Island Road bridge. Liberty Island Road bridge over Shag Slough (Bridge Number 23C0119) was built in 1992. According to the Caltrans local bridge list, the bridge is a concrete continuous slab bridge 7.3 meters in width and 114 meters long and is considered functionally obsolete. According to Solano County Department of Public Works, there is a structural problem with one of the Liberty Island Road bridge piles and the county has blocked off the north side of the structure

until funds are available to repair the bridge (Flores pers. comm.). It is unknown at this time when repairs will be completed and how this will affect traffic circulation.

Existing traffic volumes on roadways in the vicinity of the project site are extremely low. Liberty Island Road and the roads in the project area serve mainly local and agricultural traffic. Pavement widths and design features do not meet modern design standards (i.e., 12-foot-wide vehicle lanes and 4-foot-wide paved shoulders). Roads in the project area were not designed to handle heavy truck traffic and are in poor condition (Flores pers. comm.).

Temporary access to the construction site for construction equipment is required to complete construction activities; however, permanent access to the site will be by boat. The following options for temporary construction access have been identified (Figure 7):

1. Access from the south using Liberty Island Road Bridge. Construction equipment would access the site using the existing Liberty Island Road bridge across Shag Slough and travel north along the levee road to the project site. This option would require the following:

   a. Temporary construction easement agreement with TPL (property owner).

   b. Repair of the existing levee road to accommodate truck traffic.

   c. Installation of temporary culverts and fill across the existing levee breaches.

   If feasible, a barge may also be used to provide construction equipment access from Liberty Island Bridge up Shag Slough to the project site.

2. Access from the north using a floating bridge across Shag Slough. Construction equipment would access the site via Levee Road (also known as County Road 5190C) to a private road and travel east and south and cross Shag Slough to the project site. This option would require the following:

   a. Temporary construction easement agreement with Westlands (property owner).

   b. Construction of a temporary haul road across the neighboring Westlands Water District property and use of a temporary floating bridge to bring equipment and trucks across Shag Slough.

Construction of the project is anticipated to generate an estimated 130,000 cubic yards of material from lowering the levees and widening the existing breaches. The spoils material is anticipated to be a mix of soil and large rock. Some of the spoils may be used to plug the north-south ditches; however, most of the material will be removed from the Bypass floodway and deposited on nearby property(ies) in Solano County. The following disposal options have been identified (Figure 8):

Option 1: Disposal on some or all of the spoils on private property located at the southwest corner of Levee Road and Liberty Island Road (this site is referred to as Los Rios Labor Camp or Liberty Farms),

Option 2: Disposal of some or all of the spoils on private property located at the southeast corner of Delhi Road and Levee Road (this site is referred to as the Delhi Road site).

Option 3: Disposal of some or all of the spoils on property controlled by Reclamation District 2068 located on Delhi Road (this site is referred to as the RD 2068 Levee at Delhi Road).

Option 4: Disposal of some or all of the spoils at an abandoned farm yard on land controlled by Reclamation District 2068.

Option 5: Disposal of some or all of the spoils at the Hay Road Landfill located at the intersection of Hay Road and State Route 113.

Discussion

a. *Less than Significant Impact with Mitigation Incorporated.* Construction of the project would involve transporting construction equipment to the site prior to construction, removal of approximately 130,000 cubic yards of excess material during construction, and transporting construction equipment offsite when construction is complete. The only transportation issues are temporary impacts during construction; there are no long-term changes to local traffic circulation.

Construction of the project is anticipated to occur between the months of May and October. The project site would be accessed from the north or from the south. The equipment needed for the construction would make one trip to the project site and one trip leaving the project site once construction is complete. Construction personnel would need to access the site daily during construction; however, the number of construction personnel is estimated to be 10 employees or less. These trips would generate a temporary increase in traffic during construction.

Five possible disposal options have been identified for the disposition of the excess material. During grading activities, a total of approximately 6,500 round-trip truck trips are expected to be required over a period of approximately 8 weeks. Work is expected to occur six days per week (Monday through Saturday) during the hours of 7 am to 5 pm. This would result in about 100 to 150 truck trips per working day. The amount of heavy truck traffic associated with construction and grading, up to 150 truck trips per working day over eight weeks, could have a significant impact on the local roads. The roads in the project vicinity are in relatively poor condition and additional heavy truck traffic on these facilities could result in major damage. As noted above, most of the roads in the project vicinity are of substandard width and in poor condition. Depending on which option is selected for excess material disposal, the temporary increase in construction traffic has the potential to result in conflicts with existing agricultural traffic and public safety concerns.

Mitigation Measure TRANS-1:

The project applicant will enter into a secure agreement with Solano County Department of Public Works and Yolo County Department of Planning and Public Works to ensure that road conditions do not deteriorate as a result of the project. After the final disposal site option is selected, the applicant will be responsible for conducting a pre-project review of the route(s) to and from the disposal site(s). Existing road conditions will be documented. A post-project review of the roadway conditions will be conducted and the applicant will be responsible for repairing the roads used during construction to a condition at least as good as before construction started.

b. No Impact. The project would not conflict with any applicable congestion management program. The only traffic associated with the project is temporary construction traffic.

c. No Impact. The project would not affect air traffic patterns.

d. No Impact. The project does not have any design features that would result in hazardous traffic conditions.

e. No Impact. The project would not result in inadequate emergency access.

f. No Impact. Construction of the project would not conflict with any adopted policies, plans, or programs supporting alternative transportation.

XVI.	UTILITIES AND SERVICE SYSTEMS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c.	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?	☐	☐	☐	☒

XVI.	UTILITIES AND SERVICE SYSTEMS	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 that 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?	☐	☐	☐	☒
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g.	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Discussion

a. *No Impact.* The project has no wastewater treatment requirements.

b. *No Impact.* The project does not require water or wastewater facilities.

c. *No Impact.* The project does not require stormwater drainage facilities.

d. *No Impact.* The project has adequate water supplies.

e. *No Impact.* The project does not require wastewater treatment facilities.

f. *Less than Significant Impact.* One of the spoils disposal options is to remove excess dirt and rocks to the Hay Road landfill in Solano County. According to the Jurisdiction Landfill Overview information posted on the CalRecycle website on November 1, 2010, the Hay Road landfill is an active landfill site permitted to dispose of 2,400 tons per day. The estimated closure date for the landfill is 2077.

g. *No Impact.* The project would comply with federal, state, and local statutes and regulations related to solid waste.

XVII.	MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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, substantially 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?	☐	☐	☒	☐
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.)	☐	☒	☐	☐
c.	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion

a. *Less than Significant.* Implementation of the proposed project would help preserve and enhance sensitive habitat for special-status species. Construction of the proposed project has the potential to impact to biological and cultural resources (e.g., restoration or enhancement activities), as described in Sections IV and V above. However, because activities would incorporate the Environmental Commitments described under the Project Description, because they will be conducted following all applicable regulatory requirements, and because many of the goals and actions are designed to have a net benefit to biological resources, implementation of the proposed project is not anticipated to cause a significant impact to biological resources.

b. *Less than Significant with Mitigation Incorporated.* Implementation of the proposed project in combination with other actions occurring at the same time could have the potential to create and contribute to cumulative impacts on the environment. The Project Description includes a discussion of Related Projects. For the purpose of this discussion, Liberty Island Conservation Bank and Preserve, Little Hastings Island Conservation Bank, and Yolo Ranch are considered related projects that have either been implemented, such as Liberty Island Conservation Bank and Preserve, or may be implemented in the near future and could result in cumulative impacts. Little Hastings Island Conservation Bank and Yolo Ranch are relatively small projects that have independent financing and do not rely upon any State bond approvals. The BDCP, although discussed as a related project, is unlikely to be implemented within the near future because it has no reliable, secure funding source; therefore, the following discussion does not include any potential impacts resulting from the BDCP.

Resources Eliminated from the Cumulative Impacts Analysis

The project will have no impacts on some resources areas. In others cumulative impacts would not be considered cumulatively considerable for one or both of these reasons:

- cumulative effects would be beneficial, or
- the effects of the proposed project would not be added to the effect of other projects (i.e., no cumulative impact would occur) or would be too minor or localized to be cumulatively considerable.

By applying this reasoning, the following resource areas, along with a general explanation of the rationale, have been eliminated from cumulative impact consideration.

- Aesthetics—Impacts to the visual resources at the project site would be temporary and only during construction. The proposed project will not change the character of the project area.
- Biological Resources –The proposed project will be beneficial to biological resources and potential impacts would be temporary for a short duration during construction and considered less than significant with mitigation incorporated; therefore, they are not cumulatively considerable.
- Cultural Resources—There are no known sensitive cultural resources in the project area that would be affected by the project.
- Geology and Soils—Grading and ground-disturbing activities could result in temporary, localized soil erosion. Any potential effects would be reduced with the implementation of mitigation measures and would be too minor or localized to be cumulatively considerable.
- Hazards and Hazardous Materials—Effects related to hazards and hazardous materials would only temporarily have the potential to occur during construction. Mitigation measures have been incorporated to minimize the potential for exposure of people or the environment to hazardous materials.
- Mineral Resources—The project area is not located on or near any known mineral resources protected for future mining.
- Noise—The project would result in minor temporary increases in noise. These changes in combination with the short duration of the proposed project would be less than significant and not cumulatively considerable.
- Population and Housing—No population would be displaced and there would be no influence on the economy that would result in an influx of people as a result of the project.
- Recreation—The project site can be accessed only by boat and the adjacent sloughs may be frequented by fisherman. Impacts to recreation would be temporary and there are alternative locations to fish. The impacts would be too minor to be cumulatively considerable.
- Transportation and Traffic—Transportation and traffic will be temporarily affected. No changes to existing transportation infrastructure would occur.

- Utilities and Public Services—The project would not impact utilities and would not alter or increase demand for public services.

Resources for which Effects May be Cumulatively Considerable

The following is an analysis of the cumulative impacts for those resource areas where cumulative effects could occur. The geographic scope considered for each of these resources is outlined in the table below.

Resource	Geographic Scope Considered
Agricultural Resources and Land Use	Sacramento–San Joaquin River Delta
Air Quality	A 25-mile radius of the project site which is the approximate distance that haul trucks would travel to retrieve and deliver supplies to the project site, with potential regional implications within the Sacramento Valley Air Basin
Hydrology and Water Quality	Sacramento–San Joaquin River Delta

Agricultural Resources and Land Use

Liberty Island and Yolo Ranch are designated AG with a DPO by the Yolo County 2030 Countywide General Plan. The Solano County General Plan designation specifies Little Hastings Island and adjoining properties as Agriculture with a Resource Conservation Overlay. Neither Liberty Island nor Little Hastings Island has been in agricultural production for over a decade. The levees on Liberty Island failed in the 1997 and the island was never reclaimed. Flood flows during the 1980s damaged the levees on Little Hastings Island and the land was never reclaimed. Neither of these projects would result in the conversion of actively farmed land.

Yolo Ranch is an active agricultural operation with irrigated pasture. Although the specifics of any restoration project are not available at this time, it is likely that any restoration project would result in the conversion of actively farmed land to open space and wildlife use.

Because the implementation of the proposed project would not result in the loss of land that would be feasible to use for agricultural purposes and it is not dependant on or result in the implementation of other projects that would convert agricultural land uses; this cumulative impact would be less than significant.

Air Quality and Climate Change

The proposed project is located in Yolo County, which is located in the Sacramento Valley Air Basin (SVAB). The SVAB includes Sacramento, Shasta, Tehama, Butte, Glenn, Colusa, Sutter, Yuba, Yolo, and parts of Solano and Placer Counties. The SVAB

is bound on the west by the Coast Ranges and on the north and east by the Cascade Range and Sierra Nevada.

The Yolo Solano Air Quality Management District is the management agency with responsibility for ensuring that state and federal standards are met. Criteria pollutants for this area include ozone, particulate matter, carbon monoxide and toxic air contaminants. For some of these criteria pollutants, attainment status in the District has been met. For others, the status is considered nonattainment.

During construction of the cumulative projects, air quality may be temporarily affected by criteria pollutant emissions produced by construction equipment and fugitive dust created by wind and the operation of construction equipment over exposed earth. Mitigation measures will prevent construction-related emissions from exceeding current standards of the Yolo-Solano Air Quality Management District.

In addition, because the cumulative projects consist of restoring tidal influence, it would reduce the vulnerability of adjacent low lying areas to flooding caused by unusual weather events that may be attributable to global warming. Consequently, the cumulative projects would result in long-term benefits to the region by reducing the area's susceptibility to flooding.

Hydrology and Water Quality

The project in combination with other restoration projects in the Delta could have a combined cumulatively significant impact on water quality if MeHg levels exceed the values (50 µg/L) in the Sacramento–San Joaquin Delta Methyl-Mercury TMDL. Current plans for restoration in the Delta area include the 8,000 to 100,000 acres of restoration called for in the most recent OCAP BO modification and the Liberty Island Conservation Bank and Preserve has been recently constructed. The combination of these projects along with the proposed project could equal a combined total of up to 100,809 acres. Little Hastings Island has been flooded for decades, and any restoration actions would not change flooded conditions. Further restoration may occur under the BDCP. Accounting for the production of MeHg is difficult due to the sensitivity required in monitoring and laboratory analysis procedures. In addition, quantifying MeHg production from a particular restoration project could prove difficult because source analysis proves to be a challenge in a tidal estuary such as the Delta. As a result, the Central Valley RWQCB staff is compiling a database that describes existing managed wetlands as well as completed in-progress and anticipated habitat restoration efforts in the Delta and upstream watersheds. The database will identify wetland characteristics and allow habitat managers and wetland project proponents to collaborate on MeHg characterization and control studies. As a result, agencies responsible for these restoration efforts will be able to collaborate on future MeHg issues and develop control mechanisms if the production of MeHg becomes an impact on the aquatic ecosystem and human health. These collaborative efforts will substantially reduce MeHg impacts in the Delta area.

In addition to water quality impacts from MeHg, biological resources, includingMeHg impacts to the fish, would be minimal and not cumulatively considerable. Once

construction of the proposed project is complete, and construction of the other restoration efforts described above are completed, there would be no additional construction related impacts to these resources. Operational related impacts associated with production of MeHg production will be less than significant with implementation of the agency collaboration described above.

Therefore, the project would not result in a significant cumulative impact. The project would not have a substantial impact on the hydrology of the project site. The frequency of flooding would remain the same and the changes to water surface levels would be localized; therefore, these hydrologic impacts are not cumulatively considerable.

c. *Less than Significant*. The proposed project does not have any environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

List of Preparers

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APPENDIX A
Comments and Responses

Responses to Comments

During the public review period, comments were received on the ISMND from interested public agencies. The following is a list of the agencies that submitted comments on the ISMND during the public review period:

1. Arthur Murray, District 3 Division of Planning and Local Assistance Office of Transportation Planning, Caltrans, dated December 30, 2010.

2. Stanley J. Schram, Solano County Surveyor, Department of Resource Management, County of Solano, dated December 29, 2010.

3. James Herota, Staff Environmental Scientist, Floodway Projects Improvement Branch, Central Valley Flood Protection Board, dated January 24, 2011.

While CEQA and the State CEQA guidelines do not require a Lead Agency to prepare written responses to comments received on an ISMND, as contrasted with a Draft Environmental Impact Report (State CEQA Guidelines Section 15088), Reclamation District 2093 has elected to prepare the following written responses with the intent of conducting a comprehensive and meaningful evaluation of the proposed project.

The following includes the letter from the State Clearinghouse acknowledging that no comment letters were submitted by state agencies prior to the closing date and compliance with the requirements for the review of draft environmental documents.

Each comment letter has been incorporated and has been numbered to assist the response to the comments. The number designations in the responses are correlated to the bracketed and identified portions of each comment letter.

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

JERRY BROWN
GOVERNOR

January 21, 2011

Erik Vink
Reclamation District 2093
c/o Trust for Public Land
1107 Ninth Street, Suite 1050
Sacramento, CA 95814

Subject: Northern Liberty Island Fish Conservation Bank
SCH#: 2010122078

Dear Erik Vink:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on January 20, 2011, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Document Details Report
State Clearinghouse Data Base

SCH#	2010122078
Project Title	Northern Liberty Island Fish Conservation Bank
Lead Agency	Reclamation District 2093

Type	MND Mitigated Negative Declaration
Description	The project proposes to preserve, enhance, restore and create habitat beneficial to Delta native fish species in order to provide compensatory mitigation for approved projects affecting special status Delta fish species. The project includes degradation of the east-west levees to provide improved tidal connectivity and enhanced water circulation, excavation of several channels to promote habitat connectivity, exclusion of livestock along the northern boundary of the project site and planting to improve habitat.

Lead Agency Contact

Name	Erik Vink		
Agency	Reclamation District 2093		
Phone	916 557-1673	*Fax*	
email			
Address	c/o Trust for Public Land 1107 Ninth Street, Suite 1050		
City	Sacramento	*State* CA	*Zip* 95814

Project Location

County	Sacramento				
City	Sacramento				
Region					
Lat / Long	38° 19' 21.5" N / 121° 40' 41.9" W				
Cross Streets	Liberty Island Road and Shag Slough				
Parcel No.	33-27-7, 33-28-1, -5, -14, -16				
Township	6N	*Range* 3E	*Section* 29-32	*Base*	Mt. Diab

Proximity to:

Highways	
Airports	
Railways	
Waterways	Shag Slough and Liberty
Schools	
Land Use	Open space / Agriculture General and Agriculture Preserve / Agriculture with Delta Protection Overlay

Project Issues	Agricultural Land; Air Quality; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Traffic/Circulation; Vegetation; Water Quality; Wetland/Riparian

Reviewing Agencies	Resources Agency; Department of Fish and Game, Region 2; Delta Protection Commission; Department of Parks and Recreation; Central Valley Flood Protection Board; Department of Water Resources; Caltrans, District 3; Regional Water Quality Control Bd., Region 5 (Sacramento); Native American Heritage Commission; State Clearinghouse

Date Received	12/22/2010	*Start of Review*	12/22/2010	*End of Review*	01/20/2011

Note: Blank fields result from insufficient information provided by lead agency.

Mahala Guggino

From: Erik Vink [Erik.Vink@tpl.org]
Sent: Thursday, December 30, 2010 5:55 PM
To: arthur_murray@dot.ca.gov
Cc: alyssa_begley@dot.ca.gov; Mahala Guggino
Subject: Re: Northern Liberty island Fish Conservation Bank

thanks Mr. Murray; your comments are noted and this email confirms the receipt of them.

ERIK VINK
RD 2093

>>> Arthur Murray <arthur_murray@dot.ca.gov> 12/30/10 2:11 PM >>>

03-YOL-84 PM 000.000
Northern Liberty Island Fish Conservation Bank Project SCH 2010122078 Initial Study/Mitigated Negative Declaration

Mr. Erik Vink
Reclamation District 2093
c/o Trust for Public Land
1107 9th Street, Suite 1050
Sacramento, CA 95814

Dear Mr. Vink,

Thank you for the opportunity to review and comment on the Initial Study/Mitigated Negative Declaration for the Northern Liberty Fish Conservation Bank Project. The project proposes to preserve, enhance, restore, and create habitat beneficial to Delta native fish species in order to provide compensatory mitigation for approved projects affecting special status Delta fish species. The project includes degredation of the east-west levees to provide improved tidal connectivity, and enhanced water circulation, excavation of several channels to promote habitat connectivity, exclusion of livestock along the northern boundary of the project site, and planning to improve habitat. The project area, Conservation Bank of 808.76 acres is located on the northern tip of Liberty Island, approximately 5 miles west of Courtland, 10 miles north of the City of Rio Vista, and 2.6 miles west of State Route 84/Ryer Avenue. The project is within a rural, unincorporated area of Yolo County,and within the southern area of the Bypass where it flows into the northwest Delta.

At this time Caltrans has no comments. However, the Department would appreciate being kept apprised of any changes to the above-mentioned project description. Caltrans looks forward to working with the Reclamation District 2093/Trust for Public Land with this and future projects. If you have any questions, please contact me at 916-274-0616.

ARTHUR MURRAY
Desk: (916) 274-0616
Fax: (916) 274-0602

District 3 Division of Planning and Local Assistance Office of Transportation Planning-South Caltrans District 3 Transportation Planning
2379 Gateway Oaks Drive Ste. 150
Sacramento, CA 95833

Caltrans, Comment Letter dated December 30, 2010

No comment is provided, no further response is necessary.

SOLANO COUNTY
Department of Resource Management
Public Works Engineering
675 Texas Street, Suite 5500
Fairfield, CA 94533
www.solanocounty.com

Telephone No.: (707) 784-6765
Fax No.: (707) 784-2894

Bill Emlen, Director
Clifford K. Covey, Assistant Director

December 29, 2010

Liberty Island Holdings II, LLC
C/O Wildlands Inc.
Attn: Mahala Guggino
3855 Atherton Road
Rocklin, CA 95765

Dear Ms. Guggino:

We have reviewed the Initial Study and Mitigated Negative Declaration prepared for Reclamation District 2093 for the Northern Liberty Island Fish Conservation Bank project, dated December 2010. The project is in southwestern Yolo County adjacent to the County of Solano and north of the City of Rio Vista. Public Works Engineering has the following comments with regard to traffic, circulation and grading.

Comment (1)

1. The document discusses access points for the proposed construction of the restoration project. The southerly access point is through Solano County via Liberty Island Road across Shag Slough. Of concern to the County of Solano is the effect on local roads from trucking operations associated with the project. There is an estimated 130,000 cubic yards of material to be excavated and possibly stockpiled within Solano County. This will most likely have some impact to the county roads. If the off site trucking, or other project construction activities, cause damage to the County road system, the project applicant will need to mitigate these impacts by repairing those damages. The applicant shall enter into a secured agreement with the County of Solano to mitigate potential damage to the county road system.

(2)

2. At this time the Liberty Island Bridge is damaged and is marked for one lane traffic only. It is unknown at this time when repairs will be completed and the potential effect this will have on the project traffic circulation.

(3) 3. The applicant shall apply for and secure a grading permit from the County of Solano for any fill or stockpiled material within the County of Solano.

Please call me at (707) 784-6069 if you have any questions.

Sincerely

Stanley J. Schram
Solano County Surveyor

C:\SJSchram\@DRC\SpecialProjects\Libertyresponse.ltr

County of Solano, Comment Letter dated December 29, 2010

Comment 1: The document discusses access points for the proposed construction of the restoration project. The southerly access point is through Solano County via Liberty Island Road across Shag Slough. Of concern to the County of Solano is the effect on local roads from trucking operations associated with the project. There is an estimated 130,000 cubic yards of material to be excavated and possible stockpiled within Solano County. This will most likely have some impact to the county roads. If the off site trucking, or other project construction activities, cause damage to the County road system, the project applicant shall enter into a secured agreement with the County of Solano to mitigate potential damage to the county road system.

Response to Comment 1: The Transportation section of the Initial Study/Mitigated Negative Declaration (ISMND) includes **Mitigation Measure TRANS-1**, which states:

The project applicant will enter into an agreement with Solano County Department of Public Works and Yolo County Department of Planning and Public Works to ensure that road conditions do not deteriorate as a result of the project. After the final disposal site option is selected, the applicant will be responsible for conducting a pre-project review of the route(s) to and from the disposal site(s). Existing road conditions will be documented. A post-project review of the roadway conditions will be conducted and the applicant will be responsible for repairing the roads used during construction to a condition at least as good as before construction started.

The final document has inserted 'secure' so that the final **Mitigation Measure TRANS-1** will read:

The project applicant will enter into a secure agreement with Solano County Department of Public Works and Yolo County Department of Planning and Public Works to ensure that road conditions do not deteriorate as a result of the project. After the final disposal site option is selected, the applicant will be responsible for conducting a pre-project review of the route(s) to and from the disposal site(s). Existing road conditions will be documented. A post-project review of the roadway conditions will be conducted and the applicant will be responsible for repairing the roads used during construction to a condition at least as good as before construction started

Comment 2: At this time the Liberty Island Bridge is damaged and is marked for one lane traffic only. It is unknown at this time when repairs will be complete and the potential effect this will have on the project traffic circulation.

Response to Comment 2: The following sentence will be added to the end of the first paragraph under the Environmental Setting discussion in the Transportation section:

It is unknown at this time when repairs will be completed and how this will affect traffic circulation.

Comment 3: The applicant shall apply for and secure a grading permit from the County of Solano for any fill or stockpiled material within the County of Solano.

Response to Comment 3: Two revisions have been included in the document to address the County's need for a grading permit:

Revision 1. Under **Initial Study, 11. Other Public Agencies whose Approval Is Required** (page 3), the following has been added after the Yolo County bullet:

- Solano County: grading permit, if determined necessary

Revision 2. Under **Table 1. Permits and Consultations** (page 27), the following has been added as the second to the last row of the table:

Solano County	Grading permit	Need for permit will be determined by Solano County

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY EDMUND G. BROWN JR., GOVERNOR
CENTRAL VALLEY FLOOD PROTECTION BOARD
3310 El Camino Ave., Rm. 151
SACRAMENTO, CA 95821
(916) 574-0609 FAX: (916) 574-0682
PERMITS: (916) 574-0685 FAX: (916) 574-0682

January 24, 2011

Mr. Erik Vink
Reclamation District 2093
c/o Trust for Public Land
1107 Ninth Street, Suite 1050
Sacramento, California 95814

Subject: Response to the Mitigated Negative Declaration
Northern Liberty Island Fish Conservation Bank SCH Number: 2010122078

Dear Mr. Vink:

Staff for the Central Valley Flood Protection Board has reviewed the subject document and provides the following comments:

The proposed project is located within the jurisdiction of the Central Valley Flood Protection Board. The Central Valley Flood Protection Board (CVFPB) is responsible for flood safety within California and maintains the integrity of the existing flood control system and designated floodways through the CVFPB's regulatory authority by issuing permits for encroachments. Development projects within the jurisdiction of the CVFPB are required to meet standards for the construction, maintenance, and protection of adopted plans of flood control that will protect public lands from floods. The jurisdiction of the CVFPB includes the Central Valley, including all tributaries and distributaries of the Sacramento River and the San Joaquin River, and designated floodways (Title 23 California Code of Regulations (Title 23 CCR), Section 2).

A Board permit is required prior to starting the work within the Board's jurisdiction for the following:

- The placement, construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction, encroachment, excavation, the planting, or removal of vegetation, and any repair or maintenance that involves cutting into the levee (CCR Section 6);

- Existing structures that predate permitting or where it is necessary to establish the conditions normally imposed by permitting. The circumstances include those where responsibility for the encroachment has not been clearly established or ownership and use have been revised (CCR Section 6);

- Vegetation plantings that will require the submission of detailed design drawings; identification of vegetation type; plant and tree names (i.e. common name and scientific name); total number of each type of plant and tree; planting spacing and irrigation

(1)

method that will be within the project area; a complete vegetative management plan for maintenance to prevent the interference with flood control, levee maintenance, inspection and flood fight procedures (Title 23, California Code of Regulations CCR Section 131).

Potentially Significant Hydrologic Impacts

Long Term Vegetation Management - Woody vegetation growth that is not managed would have a negative impact on channel capacity and increase the potential for levee over-topping. When a channel develops vegetation that then becomes habitat for wildlife, maintenance to initial conditions becomes more difficult and control of vegetative growth may be subject to environmental constraints. In these cases, it is important to develop maintenance practices that allow controlled growth of desirable habitat without unduly compromising channel capacity. (2)

The hydrological impacts resulting from the proposed project are potentially significant as the mitigation measures to control woody vegetation and trees have not been provided. (3)

According to p. 67, "Furthermore, provisions in the project's Long-term Management Plan allow for remedy if it is determined that the long-term operation of the project negatively impacts the adopted plan of flood control. These provisions include the management of large woody riparian trees (all oaks and cottonwoods over 4 inches diameter breast height will be routinely removed) and coordination with the CVFPB. If the CVFPB finds evidence that woody vegetation is interfering with the successful execution, functioning, maintenance, or operation of the adopted plan of flood control, then the Project Sponsor will be required to remove the woody vegetation specified for removal on the project site in accordance with Title 23, California Code of Regulations (CCR), Section 131. In the event that this request is not complied with, the DWR or the CVFPB shall have the right to restore the site to baseline project design conditions using monies from the established endowment fund."

In accordance with Title 23 CCR Section 131 Vegetation (c) "Vegetation must not interfere with the integrity of the adopted plan of flood control, or interfere with maintenance, inspection, and flood fight procedures." Maintaining the channel and floodway is required to prevent the reduction of flowage capacity. Mitigation measures should be revised to include removal of all woody vegetation and trees in perpetuity and the amount of funding being provided for maintenance.

Easements - The proposed project is located within the Yolo Bypass, a federal flood control project. The draft document should clarify that the proposed project is subordinate to the CVFPB flood flowage easements and the operations of the flood control project. (4)

The permit application and Title 23 CCR can be found on the Central Valley Flood Protection Board's website at http://www.cvfpb.ca.gov/. Contact your local, federal and state agencies, as other permits may apply.

Should you have any further questions, please contact me by phone at (916) 574-0651, or via email at jherota@water.ca.gov .

Sincerely,

James Herota
Staff Environmental Scientist
Floodway Projects Improvement Branch

cc: Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, California 95814

Central Valley Flood Protection Board, Comment Letter dated January 24, 2011

Comment 1: A Board permit is required prior to starting work within the Board's jurisdiction for the following:

- The placement, construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction, encroachment, excavation, the planting, or removal of vegetation, and any repoar or maintenance that involves cutting into the levee (CCR Section 6);
- Existing structures that predate permitting or where it is necessary to establish the conditions normally imposed by permitting. The circumstances include those where responsibility for the encroachment has not been clearly established or ownership and use have been revised (CCR Section 6)
- Vegetation plantings that will require the submission of detailed design drawings; identification of vegetation type; plant and tree names (i.e., common name and scientific name); total number of each type of plant and tree; planting spacing and irrigation method that will be within the project area; a complete vegetative management plan for maintenance to prevent the interference with flood control, levee maintenance, inspection and flood fight procedures (Title 23, California Code of Regulations CCR Section 131).

Response to Comment 1: Prior to construction, the project proponent will acquire all necessary permits within the jurisdiction of the Central Valley Flood Protection Board.

Comment 2: Potentially Significant Hydrologic Impacts. Long-term Vegetation Management – Woody vegetation growth that is not managed would have a negative impact on channel capacity and increase the potential for levee over-topping. When a channel develops vegetation that then becomes habitat for wildlife, maintenance to initial conditions becomes more difficult and control of vegetative growth may be subject to environmental constraints. In these cases, it is important to develop maintenance practices that allow controlled growth of desirable habitat without unduly compromising channel capacity.

Response to Comment 2: The hydraulic assessment does not identify an impact to the federal levee and all impacts are localized. Therefore, no mitigation measures are identified. Wildlands will work directly with the Board through the permitting process to provide the level of detail necessary to determine if additional measures are required to approve the proposed project for the purposes of meeting the Board's mandate. Wildlands will incorporate permit requirements into the project design as required by the permit after it is issued.

Comment 3: The hydrological impacts resulting from the proposed project are potentially significant as the mitigation measures to control woody vegetation and trees have not been provided.

According to p. 67, "Furthermore, provisions in the project's Long-term Management Plan allow for remedy if it is determined that the long-term operation of the project negatively impacts the adopted plan of flood control. These provisions include the management of large woody riparian trees (all oaks and cottonwoods over 4 inches in diameter breast height will be routinely removed) and coordination with the CVFPB. If the CVFPB finds evidence that woody vegetation is interfering with the successful execution, functioning, maintenance, or operation of the adopted plan of flood control, then the Project Sponsor will be required to remove the woody vegetation specified for removal on the project site in accordance with Title 23, California Code of Regulations (CCR), Section 131. In the event that this request is not complied with, the DWR or the CVFPB shall have the right to restore the site to baseline project design conditions using monies from the established endowment fund."

In accordance with Title 23 CCR Section 131 Vegetation (c) "Vegetation must not interfere with the integrity of the adopted plan of flood control, or interfere with the maintenance, inspection, and flood fight procedures." Maintaining the channel and floodway is required to prevent the reduction of flowage capacity. Mitigation measures should be revised to include removal of all woody vegetation and trees in perpetuity and the amount of funding being provided for maintenance.

Response to Comment 3: The hydraulic analysis determined that there are no hydraulic impacts along the federal levees of the Yolo Bypass, and all hydraulic changes are minor and localized; therefore, no mitigation is required. Wildlands will be submitting a plan of work for constructing the proposed project as part of the Encroachment Permit process. This plan of work will include proposed vegetation maintenance actions, which will be part of the ongoing management activities associated with the conservation bank. The provisions in the management plan, as described above on pg 67, will be included in the permit application as measures to satisfy Title 23 requirements.

Comment 4: The proposed project is located within the Yolo Bypass, a federal flood control project. The draft document should clarify that the proposed project is subordinate to the CVFPB flood flowage easements and the operations of the flood control project.

Response to Comment 4: The document does identify that the site is under a flood easement on pg 26, "All of Liberty Island is under a flood easement, as part of the Yolo Bypass, which is complementary with the proposed project." Wildlands will provide clarification to the CVFPB about subordination of easements during the permitting process.

Comment 5: The permit application and Title 23 CCR can be found on the Central Valley Flood Protection Board's website at http://www.cvfpb.ca.gov/. Contact your local, federal and state agencies, as other permits may apply.

Response to Comment 5: Prior to construction, the project proponent will acquire all necessary permits within the jurisdiction of the Central Valley Flood Protection Board and acquire all other local, state, and federal permits that apply.

APPENDIX B
Mitigation Monitoring and Reporting Program

Northern Liberty Island Fish Conservation Bank Project

Mitigation Monitoring and Reporting Program

Lead Agency:

Reclamation District 2093
1107 Ninth Street, Suite 1050
Sacramento, CA 95814
Contact: Erik Vink, President
916-557-1673 x16
Erik.vink@tpl.org

February 2011

Mitigation Monitoring and Reporting Program

When an agency makes findings on significant effects that are identified in a mitigated negative declaration, the agency must adopt a program for reporting and monitoring mitigation measures that were adopted or made conditions of approval (Public Resources Code Section 21081.6[a], California Environmental Quality Act [CEQA] Guidelines Sections 15091 [d] and 15097). To that end, Reclamation District (RD) 2093, as the lead agency under CEQA, must adopt a mitigation monitoring program or plan for the Northern Liberty Island Fish Conservation Bank Project.

This mitigation monitoring program is designed to ensure that the mitigation measures identified in the Mitigated Negative Declaration for the project are implemented. These measures are detailed in the following table, organized by topic in the same order as the contents of the Mitigated Negative Declaration.

For each mitigation measure, Table 1 identifies:

- Description of mitigation measure,
- Implementing action,
- Implementation schedule, and
- Party responsible for implementation and verification.

It should be noted that this mitigation monitoring plan has been prepared prior to receipt of the various permits that are required for the project. Differences, if any, between the mitigation measures included in this report and the requirements of the various permitting agencies shall be resolved by RD 2093 and the most stringent requirements shall be met.

The following **Environmental Commitments** have also been incorporated into the project to avoid, minimize, and reduce the environmental impacts of the project and are summarized below.

1. Set construction limits that do not encroach on preserved wetlands or other water features. Preserved aquatic resources and riparian habitat will be marked on the construction drawings. If needed, a visual or physical barrier will be installed along the perimeter of these features in order to avoid disturbance.

2. Attend pre-construction meetings and conduct environmental trainings regarding the location of wetland or other water features as well as other sensitive resources.

3. Conduct a post-construction inspection to determine if any post-construction remediation is needed. If remediation actions are necessary, Wildlands will ensure that those actions are performed by the construction personnel.

4. A qualified biologist will conduct preconstruction surveys to locate all active raptor nest and rookery sites within one-half mile of construction activities

for Swainson's hawk and within 600-feet for all other raptors and rookery sites. Direct disturbance, including removal of new trees and activities in the immediate vicinity of active nests, will be avoided during the breeding season (March through August). No-disturbance buffers will be established around any identified active nest to avoid disturbing nesting birds. The size and configuration of buffers will be based on the proximity of active nests to construction, existing disturbance levels, topography, the sensitivity of the species, and other factors and will be established through coordination with California Department of Fish and Game (CDFG) representatives on a case-by-case basis.

5. Due to the location of the project site in the Yolo Bypass floodway and its' marginal giant garter snake (GGS) habitat, it is unlikely that GGS will be utilizing the site during the construction period. However, the following standard avoidance measures recommended by USFWS (1997) will be used to minimize any potential disturbance to GGS.

    a. Conduct construction activities during GGS active period (May – October).

    b. Implement a workers' awareness program wherein construction personnel are provided instruction on recognition of GGS and their habitats, and the legal protection afforded GGS by the Endangered Species Act.

    c. Conduct a GGS survey 24 hours prior to commencement of habitat maintenance activities.

    d. Observe a 20 mile per hour speed limit within the construction zone.

    e. Complete construction within one season.

6. Prior to construction of the project, the Project Sponsor shall submit construction drawings to RD 2093, Yolo County, U.S. Army Corps of Engineers (Corps), National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), CDFG, and Central Valley Flood Protection Board (CVFPB), together referred to as the Resource Agencies, showing all haul routes, staging areas, spoils areas, and wetland creation sites.

7. A Restoration Ecologist will observe and manage habitat creation on a weekly basis. If situations arise that could be detrimental to the existing aquatic resources, the Restoration Ecologist will have the authority to stop construction activities until corrective actions have been taken.

8. Erosion control best management practices (BMPs) will be implemented during excavation to ensure that substances, such as run-off generated by dust control activities, do not enter other aquatic resources during or following construction. BMPs include, but are not limited to, grading during the dry season, compaction of berms and upland spoils, and seeding and mulching areas of disturbed/exposed soil.

9. When feasible, soil stockpiles will be located more than 50 feet from existing aquatic resources, and will be surrounded with erosion control (i.e., silt fencing or sterile straw wattles). Stockpiles and other exposed soil will be watered for dust control and soil compaction, where necessary. The amount of water applied to the site will be monitored to prevent erosion and surface runoff due to excessive watering. The water will be applied to exposed soil by using a water truck. The water will be pumped from existing onsite drainage features. Water application will be directed away from other aquatic resources.

10. All construction staging activities will occur within a designated staging area. The staging area will be marked in the field and on the construction plans. All refueling and maintenance activities will occur within the staging area.

11. Any hazardous materials spill will be cleaned up immediately, in accordance with all federal, state, and local regulations. The contractor will be required to develop and implement a toxic materials control and spill response plan to regulate the use of hazardous materials associated with construction. The contractor will be required to:

    a. prevent oil or other petroleum products, or any other substances that could be hazardous to aquatic life from contaminating the soil or entering watercourses;

    b. establish a spill-prevention and countermeasure plan before construction that includes strict on-site handling rules to keep construction and maintenance materials out of drainages and waterways;

    c. clean up all spills immediately according to the spill prevention and countermeasure plan, and notify CDFG immediately of any spills and cleanup activities;

    d. develop a spill prevention plan that includes the following information:

        i. A list of immediate containment response actions and extended response actions if necessary;

        ii. A list of responsible agencies to contact in the event of a spill emergency within 24 hours;

        iii. A list of spill containment equipment held on site as well as the location of the equipment on site;

        iv. Identify a contact and location of a professional clean up company; and

        v. Designate an onsite incident commander in the event of an emergency. This person will immediately inform CDFG-OSPR

in the event of an emergency. The incident commander will have complete control of construction and cleanup activities throughout the emergency and the eventual containment.

e. provide areas located outside the ordinary high water mark (OHWM) for staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants; and

f. remove vehicles from the normal high-water area of the waterway before refueling and lubricating.

12. A stormwater pollution prevention plan (SWPPP) will be prepared and implemented prior to the initiation of construction. Additional measures and BMPs identified in the SWPPP to minimize potential impacts to water quality shall be implemented.

13. Upland areas disturbed by construction will be seeded with native and naturalized upland plant species as soon as feasible after construction to minimize dust and erosion.

14. Offsite disposal areas will be seeded with native and naturalized upland plant species as soon as feasible after construction to minimize dust and erosion.

TABLE 1. MITIGATION MONITORING PROGRAM				
Mitigation Measure No.	**Mitigation Measure**	**Implementing Action**	**Implementation Schedule**	**Party Responsible for Implementation / Verification**
AIR-1	The project shall incorporate the following standard construction dust mitigation measures recommended by the YSAQMD. o Water active construction sites at least twice daily as needed. Frequency should be based on the type of operation, soil, and wind exposure. o Haul trucks shall maintain at least 2 feet of freeboard. o All trucks hauling dirt, sand, or loose materials will be covered or wetted to minimize dust. o Plant vegetative ground cover in disturbed areas as soon as possible. o Cover inactive storage piles. o Treat accesses to a distance of 100 feet from the paved road with a 6- to 12-inch layer of wood chips or mulch, or a 6-inch layer of gravel.	CEQA-triggered mitigation	During construction	RD 2093, Liberty Island Holdings II, LLC, and contractor
AIR-2	The project shall incorporate the following standard NOx reduction requirements recommended by YSAQMD. a. Construction equipment exhaust emissions shall not exceed District Rule 2-11 Visible Emission limitations. b. Construction equipment shall minimize idling time to 5 minutes or less. c. The primary contractor shall submit to the District a comprehensive inventory (i.e., make, model, year, emission rating) of all the heavy-duty off-road	CEQA-triggered mitigation	During construction	RD 2093, Liberty Island Holdings II, LLC, and contractor

TABLE 1. MITIGATION MONITORING PROGRAM				
Mitigation Measure No.	**Mitigation Measure**	**Implementing Action**	**Implementation Schedule**	**Party Responsible for Implementation / Verification**
	equipment (50 horsepower or greater) that will be used an aggregate or 40 or more hours for the construction project. District personnel, with assistance from the California Air Resources board, will conduct initial Visible Emission Evaluations of all heavy duty equipment on the inventory list. d. An enforcement plan shall be established to weekly evaluate project-related on- and off-road heavy-duty vehicle engine emission opacities, using standards as defined in California Code of Regulations, Title 13, Sections 2180-2194. An Environmental Coordinator, CARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate project-related off-road and heavy on-road equipment emissions for compliance with this requirement. Operators of vehicles and equipment found to exceed opacity limits will be notified and the equipment must be repaired within 72 hours. Construction contracts shall stipulate that at least 20% of the heavy-duty off-road equipment included in the inventory shall be powered by CARB-certified off-road engines, as follows: o 175 hp – 750 hp 1996 and newer engines o 100 hp – 174 hp 1997 and newer engines o 50 hp – 99 hp 1998 and newer engines In lieu of or in addition to this requirement, other measures may be used to reduce particulate matter and nitrogen oxide emissions from project construction through the use of emulsified diesel fuel and/or particulate matter traps. These alternative measures, if proposed, shall be developed in consultation with District staff.			
BIO-1	Prior to construction, additional special-status plant surveys will be conducted in all construction areas to confirm the lack	CEQA-triggered mitigation	Prior to and during construction	RD 2093, Liberty Island Holdings II, LLC, and

TABLE 1. MITIGATION MONITORING PROGRAM				
Mitigation Measure No.	**Mitigation Measure**	**Implementing Action**	**Implementation Schedule**	**Party Responsible for Implementation / Verification**
	of presence. If special-status plants are located within construction areas, the plants will be avoided as feasible. If not all plants can be avoided, affected plants will be transplanted within the project area.			contractor
BIO- 2	Before any work occurs in the project area, a qualified biologist will conduct mandatory contractor/worker awareness training for construction personnel. The awareness training will be provided to all construction personnel to brief them on the need to avoid impacts on biological resources including special-status species and habitats and the penalties for not complying with the biological mitigation requirements. If new construction personnel are added to the project the contractor will ensure that the personnel receive the mandatory training before starting work.	CEQA-triggered mitigation	Prior to and during construction	RD 2093, Liberty Island Holdings II, LLC, and contractor
BIO-3	Biologists will monitor construction activities in areas where special-status wildlife species could be affected. The biologists will assist the construction crew, as needed, to comply with all project implementation restrictions and guidelines. In addition, the biologists will be responsible for ensuring that the contractor maintains areas that are restricted from construction activity to protect sensitive biological resources. The biologist shall have the authority to stop all construction, if necessary.	CEQA-triggered mitigation	During construction	RD 2093, Liberty Island Holdings II, LLC, and contractor
BIO-4	A biologist will conduct preconstruction surveys to locate all active Swainson's hawk nest sites within a 0.5-mile radius of the construction area. A 600-foot buffer zone will be established, if feasible, around all known and suspected Swainson's hawk nests and the Project Sponsor will coordinate with CDFG to identify appropriate and acceptable buffer zones and construction procedures. Whenever construction occurs within 600 feet of an active nest, a biological monitor will observe the nesting hawks for stressed/detrimental behavior that may threaten nest success. If there appears to be a threat to nesting success resulting from construction activity within the 600-foot buffer, work will be halted until the hawk's behavior normalizes and the threat has dissipated.	CEQA-triggered mitigation	Prior to and during construction	RD 2093, Liberty Island Holdings II, LLC, and contractor

TABLE 1. MITIGATION MONITORING PROGRAM				
Mitigation Measure No.	**Mitigation Measure**	**Implementing Action**	**Implementation Schedule**	**Party Responsible for Implementation / Verification**
BIO-5	The following standard avoidance measures recommended by USFWS (1997) will be used to minimize any potential disturbance to GGS. o Conduct construction activities during the GGS active period (May –October). o Conduct a GGS survey 24 hours prior to commencement of habitat maintenance activities. A monitor will be available if a snake is encountered during construction activities, and the monitor will stop construction activities until appropriate corrective measures have been completed or it is determined that the snake will not be harmed. GGS encountered during construction activities will be allowed to move away from the construction area on their own. A new inspection will be conducted whenever construction activity lapses for two weeks or more. o Observe a 20 mile per hour speed limit within the construction zone. o Complete construction within one season. o Remove all temporary fill and construction debris, and restore all disturbed areas not targeted for habitat enhancement to pre-construction conditions.	CEQA-triggered mitigation	Prior to and during construction	RD 2093, Liberty Island Holdings II, LLC, and contractor
BIO-6	A qualified biologist will conduct preconstruction surveys to locate all active raptor nest sites within 600 feet of the construction area. Direct disturbance, including removal of nest trees and activities in the immediate vicinity of active nests, will be avoided during the breeding season (March through August). No-disturbance buffers of 500 feet will be established around each active nest to avoid disturbing nesting birds, where feasible. The size of the buffers may be adjusted provided a qualified biologist monitors the behavior of any nesting hawks and determines that project-related activities are not affecting the bird's reproductive effort.	CEQA-triggered mitigation	Prior to and during construction	RD 2093, Liberty Island Holdings II, LLC, and contractor
BIO-7	Preconstruction surveys for great blue heron rookeries will be	CEQA-triggered	Prior to and during	RD 2093, Liberty Island

TABLE 1. MITIGATION MONITORING PROGRAM				
Mitigation Measure No.	**Mitigation Measure**	**Implementing Action**	**Implementation Schedule**	**Party Responsible for Implementation / Verification**
	conducted within and adjacent to all locations to be disturbed by construction. Preconstruction surveys will consist of surveying all potential nest sites within 600 feet of proposed construction features. Surveys will be performed several times during the breeding season to avoid and minimize effects on late-nesting birds. Rookery locations will be marked on an aerial photograph, and the position will be recorded using GPS.	mitigation	construction	Holdings II, LLC, and contractor
BIO-8	To the greatest extent practicable, major construction activities that will occur within 600 feet of an active rookery will be avoided during the breeding season. A no-disturbance buffer zone with a 500-foot radius will be established around each active nest to avoid disturbing nesting birds. The size of the buffer may be adjusted provided a qualified biologist monitors bird behavior at the rookery and determines project-related activities are not affecting the bird's reproductive effort.	CEQA-triggered mitigation	Prior to and during construction	RD 2093, Liberty Island Holdings II, LLC, and contractor
HAZ-1	The applicant shall conduct soil sampling beneath the parts sheds, large capacity tanks and abandoned equipment if soil staining or odors are encountered. The contents and extent of the debris piles should also be determined and soil samples conducted if the contents of the debris piles deem it necessary. If necessary, the applicant shall remove any contaminated soil and dispose of it at a license facility.	CEQA-triggered mitigation	Prior to and during construction	RD 2093, Liberty Island Holdings II, LLC, and contractor
TRANS-1	The project applicant will enter into a secure agreement with Solano County Department of Public Works and Yolo County Department of Planning and Public Works to ensure that road conditions do not deteriorate as a result of the project. After the final disposal site option is selected, the applicant will be responsible for conducting a pre-project review of the route(s) to and from the disposal site(s). Existing road conditions will be documented. A post-project review of the roadway conditions will be conducted and the applicant will be responsible for repairing the roads used during construction to a condition at least as good as before construction started.	CEQA-triggered mitigation	Prior to and post-construction	RD 2093, Liberty Island Holdings II, LLC, and contractor

NORTH DELTA
FISH CONSERVATION BANK
YOLO COUNTY, CALIFORNIA

LONG-TERM MANAGEMENT PLAN

Interagency Review Team:

National Marine Fisheries Service
U.S. Fish and Wildlife Service
California Department of Fish and Game

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List of Acronyms

APN	Assessor Parcel Number
Bank	Northern Liberty Island Fish Conservation Bank
BDCP	Bay Delta Conservation Plan
CBA	Conservation Bank Agreement
CCR	California Code of Regulations
CDFG	California Department of Fish and Game; see also DFG
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CRHR	California Register of Historical Resources
DFG	California Department of Fish and Game; see also CDFG
FAV	floating aquatic vegetation
Land Manager	Liberty Island Holdings II, LLC (see also Wildlands)
LICBP	Liberty Island Conservation Bank/Preserve
msl	mean sea level
NHP	Yolo County Natural Heritage Plan
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NRHP	National Register of Historic Places
NWP	Nationwide Permit
PAR	Property Analysis Record
RD 2093	Reclamation District 2093
SAV	submersed aquatic vegetation
SRA	shaded riverine aquatic
SSHCP	South Sacramento Habitat Conservation Plan
TPL	Trust for Public Land
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Service
WHF	Wildlife Heritage Foundation
Wildlands	Liberty Island Holdings II, LLC and Land Manager

Section I Introduction

A. Purpose of Establishment

The 811.08-acre North Delta Fish Conservation Bank (Bank) is being established under a Conservation Bank Agreement (CBA) that includes this Long-Term Management Plan (Plan). Actions taken to protect, enhance, and restore habitats throughout the Bank require long-term management to ensure benefits of the actions are maintained in perpetuity.

B. Purpose of this Long-Term Management Plan

The purpose of this Plan is to ensure the Bank's habitats are protected and managed, monitored, and maintained in perpetuity. This management plan establishes objectives, priorities and tasks to monitor, manage, maintain and report on the covered species and their habitat in the Bank. This management plan is a binding and enforceable instrument, implemented by the conservation easement covering the Bank property.

It should be noted that while it is the intent of this Plan to comply with federal, state and local permits, if any discrepancies between this Plan and permits arise, the permits override the Plan stipulations unless written approval is received from the agency exerting the appropriate jurisdiction.

C. Land Manager and Responsibilities

The Land Manager for the Bank is Liberty Island Holdings II, LLC. The Land Manager, and subsequent Land Managers upon transfer, shall implement this Plan, managing and monitoring the Bank property in perpetuity to preserve its habitat and conservation values in accordance with the Bank's CBA, the conservation easement, and this Plan. Long-term management tasks shall be funded through the Endowment Fund. The Land Manager shall be responsible for providing an annual report to the Interagency Review Team (IRT) for the Bank, consisting of California Department of Fish and Game (CDFG), National Marine Fisheries Service (NMFS), and U.S. Fish and Wildlife Service (USFWS) detailing the time period covered, an itemized account of the management tasks and total amount expended. Any subsequent grading, or alteration of the site's hydrology and/or topography by the Land Manager or its representatives must be approved by the IRT and the necessary permits, agreements and consultations, such as a Section 404 permit and streambed alteration agreement, must be obtained, if required, in addition to consultation under the federal and state Endangered Species Acts.

The Land Manager's responsibilities shall include, but not be limited to, overseeing or completing the following:

- Upholding the Land Manager's responsibilities and obligations as outlined in the Conservation Easement and this Plan.
- Implementing all habitat management activities.
- Performing general inspections of the Bank as required by this Plan.
- Performing or coordinating biological surveys by a qualified biologist.

- Analyzing monitoring data and recommending and coordinating any remedial action with the IRT.
- Coordinating with individuals or groups wishing to use the Bank for educational purposes.
- Maintaining a file for the Bank. The file will contain a record of management and maintenance related activities, correspondence and determinations regarding the Bank, and shall be made available to Conservation Easement Monitor within ten business days of request thereof.
- Reviewing potential future land use activities adjacent to the Bank.
- Assessing and seeking correction for impacts to the Bank from harmful uses or activities, and arranging for any corrective action necessary to ensure the performance of the habitat within the Bank, as required by this Plan.
- Submitting annual reports to the IRT detailing:
    - Bank management activities planned for the following year;
    - Known discrepancies from the terms of the Conservation Easement and this Plan;
    - General plant health in the Bank;
    - Excessive weed competition in the Bank;
    - Hydrological conditions in the Bank;
    - Wildlife use in the Bank;
    - Vandalism and trash problems in the Bank; and
    - Summary of the Endowment Fund.
- All other Land Manager responsibilities not otherwise described in this Plan.

D. Conservation Easement Monitor and Responsibilities

The Conservation Easement Monitor is the Bank Monitor. For the purposes of this Plan, the term "Bank Monitor" is synonymous with the "holder of the Conservation Easement". As such, the terms of the Conservation Easement govern any transfer of obligations or rights as the Bank Monitor.

The Bank Conservation Easement will be held by the Wildlife Heritage Foundation (WHF). Upon recordation of the Conservation Easement, the responsibilities and duties of the Conservation Easement Monitor shall include:

- Upholding responsibilities and obligations as outlined in the Conservation Easement and this Plan.
- Monitoring Bank management to enforce the terms of the Conservation Easement.

E. Land Owner

Bank ownership is divided between two entities; Reclamation District 2093 and the Trust for Public Lands (TPL) (Figure 3). Liberty Island Holdings II, LLC owns the Mitigation Use Rights to the portion of

the Bank owned by TPL, and has a land lease agreement with Reclamation District 2093. This land lease gives Liberty Island Holdings II, LLC. the right to develop a conservation bank.

F. Qualified Personnel / Monitoring Biologist

The Land Manager shall retain professional biologists, botanists or other types of specialists (the "Qualified Personnel", including the "Monitoring Biologist") to conduct specialized tasks. The Monitoring Biologist shall be familiar with California flora and fauna, shall have knowledge regarding wetlands, endangered species and fisheries ecology.

Duties of the Qualified Personnel may include but are not limited to:

- Monitoring and maintaining covered species habitat function.
- Monitoring and maintaining erosion control.
- Evaluating the presence of newly introduced non-native (exotic) plant species and recommending management, if needed.
- Conducting biological surveys, collecting data on the Bank, and preparing reports required by this Plan.
- Evaluating site conditions and recommending remedial action to the Land Manager.
- Assisting in reviewing or planning restoration activities, use of the Bank for education or other tasks such as grant proposals.
- Overseeing all construction activities.

G. Changes in Personnel

If the onsite personnel of either the Land Manager or Conservation Easement Monitor are changed, or the land owner changes, the outgoing and incoming personnel will tour the Bank together, and the outgoing personnel will advise the incoming personnel of trends, problem areas, and any administrative difficulties. The IRT and CDFG headquarters will be notified of changes to the onsite personnel of the Land Manager or Conservation Easement Monitor or Qualified Personnel, and any changes to the Land Owner, and will be offered an opportunity to meet the new personnel and tour the Bank together. Any changes to the Land Owner and the Conservation Easement Holder need to be approved in writing by the IRT, pursuant to the terms of the Conservation Bank Agreement.

Section II Property Description

A. Setting and Location

The Bank is located along the southern border of Yolo County approximately 10 miles north of Rio Vista (**Figures 1** and **2**). The Bank includes two landowners, Reclamation District 2093 (**RD 2093**) (Assessor Parcel Numbers [**APN**] 033-270-007, 033-280-014, and 033-280-015) and the Trust for Public Land (**TPL**) (APNs 033-280-01, 033-280-05, and 033-280-16) (collectively referred to as **Land Owners**), as depicted in **Figure 3**. Both the Land Owners have agreed to cooperatively enhance and permanently protect the conservation values of the Bank property. The Bank is adjacent to and contiguous with the Liberty Island Conservation Bank and Preserve (**LICBP**) on the northeast. If approved, the Bank will contribute towards the restoration and permanent protection of nearly 1,200 acres of fisheries habitat in the Primary Zone of the Legal Delta sponsored by Wildlands, which includes the Bank, the LICBP, and the proposed Little Hastings Island Conservation Bank (**Figure 4**).

The 811.08-acre Bank is located at the northern end of Liberty Island, and includes a portion of the island along the stair-step agricultural levees, tidal slough channels (Shag Slough and Liberty Cut), and a small portion of the land immediately north of the northernmost slough (herein referred to as Shag Slough). The Bank location corresponds to Sections 29, 30, 31, and 32, Township 6 North, Range 3 East of the Liberty Island U.S. Geological Survey (**USGS**) 7.5-minute quadrangle (Figure 2). Liberty Island is centrally located at the lower end of the Yolo Bypass just west of the Port of Sacramento Deepwater Shipping Channel in the tidal primary zone of the Legal Delta.

B. History and Land Use

Historically, the floodplain of the Sacramento River occupied vast expanses of the lower Sacramento Valley. The enormous agricultural potential of the Sacramento Valley and Delta region began to be realized in the late 1800s. The fertile land attracted farmers and investors, but the annual floodwaters had to be controlled for the farmland to realize its full potential. A number of reclamation efforts in the Delta were conducted between 1860 and 1930. Based on the cultural resources research work conducted for the Bank (*Exhibit J in the CBA*), Liberty Island was reclaimed between 1910 and 1930.

Farming operations on Liberty Island included potatoes, asparagus, beans, zucchini, onions, peas, and tomatoes. At its development peak, the island had paved roads, power and telephone lines, homes, farm buildings, and a school. Between 1918 and 1973, Liberty Island flooded 27 times and each time reclamation activities continued, until 1997 when the levees breached and the island was never reclaimed. The TPL portion of the Bank property was purchased using CALFED funding and was proposed to be part of a national wildlife refuge. Funding for the wildlife refuge was never approved, and the establishment of the Bank helps fund the permanent conservation, management, and enhancement of the property.

With the exception of the northern portion, the majority of Liberty Island has reverted back to natural tidal habitats following levee failures in 1997. The northern 1200-acre portion of the island remains in a transition between fallow agriculture and tidal marsh. While most of the levees remain intact and functional in the north, a portion of the levee system in the south has degraded and washed away. Patches of riparian habitat grow on the water and land sides of the levees, but the levee tops primarily support ruderal, nonnative upland habitat. Over half of the interior of the 5,000-acre Liberty Island is now

intertidal and has reverted to seasonal and perennial marsh. Some of the higher areas on the island are in various stages of reverting to supratidal seasonal wetlands.

The entire Bank is zoned as Agricultural with the Delta Protection Overlay in the Yolo County General Plan. The Delta Protection Overlay mandates that land use be consistent with the Delta Protection Commission's Land Use and Resource Management Plan. The entire island is under a flood easement with the CVFPB. Surrounding properties within Yolo County have the same General Plan zoning designation. Properties to the south and west of the Bank are located within Solano County, and are designated Agriculture with a Resource Conservation Overlay. The Resource Conservation Overlay designation recognizes important natural resources.

The Bank is bordered on the northeast by the LICBP. Together, the Bank and the LICBP make up the northernmost approximately 1000 acres of Liberty Island, including the majority of the remaining land that has not reverted to open tidal water. The Bank is surrounded on three sides by tidal sloughs. These sloughs function as buffers and protect conservation values at the Bank. The south edge of the Bank is connected to the remainder of Liberty Island, some of which has reverted back to tidal marsh, and the majority of which has reverted to tidal open water. The land north of the Bank is currently being used as pasturelands. The land to the east is former agricultural land that has begun reverting back to wetland. Some of the adjacent land is being evaluated for restoration potential. There are no adjacent land uses that conflict with the conservation values at the Bank

C. Cultural Resources

A Cultural Resources Inventory and Evaluation of the Bank was conducted in January 2009 and January 2010 by Analytical Environmental Services (*Exhibit J in the CBA*). The objectives of the cultural study were to identify and evaluate the significance of cultural resources located within the property pursuant to the criteria of the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR). All cultural resources work was performed in compliance with Section 106 of the National Historic Preservation Act (NHPA) as amended, and its implementing regulations found at 36 Code of Federal Regulations (CFR) Part 800, as well as the California Environmental Quality act (CEQA).

A pedestrian field survey of the project site resulted in the identification of one historic period resource:

- Site P-588 is a documented historic period resource, consisting of a levee system surrounding the Bank on the western, northern, and eastern boundaries.

The earthen levees were initially constructed during the early reclamation effort, which created Liberty Island. The levees were continuously maintained for 80 years while the island was used for agriculture. The method of construction of the levees was not unique or otherwise remarkable. The levees are indistinguishable from the myriad of such features found throughout Yolo County.

Site P-588 was found to lack merit consideration as potential historic properties (AES 2009a, AES 2009b, and AES 2010).

Application of the relevant criteria and consideration of integrity resulted in the recommendation by the cultural resources specialists that the levee is ineligible for listing on the NRHP or the CRHR. No further work is recommended or warranted to satisfy the requirements of Section 106 of the NHPA or CEQA.

D. Topography

Liberty Island is typical of land within the Yolo Bypass, which is characterized by a low gradient, wide floodplain confined by federal project levees to the east and west that range from above tidal to subtidal elevations. Remnant historic levees dominate the topography on the northern, eastern, and western perimeters of the Bank, reaching elevations up to 18 feet. Levees located in the interior of the island are severely degraded with many breaches. Elevations on the Bank site range from below mean sea level (msl) in marsh areas to approximately 18 feet above msl on the levees. Topography generally slopes from northwest to southeast. However, there is a drainage divide that functions essentially as a watershed break in the lower third of the Bank (**Figure 7**). Water depths reach 8 to 10 feet in the southern end of the Bank.

E. Hydrology

The hydrology on Liberty Island is dominated by tidal freshwater flows of the southern Yolo Bypass, agricultural drainage with Bypass canals, and winter-spring flood flows of the Yolo Bypass.

Due to the levees surrounding the Bank, water only flows over the entire site once every three years, on average. As the water recedes, some standing water remains on the site and water pools behind the existing levees. There are three levee breaches along the northern portions of the Bank that allow water to enter the site during high tides. Additionally, the existing external and internal levees in the southern portion of the site have failed, allowing large amounts of tidal water to enter the Bank from the south, resulting in the development of tidal open water habitat. The water on the Bank generally drains from north to south.

F. Soils

The Soil Survey of Yolo County, California (SCS 1972) maps two soil mapping units on the Bank (**Figure 5**):

Sycamore complex, flooded
Sacramento Soils

Sycamore complex, flooded consists of about 60 percent Sycamore silty clay loam and about 25 percent Sycamore silt loam. The remaining 15 percent is made up of Maria silt loam, Merritt silty clay loam, deep, and Sacramento soils, flooded. These soils are underlain by silty clay at a depth of 40 to 60 inches. These soils are subject to flooding 1 year out of 3 because of flowage easements. Elevation is between 0 and 60 feet and the frost free period is 275 to 300 days. Typically the soil is used for sugar beets, grain sorghum, and rice. Other uses include dryfarmed safflower, wildlife habitat, and recreation.

Sycamore silty clay loam is formed on alluvial fans. Slopes are less than 1 percent. Typically the soil ranges in color from gray to grayish brown and in texture from silty clay loam to heavy clay loam or light clay to a depth of 14 inches. At a depth of 14 to 44 inches the soil is olive gray, light yellowish brown, dark gray, or brownish yellow, textures range from silty clay loam to heavy clay loam. At a depth of 44 to 60 inches the soil is light yellowish brown to pale olive, texture ranges from strata of sandy loam to silty clay. Drainage has not been improved and water table ranges from 36 to 60 inches. The soil is used mainly for sugar beets, tomatoes and alfalfa. Other uses include prunes, dryfarmed barley, dryfarmed safflower, wildlife habitat, and recreation.

Sycamore silt loam is similar to Sycamore silty clay loam, except that it has a silt loam texture throughout the profile. Included in mapping are small areas of Maria silt loam, Merritt silty clay loam, Tyndall very fine sandy loam, and Yolo silt loam. Permeability of this Sycamore soil is moderate. The available water holding capacity is 10.0 to 12.0 inches in areas that have been drained. The effective rooting depth is 36 to 60 inches and is restricted by the water table. This soil is used principally for irrigated sugar beets, corn, alfalfa, asparagus, and prunes. Other uses include dryfarmed barley, wildlife habitat, and recreation.

Sacramento soils, flooded consist of poorly to very poorly drained soils with slow to very slow runoff and slow permeability. Altered drainage occurs in reclamation districts and areas protected by levees, resulting in improved drainage. The water table fluctuates between a depth of 34 inches to below 60 inches. Sacramento soils are subject to frequent overflow where not protected by levees or located within flood control systems. Located in nearly level basins with slopes of 0 to 1 percent at elevations of 0 to 60 feet above msl, Sacramento soils formed in fine textured alluvium of mixed origin. The depth to restrictive feature is more than 80 inches, and a typical soil profile consists of silty clay loam from 0 to 16 inches, and clay from 16 to 60 inches. The climate is dry subhumid, mesothermal with hot dry summers and cool moist winters. Mean annual precipitation is 15 to 19 inches. Average January temperature is 45 degrees F., average July temperature is 75 degrees F., and mean annual temperature is 60 degrees F. Average frost-free season is over 275 days.

G. Existing Easements

Existing easements on the Bank are discussed in *Exhibit E of the CBA*. None of the easements located within the Bank boundaries conflict with the proposed Bank. The majority of easements are related to passage of flood waters and reclamation activities conducted by the Liberty Island Reclamation District (Reclamation District 2093) and Williamson Act contracts in support of the historic agricultural activities on the island. Reclamation District 2093 has reviewed the Bank proposal and has determined it to be consistent with the Reclamation Plans for the island; Yolo County has reviewed the Bank proposal and determined it to be consistent with their implementation of the Williamson Act and the Agricultural Preserve Zoning on the property. Additional easements for roads and power lines that are no longer utilized it has been determined that these type of easements will not have an adverse impact of the conservation values of the Bank.

H. Adjacent Land Uses

The Bank is located at the northern end of Liberty Island, and is contiguous with LICBP to the northeast. The remainder of the Bank's northern and eastern boundaries and the western boundary are bordered by tidal sloughs including Liberty Cut to the east and Shag Slough to the north and west. These sloughs and the LICBP act as buffers for the conservations values of the site. The property north of Shag Slough is owned by Westland's Water District and is currently being investigated for habitat restoration. Upon completion of the Wetland's restoration project, it will constitute a permanently protected buffer on the north.

The southern boundary of the Bank is contiguous to other portions of Liberty Island that have reverted back to tidal marsh and tidal open water. There are no adjacent land uses that conflict with the conservation values at the site.

I. Consistency with Local Planning Efforts

Bay Delta Conservation Plan

Liberty Island is within the planning area of the Bay Delta Conservation Plan (BDCP). At the time this management plan was written, the BDCP was still in draft form. Liberty Island is identified as being within the tidal marsh restoration area of the BDCP. The monitoring and management activities provided in this Plan are consistent with those activities in the draft BDCP with the exception that fish monitoring on the Bank will be limited to identifying presence of covered species.

Yolo County Natural Heritage Plan

Liberty Island is within the planning area covered by the draft the Yolo County Natural Heritage Plan (NHP). At the time this management plan was prepared the NHP was still in draft form with only certain chapters available for review. To date, fish species have not been included in the list of species covered by the NHP and management activities are not included in the chapters available for review.

South Sacramento Habitat Conservation Plan

Although Liberty Island is not located within the South Sacramento Habitat Conservation Plan (SSHCP) planning area a small portion of the Service Area is within the SSHCP planning area. However, the SSHCP does not cover fish species.

Section III Habitat and Species Descriptions

A. Habitats

After breaching and permanently flooding in 1997-98, Liberty Island has reverted to tidal and upland habitats. While most of the levees remain intact and functional in the north, a large portion of the levee system in the south has degraded and washed away. Patches of riparian habitat grow on the water and land sides of the levees, but the levee tops primarily support ruderal, nonnative upland habitat. Over half of the interior of the 5,000-acre Liberty Island is now intertidal and has reverted to seasonal and perennial marsh. Some of the higher areas on the island are in various stages of reverting to supratidal seasonal wetlands.

The dominant habitat types within the Bank are tidal marsh complex, seasonal wetland, riparian scrub shrub, and tidal channel/open water. The majority of the interior of the Bank is tidal emergent marsh that has developed as a result of levee breaches that occurred in early 1997. This habitat is tidally influenced via hydrological connectivity to the adjacent Shag Slough and the predominantly tidal open water remainder of the southern end of Liberty Island. Habitats that occur within the Bank include: tidal marsh complex, seasonal wetland, riparian scrub shrub, tidal channel (open water), and levee upland (**Figure 6**). Each habitat type is described below.

Tidal Marsh Complex

Tidal marsh complex is located throughout the Bank and has developed as a result of levee breaches that occurred in early 1997. This habitat is tidally influenced via hydrological connectivity to the adjacent Shag Slough and the predominantly tidal open water areas of the southern end of Liberty Island. Tidal marsh complex includes a mosaic of emergent marsh and open water habitat. Vegetated areas within the complex are dominated by common tule (*Scirpus acutus*), American tule (*Scirpus americanus*), saltmarsh tule (*Scirpus robustus*), and broad-leaf cattail (*Typha latifolia*).

Tidal Emergent Marsh

Patches of tidal emergent marsh are located along the shoreline of Shag Slough across from the stair-step levees. Tidal emergent marsh is generally dominated by large emergent vegetation including those listed above for Tidal Marsh Complex.

Seasonal Wetland

Seasonal wetland habitat is located in a corner of the Bank adjacent to marsh habitat and along the northern bank of the portion of Shag Slough bisecting the Bank. This habitat is only seasonally flooded and consists of a mix of upland and wetland associated species. The seasonal wetlands are dominated by Bermuda grass (*Cynodon dactylon*), Fitch's tarplant (*Hemizonia fitchii*), Italian ryegrass (*Lolium multiflorum*), bird's-foot trefoil (*Lotus corniculatus*), rabbits foot grass (*Polypogon monspeliensis*), curly dock (*Rumex crispus*), and saltmarsh bulrush.

Riparian Scrub Shrub

The riparian scrub shrub habitat occurs around the perimeter of the Bank between the restricted height levees and the tidal channels/open water (Shag Slough and Liberty Cut). This habitat is dominated by black willow sandbar willow (*Salix exigua*), (*Salix gooddingii*), box elder (*Acer negundo* ssp. *californicum*), white alder (*Alnus glutinosa*), Santa Barbara sedge (*Carex barbarae*), Oregon ash (*Fraxinus latifolia*), creeping wildrye (*Leymus triticoides*), wild rose (*Rosa californica*), Himalayan blackberry (*Rubus discolor*), American tule, saltmarsh tule, and broad-leaf cattail.

Tidal Channel (Open Water)

The tidal channel/open water habitat at the Bank includes Shag Slough and Liberty Cut. Other open water habitat occurs within the tidal marsh complex in permanently inundated areas, but is considered part of the tidal marsh complex. Tidal channel/open water is tidally influenced and is mostly unvegetated.

Levee Upland

The levee upland habitat occurs around the east, west, and north edges of the Bank. This habitat has moderately convex topography and was historically used as a barrier to tidal flow and winter flood events. This habitat is dominated by nonnative annual grasses and forbs.

B. Jurisdictional Wetlands and Other Waters

A summary of the Bank's jurisdictional habitats including wetlands is provided as **Table 1.**

Table 1. Jurisdictional Habitat Summary

Wetlands	
Tidal Emergent Marsh	502.257 acres
Seasonal Wetland	79.629 acres
Riparian Wetland	32.934 acres
Wetland Total	**614.82 acres**
Other Waters of the U.S.	
Open Water	**162.202 acres**
Total Jurisdictional Habitat	**777.022 acres**

Three separate delineations were conducted over the Bank property: two on property owned by TPL (TPL 440-acre Property, November 2009 and West Property 274-acre Property, March 2010) and one on property owned by RD 2093.(Reclamation District 2093 120-acre Property, November 2009) The TPL 440-acre Property and the Reclamation District 2093 Property delineations were verified in January 2010 (USACE File No. SPK-2008-00115). The West Property 274-acre Property was verified in September 2010 (and June 2010 (USACE File No. SPK 2010-00755). For details on jurisdictional habitats and maps, see *Exhibit I of the CBA*.

C. Special Status Species

A search of the U.S. Fish and Wildlife Service (USFWS) database of federally endangered and threatened species occurring in or potentially affected by projects within the Liberty Island U.S. Geological Survey 7.5-minute quadrangle map, the California Natural Diversity Database (CNDDB) records within a 5-mile radius around the Bank, NMFS species information, and the CDFG 20mm fish survey results identified occurrences or critical habitat of the following wildlife species of conservation interest:

- **green sturgeon** (*Acipenser medirostris*)
- **Western pond turtle** (*Actinemys marmorata*)
- **western burrowing owl** (*Athene cunucularia*)
- **Swainson's hawk** (*Buteo swainsoni*)
- **valley elderberry longhorn beetle** (*Desmocerus californicus dimorphus*)
- **Delta smelt** (*Hypomesus transpacificus*)
- **central valley steelhead** (*Oncorhynchus mykiss*)
- **chinook salmon** (*Oncorhyncus tshawytscha*)
- **Sacramento splittail** (*Pogonichthys macrolepidotus*)
- **longfin smelt** (*Spirinchus thaleichthys*)
- **giant garter snake** (*Thamnophis gigas*)

Delta smelt, longfin smelt, Chinook salmon, green sturgeon, steelhead, and splittail are sensitive fish species covered by the Sacramento-San Joaquin Delta Native Fishes Recovery Plan (USFWS 1996). The Bank is within designated critical habitat for Chinook salmon, steelhead, and delta smelt. Studies by Sommer et al. (2001), Nobriga et al. (2005), and Mager et al. (2006) have shown that delta smelt, longfin smelt, splittail, sturgeon, Chinook salmon, and steelhead all occur within the southern Yolo Bypass within or near Liberty Island. The CDFG 20mm surveys identified larval and adult delta smelt within the sloughs surrounding Liberty Island as recently as March of 2010. The CDFG 20mm surveys identified splittail within the sloughs surrounding Liberty Island as late as 2005 and 2006. They have not been caught during CDFG 20mm surveys in the delta since. The CDFG 20mm surveys identified longfin smelt within the sloughs surrounding Liberty Island in 2009. The results of various fish surveys and an aquatic habitat assessment of Liberty Island is provided in an appendix of the Biological Resources Report (*Exhibit H of the CBA)*. Other biological resources are also discussed in Exhibit H.

Delta smelt, longfin smelt, Chinook salmon, Central Valley steelhead, giant garter snake, and other native fishes expected to occur on or adjacent to the Bank.

D. Summary of Development Plan

The restoration and enhancement plan for the Bank will result in a hydrologically connected complex of tidal marsh habitat including open water, emergent marsh, tule SRA, riparian SRA, seasonal wetland floodplain, and upland habitats to benefit Delta native fishes. The design has also been coordinated to provide improvements to the flood system and Project levee stability. Overall, improved connectivity with the Yolo Bypass flood events is anticipated to support higher densities of native fishes and limit access of non-native fishes. Improved connectivity is also expected to enhance primary production and food transport to open water habitats for smelt and other pelagic fishes over time (HT Harvey 2010).

The concept plan consists of the following restoration and enhancement actions (Figure 8):

1. Lowering two east-west levees along the northern edge of the Bank to allow complete flooding of the site at an increased frequency;

2. Creating three sub-tidal breaches and channels and widening a previously existing breach to improve circulation and tidal connectivity;

3. Removing a water control structure along the northern edge of the Bank;

4. Installation of a plug in one of the north-south ditches to better direct flows to and from the Liberty Island Conservation Bank created channels;

5. Controlling invasive aquatic weeds that harbor predatory fishes; and

6. Lowering an approximate 20-acre floodplain along the northern boundary of the Bank to create a tidal emergent marsh.

7. Protection and enhancement of existing of existing tule marsh and riparian scrub shrub habitat along the shoreline.

At completion, the proposed project would result in the following:

- restoration/creation of 11.6 acres of tidal emergent marsh associated with rock removal (levee lowering),
- restoration/creation of 20.75 acres of tidal emergent marsh associated with lowering of floodplain habitat.
- enhancement of 657.2 acres of tidal marsh complex,
- preservation of 25.3acres of riparian scrub shrub shoreline habitat,
- enhancement of 68.4 acres of tidal channel/open water,
- preservation of 19.2 acres of levee upland,
- restoration/creation of 10,297 linear feet of tule SRA (levee lowering and rock removal, floodplain lowering),
- preservation of 18,598 linear feet of riparian scrub shrub SRA, and

In order to restore natural tidal influence to the Bank, 4,464 linear feet (11.6 acres) of two east-west levees along Shag Slough will be lowered. In addition approximately 20.75 acres of the existing floodplain north of Shag slough will be lowered. These areas will be brought down below the mean higher high water mark (i.e., sea level) to allow tidal influence to the site and the development of tidal emergent marsh habitat. Emergent marsh that is created by the removal of levee spoils and rock is expected to colonize naturally with intertidal tule marsh vegetation. Some strategic planting of tule will occur along the new shoreline of the lowered levee. These activities will restore/create 32.35 acres of tidal emergent marsh habitat and 10,297linear feet of tule SRA habitat. The removal of rock along levees within the Delta, and the Yolo Bypass was specifically identified as a priority in the Bay Delta Conservation Plan (**BDCP**). Studies indicate native fishes including salmon heavily use the un-rocked vegetation shoreline habitats in the Delta. By removing the levees that were fortified with large rocks, the project will re-establish important un-rocked shoreline habitat.

The enhancement of tidal marsh complex, including tidal open water, will be supported by two sub-tidal breaches along the east-west levees, widening an existing breach along the east-west levees, removing a water control structure, excavating tidal channels, and plugging an existing ditch. These actions will re-connect an existing seasonal wetland area in the western portion of the Bank to more frequent flooding and increase the area of shallow water floodplain habitat for native fishes. Tidal channels have been

extended from the breaches to facilitate hydrologic connectivity with open water habitats located in the interior of the site...

- Breaches and channels will be excavated to a depth that is subtidal and supports open water habitat. These breaches will improve tidal circulation and enhance habitat connectivity.

- Levee lowering will also improve tidal circulation and habitat connectivity, and improve flood flow frequency.

- A Ditch plug will be installed to inhibit flow through an existing north-south ditch for improved scour and water flow through the tidal marsh complex.

SRA habitat along Shag Slough levee, including the stair-step levees, will be enhanced by strategic planting of tule where it has been removed and impacted as a result of scouring floods and erosion from channelized, unnaturally high water velocities.

Controlling invasive aquatic weeds, in particular the water primrose, is anticipated to benefit native fishes by excluding habitat for predatory non-native fishes. Improved circulation as well as active treatment will reduce water primrose biomass. Other submerged aquatic vegetation (SAV)/floating aquatic vegetation (FAV) identified as impacting the conservation values of the Bank, may also be controlled as needed.

In order to provide the maximum benefit to smelt, the Bank design focuses on facilitating the natural development of tidal channels with cool currents, and hard substrate. Reconnecting northern Liberty Island to flood and tidal flows would benefit smelt by providing increased transport potential for moving larval smelt downstream to brackish waters after hatching. An increase of marsh and shallow water habitats on the island may also contribute to higher productivity of the adjacent tidal channels, which would benefit smelt production.

Section IV Management and Monitoring

The overall goal of long-term management is to foster the long term viability of the Bank. Routine monitoring and maintenance tasks are intended to assure the viability of the Bank site in perpetuity.

A. Biological Resources

The approach to the long-term management of the Bank's biological resources is to conduct annual site examinations and monitor selected characteristics to determine stability and ongoing trends. Annual monitoring will assess the Bank's site condition, degree of erosion, invasion of exotic species, water quality, and/or other aspects that may warrant management actions. While it is not anticipated that major management actions will be needed, an objective of this Plan is to conduct monitoring to identify any issues that arise, and using adaptive management to determine what actions might be appropriate. Those chosen to accomplish monitoring responsibilities will have the knowledge, training, and experience to accomplish monitoring responsibilities.

Adaptive management means an approach to natural resource management which incorporates changes to management practices, including corrective actions as determined to be appropriate by the IRT in discussion with the Land Manager. Adaptive management includes those activities necessary to address the affects of climate change, fire, flood, or other natural events, force majeure, etc. Before considering any adaptive management changes to the Plan, the IRT will consider whether such actions will help ensure the continued viability of Bank's biological resources.

The Land Manager for the Bank shall implement the following:

Element A.1 Habitat Monitoring

Objective: Monitor, conserve and maintain the Bank site's habitats including waters of the U.S. Limit any impacts to waters of the U.S.

Task A.1-1: The Land Manager will be responsible for conducting at least two surveys each year in perpetuity to qualitatively monitor the general condition of the Bank habitats. General topographic conditions, hydrology, vegetation cover and composition, trash accumulation, evidence of vandalism, invasive species, and erosion will be noted, evaluated and mapped. Notes to be made will include observations of species encountered, water quality, and general extent of wetlands.

Task A.1-2: A qualified biologist will be responsible for conducting at least two annual biological inspections each monitoring year in perpetuity to qualitatively monitor the biological health of the Bank. Because access to the site is limited, Wildlands shall provide Sacramento-Yolo Mosquito & Vector Control District the opportunity to attend these site visits to monitor the need for mosquito control on the site.

Task A.1-3: A qualified biologist will be responsible for conducting long-term monitoring of the Bank in years 10, 20, and every 10 years thereafter if no problems arise. If problems arise, monitoring will be conducted more

frequently. A total of 10 areas on the Bank will be selected as photo reference sites ("Reference Areas").

Subtask: Aerial and photo point monitoring will continue in Year 10 and every 10 years thereafter.

Subtask: The Land Manager will monitor the constructed channels and levee breaches to ensure they remain unblocked by sediment and debris so that the hydrologic connection is maintained.

Subtask: The Land Manager will monitor the restored marsh habitats to ensure that the established habitats persist on the Bank and provide the maximum benefits. The extent of marsh habitats will be documented by mapping signatures using GIS software based upon rectified aerial photos.

Element A.2 Non-native Invasive Species and Vegetation Management

Invasive species (including SAV and FAV) threaten the diversity or abundance of native species through competition for resources, predation, and parasitism, interbreeding with native populations, transmitting diseases, or causing physical or chemical changes to the invaded habitat.

Objective: Monitor and maintain control over non-native invasive species that may diminish site quality for which the Bank was established.

Task A.2-1: The Land Manager will be responsible for mapping of non-native invasive species (including non-native invasive SAV and FAV and water primrose) cover or presence during the first five years of Bank management, to establish a baseline. Mapping shall be accomplished through use of available technologies, such as GIS and aerial photography.

Task A.2-2: A qualified biologist will be responsible for conducting an annual survey that includes a qualitative assessment (e.g. visual estimate of cover) of potential or observed noxious weeds or other non-native species invasions. Actions to control invasive plant species (including upland, riparian, water primrose, SAV, and FAV species) will be implemented as needed to promote the conservation values of the Bank using one or more of the following methods:

- hand removal,
- chemical treatment, and/or
- livestock grazing.

Due to access limitations (via slough channels), chemical treatment and hand removal will be the primary methods for treating noxious weeds. Only herbicides approved for use in California (using a licensed pesticide applicator and following all label instructions) will be utilized. If more extensive treatment is needed, a detailed plan will be included in the Annual Report and discussed with the IRT.

Task A.2-3. The right is reserved to utilize livestock grazing, but grazing will likely only be utilized infrequently. If livestock grazing is utilized, the Land Manager will be responsible for managing any livestock (e.g., cattle or goats) that may be used to control vegetation in upland areas. Livestock grazing will be targeted to manage vegetation along the levees or other areas accessible during the growing season.

Element A.3 Woody Vegetation Management

Because of the Bank's location within the Yolo Bypass (a designated floodway), hydraulic modeling was conducted to ensure that the project does not have a negative impact on the flood system. Although woody vegetation will not be planted on site, woody vegetation may establish within restored areas, particularly within the interface of the created tidal emergent marsh and the adjacent seasonally inundated floodplain north of Shag Slough.. The type of vegetation expected is as currently exists, riparian scrub-shrub habitat. However, if Fremont cottonwood (*Populus fremontii*) or oak (*Quercus* spp.) become established in these areas, they will be removed to address concerns by the Central Valley Flood Protection Board.

Objective: Monitor the extent of woody vegetation recruitment within the enhanced riparian scrub shrub area to ensure that Fremont cottonwood and oak do not become established.

- **Task A.3-1:** All cottonwoods and oaks establishing post-project within areas where active restoration has occurred shall be removed by the Land Manager before they exceed a 4 inch diameter at breast height (dbh).

Element A.4 Adaptive Management

Objective: Maintain flexibility to modify management strategies and methods to ensure that the protected resources persist over time.

Task A.4-1: The Land Manager shall adjust management actions, if necessary, to meet the Bank's objectives. These changes shall be based on the results of monitoring data and observations and/or new information from ongoing research on smelt, anadromous salmonids and other species of relevance. Any adaptation of the methods described in this Plan must be agreed upon by the Land Manager, Monitoring Biologist and IRT. Techniques to address management of the new conditions, if not addressed in this Plan, may be implemented by the Land Manager upon review and written approval by the IRT. Adaptive management actions will be evaluated, prioritized and implemented as funding is available.

B. Security, Safety, and Public Access

The Bank shall have no general public access, nor any regular public use. No fire hazards are located in the vicinity of the Bank. Research and/or other educational programs or efforts may be allowed on the Bank as deemed appropriate by IRT, but are not specifically funded or a part of this Plan.

Element B.1 Trash and Trespass

Objective: Monitor sources of trash and trespass.

Task B.1-1: During each site visit, the Land Manager and Conservation Easement Monitor will record occurrences of trash and/or trespass. The Land Manager and Conservation Easement Monitor shall record the type and location of trash and/ or trespass and will make management recommendations to avoid, minimize, or rectify trash and/or trespass problems.

Task B.1-2: At least once yearly or earlier, the Land Manager will collect and remove trash.

Element B.2 Authorized Access

Objective: Provide access to the Bank site for maintenance activities, law enforcement or emergency situations while limiting impacts to biological values.

Task B.2-1: The Land Manager will be responsible for providing access to the Bank. Unauthorized access to the Bank shall be discouraged. Access to the Bank for maintenance activities is allowed, but shall be restricted to the immediate area where maintenance is occurring. Access to the Bank in emergency or law enforcement situations, by medical, fire or law enforcement personnel or vehicles is allowed. The Bank Owner, Land Manager, Conservation Easement Monitor, and IRT shall have access to the Bank. Except in cases where the IRT determines that immediate entry is required to prevent, terminate, or mitigate a violation of the Plan or the Conservation Easement, 48 hours notice will normally be given.

Task B.2-2: After the Bank is approved, the Land Manager, in consultation with the Conservation Easement Monitors, will install signs around the Bank perimeter along remaining levees to discourage trespassing. The Land Manager will be responsible for maintaining the signs, as necessary, and as funding allows. During each site visit by the Land Manager or the Conservation Easement Monitors, the condition of the signs will be recorded.

Element B.3 Unauthorized Motor Vehicle Use

Objective: Maintain the site as required while limiting impacts to biological values.

Task B.3-1: The Land Manager and Conservation Easement Monitor will be responsible for noticing any unauthorized motor vehicle use on the Bank during routine inspections. No motorized vehicles, including pleasure boats, shall be used or permitted on any portion of the Bank with the exception of motorized vehicular use required for:

- Bank maintenance purposes
- Biological monitoring purposes

- Conservation easement monitoring purposes
- Non-native (exotic) plant species and habitat maintenance
- Emergency or law enforcement situations requiring access by medical, fire or law enforcement vehicles.

Element B.4 Flood Protection

Objective: Maintain the site as required by law to continue functioning as part of the floodway while limiting impacts to biological values.

Task B.4-1: If the Property Owner or Land Manager receives a request in writing by the Central Valley Flood Protection Board requiring the removal of woody vegetation which is interfering with the successful execution, functioning, maintenance, or operation of the adopted plan of flood control, then the Property Owner and/or Land Manager will remove the woody vegetation specified for removal on the Bank in accordance with Title 23, California Code of Regulations (CCR), Section 131.

In the event that the Land Manager fails to implement Task B.4-1, the Department of Water Resources or the Central Valley Flood Protection Board (CVFPB) shall have the right to restore the site to baseline project design conditions (i.e. as approved in the CVFPB Permit and as approved in the CBA) and shall have the right to access the proceeds from the endowment account to cover the cost of implementing these maintenance tasks. The Land Manager will be responsible for securing any necessary permits incidental to habitat manipulation and restoration work completed in the flood control project, and will provide any biological surveying, monitoring, and reporting needed to satisfy those permits. The Land Manager will coordinate all permits and resolve conflicts between any of the terms and conditions and those that another local, state, or federal governmental agency might impose under the laws and regulations it administers and enforces.

C. Education, Recreation and Habitat Restoration

Element C.1 Educational Activities

Objective: Provide opportunities to use the Bank for educational purposes to encourage awareness of and respect for open space and wildlife habitat in the community.

Task C.1-1: Individuals or groups wishing to use the Bank for educational purposes shall obtain the consent of and coordinate with the Land Manager. If the educational activities will be passive in nature, such as a discussion of plants and animals of the habitats, then written permission of the Land Manager is sufficient. If active use (other than restoration activities) of the Bank is proposed or regular but passive use of the Bank is proposed, review and approval by the IRT is required. To avoid repeated inquiries to the IRT, a use plan could be developed by the interested party for a one-time approval.

Element C.2 Recreational Activities

Objective: Provide opportunities for the Bank Owner, Land Manager, and Conservation Easement Monitor to use the Bank site for recreational purposes including hunting, fishing, bird watching, etc. while limiting impacts to biological values.

Task C.2-1: Hunting shall be prohibited except by the Bank Owner, Land Manager, or Conservation Easement Monitor, or an employee or guest of the Bank Owner, Land Manager or Conservation Easement Monitor where the Bank Owner, Land Manager or Conservation Easement Monitor is also present. All hunting activities shall be carried out pursuant to current (i.e., season during which hunting occurs) state and federal laws and regulations.

The total number of hunters is limited to six each shoot day. Hunting will be consistent with DFG seasons and limits. All hunters shall possess no more than 25 shells while in the field hunting.

It is the responsibility of the hunters, Bank Owner and Land Manager to ensure compliance with all relevant laws and prohibitions. If the Conservation Easement Monitor or the IRT reasonably determines that the hunting is harmful to the conservation values of the Bank, or if any of these restrictions has been violated, all hunting shall be prohibited.

Element C.3 Habitat Restoration/Enhancement Activities

Objective: Provide opportunities to use the Bank for future habitat restoration and/or enhancement purposes.

Task C.3-1: In the future, the Bank Owner, Land Manager, Conservation Easement Monitor, or other group/organization, may want to conduct additional habitat restoration or enhancement within the Bank. This could include the removal of non-native (exotic) plant species, planting native plants, or other restoration activities. Restoration activities that involve work in wetlands or other waters of the United States may require a permit under Section 404 of the Clean Water Act from the U.S. Army Corps of Engineers, and/or a Streambed Alteration Agreement from CDFG. The current Nationwide Permit (NWP) 27, Stream and Wetland Restoration Activities, is available from the Corps for these types of activities. Coordination and permitting from NMFS, USFWS, and CDFG. as well as review of the proposed activities by the Sacramento-Yolo Mosquito &Vector Control District may also be necessary.

The Land Manager need not notify the IRT if restoration activities do not require a permit; however, these activities will be reviewed by the Monitoring Biologist and will be described in the Annual Report. If there is a question regarding whether a restoration activity will require a permit, the Land Manager shall seek guidance from the IRT.

D. Reporting and Administration

Element D.1 Annual Report

Objective: Provide annual report on all management tasks conducted and general site conditions to the IRT, CVFPB, Sacramento-Yolo Mosquito & Vector Control District, Conservation Easement Monitor, Land Owner, and any other appropriate parties.

Task D.1-1: The Land Manager shall be responsible for preparing an annual report on all management tasks conducted and general site conditions. The annual report will include a summary of monitoring and management activities undertaken during the previous year. The results of the general inspections and the biological surveys will be included in the annual report. The annual report will be completed and circulated to the IRT and other parties (as described above) by December 31st of each year. The annual report will include the following at a minimum:

- A map of the Bank;
- Photos documenting the status of the Bank;
- A description of proposed activities and maintenance or management actions as required by this Plan;
- A description of actions for which the IRT notification or approval was not needed, but were carried out during the year;
- Observations from the Monitoring Inspections and Habitat and Biological Surveys; and
- Recommendations for altered (adaptive) management practices as needed.

Annual reports will be provided to the IRT, CVFPB, Sacramento-Yolo Mosquito & Vector Control District, and Conservation Easement Monitor in perpetuity.

Task D.1-2: The Land Manager shall make recommendations in the annual report with regard to (1) any habitat enhancement measures deemed to be warranted, (2) any problems that need near short- and long-term attention (e.g., weed removal, erosion control, mosquito control), and (3) any changes in the monitoring or management program that appear to be warranted based on monitoring results to date.

Element D.2 Annual Conservation Easement Monitoring Inspection Report

Objective: Provide annual report on all conservation easement inspections conducted and general site conditions to the IRT and the Land Manager.

Task D.2-1: The Land Manager shall allow the Conservation Easement Monitor access to the Bank for the purpose of conducting Monitoring Inspections related to the Conservation Easement. Monitoring Inspections shall be scheduled at a frequency and duration that adequately verifies the integrity of the conservation values of the conservation easement. Monitoring Inspections shall be conducted at least annually, but preferably twice a year. Monitoring Inspections will concentrate on an evaluation of the condition of the protected conservation values as well as the Land Manager's adherence to the terms of the Conservation Easement. The Conservation Easement Monitor will also note the existence or condition of the following factors: erosion and evidence of unauthorized use. The Conservation Easement Monitor will also evaluate any potential or actually violation of the terms of the Conservation Easement, and will identify measures to remediate or restore any violations.

During Monitoring Inspections, the entire perimeter of the Bank shall be surveyed, as well as meandering transects throughout the entirety of the Bank. Photographs from fixed locations will be used in the Monitoring Inspections. A Conservation Easement Monitoring Inspection Report shall be prepared upon the completion of each survey. Previous Monitoring Inspection Reports shall be reviewed before each visit to better identify potential trouble spots or recurring problem areas. If any maintenance issues or violations are identified, more frequent inspections will be done to identify if the problem is a recurring issue and whether remedial actions are effective. The written Monitoring Inspection Report shall be provided to the Land Manager within 30 days of its Monitoring Inspections.

Element D.3 Special and/or Emergency Notifications

Objective: Provide notification to the IRT and the Corps on any activities with the potential to result in temporary or permanent loss of waters of the U.S., including wetlands or other habitats.

Objective: Provide notification to the IRT on any emergency situations that may arise that would normally require the agencies to be notified or have review and approval authority.

Task D.3-1: The Land Manager shall be responsible for providing notification to the IRT (and the Corps for any activities requiring Corps review and approval). All efforts will be made to outline the activities for the coming 12 months in the annual report. If this is not possible, the Land Manager will submit a separate letter to the IRT (and the Corps, if applicable) with a written description of the activity, including when the activity will take place and what methodology will be used, as well as a map showing what areas will be targeted. The IRT will have 30 days to contact the Land Manager to discuss the activity if they do not approve. If the Land Manager is not contacted within 30 days, the activity will be considered approved. Notification will be made either by fax, email, registered mail, or overnight transmittal. The Land Manager will remain responsible for obtaining any permits.

Task D.3-2: The Land Manager shall be responsible for identifying emergency situations that require immediate action. Should an emergency situation arise that requires immediate action, and would normally require that the IRT be notified or have review and approval authority, the Land Manager shall notify the IRT verbally within forty-eight (48) hours, with written confirmation of the actions taken within five (5) business days. In these situations, "emergency" is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship.

Should an emergency situation arise that requires immediate action in a wetland or waters of the U.S., but would normally require that a permit be obtained from the Corps, the Land Manager shall notify the Corps verbally within twenty-four (24) hours regarding the situation and the actions taken. The Corps will be notified in writing of the actions taken and further actions (if any) proposed, within five (5) business days. Emergency situations are defined as a situation that would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship. The Land Manager will work with the Corps to determine, what, if any further actions or compensation are necessary. The following applies as stated in the Code of Federal Regulations, Title 33, Chapter II, Part 325, Section 325.2 – Processing of Applications:

> Emergency procedures – Division engineers are authorized to approve special processing procedures in emergency situations. An "emergency" is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unseen, and significant hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard procedures.

The California Fish and Game Code Section 1600 also have emergency procedure stipulations that may apply.

Section V Transfer, Replacement, Amendments, and Notices

A. Transfer

Any subsequent transfer of responsibilities under this Plan to a different Land Manager or Land Owner shall be requested by the appropriate party in writing to the IRT, shall require written approval by the IRT, and shall be incorporated into this Plan by amendment. Any subsequent Land Owner assumes Land Manager responsibilities described in this Plan and as required in the Conservation Easement, unless otherwise amended in writing by the IRT.

B. Replacement

If the Land Manager fails to implement the tasks described in this Plan and is notified of such failure in writing by the IRT, the Land Manager shall have 90 days to cure such failure. If failure is not cured within 90 days, the Land Manager may request a meeting with the IRT to resolve the failure. Such meeting shall occur within 30 days or a longer period if approved by the IRT. Based on the outcome of the meeting, or if no meeting is requested, the IRT may designate a replacement Land Manager in writing by amendment of this Plan. If the Land Manager fails to designate a replacement Land Manager, then such public or private land or resource management organization acceptable to and as directed by the IRT may enter onto the Bank property in order to fulfill the purposes of this Plan.

C. Amendments

The Land Manager, Land Owner, and IRT may meet and confer from time to time, upon the request of any one of them, to revise the Plan to better meet management objectives and preserve the habitat and conservation values of the Bank property. Any proposed changes to the Plan shall be discussed with the IRT and the Land Manager. Any proposed changes will be designed with input from all parties. Amendments to the Plan shall be approved by the IRT in writing, shall be required management components, and shall be implemented by the Land Manager.

If the NMFS, USFWS or CDFG determine, in writing, that continued implementation of the Plan would jeopardize the continued existence of a state or federally listed species, any written amendment to this Plan, determined by either the NMFS, USFWS or CDFG as necessary to avoid jeopardy, shall be a required management component and shall be implemented by the Land Manager.

D. Notices

Any notices regarding this Plan shall be directed as follows:

Land Manager

Liberty Island Holdings II, LLC (Wildlands)
3855 Atherton Road
Rocklin, CA 95765

Attn: General Counsel
Telephone: (916) 435-3555

Land Owners

Reclamation District 2093
c/o The Trust for Public Land
1107 9th Street – Suite 1050
Sacramento, CA 95814
Attn: Erik Vink
Telephone: (916) 557-1673
Fax: (916) 557-1675

The Trust for Public Land
1107 9th Street – Suite 1050
Sacramento, CA 95814
Attn: Erik Vink
Telephone: (916) 557-1673
Fax: (916) 557-1675

Conservation Easement Monitor

Wildlife Heritage Foundation
563 2nd Street, Suite 120
Lincoln, CA 95648
Attn: Executive Director
Telephone: (916) 434-2759

Interagency Review Team

National Marine Fisheries Service
650 Capitol Mall, Suite 8-300
Sacramento, CA 95814-4708
Telephone: (916) 930-3600
Fax: (916) 930-3629

U.S. Fish and Wildlife Service
Bay-Delta Fish and Wildlife Office
2800 Cottage Way, Rm W-2605
Sacramento, CA 95825
Attn: Field Supervisor
Telephone: (916) 414-6600
Fax: (916) 414-6712

California Department of Fish and Game
Bay Delta Region
7329 Silverado Trail
Napa, CA 94558

Attn: Regional Manager
Telephone: (707) 944-5500
FAX: (707) 944-5563

California Department of Fish and Game
Water Branch
830 S Street
Sacramento, CA 95814
Attn: Water Branch Chief
Telephone: (916) 445-1231
Fax: (916) 445-1768

Other Interested Agencies

Central Valley Flood Protection Board
P. O. Box 942836
Sacramento, CA 94236

Sacramento-Yolo Mosquito & Vector Control District
8631 Bond Road
Elk Grove, CA 95624
Telephone: (916) 405-2085

Section VI Funding and Task Prioritization

A. Funding

During the Initial Monitoring Period, the cost to conduct the monitoring and carry out the management activities will be fully funded by the Land Manager. Following the completion of the Initial Monitoring Period, the annual cost of monitoring and management described in this Plan will be funded through the interest generated on an endowment account (Endowment Fund). The Land Manager will be responsible for depositing money into the Endowment Fund concurrent with the transfer of the Conservation Credits. The Endowment Fund will be held and managed by a CDFG-approved third party entity (likely the National Fish and Wildlife Foundation [NFWF]).

The value of the Endowment Fund is based upon the costs necessary to manage the Bank in perpetuity calculated using the Center for Natural Lands Management's Property Analysis Record (PAR) software. The PAR analysis of the Endowment Fund is provided as *Exhibit D-2 of the CBA*. The accrued interest and earnings from the Endowment Fund shall be used exclusively to fund the permanent management and long-term maintenance of the Bank.

The Endowment Fund shall remain as a permanent capital endowment to manage the Bank consistent with this Plan and the Conservation Easement. The Bank Owner or Land Manager may use interest and earnings from the Endowment Account to pay any costs and expenses reasonably incurred through the monitoring, maintenance, or long-term management, including, without limitation, property taxes, contracts, equipment or materials, and signage related to the management of the Bank and consistent with the Conservation Easement.

NFWF or other CDFG-approved entity shall hold the endowment principal and interest monies. These interest monies will fund the long-term management, enhancement, and monitoring activities on habitat lands in a manner consistent with this Plan.

The Land Manager shall consult with NFWF or other CDFG-approved entity on a year-to-year basis to determine the amount of funding available for management and monitoring activities. Following annual management activities, the Land Manager may invoice NFWF or other CDFG-approved entity for management activities following the invoicing instructions provided by NFWF or other CDFG-approved entity.

The Endowment Fund obligations, the management obligations described in this Plan, and the obligations under the Conservation Easement shall continue in perpetuity as a covenant running with the land.

B. Task Prioritization

Due to unforeseen circumstances, prioritization of tasks, including tasks resulting from new requirements, may be necessary if insufficient funding is available to accomplish all tasks. The Land Manager and the IRT shall discuss task priorities and funding availability to determine which tasks will be implemented. In general, tasks are prioritized in this order:

1. Tasks required by a local, state, or federal agency;

2. Tasks necessary to maintain or remediate habitat quality; and

3. Tasks that monitor resources, particularly if past monitoring has not shown downward trends.

Equipment and materials necessary to implement priority tasks will also be considered priorities. Final determination of task priorities in any given year of insufficient funding will be determined in consultation with the IRT and as authorized by the IRT in writing.

*****

Section VII References

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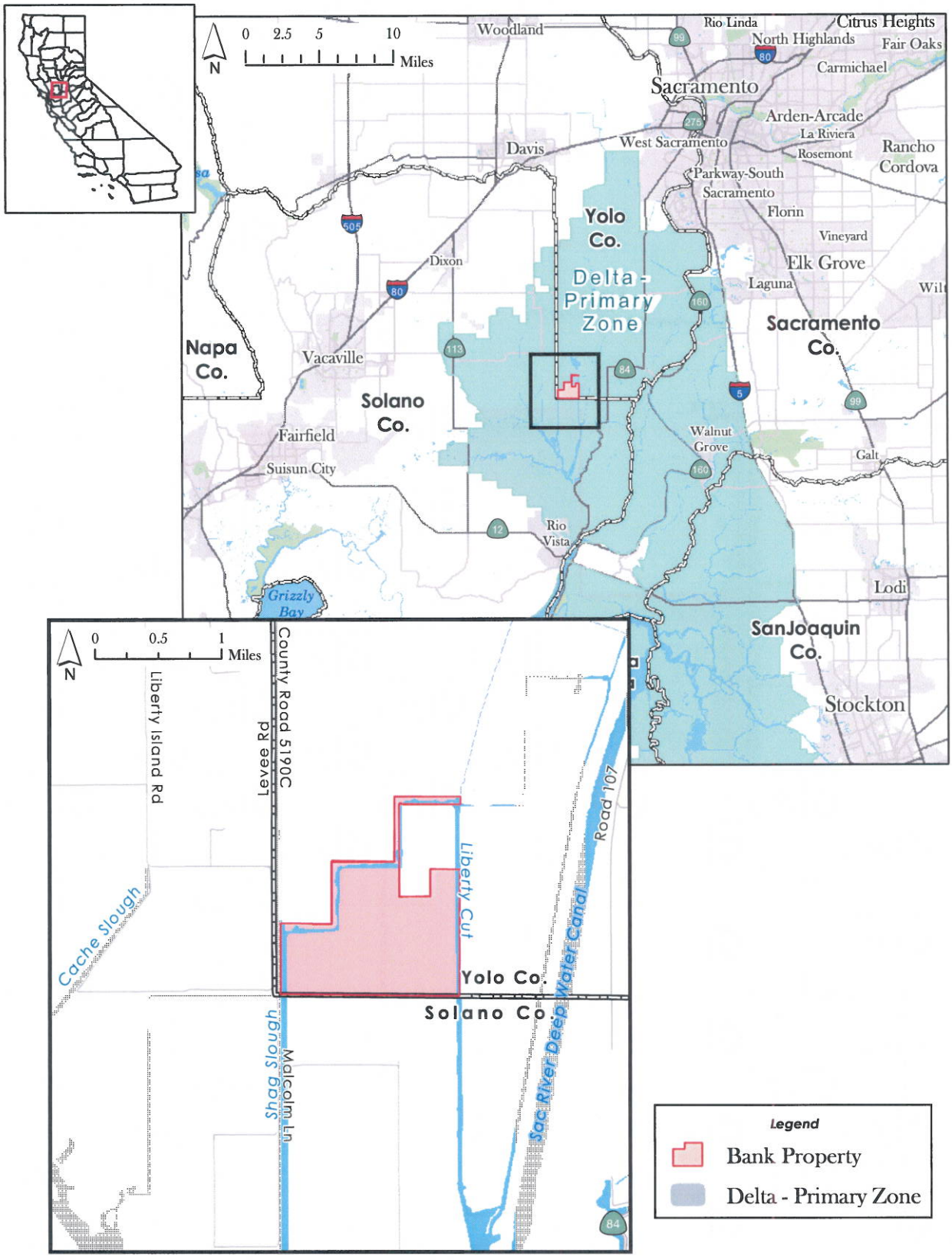
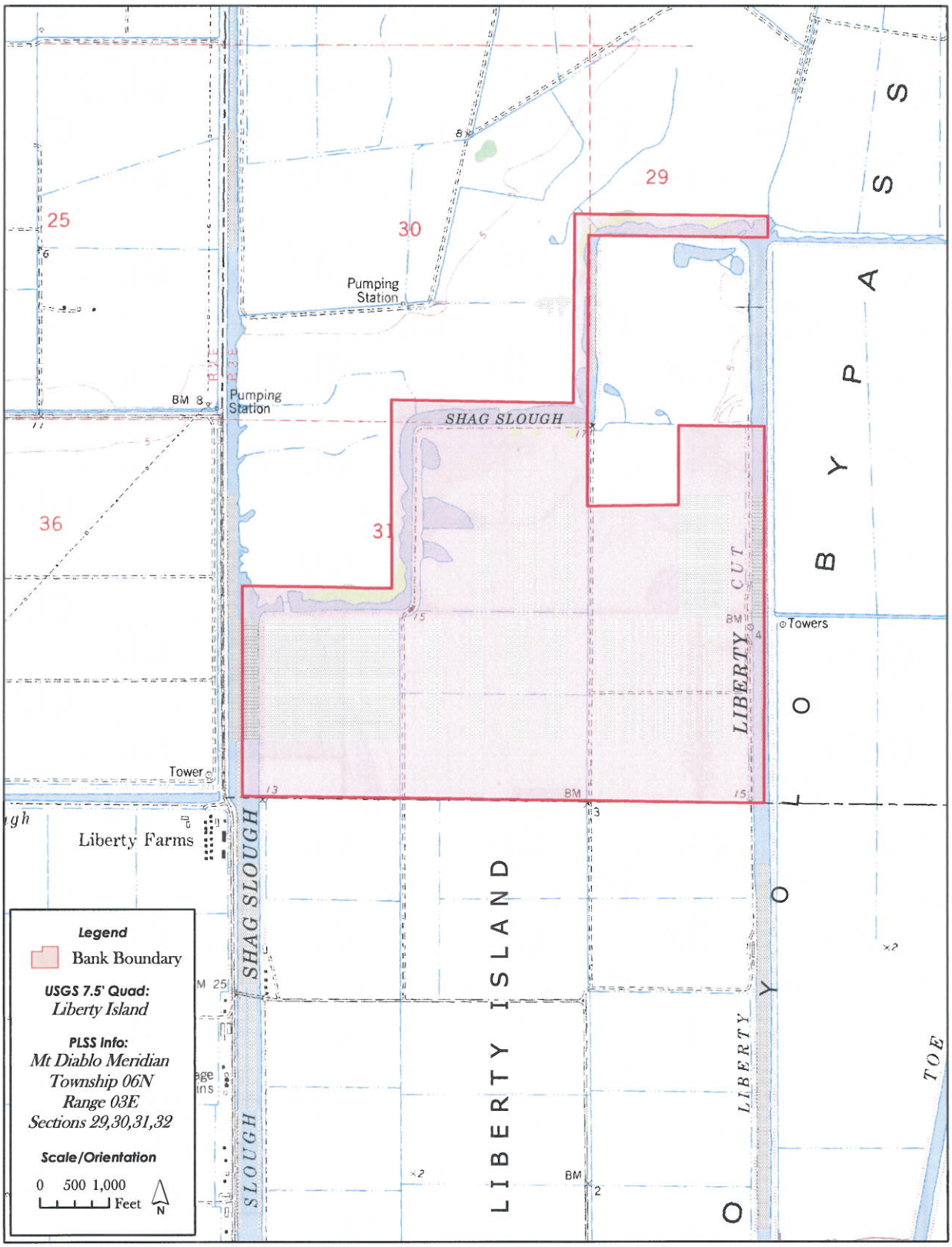
FIGURES



WILDLANDS

Northern Delta Fish Conservation Bank
Long-Term Management Plan

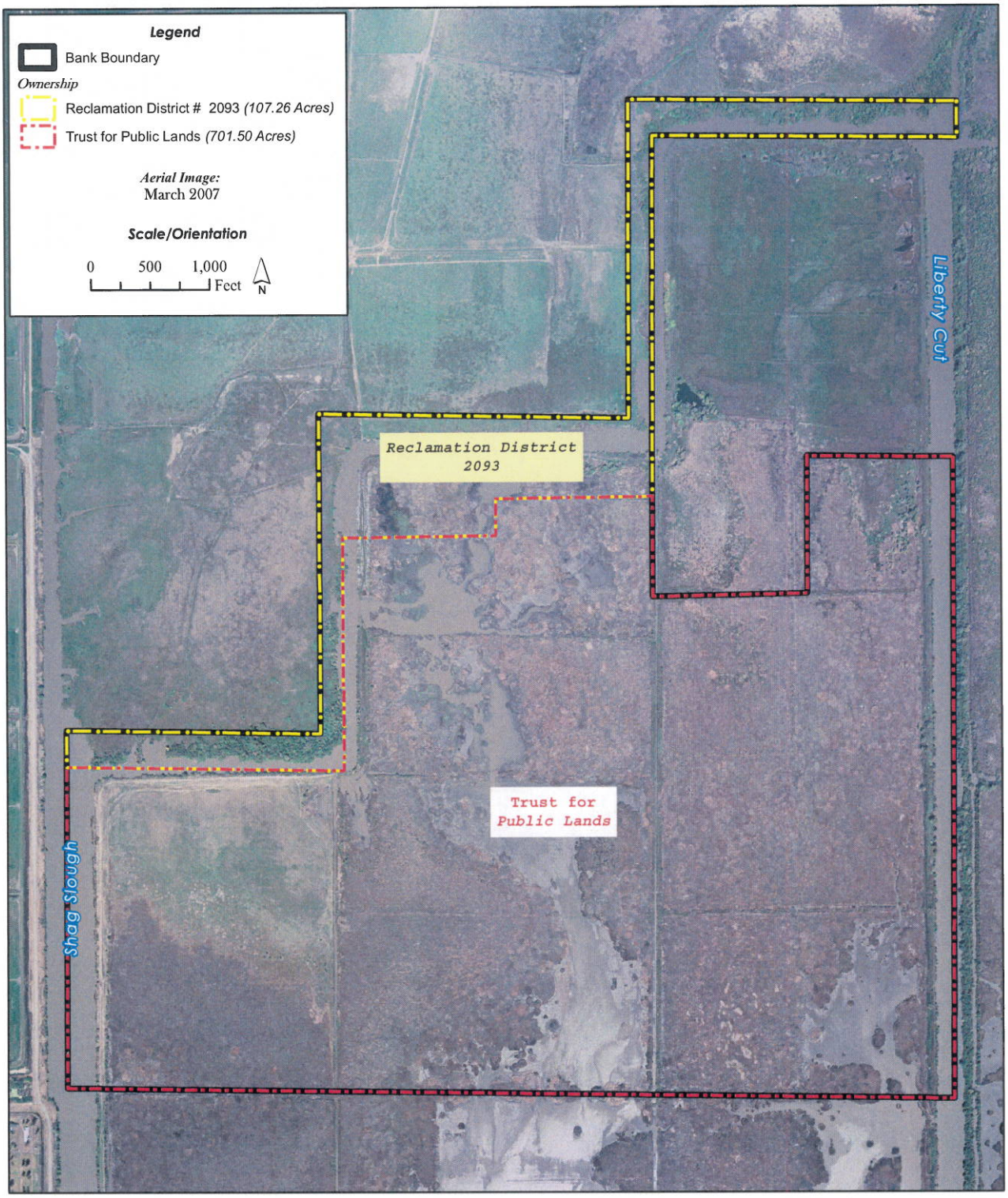
Figure 1
Regional Vicinity



WILDLANDS

North Delta Fish Conservation Bank
Long-Term Management Plan

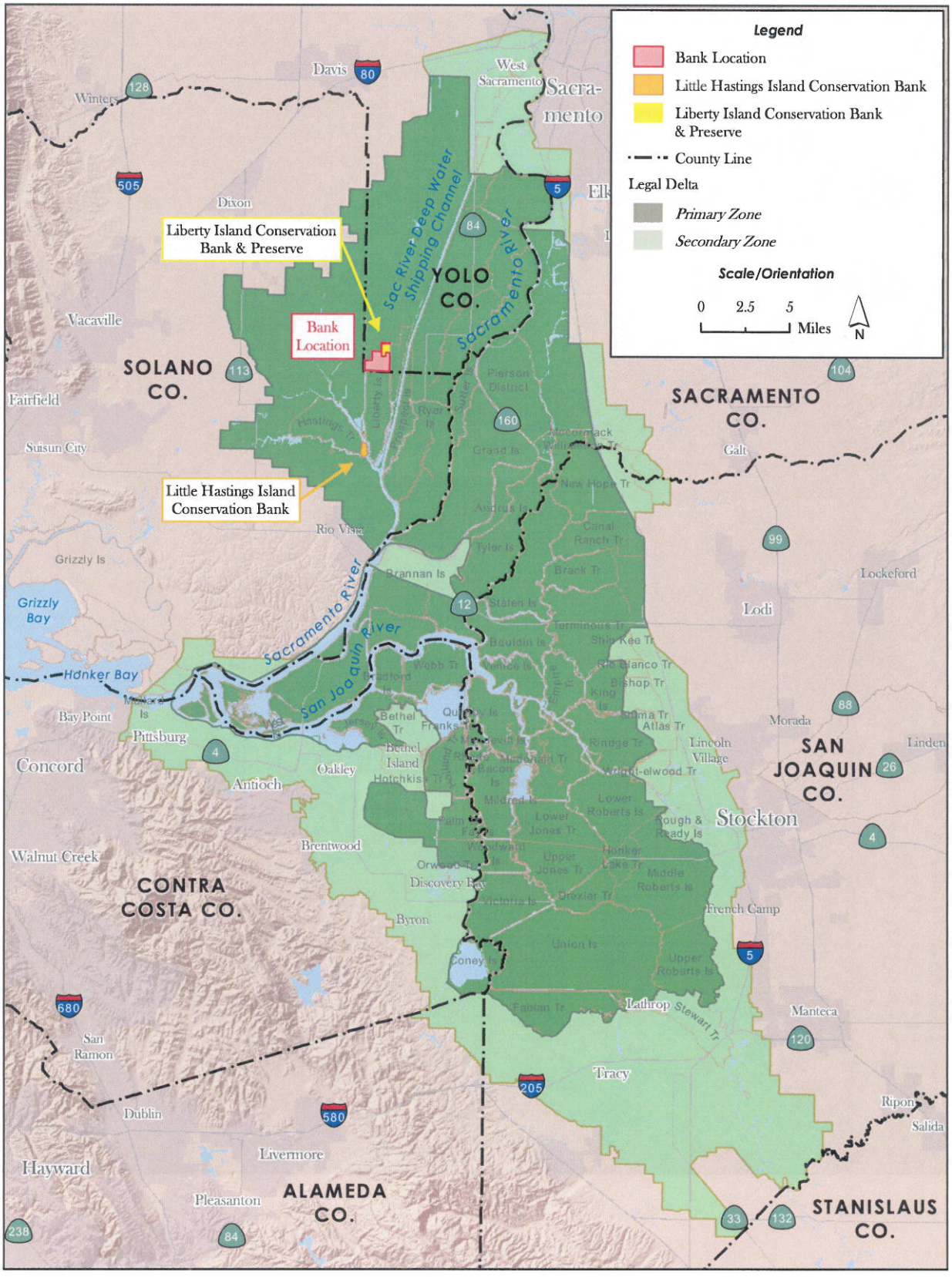
Figure 2
Bank Location



WILDLANDS

North Delta Fish Conservation Bank
Long-Term Management Plan

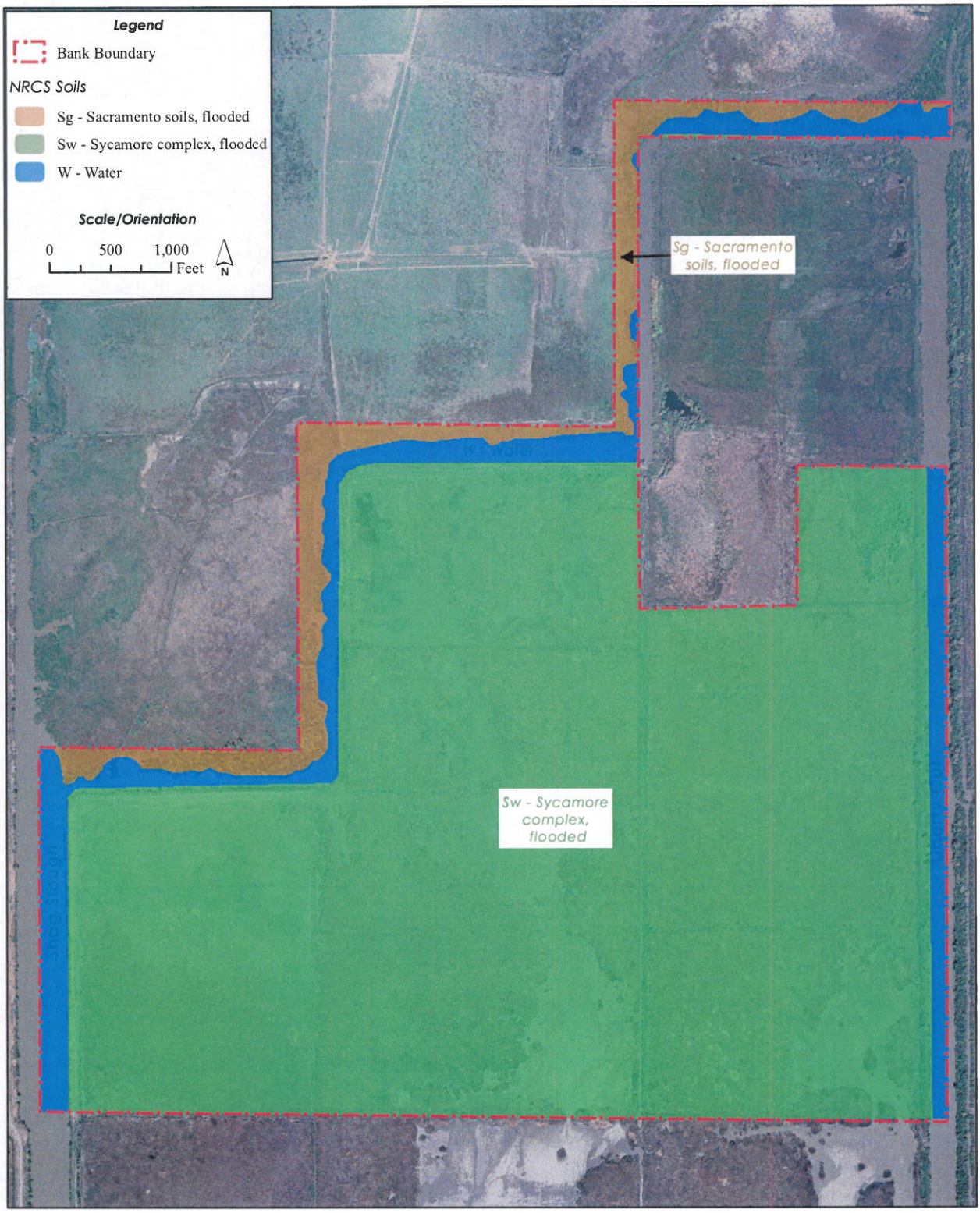
Figure 3
Property Ownership



WILDLANDS

North Delta Fish Conservation Bank
Long-Term Management Plan

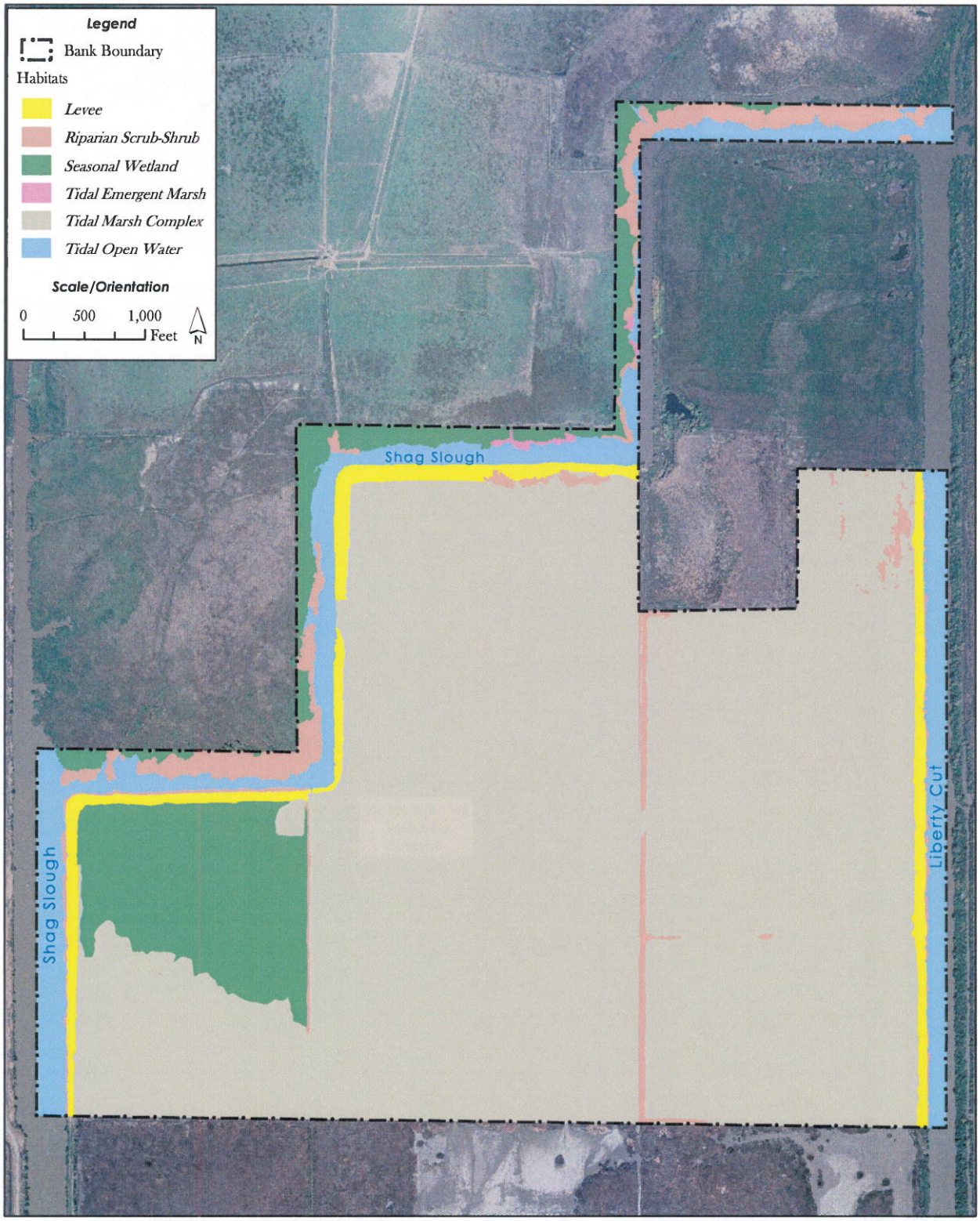
Figure 4
Map of Legal Delta



WILDLANDS

North Delta Fish Conservation Bank
Long-Term Management Plan

Figure 5
Soils



WILDLANDS

North Delta Fish Conservation Bank
Long-Term Management Plan

Figure 6
Existing Habitats

LEGEND

Bank Boundary

Existing

Tidal Emergent Marsh Complex - Enhanced

Riparian Scrub Shrub / Shaded Riverine Aquatic Cover (SRA) - Preserved

Riparian Scrub Shrub and Seasonal Wetland Floodplain - Preserved

Levee Upland - Preserved

Tidal Channels - Enhanced

Ditches

Water Control Structure to be Removed

Proposed

Tidal Emergent Marsh Complex - Created (Excavation and/or Rock Removal / Tule Planting)

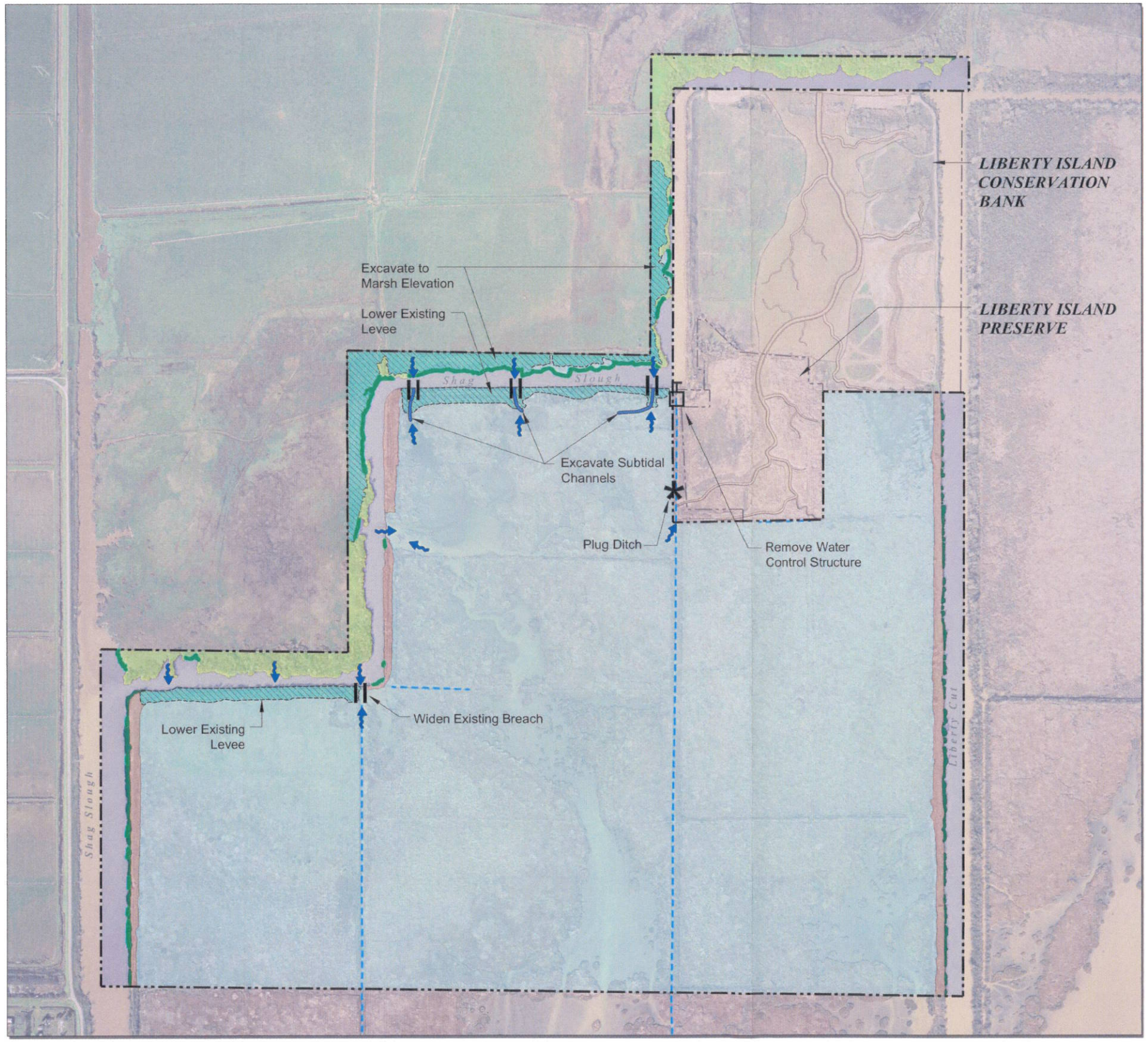
Tule Planting / Shaded Riverine Aquatic Cover (SRA)

Channels

Levee Breach

Enhanced Tidal and Bypass Flow

0 500' 1000' NORTH



WILDLANDS

North Delta Fish Conservation Bank
Long-Term Management Plan

Figure 7
Concept Plan

ATTACHMENT A
LONG-TERM MANAGEMENT FUNDING CROSSWALK

Attachment A. Long Term Management Funding	
Long Term Management Plan Task	**Task Description in the PAR (Exhibit D-2 of the CBA)**
Element A.1 Habitat Monitoring	
Element A.1-1	Inspection, Field Equipment
Element A.1-2	Inspection, Field Equipment
Element A.1-3	Vegetation Surveys
Element A.2 Non-native Invasive Species	
Element A.2 -1	N/A (Conducted during Interim Management Period)
Element A.2-2	Exotic Plant Control – Labor and Materials
Element A.2-3	Exotic Plant Control – Livestock Grazing Oversight
Element A.3 Woody Vegetation Management	
Element A.3-1	Habitat Maintenance – Other (Woody Vegetation)
Element A.4 Adaptive Management	
Element A.4-1	N/A
Element B.1 Trash and Trespass	
Element B.1-1	Inspection, General Maintenance – Other (Trash Removal)
Element B.1-2	Trash Removal
Element B.2 Authorized Access	
Element B.2-1	N/A
Element B.2-2	Public Services – Sign, & Site Construction/Maint – Sign and Maintenance
Element B.3 Unauthorized Motor Vehicle Use	
Element B.3 -1	Inspections
Element B.4 Flood Protection	
Element B.4-1	N/A
Element C.1 Educational Activities	
Element C.1-1	N/A
Element C.2 Recreational Activities	
Element C.2-1	N/A
Element C.3 Habitat Restoration/Enhancement Activities	
Element C.3-1	N/A
Element D.1 Annual Report	
Element D.1-1	Annual Reports, Monitoring Reports, Aerial Photo
Element D.1-2	Annual Reports, Monitoring Reports, Aerial Photo
Element D.2 Annual Conservation Easement Monitoring Inspection Report	
Element D.2-1	N/A
Element D.3 Special and/or Emergency Notifications	
Element D.3-1	N/A
Element D.3-2	N/A
Element D.3-3	N/A

FILED
YOLO COUNTY CLERK/RECORDER
FEB 10 2011
FREDDIE OAKLEY, CLERK
BY _____ DEPUTY

Notice of Determination

Appendix D

To:

☒ Office of Planning and Research

For U.S. Mail: P.O. Box 3044, Sacramento, CA 95812-3044

Street Address: 1400 Tenth St., Sacramento, CA 95814

☒ County Clerk
County of: Yolo
Address: 625 Court Street, Room B01
Woodland, CA 95695

From:
Public Agency: Reclamation District 2093
Address: c/o Trust for Public Land
1107 9th Street, Suite 1050 Sacramento, CA 95814
Contact: Erik Vink erik.vink@tpl.org
Phone: (916) 557-1673

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): 2010122078

Project Title: Northern Liberty Island Fish Conservation Bank

Project Location (include county): Northern tip of Liberty Island, Yolo County

Project Description:

The project proposes to preserve, enhance, restore and create habitat beneficial to Delta native fishes. The project includes degradation of the east-west levees to provide improved tidal connectivity and enhanced water circulation, excavation of several channels to promote habitat connectivity, exclusion of livestock along the northern boundary of the project site and planting to improve habitat.

This is to advise that the Reclamation District 2093 has approved the above described project on
☒ Lead Agency or ☐ Responsible Agency
_____ and has made the following determinations regarding the above described project:
(Date)

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: 1107 9th Street, Suite 1050 Sacramento, CA 95814.

Signature (Public Agency) Erik Vink Title President

Date 2/10/11 Date Received for filing at OPR _____

Authority cited: Sections 21083, Public Resources Code.
Reference Section 21000-21174, Public Resources Code.

Revised 2005

POSTED FEB 10 2011 TO _____

4111-05

State of California—The Resources Agency
DEPARTMENT OF FISH AND GAME

2011 ENVIRONMENTAL FILING FEE CASH RECEIPT

RECEIPT# 410954

STATE CLEARING HOUSE # *(If applicable)*

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY

LEAD AGENCY: Reclamation District 2093 — DATE: 2/10/2011

COUNTY/STATE AGENCY OF FILING: Yolo — DOCUMENT NUMBER: 411-05

PROJECT TITLE: N. Liberty Island Fish Conservation Bank

PROJECT APPLICANT NAME: ERIK Vink — PHONE NUMBER: (916) 557-1673

PROJECT APPLICANT ADDRESS: 1107 9th Street, Suite 1050 — CITY: SAC — STATE: CA — ZIP CODE: 95814

PROJECT APPLICANT *(Check appropriate box):*

☐ Local Public Agency ☐ School District ☒ Other Special District ☐ State Agency ☐ Private Entity

CHECK APPLICABLE FEES:

☐ Environmental Impact Report (EIR)	$2,839.25	$
☑ Mitigated/Negative Declaration (ND)(MND)	$2,044.00	$ 2,044.00
☐ Application Fee Water Diversion *(State Water Resources Control Board Only)*	$850.00	$
☐ Projects Subject to Certified Regulatory Programs (CRP)	$965.50	$
☑ County Administrative Fee	$50.00	$ 50.00
☐ Project that is exempt from fees		
☐ Notice of Exemption		
☐ DFG No Effect Determination (Form Attached)		
☐ Other _____		$

PAYMENT METHOD:

☐ Cash ☐ Credit ☑ Check #120416 ☐ Other _____ TOTAL RECEIVED $ 2,094.00

SIGNATURE: X _____ TITLE: DEPUTY

WHITE - PROJECT APPLICANT YELLOW - DFG/ASB PINK - LEAD AGENCY GOLDEN ROD - COUNTY CLERK FG 753.5a (Rev. 11/10)