

U.S. Department of the Interior  
Fish and Wildlife Service  
Sacramento River National Wildlife Refuge

**PROPOSED  
FINDING OF NO SIGNIFICANT IMPACT (FONSI)**  
for the

M&T Chico Ranch/Llano Seco Rancho Fish Screen Facility Short-term Protection Project

The U.S. Fish and Wildlife Service (USFWS, or Service) and California Department of Fish and Wildlife (CDFW), along with the M&T Chico Ranch and Llano Seco Rancho, are proposing to implement interim measures to protect and maintain the viability of the M&T Chico Ranch/Llano Seco Rancho fish screen and pumping facility (M&T/Llano Seco Pumps Facility) to meet existing CDFW and National Marine Fisheries Service (NMFS) fish screen criteria and to provide a reliable water supply to farmland, Federal wildlife management areas, and a State wildlife area. These areas include the eastern portion of the Llano Seco Rancho, which is under conservation easement and is served by the M&T/Llano Seco Pumps Facility. The facility provides Sacramento River water to of wetlands and associated habitats owned or managed by USFWS, CDFW and Llano Seco Rancho, which creates wetland habitat for waterfowl, shorebirds, and other wetland-dependent and special-status species. Key wetland habitat for these species depends upon a reliable water supply that is made available from the M&T/Llano Seco Pumps Facility on the Sacramento River. A reduction of pumping may jeopardize the water supply to these valuable habitats.

Sediment deposition has posed, and continues to pose, a threat to the normal operation of the existing M&T/Llano Seco Pumps Facility and the City of Chico's wastewater treatment plant (WWTP) outfall. As a result of continued sediment deposition in the vicinity of the intake screens on the M&T/Llano Seco Pumps Facility, there is an imminent threat of inundation by encroaching sediment and the ability to maintain sufficient sweeping velocities parallel to the screen, which would render the screens out of compliance with CDFW and NMFS fish screen criteria, and potentially result in adverse impacts to anadromous salmonids in the Sacramento River and/or impacts to water deliveries by the ranches. Additionally, although river meander away from the pumping facility is being controlled by the temporary rock-toe and tree revetment that was installed during 2007, the continued presence of the revetment is necessary until further technical and environmental evaluations are completed to determine whether this short-term measure should be incorporated as part of a long-term solution. A Federal action would be required to authorize the continued presence of the temporary revetment on the USFWS Capay Unit, as well as activities that may be required to maintain the revetment, until a long-term solution is developed and completed.

## **Decision**

Following comprehensive review and analysis, the Service selects the Proposed Action for implementation because it is the alternative that best achieves the purpose and need (for

additional information, see the Final Environmental Assessment, which is incorporated by reference and included as **Attachment A**).

The Proposed Action will continue to: (1) secure the water supply to the ranches, Federal wildlife management areas, and a State wildlife area; (2) protect the fisheries resources of Big Chico Creek; (3) preserve the enhancement of instream flows on Butte Creek for the protection of salmonids, including spring-run Chinook salmon (Federally and State threatened) and steelhead (Federally threatened); and (4) protect the significant investments made by Federal, State and private parties.

The Proposed Action will benefit the USFWS by contributing to the purposes of the Sacramento National Wildlife Refuge Complex (SNWRC) and by enabling the Service to maintain and restore the ecological integrity of the habitats and populations on the SNWRC.

## **Alternatives Considered**

### **No Action Alternative**

The No Action Alternative includes the actions, practices, and land uses that would be assumed to occur at the project site if the Proposed Action is not approved and there is no change in current management direction or level of management intensity. Under the No Action Alternative, alternate sources of funding would be necessary before M&T Chico Ranch/Llano Seco Rancho could implement maintenance activities required to ensure that Federal and State fish screening criteria are met. Additionally, as a commitment described in the 2007 Temporary Maintenance Project Final EA/IS (CDFG and USFWS 2007), the existing temporary rock-toe and tree revetment would be removed and erosion of the right (west) bank of the Sacramento River would continue.

### Dredging Would Not Occur

If the encroaching in-river sedimentation renders the M&T/Llano Seco Pumps Facility non-functional prior to implementation of a long-term solution, the M&T Chico Ranch/Llano Seco Rancho would divert the entirety of their Butte Creek and Sacramento River water right entitlements from the Parrott-Phelan Dam on Butte Creek and from the pumping facility on Big Chico Creek.

In accordance with the 1996 Agreement to provide flows for fisheries and wildlife purposes associated with the relocation of the M&T/Llano Seco Pumps Facility, if M&T Chico Ranch/Llano Seco Rancho's ability to pump water from the Sacramento River is lost, flows in Butte Creek dedicated under the 1996 Agreement likely would be reduced, which could potentially impact listed species such as spring-run Chinook salmon and steelhead that use Butte Creek. Compared to the total amount of Sacramento River water presently diverted at the M&T/Llano Seco Pumps Facility, diversion of the previously dedicated water for environmental enhancement purposes of up to 40 cfs from Butte Creek under the No Action Alternative would be sufficient to irrigate only a small portion of farmland, which would result in economic damage to the ranch. The available Butte Creek water supply would also not be sufficient to maintain the existing managed wetlands.

Under the No Action Alternative, it also may be necessary to return to the existing diversion facility on Big Chico Creek, approximately 0.75 miles upstream from the confluence with the Sacramento River. In the event of a water cut-off emergency at the M&T/Llano Seco Pumps Facility on the Sacramento River, the pumping plant on Big Chico Creek would be used to divert water until the ranches were able to resume diverting water from the M&T/Llano Seco Pumps Facility on the Sacramento River. Because alternative sources of water supply have not been identified for USFWS and CDFW wetland management and restoration purposes, it is expected that USFWS and CDFW will limit delivery of Llano Seco's available supplies, as was the practice prior to relocation of the M&T/Llano Seco Pumps Facility in 1997.

The No Action Alternative would adversely affect the ability of the M&T/Llano Seco Pumps Facility to deliver adequate, or any, water supplies to the ranches, Federal wildlife management areas, and a State wildlife area that depend on the pumps for their water supply while meeting existing fish screening criteria.

#### Removal of the Temporary Rock-toe and Tree Bank Revetment Installed in 2007

Under the No Action Alternative, the temporary 1,520-foot long rock-toe and tree revetment installed during 2007 would be removed once available funding was secured and appropriate regulatory compliance activities (e.g., permitting) are completed. Since installation of the revetment in 2007, The Nature Conservancy (TNC) has acquired ownership, in fee title, of the property immediately south of the USFWS Capay Unit (referred to as the Stile property). Revetment removal under the No Action Alternative would require access to the southernmost 245 feet of the revetment presently located on TNC property. Thus, landowner permission would need to be obtained and an access agreement negotiated at least 30 days prior to the commencement of construction activities. Revetment removal would occur during a five week period between July 1 and October 15.

Following revetment removal, erosion of the west bank would likely continue to occur and the Sacramento River would continue to migrate to the west. Continued in-river sedimentation and deposition on the east (left) bank of the river could compromise the operation of the City of Chico's WWTP outfall and the M&T/Llano Seco Pumps Facility, reducing the amount of water supplied to private, State and Federal wetland habitat areas – some of which are used by ESA-listed species. Based on observed bank erosion rates at the site between 1996 and 2006 (annual erosion rates have ranged from about 20 to 60-feet per year, with up to 100-feet per year during wet winters), erosion of 100-feet and 500-feet could occur over a subsequent five-year period (CDFG and USFWS 2007).

This alternative was not selected because of the potential to affect the ability of the M&T/Llano Seco Pumps Facility to provide adequate water supplies to the ranches, Federal wildlife management areas, and a State wildlife area, as well as the potential to affect in-river critical habitat and special-status fish species, and operation of the City of Chico's WWTP outfall.

#### **Proposed Action**

The Proposed Action includes: (1) implementation of up to two additional maintenance dredging operations; (2) a time extension for the temporary rock-toe and tree revetment to remain in place

on the USFWS Capay Unit of the SRNWR, and what is now a TNC fee title property immediately south of the Capay Unit until a long-term solution is developed and completed; and (3) ongoing monitoring and maintenance of the revetment, which would extend until a long-term solution is developed and completed. These measures, in concert, are intended to sustain the viability of the M&T/Llano Seco Pumps Facility, including meeting existing fish screen criteria, and water supply and delivery responsibilities, as well as to maintain the viability of a range of alternatives under consideration for a long-term solution.

#### In-river Dredging and Spoils Disposal Operations

Under the Proposed Action, dredging would entail removing in-river sedimentation from the Sacramento River to allow parallel sweeping flows at the pumping site in order to maintain the functionality of the M&T/Llano Seco Pumps Facility while continuing to meet NMFS and CDFW fish screen criteria. It is anticipated that up to two dredge cycles (during separate years) could occur, potentially removing up to 100,000 cubic yards of material per cycle, in the area immediately upstream, adjacent to, and downstream of the M&T/Llano Seco Pumps Facility via suction dredge. The first dredge cycle is currently proposed for 2014. Dredging operations (e.g., equipment mobilization, site set-up, in-river dredging, spoils disposal, and demobilization) would be conducted between June 14 and October 28, and work would occur about 12 hours per day, seven days per week. The in-river work period would extend from July 1 through October 15, which has been identified as being protective of fisheries resources in the Sacramento River.

The Proposed Action would utilize a swinging ladder suction dredge with a rotating cutterhead at the end of a ladder used to dislodge sediment for capture by a suction pipe. The dredged material would be pumped through a pipeline system to two confined containment areas, bounded by 6-foot high berms, located upland from the dredge site and approximately 1,500 feet to the east on the M&T Chico Ranch property. In addition to the dredging site within the Sacramento River, equipment staging and access areas would be necessary. Two areas would be utilized for material staging and assembly of the dredge pipeline system on the east bank of the river, including a gravel parking lot at the M&T/Llano Seco Pumps Facility and an area within the vicinity of the existing spoils location.

#### Rock-toe and Tree Revetment Monitoring and Maintenance

The Proposed Action includes approval for the revetment installed during the fall of 2007 to persist, as well as implementation of maintenance activities that may be required while the revetment is in place until a long-term solution is completed. Because the revetment was designed as an interim and temporary measure, there was an expectation that some maintenance would be required; however, monitoring conducted to date indicates that the revetment is performing as designed. Therefore, maintenance activities associated with the revetment are not anticipated to occur frequently.

If maintenance-related repairs are required, work would be conducted in a manner that would return the revetment to the condition in which it was originally designed and constructed. Types of maintenance would include the following: (1) inspecting for movement of revetment due to slippage of the underlying bank, and making repairs to stabilize the area; (2) repairing areas of localized scour and erosion, particularly in the toe zone, by adding rock and other materials; (3)

dispersing large build-ups of debris to eliminate eddy currents; and (4) re-anchoring or replacing woody material and brush structures if they become rotted, disintegrated, or washed out due to high flow events. Construction work would be completed within one week, and in-river work activities associated with revetment maintenance would be conducted from July 1 through October 15.

Additionally, according to the Glenn County Assessor's Parcel Map, approximately 245 feet along the southern portion of the revetment is presently located on property owned, in fee title, by TNC. Landowner permission was obtained during July 2013 when TNC and the ranches finalized an access agreement to continue to have and maintain the portion of the revetment on TNC property until a long-term solution is developed and completed. Access would be limited to the fee title Stile property only.

## **Environmental Consequences of Implementing the Proposed Action**

A summary of the potential effects of implementing the Proposed Action is provided below. To ensure that no significant adverse effects to the environment would result from the Proposed Action, BMPs, environmental commitments and mitigation measures have been incorporated into the project design. A detailed description of the resource-specific environmental commitments and mitigation measures, including: (1) identification of the responsible implementing entity(s); (2) the timeframe for implementation; (3) identification of the responsible monitoring entity(s)/agency; and (4) reporting requirements, is provided in the Mitigation, Monitoring and Reporting Program, which is included as **Attachment B<sup>1</sup>** to this FONSI.

### Fisheries and Aquatic Resources

#### *Dredging and Spoils Disposal*

Activities associated with dredging and spoils disposal have the potential to affect fisheries resources nearby and downstream of the activity areas. The removal, transport, and placement of dredged sediments, in addition to general construction-related activities associated with access, staging, storage and disposal areas have the potential to affect fish species of focused evaluation due to the potential for: (1) sedimentation and turbidity; (2) hazardous materials and chemical spills; (3) underwater noise; (4) entrainment; (5) reduced prey availability; (6) physical habitat modification; (7) increased susceptibility to predation; and (8) spreading or introducing invasive aquatic species. Implementation of best management practices (BMPs) and impact avoidance measures, including the in-water construction work window of July 1 – October 15 and a Hazardous Materials Control, Spill Prevention and Response Plan, in addition to the use of specific design elements and construction techniques, including but not limited to utilization of a slow cutterhead rotation speed where feasible and conducting entrainment monitoring if fish are identified in dredge slurry, are anticipated to minimize the potential for impacting fish species of focused evaluation associated with the Proposed Action. With implementation of ***Environmental Commitments FAR-1 – FAR-4***, as described in Attachment B, suction dredging and spoils

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<sup>1</sup> For review purposes during the 45-day public comment period, see Appendix I to the Draft EA/IS.

disposal activities associated with the Proposed Action would have a less than significant impact on fisheries and aquatic resources.

Additionally, as described in Chapter 3 of the Draft EA/IS (CDFW and USFWS 2013), potential impacts to fish species of focused evaluation due to dredging-related activities would be temporary and/or minimal with respect to changes in prey availability and permanent physical habitat modification.

#### *Bank Revetment Monitoring and Maintenance*

Construction-related activities associated with revetment maintenance include the potential for impacts to fish and aquatic resources from erosion, sedimentation and turbidity, hazardous materials and chemical spills, vibration and pressure waves, direct harm, and increased susceptibility to predation. However, because construction activities associated with periodic maintenance of the rock-toe and tree revetment could be accomplished from the landward side, and because no bank grading is anticipated at the site, the potential for short-term construction-related impacts to fish and aquatic resources would be minimal with implementation of impact avoidance measures. Therefore, with implementation of ***Environmental Commitments FAR-1 – FAR-3***, as described in Attachment B, bank revetment monitoring and maintenance activities associated with the Proposed Action would have a less than significant impact on fisheries and aquatic resources.

#### Terrestrial Resources (Botanical and Wildlife)

##### *Dredging and Spoils Disposal*

The potential short-term construction-related impacts to botanical and wildlife resources associated with the Proposed Action are considered relative to: (1) timing of project activities; (2) physical habitat disturbance and short-term changes in habitat conditions; (3), potential for direct physical injury; (4) hazardous spills; and (5) the known or assumed presence of species and habitats within the project area. Potential impacts to terrestrial resources associated with dredging and spoils disposal primarily include noise-related impacts, although to a lesser extent, other potential terrestrial resource impacts could occur as a result of: (1) sediment removal and containment; (2) spoils disposal; and (3) equipment access, staging, and egress. In addition to conducting pre-construction surveys, implementation of BMPs and impact avoidance measures, including the in-water construction work window of July 1 – October 15 and a Hazardous Materials Control, Spill Prevention and Response Plan, is anticipated to minimize potential impacts to botanical and wildlife resources associated with the Proposed Action. Therefore, with implementation of ***Environmental Commitments TR-1 – TR-6***, as described in Attachment B, dredging and spoils disposal activities associated with the Proposed Action would have a less than significant impact on terrestrial resources.

#### *Bank Revetment Monitoring and Maintenance*

Construction-related activities associated with revetment maintenance include physical habitat disturbance, potential for physical injury, hazardous materials and chemical spills, short-term changes in habitat conditions, and the disruption of habitat utilization by special-status species.

Replacement of the rock or brush, as needed, on the revetment would incorporate project commitments, including impact avoidance/minimization measures, consistent with those described in the 2007 Temporary Maintenance Project Final EA/IS (CDFG and USFWS 2007). As previously described, these measures include BMPs and standard construction practices to avoid direct physical harm. With implementation of *Environmental Commitments TR-1 – TR-6*, as described in Attachment B, bank revetment monitoring and maintenance activities associated with the Proposed Action would have a less than significant impact on terrestrial resources.

#### Recreation and Navigation Safety

While in the Sacramento River (during both the 10-hour dredge operation period and the 14-hour non-working period), the suction dredge barge and the floating dredge pipeline represent an obstacle to watercraft navigation. Therefore, several precautionary measures are incorporated into the Proposed Action, including public noticing, placement of warning buoys, installation of lighting on the dredge barge and in-river section of the pipeline, among others. These measures would be in place prior to and during the dredging operations that would occur in the Sacramento River. Additionally, signs will be placed on the Capay Unit of the SRNWR prior to, and during revetment maintenance activities to alert the public of potential hazards and trail closures. Therefore, with implementation of *Environmental Commitments REC-1 – REC-4*, as described in Attachment B, the Proposed Action would have a less than significant impact on recreation and navigation safety.

#### Hydrology and Water Quality

Dredging operations under the Proposed Action have the potential to cause some temporary degradation to surface waters as concentrations of turbidity, total suspended solids, and other wastes may increase as bottom sediments are disturbed in the excavation process. Potential impacts due to dredging also may include short-term decreases in dissolved oxygen and increases in nutrient concentrations as a result of resuspension of sediment and sediment-bound organic material. These impacts would be temporary, generally confined to the dredging area, and would return to baseline levels following dredging activities in the immediate area (USACE 2011). Additionally, construction activities associated with maintaining or repairing the rock-toe and tree revetment may require some in-river work, which would result in generally similar water quality impacts if appropriate measures are not implemented to minimize the effects of the project. Implementation of the BMPs incorporated into the Proposed Action, compliance with CWA Section 401 certification requirements, and implementation of a Stormwater Pollution Prevention Plan are anticipated to minimize the potential for water quality impacts associated with the Proposed Action. With implementation of *Environmental Commitments WQ-1 – WQ-3*, as described in Attachment B, the Proposed Action would have a less than significant impact on hydrology and water quality.

#### Geology, Geomorphology and Soils

Vegetation clearing and placement of construction materials associated with revetment maintenance and dredging would result in ground and soil disturbance. These disturbances would increase the hazard of erosion and could temporarily increase erosion and sedimentation

rates. Most earthwork would be conducted on or immediately adjacent to the top of the western river bank. Potential impacts on Sacramento River geomorphology would be minimal. To address potential short-term impacts related to soil and erosion, standard water pollution prevention measures, including erosion and sediment control measures, proper maintenance of equipment and storage of materials, proper control of stormwater discharges, and hazardous spill prevention and response measures will be implemented, as described in the sections of this FONSI that address Hydrology and Water Quality, and Hazards and Hazardous Materials.

#### Aesthetics/Visual Resources

The presence of construction equipment would temporarily degrade the visual quality of scenic vistas from the top of the river bank and in the immediate vicinity along the Sacramento River. However, this effect would last no longer than the construction period. Because the Proposed Action is not expected to degrade the visual character or quality of the site and its surroundings, potential impacts would be less-than-significant.

#### Cultural Resources

Although unlikely, if historic properties, cultural resources or unique archaeological resources are discovered, potential impacts on these resources could be significant if they are destroyed or are determined eligible for listing in the National Register of Historic Places or the California Register of Historical Resources, and if the impact would affect their eligibility. Therefore, to minimize potential impacts, impact avoidance measures will be implemented if human remains, or buried historic or cultural resources are inadvertently discovered during ground-disturbing activities. With implementation of *Environmental Commitments CULT-1 – CULT-3*, as described in Attachment B, the Proposed Action would have a less than significant impact on cultural resources.

#### Air Quality and Greenhouse Gas Emissions

Construction-related activities associated with the Proposed Action would result in the temporary generation of reactive organic gases (ROG), oxides of nitrogen (NO<sub>x</sub>), and particulate matter smaller than or equal to 10 microns in diameter (PM<sub>10</sub>), resulting in temporary, short-term impacts to air quality. However, once the in-river dredging is completed, no additional emissions would be generated by the Proposed Action. Modeled construction emissions of ROG, PM<sub>10</sub> and NO<sub>x</sub> would each be less than the *de minimis* thresholds established by the EPA for Federal air quality conformity analyses.

Potential sources of GHG emissions associated with the Proposed Action would be limited to exhaust from construction vehicles and equipment (including CO<sub>2</sub> and NO<sub>x</sub>). Construction activities associated with both dredging and spoils disposal and monitoring and maintenance of the revetment would result in temporary, short-term air quality and GHG emissions that would be limited to the construction time period.

Based on the results of air quality emissions modeling, NO<sub>x</sub> emissions would exceed Butte County Air Quality Management District (BCAQMD) “Level B” state CEQA significance thresholds, potentially resulting in significant air quality effects. To address potential air quality

concerns related to NO<sub>x</sub> emissions, the Proposed Action has been designed to incorporate measures to minimize the total quantity of air quality pollutants emitted during construction-related operations. BMPs, standard mitigation measures and best available mitigation measures, as defined by the BCAQMD in the *CEQA Air Quality Handbook* (January 2008), are incorporated into the Proposed Action. Therefore, with implementation of ***Environmental Commitments AQ-1*** and ***AQ-2*** and ***Mitigation Measure AQ-1***, as described in Attachment B, the Proposed Action would have a less than significant impact on air quality and greenhouse gas emissions.

#### Hazards and Hazardous Materials

During construction activities associated with the Proposed Action, there would be a remote possibility of accidental spills of fuel or oil from the equipment used. Implementation of best construction practices for hazardous materials, including preparation of a spill prevention and response plan, training of construction personnel to comply with the plan, and the availability of on-site hazmat cleanup equipment and materials, would minimize the potential risk to health and worker safety due to exposure to hazards and hazardous materials. Therefore, with implementation of ***Environmental Commitments HAZ-1 and HAZ-2***, as described in Attachment B, the Proposed Action would have a less than significant impact on hazards and hazardous materials.

#### Traffic and Circulation

Construction activities associated with dredging operations would temporarily result in a slight increase in traffic levels from worker commutes and transportation of construction equipment and materials. However, once dredging equipment and machinery are on-site, it would remain on-site until completion of construction activities. Additionally, while maintenance activities would be limited in effort and duration, trucks and other construction equipment required for the periodic maintenance of the rock-toe and tree revetment may result in temporary traffic delays along roads in the vicinity of the project site as trucks hauling materials are entering and leaving the project area. Although roadway safety problems should be minimal, implementation of traffic control measures (e.g., signs, flaggers), as appropriate, would minimize and avoid potential traffic-related impacts. With implementation of ***Environmental Commitments TRAF-1 – TRAF-3***, as described in Attachment B, the Proposed Action would have a less than significant impact on transportation and circulation.

#### Noise

There are no significant impacts to the environment from construction noise. Noise and vibration would be short-term and intermittent, limited to daytime hours and would not subject nearby residences to prolonged noise exposure above 55 to 65 dBA, or severe noise levels above 80 dBA.

#### Cumulative Effects

As discussed above and in Chapter 3 of the Draft EA/IS, all potential impacts related to the Proposed Action would be mitigated to below a level of significance through the incorporation of

specific measures into the scope of the project.

Because the majority of the potential impacts associated with the Proposed Action are temporary and these, as well as all other potential impacts, would be mitigated to below a level of significance, the Proposed Action would not significantly contribute to cumulative impacts related to the aforementioned resources.

## **Measures Incorporated into the Proposed Action to Mitigate Adverse Effects**

All adverse environmental impacts have either been eliminated through project design, or BMPs, environmental commitments and mitigation measures that have been integrated into the Proposed Action and would reduce impacts to a less-than-significant level. Provided below is a summary of the measures which have been incorporated into the Proposed Action to avoid and minimize impacts to the environment. A detailed description of each resource-specific impact avoidance measure is provided in the Mitigation, Monitoring, and Reporting Program (Attachment B).

- ❑ Fisheries and Aquatic Resources (see *Environmental Commitments FAR-1 – FAR-4*, and *WQ-3* in Attachment B)
  - A qualified biologist will conduct environmental awareness training for project personnel.
  - Implement procedures for decontaminating field gear and in-river equipment to avoid introduction of invasive species.
  - Conduct entrainment monitoring if fish are identified in the dredge slurry.
  - Implement measures to minimize the injury or mortality of fish in the immediate work area associated with rock-toe and tree revetment maintenance activities.
  - Implement standard water pollution prevention measures to avoid potential water quality-related significant effects on fisheries and aquatic resources.
  - Submerge the cutterhead to the extent practicable within the substrate when the dredge pumps are engaged and reduce the dredge ladder swing speed, to the extent practicable, to avoid/minimize the potential for entrainment of juvenile fish into the suction dredge.
  - Implement protective measures described in the NMFS Biological Opinion for this project.
- ❑ Terrestrial Resources (Botanical and Wildlife) (see *Environmental Commitments TR-1 – TR-6* in Attachment B)
  - A qualified biologist will conduct environmental awareness training for project personnel.
  - Implement protective measures to avoid and minimize potential effects to Valley Elderberry Longhorn Beetle and its habitat, including measures described in the USFWS Biological Opinion for this project.

- Place temporary construction netting around nearby vegetation to provide protection from construction activities.
  - Remove materials placed in natural areas and temporary structures and return affected areas to pre-construction elevations. Revegetate, as appropriate, to stabilize the environment and prevent erosion as detailed in a restoration plan approved by CDFW.
  - Only native grasses will be used for any necessary re-seeding resulting from revetment maintenance activities. Seed mix will be determined by CDFW and USFWS biologists utilizing appropriate native species collected from local ecotypes.
  - Avoid and minimize the spread of non-native weeds through pressure washing of construction equipment prior to entering the project site.
  - Avoid and minimize potential adverse effects to terrestrial resources through the implementation of the following protective measures: (1) strategic placement of construction staging locations (e.g., delineating and avoiding sensitive habitats); and (2) time activities to avoiding peak migratory bird, bank swallow, and raptor nesting seasons.
  - Conduct pre-construction floristic plant survey and pre-construction surveys for sensitive biological resources, including western pond turtle, and nesting raptors (if construction timing necessitates) by a qualified biologist prior to initiation of construction activities.
  - Implement construction BMPs and avoid, to the extent feasible, potential bank swallow habitat areas.
  - CDFW and/or USFWS will be contacted for additional review and consultation prior to implementation of any activities that could result in impacts to listed species or sensitive habitats.
- ☐ Recreation and Navigation Safety (see *Environmental Commitments REC-1 – REC-4* in Attachment B)
- Post notices alerting recreationalists to the dredge activities beginning two weeks prior to the proposed dredging and throughout the duration of the activity. A notice also will be published in local newspapers approximately one week prior to commencement of in-river activities.
  - Post signs on the Capay Unit of the SRNWR prior to, and during revetment maintenance activities to alert the public of potential hazards and trail closures.
  - Use lighting and warning signs consistent with U.S. Coast Guard rules and regulations to identify the location of the dredge boat and any associated in-river hazards, which will be in place during all in-river construction activities.
- ☐ Hydrology and Water Quality (see *Environmental Commitments WQ-1 – WQ-3* in Attachment B)

- Implement standard water pollution prevention measures (e.g., erosion and sediment control measures, proper maintenance of equipment and storage of materials, proper control of non-stormwater discharges).
  - Prepare and implement a Storm Water Pollution Prevention Plan in compliance with NPDES Water Quality Certification Standard Conditions.
  - Prepare and implement an Erosion Control Plan and Post Construction Storm Water Management Plan.
  - Minimize the potential for increased sediment and turbidity by reducing the cutterhead dredge speed and/or the ladder swing speed, as conditions warrant.
- ☐ Cultural Resources (see *Environmental Commitments CULT-1 – CULT-3* in Attachment B)
- Should buried resources, human remains, or submerged archaeological or historic resources be discovered during construction, potential historic and cultural resources impacts will be reduced through immediate contact and consultation with the appropriate agencies (i.e., State Historic Preservation Officer, the County Coroner, and/or the California State Lands Commission).
- ☐ Air Quality and Greenhouse Gasses (see *Environmental Commitments AQ-1, AQ-2* and *GHG-1*, and *Mitigation Measure AQ-1* in Attachment B)
- Implement standard minimization and mitigation measures, and best available construction management practices (e.g., maintaining all construction equipment in proper tune according to manufacturer's specifications, minimizing the amount of disturbed area and the amount of materials actively worked) during construction operations.
  - Prepare and implement a dust control plan.
  - Prepare an Air Quality Control Plan to reduce NO<sub>x</sub> emissions.
  - Implement standard BMPs for reducing GHG emissions.
- ☐ Hazards and Hazardous Materials (see *Environmental Commitments HAZ-1 and HAZ-2* in Attachment B)
- Prepare and implement a Hazardous Materials Control, Spill Prevention, and Response Plan to reduce the potential effects of hazardous materials use and spills.
  - Implement fire risk reduction measures (e.g., maintaining staging areas, welding areas, or other areas identified for construction work clear of combustible materials in order to maintain a firebreak) throughout the construction period.
- ☐ Traffic and Circulation (see *Environmental Commitments TRAF-1 – TRAF-3* in Attachment B)

- Develop and implement a Traffic Control Plan to avoid potential delays or safety issues on SR45, County Rd 23, River Road or other haul routes.
- Maintain and/or repair, if necessary, the local access road on the Capay Unit of the SRNWR following completion of revetment maintenance activities.

**The proposal is not expected to have any significant adverse effects on wetlands and floodplains, pursuant to Executive Orders 11990 and 11988 because:**

Since the 1997 relocation, the M&T/Llano Seco Pumps Facility has provided a reliable water supply to the M&T Chico Ranch and Llano Seco Rancho, as well as habitat acreage owned and managed by USFWS and CDFW. As described in Chapter 1 of the Draft EA/IS, the combined acreage of the M&T and Llano Seco Ranches which is potentially irrigable by the M&T/Llano Seco Pumps Facility is approximately 21,000 acres. Virtually all of the Llano Seco acreage is protected by conservation and agricultural easements to permanently preserve the Ranch's wildlife and its farming culture. In addition to serving the ranches, the pumping facility provides water to approximately 2,200 acres in fee title owned and managed by USFWS. Included in these fee title lands, approximately 933 acres has been developed in wetlands and associated habitat. In addition, CDFW owns approximately 1,500 acres in fee title that includes approximately 952 acres developed into wetlands and associated habitat. These habitat areas provide wetland habitat for waterfowl, shorebirds, and other wetland-dependent and special-status species.

As discussed in Chapter 3 of the Draft EA/IS (Section 3.4 – Terrestrial Resources), the Proposed Action would not result in significant adverse effects on Federal wetlands, riparian habitat or other sensitive natural communities in the Project Area.

Additionally, as described in Chapter 3 of the Draft EA/IS (Section 3.6 – Hydrology and Water Quality), the hydraulics and sediment transport characteristics of the project reach have been modeled extensively for a wide range of flows (10,000 cfs to 134,000 cfs). The hydraulics and sediment transport results from the entire suite of numerical and physical models are summarized in Tetra Tech (2012b). Although the existing gravel stockpile area is located in the floodplain, the area is a backwater under flood flows and the drainage pattern or quantity of direct run-off was not altered by the stockpile placement. Under the Proposed Action, dredged material removed from the Sacramento River would be placed on top of the existing stockpile. Because the top of the existing stockpile is higher in elevation than the existing flood control levee, the placement of new material on the top of the existing stockpile would occur above the area of the existing floodplain that is subject to inundation. Therefore, storage of dredged material will not significantly impede or redirect flows because the stockpile storage area is within a backwater of the floodplain.

## **Project Coordination**

Consistent with NEPA and CEQA regulatory requirements, the Proposed Action and associated environmental documentation were prepared in consideration and coordination with interested and/or affected parties, including:

- California Department of Fish and Wildlife
- U.S. Fish and Wildlife Service
- California State Lands Commission
- California Department of Boating and Waterways
- California Department of Water Resources
- Butte County Air Quality Management District
- Glenn County Air Pollution Control District
- Central Valley Regional Water Quality Control Board
- Sacramento River Conservation Area Forum
- Sacramento River Preservation Trust
- National Marine Fisheries Service
- U.S. Army Corps of Engineers
- California State Parks
- City of Chico
- The Nature Conservancy
- Ducks Unlimited

## **Public Availability**

The supporting Environmental Assessment was available for public review and comment for a 45-day period beginning on December 18, 2013. The document was distributed to Federal, State and local agencies, public libraries, potentially affected landowners, and private groups and individuals upon their request. Comments were received through January 31, 2014. The Environmental Assessment and FONSI are available from:

U.S. Fish and Wildlife Service  
Sacramento National Wildlife Refuge Complex  
752 County Road 99W  
Willows, CA 95988  
Phone: 530-934-2801

or

<http://sacramentovalleyrefuges.fws.gov>

## **Other Statutory Compliance Requirements**

Prior to considering signature of the FONSI, Section 7 consultation by USFWS and NMFS for species covered by the Endangered Species Act, and by CDFW for species covered by the California Endangered Species Act will be completed. Prior to construction, permits from the U.S. Army Corps of Engineers (including a Section 404 permit under the Clean Water Act and Section 10 under the River and Harbors Act), Regional Water Quality Control Board, California

State Lands Commission, Central Valley Flood Protection Board and others, as appropriate, will be obtained.

## **Conclusions**

Based on information contained in the Environmental Assessment and the supporting references, it is my determination that the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment, within the meaning of section 102(2)(C) of the National Environmental Policy Act of 1969, as amended. As such, an environmental impact statement is not required. The attached Environmental Assessment has been prepared in support of this finding.

## **Supporting References**

- BCAQMD. 2008. CEQA Air Quality Handbook: Guidelines for Assessing Air Quality Impacts for Projects Subject to CEQA Review. January 2008.
- CDFG and USFWS. 2007. M&T Chico Ranch/Llano Seco Rancho Pumping Plant Maintenance of Channel Alignment River Mile 192.5 Final Environmental Assessment/Initial Study. Prepared by HDR|SWRI. Prepared for M&T Chico Ranch. October 2007.
- CDFW and USFWS. 2013. M&T Chico Ranch/Llano Seco Rancho Fish Screen Facility Short-term Protection Project Draft Environmental Assessment/Initial Study. December 2013.
- Tetra Tech. 2012b. Summary Report, M&T/Llano Seco Fish Screen Facility, Short-Term/Long-Term Protection Project; Alternatives Evaluation. Prepared for Ducks Unlimited, Inc. June 25, 2012.

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Assistant Regional Director, Refuges  
Pacific Southwest Region

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Date