

APPENDIX I

Draft Mitigation, Monitoring and Reporting Program

M&T CHICO RANCH/LLANO SECO RANCHO FISH SCREEN FACILITY SHORT-TERM PROTECTION PROJECT

DRAFT MITIGATION, MONITORING AND REPORTING PROGRAM

INTRODUCTION

Mitigation is an important mechanism that Federal agencies can use to minimize the potential adverse environmental impacts associated with their actions (CEQ 2011). Many Federal agencies rely on mitigation to reduce adverse environmental impacts as part of the planning process for a project, incorporating mitigation¹ as integral components of a proposed project design before making a determination about the significance of the project's environmental impacts. Federal agencies should clearly identify commitments to mitigation measures designed to achieve environmentally preferable outcomes in their decision documents (CEQ 2011). Agencies also should identify mitigation commitments necessary to reduce impacts, where appropriate, to a level necessary for a mitigated “Finding of No Significant Impact” (FONSI) on the environment. In both cases, mitigation commitments should be carefully specified in terms of measurable performance standards or expected results, so as to establish clear performance expectations (CEQ 2011).

Section 15097 of the California Environmental Quality Act (CEQA) Guidelines states that all State and local agencies to establish monitoring or reporting programs for projects approved by a public agency whenever approval involves the adoption of either a “mitigated negative declaration” or specified environmental findings related to environmental impact reports. The primary purpose of the Mitigation, Monitoring and Reporting Program (MMRP) is to ensure that the environmental commitments and mitigation measures identified in the Environmental Assessment/Initial Study (EA/IS) are implemented to avoid or reduce identified potential environmental impacts.

Mitigation is defined by both CEQA (see Section 15370 of the CEQA Guidelines) and the National Environmental Policy Act (NEPA) as a measure that:

- Avoids an impact altogether by not taking a certain action or parts of an action.
- Minimizes an impact by limiting the degree or magnitude of the action and its implementation.

¹ This type of mitigation can lead to an environmentally preferred outcome and in some cases reduce the projected impacts of agency actions to below a threshold of significance. An example of mitigation measures that are typically included as part of the proposed action are agency standardized best management practices such as those developed to prevent stormwater runoff or fugitive dust emissions at a construction site (CEQ 2011).

- ❑ Rectifies an impact by repairing, rehabilitating, or restoring the affected environment.
- ❑ Reduces or eliminates an impact over time, through preservation and maintenance activities during the life of the action.
- ❑ Compensates for an impact by replacing or providing substitute resources or environments.

BASIS FOR THE MITIGATION, MONITORING AND REPORTING PROGRAM

The legal basis for the development and implementation of the MMRP lies within both NEPA and CEQA (including the California Public Resources Code).

Although not expressly required by NEPA, the Council on Environmental Quality (CEQ) directs all Federal agencies to include appropriate means to mitigate adverse environmental impacts (40 CFR 1502.14(f), 1502.16(h)). For many Federal actions, environmental review is conducted through the preparation of an Environmental Assessment. In these instances, NEPA compliance is usually completed with a FONSI and, thus, a more detailed environmental impact statement is not required. According to CEQ (2011), the environmental impacts of a proposed action may be mitigated to the point when the Federal agency may make a FONSI determination. When the FONSI depends on successful mitigation, however, such mitigation requirements should be made public and be accompanied by monitoring and reporting (CEQ 2011; CEQ 2010).

Public involvement is a key procedural requirement of the NEPA review process, and should be provided for in the development of mitigation and monitoring procedures (40 CFR §1506.6). As a matter of transparency and accountability, Federal agencies are encouraged to consider including public involvement components in their mitigation monitoring programs because public involvement may provide insight or perspective for improving mitigation activities and monitoring (CEQ 2011). NEPA further requires all Federal agencies to make information useful for restoring, maintaining and enhancing the quality of the environment available to States, counties, municipalities, institutions and individuals (42 U.S.C. §4332(2)(G)). This requirement can include information on mitigation and mitigation monitoring (CEQ 2011).

With respect to CEQA, Sections 21002 and 21002.1 of the California Public Resources Code state:

- ❑ Public agencies are not to approve projects as proposed if there are feasible alternatives or feasible mitigation measures available that would substantially lessen the significant environmental effects of such projects; and
- ❑ Each public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so.

Section 21081.6 of the California Public Resources Code further requires that the public agency shall adopt a mitigation monitoring or reporting program for the changes made to the project or conditions of project approval, adopted to mitigate or avoid significant effects on the environment. The monitoring or reporting program shall be designed to ensure compliance with

mitigation measures during project implementation (OPR 1997). Section 21081.6 of the California Public Resources Code also requires that mitigation measures be adopted when a public agency adopts a mitigated negative declaration or, after preparing a full environmental impact report, the agency makes its findings under CEQA regarding how identified significant environmental effects will be addressed. The monitoring or reporting program can be made a condition of project approval or otherwise made binding on the project in order to mitigate or avoid significant effects on the environment.

INTENT OF THE MITIGATION MONITORING AND REPORTING PROGRAM

The primary objective of the MMRP is to ensure the effective implementation and enforcement of adopted environmental commitments, mitigation measures and permit conditions. The MMRP will provide for monitoring of construction and dredging activities as needed, on-site identification and resolution of potential environmental issues, and proper reporting to Lead Agency staff.

CONTENT OF THE MITIGATION, MONITORING AND REPORTING PROGRAM

Environmental commitments are measures or practices adopted by a project proponent to reduce or avoid adverse effects that could result from project construction and operations. An MMRP describes the environmental commitments, including impact avoidance or minimization measures, incorporated into the Proposed Project as a means to avoid and/or reduce potentially significant impacts on the environment (**Table I-1**).

The mitigation program identified in this Draft MMRP to reduce potential project impacts consists of mitigation measures, project design elements, and construction-related best management practices. Potentially significant impacts related to air quality have been identified. Although impacts on other environmental resources are expected to be less than significant, environmental commitments are nonetheless proposed for several other resources to ensure that any potential impacts remain less than significant. These environmental resources include cultural resources, fisheries resources, geology and soils, greenhouse gas emissions, hydrology and water quality, hazards and hazardous materials, terrestrial resources and traffic. Resource-specific environmental commitments and mitigation measures provided in this Draft MMRP were identified in Chapter 3 – Affected Environment and Environmental Consequences and Chapter 4 – Other Impact Considerations, of the Draft EA/IS. As part of the impact assessment for each resource, environmental commitments and/or mitigation measures have been identified that reduce these impacts to less than significant levels. The environmental analysis conducted for the Proposed Project did not identify any impacts that, after mitigation, remained significant and therefore unavoidable; no significant irreversible impacts were identified associated with the Proposed Project.

The Lead Agencies are proposing to adopt these measures and incorporate them as part of the Proposed Project in compliance with applicable Federal, State, and local policies or regulations that apply to the project activities. If the Lead Agencies decide to approve and implement the

Proposed Action/Project, then compliance monitoring and evaluation will be performed as indicated in the description of each measure in Table I-1.

As the lead agencies, USFWS and CDFW are responsible for monitoring the implementation of the Proposed Action/Project and for ensuring that adopted environmental commitments and mitigation measures are implemented. The purpose of the MMRP is to document that the required mitigation measures are implemented as described in the EA/IS and to ensure that project impacts are reduced to a less-than-significant level. USFWS and CDFW may delegate duties and responsibilities for monitoring to other mitigation monitors or consultants, as deemed necessary. They will ensure that the person(s) delegated to conduct these duties or responsibilities are qualified to monitor compliance.

Another important consideration addressed in this MMRP pertains to funding assurances for the proposed project. In particular, adequate funding must be provided to implement the required minimization and mitigation measures, and to monitor compliance with and the effectiveness of the measures (CDFW 2013). For the proposed project, the existing Ecosystem Restoration Program Grant provides a funding mechanism to address: (1) preparation of requisite NEPA and CEQA environmental compliance documentation; (2) preparation of requisite permitting applications, including ESA and CESA; (3) site maintenance activities comprised of sedimentation monitoring (bathymetric survey) and an additional year of habitat mitigation monitoring at the restoration and enhancement areas associated with the rock-toe revetment installed in 2007. If the Proposed Action/Project is approved, additional funding for subsequent activities pertaining to construction, implementation of project-related mitigation and post-project effectiveness monitoring described in this MMRP would need to be secured prior to the initiation of any on-the-ground activities. After funding is secured for the next phase of work, and prior to implementation of any on-the-ground activities, a construction bid contract will be circulated and selection of a contractor(s) will occur at that time. Through the contracting process, it is anticipated that a Grant Administrator will be responsible for ensuring that the contractor (or sub-contractor) implements the measures specified in this MMRP.

As specified in Table I-1, USFWS, CDFW, and/or delegated representatives will be responsible for implementing the MMRP, which will include:

- Ensuring that the MMRP elements are incorporated into the construction bid documents.
- Coordinating monitoring activities.
- Directing the preparation and filing of compliance reports.
- Maintaining records concerning the status of all environmental commitments and mitigation measures.

This Draft MMRP is organized in a matrix format and measures are presented by environmental resource area (e.g., air quality, biological resources). Table I-1 is comprised of the following five columns.

- ❑ ***Environmental Commitment/Mitigation Measure.*** – The first column lists the environmental commitment or mitigation measure identified for each respective resource-specific impact discussed in the Draft EA/IS. The numbering system used in the Draft EA/IS is carried forward in this Draft MMRP.
- ❑ ***Responsible Implementing Entity.*** – The second column identifies the agency or entity that will be responsible for implementing the environmental commitment and/or mitigation measure, and what, if any, coordination is required. If more than one party has responsibility under a given mitigation measure, the tasks of each individual party is identified parenthetically (e.g., “implementation” or “monitoring”).
- ❑ ***Timeframe for Implementation.*** – The third column refers to when a measure will be implemented and/or when monitoring will occur.
- ❑ ***Responsible Monitoring Agency.*** – The fourth column refers to the agency responsible for ensuring that the environmental commitment and/or mitigation measure is implemented.
- ❑ ***Verification of Compliance.*** – The fifth column includes an area for sign-off indicating compliance.

LITERATURE CITED

- CDFW. 2013. California Endangered Species Act (CESA) Sections 2081 (b) and (c) - Incidental Take Permit Process. http://www.dfg.ca.gov/habcon/cesa/incidental/incid_perm_proced.html. Accessed on August 6, 2013.
- 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.
- Council on Environmental Quality (CEQ). 2010. White House Council on Environmental Quality Announces Steps to Modernize and Reinvigorate the National Environmental Policy Act. February 18, 2010.
- CEQ. 2011. Memorandum for Heads of Federal Departments or Agencies Regarding Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact. January 14, 2011.
- Governor’s Office of Planning and Research (OPR). 1997. CEQA Technical Advice Series – Mitigated Negative Declarations. December 1997 Revision.

Table I-1. Summary of Environmental Commitments Incorporated into the Proposed Project and Mitigation Measures.

Environmental Commitment / Mitigation Measure	Responsible Implementing Entity	Timeframe for Implementation	Responsible Monitoring and Regulatory Compliance Agencies	Verification of Compliance
Air Quality / Greenhouse Gas Emissions				
<p><i>Environmental Commitment AQ-1: Reduce potential air quality impacts by implementing standard minimization and mitigation measures, and best available construction management practices.</i></p> <p>The following standard mitigation measures would be implemented as part of the project to ensure minimization of impacts on air quality.</p> <ul style="list-style-type: none"> ▪ Maintain all construction equipment in proper tune according to manufacturer's specifications. ▪ Maximize to the extent feasible, the use of diesel construction equipment meeting the CARB's 1996 or newer certification standard for off-road heavy-duty diesel engines. ▪ Use electric equipment where feasible. ▪ Substitute gasoline-powered for diesel-powered equipment, where feasible. ▪ Require that emissions from all off-road diesel-powered equipment used on the project site not exceed 40 percent opacity for more than 3 minutes in any one hour. ▪ Minimize the amount of disturbed area and the amount of materials actively worked. <p>Additional review of BCAQMD guidelines regarding BAMMs identified one additional measure that the Proposed Action/Project is capable of implementing.</p> <ul style="list-style-type: none"> ▪ A Vehicle Idling Policy will be implement to restrict unnecessary vehicle idling to 5 minutes. 	<p>Construction contractor (implementation)</p>	<p>During the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring)</p> <p>USFWS (Lead Agency implementation monitoring)</p> <p>BCAQMD (Butte County air quality regulatory compliance)</p> <p>GCAPCD (Glenn County air quality regulatory compliance)</p>	
<p><i>Mitigation Measure AQ-1: Prepare an Air Quality Control Plan to reduce NO_x emissions.</i></p> <p>Because potentially significant air quality impacts related to NO_x emissions have been identified, mitigation measures will be implemented to reduce NO_x emissions when GCAPCD and BCAQMD</p>	<p>Construction contractor, in collaboration with M&T Chico Ranch and Llano Seco Rancho</p>	<p>Prior to and during the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring)</p>	

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<p>thresholds are exceeded. Projects that exceed a BCAQMD Level B threshold (i.e., > 25 lbs per day of NO_x) should be submitted to the BCAQMD for review (BCAQMD 2008).</p> <p>The contractor will provide a plan for review and approval by GCAPCD and BCAPCD and the Lead Agencies demonstrating that construction activities will not exceed 25 lbs/day of NO_x. The plan also will demonstrate that the heavy-duty (equal to or greater than 50 horsepower) off-road equipment to be used during construction, including owned, leased and subcontractor vehicles, will achieve a project-wide fleet-average 20 percent NO_x reduction compared to the most recent CARB fleet average at time of construction. To reduce NO_x emissions for the Proposed Action/Project, the contractor may employ one or more of the following measures:</p> <ul style="list-style-type: none"> ▪ Require injection timing retard of 2 degrees on all diesel vehicles, where applicable. ▪ Install high-pressure injectors on all vehicles, where feasible. ▪ Encourage the use of reformulated diesel fuel. ▪ Electrify equipment, where feasible. ▪ Maintain equipment in tune with manufacturer's specifications. ▪ Install catalytic converters on gasoline-powered equipment. ▪ Substitute gasoline-powered for diesel-powered equipment where feasible. ▪ Use compressed natural gas or on-site propane mobile equipment instead of diesel-powered equipment, where feasible. <p>The contractor will submit to the Lead Agencies and all relevant air quality management districts a comprehensive inventory of all off-road construction equipment equal to or greater than 50 horsepower that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use or fuel throughput for each piece of equipment. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the contractor shall provide the relevant air quality management districts with the anticipated construction timeline, including start date and the name and phone number of the project manager and on-site foreman.</p>	(implementation)		<p>USFWS (Lead Agency implementation monitoring)</p> <p>BCAQMD (Butte County air quality regulatory compliance)</p> <p>GCAPCD (Glenn County air quality regulatory compliance)</p>	

Environmental Commitment / Mitigation Measure	Responsible Implementing Entity	Timeframe for Implementation	Responsible Monitoring and Regulatory Compliance Agencies	Verification of Compliance
<p>Acceptable options for reducing emissions also may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, aftertreatment products, provide funds for air district offsite mitigation projects, and/or other options as they become available. The GCAPCD and GCAQMD will be contacted to discuss plan details and potential alternative measures, if necessary.</p>				
<p><i>Environmental Commitment GHG-1: Reduce potential GHG impacts by implementing standard BMPs for reducing GHG emissions.</i></p> <p>Although BCAQMD (2008) does not identify specific measures for reducing GHG emissions, the measures below are considered BMPs that provide options for reducing GHG emissions from construction projects (SMAQMD 2010).</p> <ul style="list-style-type: none"> ▪ Improve fuel efficiency from construction equipment: ▪ Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than 3 minutes (5 minute limit is required by the State airborne toxics control measure [Title 13, sections 2449(d)(3) and 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site. ▪ Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated. ▪ Train equipment operators in proper use of equipment. ▪ Use the proper size of equipment for the job. ▪ Use equipment with new technologies (repowered engines, electric drive trains). ▪ Perform on-site material hauling with trucks equipped with on-road engines (if determined to be less emissive than the off-road engines). ▪ Use alternative fuels for generators at construction sites such as propane or solar, or use electrical power. 	<p>Construction contractor, in coordination with M&T Chico Ranch and Llano Seco Rancho (implementation)</p>	<p>During the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring)</p> <p>USFWS (Lead Agency implementation monitoring)</p> <p>BCAQMD (Butte County air quality regulatory compliance)</p> <p>GCAPCD (Glenn County air quality regulatory compliance)</p>	

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<ul style="list-style-type: none"> ▪ Use an CARB approved low carbon fuel for construction equipment (NO_x emissions from the use of low carbon fuel must be reviewed and increases mitigated.) ▪ Use locally sourced materials for construction materials (goal of at least 20% based on costs for building materials) ▪ Develop a plan to efficiently use water for adequate dust control. ▪ Encourage and provide carpools or shuttle vans for construction worker commutes. 				
Hydrology and Water Quality				
<p><i>Environmental Commitment WQ-1: (1) Obtain appropriate NPDES Permit and Water Quality Certification; and (2) comply with the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities by Preparing and Implementing a Stormwater Pollution Prevention Plan.</i></p> <p>The Construction General Permit requires that all stormwater discharges associated with construction activity, where clearing, grading, and excavation results in soil disturbance of at least 1 acre of total land area, by law must comply with the provisions of an NPDES Permit and develop and implement and effective SWPPP (Caltrans 2003). Because both the Proposed Action/Project and the No Action Alternative would involve construction activities affecting more than one acre, it is anticipated that coverage would be obtained through the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit Order 2009-0009-DWQ), consistent with the terms of the NPDES Permit obtained for the 2007 project. The Construction General Permit requires the development and implementation of a SWPPP, which must list BMPs and the placement of those BMPs, that will be used to protect stormwater runoff (SWRCB 2013).</p> <p>BMPs will include but are not limited to:</p> <ul style="list-style-type: none"> ▪ Implementing the terms and conditions of the CWA Section 401 Water Quality Certification, including a ECP, PCSWMP, SWPPP, and a Hazardous Materials Control, Spill Prevention, and Response Plan (HMCSPRP) to prevent any substances that could be hazardous to aquatic life from contaminating the soil or entering watercourses, as well as to minimize turbidity levels and suspension of sediments; 	<p>M&T Chico Ranch/Llano Seco Rancho (permit applicants)</p> <p>Construction contractor (implementation)</p>	<p>Prior to and during the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring)</p> <p>USFWS (Lead Agency implementation monitoring)</p> <p>RWQCB (CWA regulatory compliance)</p>	

Environmental Commitment / Mitigation Measure	Responsible Implementing Entity	Timeframe for Implementation	Responsible Monitoring and Regulatory Compliance Agencies	Verification of Compliance
<ul style="list-style-type: none"> ▪ Establishing and implementing a HMCSRP before project construction that includes strict on-site handling rules to keep construction and maintenance materials out of drainage and waterways; ▪ Training all construction personnel in the proper use and cleanup of potentially hazardous materials; ▪ Notifying CDFW and the Central Valley RWQCB immediately of spills and cleanup procedures, and cleaning up all spills immediately according to the HMCSRP, and ▪ Providing staging and storage areas for equipment, materials, fuels, lubricants, solvents, and other possible contaminants away from watercourses and their watersheds. <p>The SWPPP will be provided prior to the onset of construction activities, and will be implemented as required by the conditions of a NPDES permit.</p>				
<p><i>Environmental Commitment WQ-2: Prepare and Implement an Erosion Control Plan and a Post-Construction Stormwater Management Plan.</i></p> <p>Implementing an Erosion Control Plan (ECP) and Post-construction Stormwater Management Plan (PCSWMP) will help to prevent any substances that could be hazardous to aquatic life from contaminating the soil or entering watercourses, as well as to minimize turbidity levels and suspension of sediments. Consistent with mitigation requirements for the 2007 Temporary Maintenance Project, it is anticipated that a ECP and PCSWMP will be prepared and implemented for the Proposed Project.</p> <p><u>Erosion Control Plan</u></p> <p>According to Butte County (2005) requirements for preparing an ECP, the plan must be prepared by a qualified professional with experience in the field of erosion and sediment control that has the ability to certify based on a professional license or registration issued in the State of California that the erosion control plan is suitable for proposed construction and that when completed, the construction was in accordance with the erosion and sediment control plans (Butte County 2005). The ECP shall include both temporary (first year) and permanent erosion control protection measures that prevent sediment and other pollutant discharges from reaching watershed drainages and streams. In the event that the ECP fails to adequately prevent sediment from</p>	<p>M&T Chico Ranch/Llano Seco Rancho (permit applicants)</p> <p>Construction contractor (implementation)</p> <p>M&T Chico Ranch and Llano Seco Rancho</p>	<p>Develop plans prior to the construction period.</p> <p>Adhere to ECP specifications during the construction period.</p> <p>Adhere to PCSWMP specifications post-construction.</p>	<p>CDFW (Lead Agency implementation monitoring)</p> <p>USFWS (Lead Agency implementation monitoring)</p> <p>RWQCB (CWA regulatory compliance)</p>	

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<p>leaving the site, the qualified professional will be contacted to immediately correct and/or repair the deficiencies (Butte County 2005). Erosion and sediment control requirements may include, but are not limited to, the following.</p> <ul style="list-style-type: none"> ▪ Hydroseeding mixtures shall conform to the Federal Seed Act, the Federal Noxious Weed Act, and applicable state and local seed and noxious weed laws. Seed mixes will be determined by CDF&W and USFWS biologists utilizing appropriate native species collect from local ecotypes. ▪ Use hydroseeding in conjunction with straw mulch, and state the application rate per seed mixture in the ECP. Supplemental irrigation may be required during dry periods. ▪ Hydroseeding can be applied prior to straw mulch or in a mixture of fiber, seed, etc. Application prior to straw mulch ensures maximum direct contact of the seeds to the soil. If seed is applied in a mixture, increase the seed rate to compensate for all seeds not having direct contact with the soil. ▪ Roughen embankments and fill rills before placing straw mulch by rolling with a crimping or punching type roller or by track walking. Apply straw at a minimum rate of 4,000 lb/acre, either by machine or by hand distribution, and evenly distribute straw mulch on the soil surface. ▪ Avoid use of hydroseeding in areas where it would be incompatible with future earthwork activities and would have to be removed. ▪ Follow up application shall be made as needed to cover weak spots and to maintain adequate soil protection. ▪ Avoid over spray onto roads, sidewalks, drainage channels and existing vegetation. ▪ Use fiber rolls that are a minimum of 8 inches in diameter, and locate them on level contours according to appropriate slope inclination requirements. ▪ Turn the ends of the fiber roll up slope to prevent runoff from going around the roll. If more than one fiber roll is placed in a row, the rolls shall be abutted securely to one another to provide a tight joint. ▪ Fiber rolls typically remain in place. If fiber rolls are removed, the contractor should collect and dispose of sediment accumulation, and fill and compact holes, trenches, depressions or any other ground disturbance to blend with adjacent ground. 				

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<p>With respect to revetment maintenance, the specific combination of erosion control measures to be implemented will be dependent on the location, type and extent of maintenance that may be required. Post-construction inspection and maintenance requirements include, but are not limited to the following.</p> <ul style="list-style-type: none"> ▪ Inspect erosion control applications prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season. ▪ Areas where erosion is evident shall be repaired, and straw mulch and hydroseed shall be re-applied as soon as possible. Reapplication of straw mulch and tackifier may be required to maintain effective soil stabilization over disturbed areas and slopes. A tackifier is typically applied at a rate of 125 lb per acre. In windy conditions, the rates are typically 180 lb per acre. ▪ Where seeds fail to germinate, or they germinate and die, the area must be re-seeded, fertilized, and mulched within the planting season, using not less than half the original application rates. ▪ Sediment shall be removed from fiber rolls when sediment accumulation reaches one-half the designed sediment storage depth, usually one-half the distance between the top of the fiber roll and the adjacent ground surface. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed at an appropriate location. <p><u>Post-Construction Stormwater Management Plan</u></p> <p>The primary objective of a Post-Construction Stormwater Management Plan is to ensure that pollutant discharges are reduced to the maximum extent practicable and to prevent stormwater discharges from causing or contributing to a violation of receiving water quality standards (RWQCB 2012). Post-construction stormwater management primarily consists of non-structural and structural BMPs (RWQCB 2011). Non-structural BMPs include the preservation of riparian zones, minimization of disturbance and imperviousness, and maximization of open space. Structural BMPs include treatment devices designed to reduce pollutants through sedimentation, adsorption, decomposition, filtration and infiltration (RWQCB 2011).</p>				

Environmental Commitment / Mitigation Measure	Responsible Implementing Entity	Timeframe for Implementation	Responsible Monitoring and Regulatory Compliance Agencies	Verification of Compliance
<p>Development of stormwater management controls and practices is an effective and economical way of meeting the requirements of the NPDES General Permit and the stormwater management objectives (RWQCB 2011). The minimum requirements for a Post-Construction Stormwater Management Plan, as described in the General Permit, are as follows:</p> <ul style="list-style-type: none"> ▪ Develop a regulatory mechanism (to the maximum extent allowable by State, tribal, and local law) requiring the implementation of post-construction runoff BMPs at new development and redevelopment projects covering at least one acre of land. ▪ Continue to implement and evaluate structural and non-structural BMPs for the control of post-construction runoff from new development and redevelopment projects. ▪ Ensure adequate long term operation, maintenance and success of BMPs. ▪ Identify, develop and implement the appropriate BMPs and measurable goals to meet these minimum requirements. <p>A discharger must certify that all State and local requirements have been met in accordance with the General Permit. For construction to be found complete, post-construction stormwater management measures must be installed, and a long-term maintenance plan established (SWRCB 2013). This requirement is intended to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect water quality impacts (i.e., pollution and/or hydromodification) upstream and downstream. Specifically, the discharger must demonstrate compliance with the post-construction standards set forth in Section XIII of the General Permit (SWRCB 2013).</p>				
<p><i>Environmental Commitment WQ-3: Minimize the potential for increased sediment and turbidity by reducing the cutterhead dredge speed and/or the ladder swing speed, as conditions warrant.</i></p> <p>The Proposed Action/Project would adhere to RWQCB water quality objectives for the Sacramento River Basin. These objectives require that project discharge cannot exceed 1 Nephelometric Turbidity Unit (NTU) when natural turbidity is between 0 and 5 NTUs, 20 percent of natural turbidity levels when natural turbidity is between 5 and 50 NTUs, 10 NTUs when natural turbidity is between 50 and 100 NTUs, or 10 percent when natural turbidity is greater than 100 NTUs. A biological</p>	Construction contractor (implementation)	During the construction period.	CDFW (Lead Agency implementation monitoring and CESA compliance) USFWS (Lead Agency	

Environmental Commitment / Mitigation Measure	Responsible Implementing Entity	Timeframe for Implementation	Responsible Monitoring and Regulatory Compliance Agencies	Verification of Compliance
<p>monitor will oversee construction activities within the channel of the Sacramento River, and if water quality objectives are exceeded, in-water work will stop until these objectives can be achieved.</p> <p>Silt curtains are not recommended for operations around cutterhead dredges where frequent curtain movement would be necessary (Herbich and Brahme 1991). Operating parameters used to determine the turbidity generation from the cutterhead typically include the cutter rotational velocity, the suction flow rate, the thickness of cut, the ladder angle, and the translational ladder speed (Henriksen 2009). In addition to the other environmental commitments to minimize and avoid potential water quality impacts described in this chapter, the following BMPs for dredging will be applied to further reduce the potential for mobilization of sedimentation in the water column.</p> <ul style="list-style-type: none"> ▪ Reduce cutterhead rotation speed. Submerge the cutterhead within the substrate to the maximum extent practicable when the dredge pumps are engaged, and utilize a slow rotational speed, where feasible given onsite in-river conditions. Reducing cutterhead rotation speed reduces the potential for side casting excavated sediment away from the suction entrance and re-suspending sediment. This measure is typically effective only on maintenance of relatively loose, fine grain sediment (LTMS 2001). Pipeline clearing will be kept to the minimum amount necessary. ▪ Reduce ladder swing speed. Reducing the swing speed ensures that the dredgehead does not move through the cut faster than it can hydraulically pump the sediment. Reducing swing speed reduces the volume of re-suspended sediment. When feasible given onsite in-river conditions, the goal is to swing the dredgehead at a speed that allows as much of the disturbed sediment as possible to be removed with the hydraulic flow. Typical swing speeds are 5-30 feet per minute (LTMS 2001). 			<p>implementation monitoring compliance)</p> <p>NMFS (ESA regulatory compliance)</p> <p>RWQCB (CWA regulatory compliance)</p>	
Fisheries and Aquatic Resources				
<p><i>Environmental Commitment FAR-1: Implement measures to minimize the injury or mortality of fish in the immediate work area associated with rock-toe and tree revetment maintenance activities.</i></p> <p>The construction contractor conducting rock-toe and tree revetment maintenance activities, including rock or brush replacement, will be required to implement measures to scare fish away</p>	<p>Construction contractor (implementation)</p>	<p>During the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring and CESA compliance)</p>	

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<p>from the immediate work area. Before submerging a dragline bucket or placing rock below the water surface, the dragline will be splash-cast into the water, and a person will wade ahead of the equipment to scare fish away from the immediate work area.</p>			<p>USFWS (Lead Agency implementation monitoring compliance)</p> <p>NMFS (ESA regulatory compliance)</p>	
<p>Environmental Commitment FAR-2: Prepare and implement an environmental awareness training program for project personnel.</p> <p>Project personnel will participate in an environmental awareness training program provided by a qualified biologist. Construction workers will be informed by a qualified biologist about any sensitive fisheries and aquatic biological resources associated with the project and that disturbance of sensitive habitat or special-status species is a violation of the Federal ESA and Section 404 of the CWA.</p> <p>Workers will be informed of the potential near-shore presence of juvenile listed fish species, including anadromous salmonids, and that actions causing injury or death to these fish could result in civil or criminal penalties to the individuals who commit such actions.</p>	<p>CDFW and USFWS biologists, construction contractor, M&T Chico Ranch and Llano Seco Rancho (awareness program)</p> <p>Construction contractor (implementation)</p>	<p>Prior to the construction period.</p> <p>During the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring and CESA compliance)</p> <p>USFWS (Lead Agency implementation monitoring compliance)</p> <p>NMFS (ESA regulatory compliance)</p>	
<p>Environmental Commitment FAR-3: Decontaminate field gear and dredging equipment to avoid introduction of invasive species.</p> <p>The construction contractor will be required to read and implement procedures identified for decontaminating field gear and in-river dredging equipment contained in the CDFG (2008) Field Gear Decontamination Protocols. Procedures for decontaminating field gear (i.e., waders, wading boots, boot insoles, nets, wading sticks, or anything else that comes into contact with the water), as well as in-river equipment, developed by CDFG (2008) will be followed prior to entering the</p>	<p>Construction contractor (implementation)</p>	<p>During and subsequent to the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring and CESA compliance)</p> <p>USFWS (Lead Agency</p>	

Environmental Commitment / Mitigation Measure	Responsible Implementing Entity	Timeframe for Implementation	Responsible Monitoring and Regulatory Compliance Agencies	Verification of Compliance
Sacramento River in the Action/Project Area.			implementation monitoring and ESA compliance)	
<p><i>Environmental Commitment FAR-4:</i> Conduct entrainment monitoring if construction crews identify fish in dredge slurry.</p> <p>Although entrainment associated with suction dredging is not anticipated, if construction personnel observe fish in dredge slurry entering the containment areas, work would be halted and CDFW, NMFS, and USFWS would be contacted, and a formal entrainment monitoring plan would be developed and implemented prior to the re-initiation of dredging activities.</p>	Construction contractor, in coordination with M&T Chico Ranch and Llano Seco Rancho (implementation)	During the construction period.	CDFW (Lead Agency implementation monitoring and CESA compliance) USFWS (Lead Agency implementation monitoring compliance) NMFS (ESA regulatory compliance)	
Terrestrial Resources (Botanical and Wildlife)				
<p><i>Environmental Commitment TR-1:</i> Avoid and minimize potential adverse effects to Valley Elderberry Longhorn Beetle and its habitat.</p> <p>If suitable habitat for VELB occurs on a project site, or within close proximity where beetles will be affected by the project, these areas must be designated as avoidance areas and must be protected from disturbance during the construction and operation of the project. Protective measures are identified in USFWS's 1999 guidelines to avoid and minimize potential project effects on VELB. Complete avoidance (i.e., no adverse effects) may be assumed when a 100-foot (or wider) buffer is established and maintained around elderberry plants containing stems measuring 1.0 inch or greater in diameter at ground level (USFWS 1999). In buffer areas, construction-related disturbance should be minimized and any damaged area should be promptly restored following construction. The USFWS must be consulted before any disturbances within the</p>	Construction contractor, M&T Chico Ranch, Llano Seco Rancho in collaboration with the project engineer and CDFW and USFWS biologists (implementation)	Prior to and during the construction period.	CDFW (Lead Agency implementation monitoring) USFWS (Lead Agency implementation monitoring and ESA compliance)	

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<p>buffer area are considered. In addition, the Service must be provided with a map identifying the avoidance area and written details describing avoidance measures (USFWS 1999). Any VELB habitat that cannot be avoided should be considered impacted and appropriate minimization measures should be implemented (USFWS 1999). The Proposed Project will avoid and minimize impacts to VELB by implementing the protective measures that are prescribed in the USFWS Biological Opinion that will be prepared for this project, as well as those described below.</p> <ul style="list-style-type: none"> ▪ The project engineer will stake the limits of the construction footprint that is in proximity to potential VELB habitat (i.e., elderberry shrubs) at the project site. Elderberry shrubs located within 100 feet from the edge of access roads in the Action/Project Area will be protected. Temporary construction netting (e.g., high-visibility plastic fencing) will be placed around nearby vegetation by the contractor to provide protection from construction activities. ▪ A biological monitor will be on site during mobilization to assist the project engineer with identifying suitable locations for placement of construction equipment, staging, and containment areas that avoid elderberry shrubs. The biologist will direct activities to occur away from the drip line of all elderberry shrubs and to avoid shrubs at a distance of 100 feet if possible. <p>Protective measures identified in USFWS 1999 Conservation Guidelines for the Valley Elderberry Longhorn Beetle include:</p> <ul style="list-style-type: none"> ▪ Fence and flag all areas to be avoided during construction activities. In areas where encroachment on the 100-foot buffer has been approved by the USFWS, provide a minimum setback of at least 20 feet from the drip line of each elderberry plant. ▪ Brief contractors on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements. ▪ Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." ▪ The signs should be clearly readable from a distance of 20 feet, and must be maintained for the duration of construction. 				

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<ul style="list-style-type: none"> ▪ Instruct work crews about the status of the beetle and the need to protect its elderberry host plant. <p>Restoration and maintenance measures identified in USFWS 1999 Conservation Guidelines for the Valley Elderberry Longhorn Beetle include:</p> <ul style="list-style-type: none"> ▪ Restore any damage done to the buffer area (area within 100 feet of elderberry plants) during construction. Provide erosion control and re-vegetate with appropriate native plants. ▪ Buffer areas must continue to be protected after construction from adverse effects of the project. Measures such as fencing, signs, weeding, and trash removal are usually appropriate. ▪ No insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant should be used in the buffer areas, or within 100 feet of any elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level. ▪ The applicant must provide a written description of how the buffer areas are to be restored, protected, and maintained after construction is completed. ▪ Mowing of grasses/ground cover may occur from July through April to reduce fire hazard. No mowing should occur within five feet of elderberry plant stems. Mowing must be done in a manner that avoids damaging plants (e.g., stripping away bark through careless use of mowing/trimming equipment). ▪ If new elderberry shrubs are identified or any shrubs cannot be avoided during implementation of the Proposed Action/Project, the appropriate resource agency (i.e., CDFW and/or USFWS) will be contacted for additional review and consultation to determine the potential significance of any anticipated impact, and whether additional impact avoidance measures exceeding those described in USFWS (1999) are necessary. ▪ In addition to the protective measures described above, minimization measures (e.g., planting replacement habitat, or conservation planting), may be needed (USFWS 1999). Elderberry plants must be transplanted if they can not be avoided by the Proposed Project. All elderberry plants with one or more stems measuring 1.0 inch or greater in diameter at ground level must be transplanted to a conservation area (USFWS 1999). At USFWS discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation. In cases where transplantation is not possible, the 				

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<p>minimization ratios in Table 1 of USFWS (1999) may be increased to offset the additional habitat loss. The numbers of elderberry seedlings/cuttings and associated riparian native trees/shrubs to be planted as replacement habitat are determined by stem size class of affected elderberry shrubs, presence or absence of exit holes, and whether a project lies in a riparian or non-riparian area (USFWS 1999).</p> <p>On October 2, 2012, the USFWS issued a proposed rule to remove VELB from the Federal list of endangered and threatened wildlife and to remove the designation of critical habitat (77 FR 60237). The protective measures described above would be implemented as part of the Proposed Action/Project until such time that the USFWS issues a Final Rule removing VELB from the Federal list of threatened and endangered species.</p>				
<p>Environmental Commitment TR-2: Prepare and implement an environmental awareness training program for project personnel.</p> <p>Concurrent with the fisheries environmental awareness training described in Environmental Commitment FAR-2, project personnel will participate in an environmental awareness training program provided by a qualified terrestrial resources biologist prior to initiation of construction activities at the project site. Construction workers will be informed by a qualified biologist about any sensitive terrestrial biological resources associated with the project and that disturbance of sensitive habitat or special-status species is a violation of the Federal ESA and Section 404 of the CWA. The training also will instruct workers about what to do if a special-status species is encountered during construction activities, and how to contact the monitoring biologist overseeing construction activities.</p>	<p>CDFW and USFWS biologists, construction contractor, M&T Chico Ranch and Llano Seco Rancho (awareness program)</p> <p>Construction contractor (implementation)</p>	<p>Prior to the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring and CESA compliance)</p> <p>USFWS (Lead Agency implementation monitoring and ESA compliance)</p>	
<p>Environmental Commitment TR-3: Maintain existing project conditions to the extent feasible.</p> <ul style="list-style-type: none"> ▪ Materials placed in natural areas and all temporary structures will be removed in their entirety and the affected areas returned to pre-construction elevations. ▪ These affected areas will be revegetated, as appropriate, to stabilize the environment and to prevent erosion and will be detailed in a restoration plan approved by CDFW. 	<p>Construction contractor, M&T Chico Ranch and Llano Seco Rancho (implementation)</p> <p>CDFG and</p>	<p>During the construction period.</p> <p>During the</p>	<p>CDFW (Lead Agency implementation monitoring and CESA compliance)</p> <p>USFWS</p>	

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	<p>USFWS (SRNWR) will oversee implementation of planting of re-vegetation on the Capay Unit and Stile property, if revetment maintenance becomes necessary.</p> <p>Independent contractor / qualified biologist, in coordination with CDFW, USFWS, M&T Chico Ranch and Llano Seco Rancho (post-construction monitoring and reporting)</p>	<p>construction period.</p> <p>Subsequent to the construction period.</p>	<p>(Lead Agency implementation monitoring and ESA compliance)</p>	
<p>Environmental Commitment TR-4: <i>Avoid and minimize potential adverse effects to terrestrial resources.</i></p> <ul style="list-style-type: none"> Conduct a pre-construction floristic plant survey according to CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFG 2009) during the spring of 2014 to investigate whether botanical species identified as having the potential to occur in the Action/Project Area are present. If special status botanical species (see Chapter 3) are identified, then CDFW and USFWS will be notified, survey results will be provided to CDFW and USFWS, the locations of 	<p>Independent contractor / qualified biologist, M&T Chico Ranch and Llano Seco Rancho, in coordination with CDFW and</p>	<p>Prior to the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring and CESA compliance)</p> <p>USFWS</p>	

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<p>individual plants or populations will be identified, and these locations will be clearly identified as avoidance areas (e.g., exclusionary fencing and signage) prior to initiation of construction.</p> <ul style="list-style-type: none"> ▪ To avoid take of birds and/or their nests, if construction is to occur during the nesting season (February 1 – August 31), conduct pre-construction surveys within 15 days prior to initial mobilization. Surveys for raptors will be conducted within 500 feet of the project area, other nesting bird surveys will be conducted within the project footprint. <p>The results of the survey shall be emailed to Tracy.McReynolds@wildlife.ca.gov.</p> <p>If no active nests are detected during these surveys, no additional measures are required.</p> <p>If active nests are found in the survey area, avoidance measures will be developed in coordination with CDFW (and USFWS).</p> <ul style="list-style-type: none"> ▪ If a lapse in project-related work of 15 days or longer occurs, another focused survey shall be required before project work can be reinitiated. Concurrent with Environmental Commitment TR-1, a pre-construction survey for WPT shall be conducted by a qualified biologist the morning of initiation of construction activities. If a pond turtle is observed in the project area during construction activities, the contractor will temporarily halt construction until the turtle has moved itself to a safe location outside of the construction limits. If construction is to occur during the nesting season (late June–July), a pre-construction survey will be conducted by a qualified biologist to locate any WPTs or their nests. This survey will be conducted within suitable habitat within the project footprint no more than two days prior to the start of construction or restoration activities in suitable habitat. If a pond turtle nest is found, the biologist will flag the site and determine whether construction activities can avoid affecting the nest. If the nest cannot be avoided, in consultation with CDFW, a no-disturbance buffer zone may be established around the nest until the young have left the nest. <p>The monitoring biologist shall be contacted immediately in the event that a turtle or eggs are encountered during the work period. Any dead or injured turtles shall be immediately reported to the CDFW. The treatment of any injured or dead turtles shall be coordinated with the CDFW.</p>	<p>USFWS biologists</p>		<p>(Lead Agency implementation monitoring and ESA compliance)</p>	

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<ul style="list-style-type: none"> ▪ Coordinate with CDFW (and USFWS as appropriate) if the aforementioned pre-construction surveys identify other special status species (see Chapter 3) in the Action/Project Area prior to the onset of construction activities. <p>As previously discussed, the results of site assessments and biological surveys are often considered valid by the USFWS and/or CDFW for a period of two years, unless determined otherwise on a case-by-case basis by the appropriate USFWS or CDFW office. Depending on the timing of when revetment maintenance and a second dredge cycle may become necessary, additional terrestrial resource pre-construction surveys (e.g., nesting raptors, WPT, VELB habitat) may need to be conducted if these activities occur two or more years in the future.</p>				
<p><i>Environmental Commitment TR-5: Avoid and minimize potential adverse effects to terrestrial resources resulting from the spread of non-native weeds.</i></p> <p>Construction equipment will be pressure washed prior to entering the project site to help control the spread of non-native weeds. Additionally, reseeding with native grasses may be required if mowing of grasslands is required during revetment maintenance to ensure adequate construction vehicle clearance to minimize the potential fire risk.</p>	<p>Construction contractor, M&T Chico Ranch and Llano Seco Rancho, USFWS (implementation)</p>	<p>During the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring)</p> <p>USFWS (Lead Agency implementation monitoring)</p>	
<p><i>Environmental Commitment TR-6: Avoid and minimize potential adverse effects to bank swallow habitat.</i></p> <p>Impacts to potential bank swallow habitat will be minimized during construction activities through the implementation of construction BMPs and avoidance, to the extent feasible, of potential bank swallow habitat areas.</p>	<p>CDFW, USFWS, M&T Chico Ranch and Llano Seco Rancho (implementation)</p>	<p>Prior to, during and subsequent to the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring and CESA compliance)</p> <p>USFWS (Lead Agency implementation monitoring)</p>	

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Recreation and Navigation Safety																															
<p><i>Environmental Commitment REC-1: Post notices at area public boat launch facilities.</i></p> <p>Notices alerting recreationalists to the dredge activities will be posted at local boat launch facilities. Beginning two weeks prior to the proposed dredging and throughout the duration of the activity (i.e., June 15 through October 15), notices will be posted at boat launch facilities along the Sacramento River within Glenn and Butte counties. Facilities with motor boat access (e.g., boat launches) where notices will be posted are provided below.</p> <p>Each notice will state that, while in the river, the suction dredge boat will represent a potential hazard to navigation and boaters, and other recreationalists should exercise caution while passing through the affected portion of the Sacramento River. The notices also will state that in-river operations are anticipated to occur between 7 am and 7 pm from July 1 through October 15. A sample of the public notice is provided in Attachment 1 to this Draft MMRP.</p> <p>Public Motor Boat Access Points in Glenn and Butte Counties</p> <table border="1" data-bbox="178 950 1081 1291"> <thead> <tr> <th>Facility</th> <th>Location</th> <th>County</th> </tr> </thead> <tbody> <tr> <td>Irvine Finch River Access</td> <td>RM 200</td> <td>Glenn</td> </tr> <tr> <td>Gianella Landing</td> <td>RM 199</td> <td>Glenn</td> </tr> <tr> <td>Pine Creek Day Use Area (Landing)</td> <td>RM 196.5</td> <td>Butte</td> </tr> <tr> <td>Scotty's Boat Landing</td> <td>RM 196</td> <td>Butte</td> </tr> <tr> <td>Bidwell-Sacramento River State Park</td> <td>RM 193</td> <td>Glenn/Butte</td> </tr> <tr> <td>Ord Bend Park</td> <td>RM 184</td> <td>Glenn</td> </tr> <tr> <td>Butte City Launch Facility</td> <td>RM 169</td> <td>Glenn</td> </tr> <tr> <td>Capay Unit Parking Lots, SRNWR</td> <td>RM 194</td> <td>Glenn</td> </tr> </tbody> </table>	Facility	Location	County	Irvine Finch River Access	RM 200	Glenn	Gianella Landing	RM 199	Glenn	Pine Creek Day Use Area (Landing)	RM 196.5	Butte	Scotty's Boat Landing	RM 196	Butte	Bidwell-Sacramento River State Park	RM 193	Glenn/Butte	Ord Bend Park	RM 184	Glenn	Butte City Launch Facility	RM 169	Glenn	Capay Unit Parking Lots, SRNWR	RM 194	Glenn	<p>Construction contractor, M&T Chico Ranch and Llano Seco Rancho, in coordination with CDFW and USFWS (implementation)</p>	<p>Prior to and during the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring)</p> <p>USFWS (Lead Agency implementation monitoring)</p>	
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<p>Environmental Commitment REC-2: Publish notice for planned dredge activities in local newspapers.</p> <p>An informative notice advising the public of the proposed dredge activities will be published in local newspapers. Newspaper notices will be published approximately one week prior to commencement of in-river activities.</p>	<p>Construction contractor, in coordination with project landowners (i.e., M&T Chico Ranch and USFWS)</p>	<p>Prior to the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring) USFWS (Lead Agency implementation monitoring)</p>	
<p>Environmental Commitment REC-3: Utilize U.S. Coast Guard standard lighting elements on suction dredge boat and associated in-river equipment.</p> <p>Consistent with U.S. Coast Guard Inland Navigation Rules (e.g., Rule 27) and Federal Navigation Regulations (33 CFR 83), lights will be used to illuminate the location of the dredge boat and the portion of the pipeline in the river between dusk and dawn. The barge, flexible pipe, and auxiliary boats will be anchored and sufficiently illuminated during non-daylight hours to maintain high visibility for boaters and other water users. The dredge boat will be anchored as close to shore as practicable at night to allow traffic to pass freely. In addition, a night watchman would remain on the project site during non-working hours to respond to any unforeseen issues. It is anticipated that active dredge operations would be conducted about 12 hours per day, seven days per week.</p> <p>Vessels engaged in dredging or underwater operations also must utilize the following lighting elements when an obstruction exists and when at anchor:</p> <ul style="list-style-type: none"> ▪ Two all-round red lights or two balls in a vertical line to indicate the side on which the obstruction exists. ▪ Two all-round green lights or two diamonds in a vertical line to indicate the side on which another vessel may pass. 	<p>Construction contractor (implementation)</p>	<p>During the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring) USFWS (Lead Agency implementation monitoring) CDBW (regulatory compliance)</p>	
<p>Environmental Commitment REC-4: Install warning signs upstream and downstream of dredging construction site on the Sacramento River.</p> <p>The contractor will install warning signs consistent with both U.S. Coast Guard and California Department of Boating and Waterways marking systems. Two special marked buoys will be utilized to alert boaters and other recreationalists of the general location of the dredge boat and the</p>	<p>Construction contractor (implementation)</p>	<p>Prior to and during the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring) USFWS (Lead Agency</p>	

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<p>dredging activities. The buoys will be yellow, and will be placed upstream and downstream of the affected area two days prior to and throughout the duration of dredging operations to caution local water craft of the potential in-river hazard. Although special marked buoys are not required to be lit, a lighted warning buoy would be utilized in order to increase visibility of the dredge boat (California Department of Boating and Waterways 2012).</p>			<p>implementation monitoring) CDBW (regulatory compliance)</p>	
Cultural Resources				
<p><i>Environmental Commitment CULT-1: Reduce potential historic and cultural resources impacts if buried resources are discovered during construction.</i></p> <p>If buried historic properties, cultural or archeological resources are discovered during construction, the contractor will cease work in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the State Historic Preservation Officer (SHPO). In accordance with Section 15064.5(f) of the CEQA Guidelines, if the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the project site while historical or unique archaeological resource mitigation takes place. The contractor also would contact the lead agencies.</p>	<p>Construction contractor, in coordination with project landowners (i.e., M&T Chico Ranch and USFWS)</p>	<p>During the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring) USFWS (Lead Agency implementation monitoring) SHPO</p>	
<p><i>Environmental Commitment CULT-2: Reduce potential historic and cultural resources impacts if human remains are discovered during construction.</i></p> <p>If human remains are unearthed during construction, the contractor would contact the County Coroner to make the necessary findings of origin and disposition in accordance with Public Resources Code Section 5097.98. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission (NAHC) shall be adhered to in the treatment and disposition of the remains. The contractor also would contact the lead agencies.</p>	<p>Construction contractor, in coordination with project landowners (i.e., M&T Chico Ranch and USFWS)</p>	<p>During the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring) USFWS (Lead Agency implementation monitoring) Butte County and/or Glenn County Coroner NAHC</p>	

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<p>Environmental Commitment CULT-3: Reduce potential historic and cultural resources impacts if submerged archaeological or historic resources are discovered in the Sacramento River.</p> <p>Title to abandoned shipwrecks, archaeological sites, and historic or cultural resources on or in the tide and submerged lands of California is vested in the State and under the jurisdiction of the California State Lands Commission (CSLC). Any submerged archaeological site or submerged historic resource that has remained in State waters for more than 50 years is presumed to be significant. Therefore, in the even that any buried cultural materials are unearthed on lands under CSLC jurisdiction, the CSLC will be consulted and notified. The contractor also would contact the lead agencies.</p>	<p>Construction contractor, in coordination with CDFW and USFWS, M&T Chico Ranch and Llano Seco Rancho (implementation)</p>	<p>During the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring) USFWS (Lead Agency implementation monitoring) CSLC (regulatory compliance)</p>	
Hazards and Hazardous Materials				
<p>Environmental Commitment HAZ-1: Prepare and Implement a Hazardous Materials Control, Spill Prevention and Response Plan.</p> <p>Before construction begins, a Hazardous Materials Control, Spill Prevention, and Response Plan (HMCSRP) will be prepared to reduce the potential effects of hazardous materials and spills. The plan will identify staging areas where hazardous materials would be stored during construction and include an accidental spill prevention and response plan. The plan also will identify potential hazardous materials that would be used during construction activities and include appropriate practices to reduce the likelihood of a spill of toxic chemicals and other hazardous materials during construction, which may include the following.</p> <ul style="list-style-type: none"> ▪ Protocols for proper handling and disposal of materials will be established prior to construction. ▪ Spill prevention measures will include stockpiling absorbent booms, staging hazardous materials at least 25 feet away from the river, and maintaining and checking construction equipment to prevent fuel and lubrication leaks. Additional spill prevention measures will include specific actions regarding the containers, handling, and transport of fuel to the barge, and refueling practices. ▪ Any spill within the floodplain and active channel of the Sacramento River will be reported to NMFS, CDFW, and other appropriate resource agencies within 48 hours. 	<p>Construction contractor, in collaboration with M&T Chico Ranch and Llano Seco Rancho (implementation)</p>	<p>Prior to and during the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring and CESA compliance) USFWS (Lead Agency implementation monitoring) RWQCB (CWA regulatory compliance) USACE</p>	

Environmental Commitment / Mitigation Measure	Responsible Implementing Entity	Timeframe for Implementation	Responsible Monitoring and Regulatory Compliance Agencies	Verification of Compliance
<ul style="list-style-type: none"> ▪ The contractor will have absorbent boom available within 250 feet of the live channel during all in channel work to be further prepared for quick containment of any spills within or adjacent to the Sacramento River. ▪ All measures from the 1602 Streambed Alteration Agreement, 404 and 401 water quality certifications and permits will be adhered to. 			(CWA regulatory compliance) NMFS (ESA compliance)	
<p><i>Environmental Commitment HAZ-2: Implement fire risk reduction measures.</i></p> <p>To minimize the potential for wildland fires during construction, the lead agencies would ensure (through enforcement of contractual obligations) that staging areas, welding areas, or other areas identified for construction work using spark-producing or intense heat-producing equipment would be cleared of dried vegetation or other materials that could serve as fire fuel. The contractor would keep these areas clear of combustible materials in order to maintain a firebreak.</p>	Construction contractor, in collaboration with M&T Chico Ranch and Llano Seco Rancho (implementation)	During the construction period.	CDFW (Lead Agency implementation monitoring) USFWS (Lead Agency implementation monitoring)	
Traffic and Circulation				
<p><i>Environmental Commitment TRAF-1: Prepare and Implement a Traffic Control Plan.</i></p> <p>To avoid any potential delays or safety issues on SR45, County Rd. 23, River Road or other haul routes, a traffic control plan would be developed and implemented. M&T Chico Ranch/Llano Seco Rancho would work with the construction contractor and coordinate with Caltrans and/or county public works or planning departments and develop a traffic control plan prior to initiating work. The traffic control plan would include specific measures to manage traffic in the Action/Project Area and along haul routes, which would be submitted to the appropriate transportation agency for review and approval prior to the start of construction.</p> <p>The traffic control plan would include measures to address the following.</p> <ul style="list-style-type: none"> ▪ Reduce, to the extent practicable, the number of vehicles (construction-related and other) on the roadways adjacent to the Action/Project Area. ▪ Reduce, to the extent practicable, the interaction between construction equipment and other vehicles. 	Construction contractor, in collaboration with M&T Chico Ranch and Llano Seco Rancho (traffic plan development) Construction contractor (implementation)	Prior to the construction period. During the construction period.	CDFW (Lead Agency implementation monitoring) USFWS (Lead Agency implementation monitoring) Caltrans	

Environmental Commitment / Mitigation Measure	Responsible Implementing Entity	Timeframe for Implementation	Responsible Monitoring and Regulatory Compliance Agencies	Verification of Compliance
<ul style="list-style-type: none"> ▪ Promote public safety through actions aimed at driver and road safety. ▪ Prior to implementation of construction activities, the contractor will verify that all roads, bridges, culverts, and other infrastructure along the access routes can support expected vehicle loads. ▪ Identify intended haul routes, locations of signage, locations of flaggers, approved permits, documentation of coordination with local and State agencies, and locations of potential delays to vehicle and pedestrian traffic. Construction vehicles will follow established truck routes to the greatest extent practicable. 			and/or Butte and Glenn Counties (regulatory compliance)	
<p><i>Environmental Commitment TRAF-2: Implement Measures to Address Potential Traffic Flow and Access Issues.</i></p> <p>The following environmental commitments would be implemented as part of the project to ensure minimization of impacts on traffic and circulation.</p> <ul style="list-style-type: none"> ▪ The construction contractor will maintain travel traffic on all roads adjacent to the site and on all affected public roads during the construction period. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, will be as required by State and local authorities having jurisdiction. ▪ The traveling public shall be protected from construction and work damage to person and property. The contractor's traffic on roads selected for hauling material to and from the site shall interfere as little as possible with public traffic. ▪ Traffic controls on major roads and collectors would include flag persons wearing bright orange or red vests and using "stop/slow" paddles to direct drivers. ▪ Access to public transit would be maintained, and movement of public transit vehicles would not be impeded as a result of construction activities. ▪ Through access for emergency vehicles would be provided at all times. ▪ Access would be maintained for driveways and private roads. 	Construction contractor, in coordination with project landowners (i.e., M&T Chico Ranch and USFWS)	Prior to and during the construction period.	CDFW (Lead Agency implementation monitoring) USFWS (Lead Agency implementation monitoring) Caltrans and/or Butte and Glenn Counties (regulatory compliance)	

Environmental Commitment / Mitigation Measure	Responsible Implementing Entity	Timeframe for Implementation	Responsible Monitoring and Regulatory Compliance Agencies	Verification of Compliance		
<p><i>Environmental Commitment TRAF-3: Construction-related Traffic Measures.</i></p> <p>The following environmental commitments would be implemented as part of the project to ensure minimization of impacts on traffic and circulation.</p> <ul style="list-style-type: none"> ▪ Construction parking will be restricted to the designated staging areas. ▪ During peak periods, construction-generated traffic will avoid roadway segments or intersections that are at, or approaching, a level of service (LOS) that exceeds local standards, either by traveling different routes or by traveling at non-peak times. ▪ Construction warning signs would be posted in accordance with local standards or those set forth in the Manual on Uniform Traffic Control Devices (Federal Highway Administration 2000) in advance of the construction area and at any intersection that provides access to the construction area. ▪ Rock, dirt, and/or other fill materials will be prevented from being accidentally dropped from trucks traveling on highways to and from the project site. ▪ Written notification would be provided to appropriate contractors regarding appropriate routes to and from construction sites, and weight and speed limits for local roads used to access construction sites. ▪ Water trucks will be utilized to prevent excess dust caused by equipment traffic on dirt and gravel roads. 	<p>Construction contractor, in coordination with M&T Chico Ranch and Llano Seco Rancho (implementation)</p>	<p>Prior to and during the construction period.</p>	<p>CDFW (Lead Agency implementation monitoring)</p> <p>USFWS (Lead Agency implementation monitoring)</p> <p>Caltrans and/or Butte and Glenn Counties (regulatory compliance)</p>			
<p>Notes</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <p>BCAQMD – Butte County Air Quality Management District</p> <p>Caltrans – California Department of Transportation</p> <p>CDBW – California Department of Boating and Waterways</p> <p>CDFW – California Department of Fish and Wildlife</p> <p>CSLC – California State Lands Commission</p> <p>GCAPCD – Glenn County Air Pollution Control District</p> </td> <td style="width: 50%; border: none;"> <p>NAHC – Native American Heritage Commission</p> <p>NMFS – National Marine Fisheries Service</p> <p>RWQCB – Regional Water Quality Control Board</p> <p>SHPO – State Historical Preservation Officer</p> <p>USACE – U. S. Army Corps of Engineers</p> <p>USFWS – U.S. Fish and Wildlife Service</p> </td> </tr> </table>					<p>BCAQMD – Butte County Air Quality Management District</p> <p>Caltrans – California Department of Transportation</p> <p>CDBW – California Department of Boating and Waterways</p> <p>CDFW – California Department of Fish and Wildlife</p> <p>CSLC – California State Lands Commission</p> <p>GCAPCD – Glenn County Air Pollution Control District</p>	<p>NAHC – Native American Heritage Commission</p> <p>NMFS – National Marine Fisheries Service</p> <p>RWQCB – Regional Water Quality Control Board</p> <p>SHPO – State Historical Preservation Officer</p> <p>USACE – U. S. Army Corps of Engineers</p> <p>USFWS – U.S. Fish and Wildlife Service</p>
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ATTACHMENT 1

Attachment 1 presents an example of the public notice that would be posted at each of the Sacramento River boat launch facilities listed in *Environmental Commitment REC-1* above. Additionally, an informative notice advising the public of the proposed dredge activities will be published in local newspapers, consistent with the Notice of Preparation, Notice of Availability and other public notices for the Proposed Action/Project. Newspaper notices will be published approximately one week prior to the commencement of in-river activities. As a supplemental public outreach measure, information regarding the proposed dredge activities will be shared through the Sacramento River Conservation Area Forum listserv.

Sample Public Notice to be Posted at Area Boat Launch Facilities.

PUBLIC NOTICE TEMPORARY NAVIGATION HAZARD

IN-RIVER DREDGING IN THE SACRAMENTO RIVER AT RIVER MILE 192.5
(JULY 1 THROUGH OCTOBER 15)



The USFWS and CDFW will be sponsoring a maintenance dredging operation downstream of the confluence of Big Chico Creek and the Sacramento River, along the east bank of the Sacramento River immediately south of the Bidwell-Sacramento River State Park at River Mile (RM) 193, approximately 6 miles southwest of the City of Chico. Dredging operations are anticipated to occur between 7 am and 7 pm from July 1 through October 15. While in the Sacramento River, the suction dredge barge will represent a potential hazard to navigation.

Boaters and other recreationalists should exercise caution while passing through the affected portion of the Sacramento River. Yellow warning buoys will be placed at highly visible locations in the Sacramento River to alert boaters to the potentially hazardous in-river conditions. These buoys will be placed upstream and downstream of the dredge area and will be set two days prior to initiation of dredging. The buoys will remain in place for the duration of the dredging operation. For questions regarding this public notice, please contact either:



Mr. Dan Frisk
Sacramento NWR Complex Office
752 County Road 99W
Willows, CA 95988
(530) 934-2801

Mr. Joe Johnson
California Department of Fish and Wildlife
1701 Nimbus Road Ste. A
Rancho Cordova, CA 95670
(916) 358-2900



The environmental documentation addressing the suction dredging activities, including detailed descriptions of the dredging activities and specific locations affected, are available at: <http://www.ducks.org/california/california-projects/m-t-llano-seco-fish-screen-project>.