Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4–111.7

Environmental Assessment/Draft Environmental Impact Report
Volume III: Appendices

November 2007

Project Applicant and Federal Co-Lead Agency for NEPA

Trinity River Restoration Program
U.S. Department of the Interior
Bureau of Reclamation

Federal Co-Lead Agency for NEPA

U.S. Department of Agriculture
Forest Service

Federal Cooperating Agency for NEPA

U.S. Department of Interior
Bureau of Land Management

California Lead Agency for CEQA

Trinity County
Resource Conservation District

Applicant's Consultant

North State Resources, Inc.

Cover photos: The top photo is of the historic Lewiston Bridge on the Trinity River. The middle photo is of the Cableway Fishing Access on the Trinity River. The bottom photo is of the Indian Creek Rehabilitation site, an earlier Trinity River Restoration Program project; this photo, taken in late October 2007, shows a created floodplain and side channel on the Trinity River upstream of Weaver Creek.

LEWISTON–DARK GULCH REHABILITATION PROJECT: TRINITY RIVER MILE 105.4 TO 111.7

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State Clearinghouse
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Volume III: Appendices
Table of Contents

Lewiston–Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7
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APPENDIX A

Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program

Introduction

This document comprises the Final Mitigation Monitoring and Reporting Program (MMRP) for the Lewiston-Dark Gulch Rehabilitation Project: Trinity River Mile 105.4 to 111.7 (project). The purpose of providing the MMRP as a stand-alone document in the EA/Final EIR is to make clear to the reader the mitigation responsibilities of the Bureau of Reclamation (Reclamation), and the Trinity County Planning Department (Trinity County) in implementing the project. The mitigation measures listed herein are required by law or regulation and will be adopted by Trinity County as part of the overall project approval.

Mitigation is defined by both the California Environmental Quality Act (CEQA) – Section 15370 and the National Environmental Policy Act (NEPA) as a measure which:

- Avoids the impact altogether by not taking a certain action or parts of an action
- Minimizes impacts by limiting the degree or magnitude of the action and its implementation
- Rectifies the impact by repairing, rehabilitating, or restoring the impacted environment
- Reduces or eliminates the impact over time by preservation and maintenance operations during the life of the project
- Compensates for the impacts by replacing or providing substitute resources or environments

Mitigation measures provided in this MMRP were identified in Chapter 3, Affected Environment and Environmental Consequences of the EA/Draft EIR, as feasible and effective in mitigating project-related environmental impacts. These measures were also summarized in Volume I, Executive Summary of the EA/Draft EIR.

This MMRP includes a discussion of the following topics related to the MMRP: legal requirements, the intent of the MMRP, the development and approval process for the MMRP, the authorities and responsibilities associated with the

implementation of the MMRP, a description of the mitigation summary table, and resolution of noncompliance complain.

Legal Requirements

The legal basis for the development and implementation of the MMRP lies within both CEQA (including the California Public Resources Code) and NEPA 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 reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation.

- The monitoring program must be adopted when a public agency makes its findings under CEQA so that the program can be made a condition of project approval in order to mitigate significant effects on the environment. The program must be designed to ensure compliance with mitigation measures during project implementation to mitigate or avoid significant environmental effects.

NEPA 40 CFR Section 1502.14f requires that:

- Agencies shall include appropriate mitigation measures not already included in the proposed action or alternatives.

Intent of the Mitigation Monitoring and Reporting Program

The MMRP is intended to satisfy the requirements of CEQA as they relate to the project. It is anticipated to be used by Reclamation and Trinity County staff, participating agencies, project contractors, and mitigation monitoring personnel during implementation of the project.

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

Development and Approval Process

The timing elements for implementing mitigation measures and the definition of the approval process have been provided in detail through this MMRP to assist staff from Reclamation and Trinity County by providing the most usable monitoring document possible.

Authorities and Responsibilities

Reclamation, functioning as the TRRP, will have the primary responsibility for the execution and proper implementation of the MMRP. Trinity County may provide Reclamation with support, as warranted. Reclamation will be responsible for the following activities:

- Coordination of monitoring activities
- Management of the preparation and filing of monitoring compliance reports
- Maintenance of records concerning the status of all approved mitigation measures

Summary of Monitoring Requirements

Table 1, which follows, summarizes the mitigation measures and associated monitoring requirements proposed for the project. Table 1 consists of the following four columns:

- **Mitigation Measure:** Lists the mitigation measures identified for each significant impact discussed in the EA/Draft EIR for the project. The same mitigation numbering system used in the EA/Draft EIR is carried forward in this MMRP.
- **Timing/Implementation:** Indicates at what point in time or project phase the mitigation measure will need to be implemented.

- **Responsible Parties (tasks):** Documents which agency or entity is responsible for implementing mitigation measures and what, if any, coordination is required (e.g., approval from Caltrans). 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").

- **Verification:** Provides spaces to be initialed and dated by the individual responsible for verifying compliance with each specific mitigation measure.

Resolution of Noncompliance Complaints

Any person or agency may file a complaint that states noncompliance with the mitigation measures that were adopted as part of the approval process for the project. The complaint shall be directed to Reclamation, via the TRRP office (P.O. Box 1300, 1313 South Main Street, Weaverville, CA 96093) and Trinity County (P.O. Box 2819, 60 Glen Road, Weaverville, CA 96093) in written form, providing detailed information on the purported violation. Reclamation and Trinity County Planning shall conduct an investigation and determine the validity of the complaint. If noncompliance with a mitigation measure is verified, Reclamation shall take the necessary action(s) to remedy the violation. The complainant shall receive written confirmation indicating the results of the investigation or the final corrective action that was implemented in response to the specific noncompliance issue.

TABLE 1 SUMMARY OF MITIGATION MONITORING REQUIREMENTS

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
Chapter 3.3 Geology, Fluvial Geomorphology, and Soils			
Impact 3.3-2 Construction activities associated with the project could potentially result in increased erosion and short-term sedimentation of the Trinity River.			
Mitigation Measure 2a Reclamation or its contractors shall implement the following measures during construction activities: • Areas where ground disturbance would occur shall be identified in advance of construction and limited to only those areas that have been approved by Reclamation. • All vehicular construction traffic shall be confined to the designated access routes and staging areas. • Disturbance shall be limited to the minimum necessary to complete all rehabilitation activities. • All supervisory construction personnel shall be informed of environmental concerns, permit conditions, and final project specifications.	Construction	Reclamation	
Mitigation Measure 2b Reclamation or its contractors shall prepare an erosion and sedimentation control plan (Storm Water Pollution Prevention Plan [SWPPP]). Measures for erosion control will be prioritized based on proximity to the river. The following measures shall be used as a guide to develop this plan: • Restore disturbed areas to pre-construction contours to the fullest extent feasible. • Salvage, store, and use the highest quality soil for revegetation. • Discourage noxious weed competition and control noxious weeds. • Clear or remove roots from steep slopes immediately prior to scheduled construction. • Leave drainage gaps in topsoil and spoil piles to accommodate surface water runoff. • To the fullest extent possible, cease excavation activities during significantly wet or windy weather. • Use bales and/or silt fencing as appropriate. • Before seeding disturbed soils, work the topsoil to reduce compaction caused by	Pre-Construction Construction Post-Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
construction vehicle traffic. • Rip feathered edges (and floodplain surfaces where appropriate) to approximately 18 inches depth. The furrowing of the river's edge will remove plant roots to allow mobilization of the bed, but will also intercept sediment before it reaches the waterway. • Spoil sites shall be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated to reduce the potential for erosion. • Sediment control measures shall be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until disturbed areas have been revegetated. If work activities take place during the rainy season, erosion control structures must be in place and operational at the end of each construction day. Reclamation will develop the erosion and sedimentation control plan in conjunction with the STNF, BLM, and the Regional Water Board and in cooperation with NMFS and CDFG. Reclamation's project manager will ensure the preparation and implementation of an erosion and sediment control plan prior to the start of construction.			
Chapter 3.5 Water Quality			
Impact 3.5-1 Construction of the project could result in short-term, temporary increases in turbidity and total suspended solids levels during construction.			
Mitigation Measure 1a Turbidity increases associated with project activities shall not exceed the water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River, as listed in the Basin Plan for the North Coast Region (2001), is summarized below. • Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.	Construction	Reclamation	
Mitigation Measure 1b To ensure that turbidity levels do not exceed the threshold listed above during river's edge project construction activities, Reclamation or its contractor shall	Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
monitor turbidity levels 50 feet upstream and 500 feet downstream of the point of river's edge construction activities. At a minimum, field turbidity measurements shall be collected on a daily basis during river's edge construction (within 10 feet of the water line). Whenever a visible increase in turbidity is observed, monitoring frequency shall be a minimum of every 2 hours during this period. • If the grab sample results indicate that turbidity levels exceed the thresholds established in the Basin Plan, actions shall be implemented immediately to reduce and maintain turbidity at or below the thresholds. Potential remedial actions include temporarily halting construction activities and implementation of additional Best Management Practices (BMPs) until turbidity is at or below the thresholds.			
Mitigation Measure 1c Fill gravels used on the streambeds, stream banks, and river crossing will be composed of washed, spawning-sized gravels from a local Trinity Basin source. Gravel will be washed to remove any silts, sand, clay, and organic matter and will be free of contaminants such as petroleum products. Washed gravel will pass Caltrans cleanliness test #227 with a value of 85 or greater.	Pre-Construction Construction	Reclamation	
Mitigation Measure 1d Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes BMPs for the project, including silt fences, sediment filters, and routine monitoring to verify effectiveness. Proper implementation of erosion and sediment controls shall be adequate to minimize sediment inputs into the Trinity River until vegetation re-growth occurs. All BMPs and sediment and erosion control devices will be inspected daily during the construction period to ensure that the devices are properly functioning. Excavated and stored materials will be kept in upland sites with erosion control properly installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.	Pre-Construction Construction	Reclamation	
Mitigation Measure 1e To minimize the potential for increases in turbidity and suspended sediments entering the Trinity River as a result of the new access roads, Reclamation or its contractor shall implement the following protocols. (To ensure that turbidity levels do not exceed the thresholds listed in 1a, see measure 1b listed above). • Keep bare soil to the minimum required by designs. Erosion control devices/measures shall be applied to areas where vegetation has been removed to reduce short-term erosion prior to the start of the rainy season. • Keep runoff from bare soil areas well dispersed. Dispersing runoff keeps sediment on-	Pre-Construction Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
site and prevents sediment delivery to streams. Direct any concentrated runoff from bare soil areas into natural buffers of vegetation or to gentler sloping areas where sediment can settle out. • Disconnect and disperse flow paths, including roadside ditches, that might otherwise deliver fine sediment to stream channels. • Decompact or rip floodplain areas so that surfaces are permeable and no surface water runoff occurs.			
Impact 3.5-2 Construction of the project could result in short-term, temporary increases in turbidity and total suspended solids levels following construction.			
Mitigation Measure 2a Turbidity increases associated with project activities shall not exceed the water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River, as listed in the Basin Plan for the North Coast Region (2001), is summarized below. • Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.	Construction	Reclamation	
Mitigation Measure 2b To ensure that turbidity levels do not exceed the threshold listed above following construction, Reclamation or its contractor shall monitor turbidity and total suspended solids during and after representative rainfall events to determine the effect of the project on Trinity River water quality. At a minimum, field turbidity measurements shall be collected whenever a visible increase in turbidity is observed. • If increases in turbidity and total suspended solids are observed as a result erosion from access roads, then field turbidity measurements shall be collected 50 feet upstream of a point adjacent to the end of the access road and 500 feet downstream. • If the grab sample results indicate that turbidity levels exceed the established thresholds identified in the Basin Plan, the Regional Water Qulaioty Control Board will be notifed. The need to implement erosion control measures for turbidity that is expected to result from overland river flows (versus surface run-off) will be evaluated with Regional Water Quality Control Board staff to determine if remedation measures are needed.	Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
Mitigation Measure 2c To reduce the potential for the new access roads to continually contribute soil materials to the Trinity River following project construction, thereby increasing turbidity and total suspended solids in the river, the new access roads shall be stabilized or decommissioned upon completion of work in those areas. Decommissioning is defined as removing those elements of a road that reroute hillslope drainage and present slope stability hazards.			
Impact 3.5-3 Construction of the project could potentially cause contamination of the Trinity River from hazardous materials spills.			
Mitigation Measure 3a Reclamation shall require that the contractor prepare and implement a spill prevention and containment plan in accordance with applicable federal and state requirements.	Pre-Construction	Reclamation	
Mitigation Measure 3b Reclamation shall include in the construction contract documents a requirement that any construction equipment that would come in contact with the Trinity River will need to be inspected daily for leaks prior to entering the flowing channel. External oil, grease, and mud will be removed from equipment using steam cleaning. Untreated wash and rinse water must be adequately treated prior to discharge if that is the desired disposal option.	Pre-Construction	Reclamation	
Mitigation Measure 3c Reclamation shall include in the construction contract documents a requirement that hazardous materials, including fuels, oils, and solvents, not be stored or transferred within 150 feet of the active Trinity River channel. Areas for fuel storage, refueling, and servicing will be located at least 150 feet from the active river channel. In addition, the construction contractor shall be responsible for maintaining spill containment booms onsite at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks will maintain a spill containment boom at all times.	Pre-Construction	Reclamatiojn	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
Impact 3.5-5 Construction and maintenance of the project could result in the degradation of Trinity River beneficial uses identified in the Basin Plan.			
The significance of impacts related to sediment, settleable materials, suspended materials, turbidity, and increased stormwater runoff and subsequent potential for erosion, as well as mitigation measures that would reduce the significance of these impacts are addressed under Impacts 3.5.1, 3.5.2, and 3.5.4. The significance of and mitigation for chemical constituents and toxicity impacts are addressed under Impact 3.5.3.	Pre-Construction Construction	Reclamation	
Chapter 3.6 Fishery Resources			
Impact 3.6-1 Implementation of the project could result in effects on potential spawning and rearing habitat for anadromous fishes, including federally listed coho salmon.			
Mitigation Measure 1a Because the proposed construction schedule includes in-river work that could impact spawning spring- and fall-run Chinook salmon, coho salmon, and steelhead or their eggs once in the gravel, prior to the start of project construction, Reclamation or its contractor shall retain a qualified fisheries biologist to conduct a survey for active redds and potential spawning habitat 200 feet upstream and downstream of the proposed in-river construction activities if in-river work activities will be conducted outside of the late-summer, low-flow conditions (e.g., July 15–September 15).	Pre-Construction Construction	Reclamation	
Mitigation Measure 1b Alluvial material used for coarse sediment additions will be composed of washed, spawning-sized gravels (3/8 to 5 inches diameter) from a local Trinity basin source. Gravel will be washed to remove any silts, sand, clay, and organic matter and will be free of contaminants such as petroleum products. Washed gravel will pass Caltrans cleanliness test #227 with a value of 85 or greater.	Construction	Reclamation	
Impact 3.6-2 Implementation of the project could result in increased erosion and sedimentation that could adversely affect fishes, including federally listed coho salmon.			
Mitigation Measure 2a Turbidity increases associated with project construction activities shall not exceed the Regional Water Board water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity River, as listed in the Basin Plan for the North Coast	Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
Region (2001), is summarized below. • Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits.			
Mitigation Measure 2b To ensure that turbidity levels do not exceed the threshold listed above during project construction activities, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of construction activities. At a minimum, field turbidity measurements shall be collected on a daily basis during in-water and river's edge construction (within 10 feet of the water line). Whenever a visible increase in turbidity is observed, monitoring frequency shall be at a minimum of every 2 hours. • If the grab sample results indicate that turbidity levels exceed the established thresholds identified in the Basin Plan, actions shall be implemented immediately to reduce and maintain turbidity at or below the thresholds. Potential remedial actions include temporarily halting in-channel construction activities and implementation of additional Best Management Practices (BMPs) until turbidity is at or below the thresholds.	Construction	Reclamation	
Mitigation Measure 2c Proper implementation of erosion and sediment containment devices during and after construction shall be adequate to minimize sediment inputs into the Trinity River. Decompaction and ripping of floodplain areas is expected to eliminate surface runoff during the first year post-construction. Because shoreline construction activities must be able to take place during the fall and potentially winter period, after October 15 and before April 15, temporary erosion and sediment control structures must be in place and operational at the end of each construction day. Measures for erosion control will be prioritized based on proximity to the river. Spoil sites shall be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated to reduce the potential for erosion.	Pre-Construction Construction	Reclamation	
Mitigation Measure 2d Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes Best Management Practices (BMPs) for the project. Ripping of all riparian areas to create furrows parallel to the river is expected to stop delivery of storm water to the river; however, BMPs, including silt fences,	Pre-Construction Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
sediment filters, and routine monitoring to verify effectiveness, may be necessary. Proper implementation of erosion and sediment controls and dewatering activities shall be adequate to minimize sediment inputs into the Trinity River until construction ends. All sediment containment devices and erosion control devices will be inspected daily during the construction period to ensure that the devices are functioning properly. Any erosion control devices found to be nonfunctional must be repaired or replaced following their discovery or by the end of the work day if rain is imminent or if a greater than 50 percent possibility of rain has been forecast within the following 24 hours by the National Weather Service. In those cases where, for safety reasons, repairs cannot be made immediately, they should be completed as soon as the work can safely be performed. Excavated and stored materials will be kept in upland sites with erosion control properly installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.			
Impact 3.6-3 Construction activities associated with the project could potentially result in the accidental spill of hazardous materials that could adversely affect fishes, including federally listed coho salmon.			
Mitigation Measure 3a Equipment and materials shall be stored away from wetland and surface water features.	Pre-Construction	Reclamation	
Mitigation Measure 3b Vehicles and equipment used during construction shall receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling shall be conducted in an area at least 150 feet away from waters of the Trinity River or within an adequate fueling containment area.	Construction	Reclamation	
Mitigation Measure 3c The contractor will develop and implement site-specific Best Management Practices (BMPs), a water pollution control plan, and emergency spill control plan. The contractor will be responsible for immediate containment and removal of any toxins released.	Construction	Reclamation	
Section 3.5, Water Quality, and Section 3.15, Hazards and Hazardous Materials, provide additional details on mitigation measures developed for water quality standards, hazards, and hazardous materials.			

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
Impact 3.6-4 Construction activities associated with the project could result in the mortality of rearing fishes, including federally listed coho salmon.			
Mitigation Measure 4a To avoid or minimize potential injury and mortality of fish during riverine activities (removal of grade control structures, channel crossings, addition and grading of coarse sediment), equipment shall be operated slowly and deliberately to alert and scare adult and juvenile salmonids away from the work area.	Construction	Reclamation	
Mitigation Measure 4b Reclamation or its contractor shall minimize potential injury and mortality of fish during the use of low-flow channel crossings. This will be accomplished by minimizing vehicle traffic and by operating equipment and vehicles slowly and deliberately to alert and scare adult and juvenile salmonids away from the crossing area, or by having a person wade ahead of equipment to scare fish away from the crossing area.	Construction	Reclamation	
Mitigation Measure 4c To avoid or minimize potential injury and mortality of fish during excavation and placement of fill materials within the active low-flow channel, equipment shall be operated slowly and deliberately to alert and scare adult and juvenile salmonids away from the work area. The contractor shall be instructed that before submerging an excavator bucket or laying gravel below the water surface, the excavator bucket will be operated to "tap" the surface of the water, or a person will wade ahead of fill placement equipment to scare fish away from the work area. To avoid impacts to mobile life stages of salmonids that may be present in the water column, the first layers of clean gravel that are being placed into the wetted channel shall be added slowly and deliberately to allow fish to move from the work area.	Construction	Reclamation	
Mitigation Measure 4d Monitoring of the rehabilitated floodplain sites for salmon fry stranding shall be performed by a qualified fishery biologist immediately after recession of flood flow events designated as a 1.5- year or less frequent event (i.e., Q > 6,000 cfs) for a period of 3 years following construction. These flows, and associated fry stranding surveys, will occur most frequently between January and May. If substantial stranding is observed, Reclamation will take appropriate measures to return stranded fishes to river habitats and to modify floodplain topography to reduce the likelihood of future occurrences of fry stranding.	Post-Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
Impact 3.6-5 Implementation of the project would result in the permanent or temporary loss of shaded riverine aquatic habitat for anadromous salmonids.			
Mitigation Measure 5a To mitigate for the loss of riparian habitat, the Project would be designed to preserve riparian vegetation within the site boundaries (1) to increase the diversity of native vegetation types and age classes available post-project and (2) to facilitate natural recolonization of constructed surfaces by native vegetation. Prior to the start of construction activities, Reclamation shall identify potential construction access routes that avoid and/or minimize, to the fullest extent, impacts to riparian habitat. In addition, Reclamation shall clearly identify and flag biologically sensitive areas (e.g., jurisdictional waters and riparian habitat) to be protected during construction activities. Each biologically sensitive area to be avoided will be flagged, staked, or otherwise marked to ensure that construction activities do not encroach upon them. Reclamation shall inspect and maintained marked areas regularly throughout the construction phase.	Pre-Construction Construction	Reclamation	
Mitigation Measure 5b Reclamation shall develop a Riparian Revegetation and Monitoring Plan (Plan), subject to approval by the Corps, Regional Water Board, and CDFG, prior to implementing the proposed project. The Plan shall include measures that ensure that all riparian vegetation removed by the TRRP projects within the 40-mile corridor of the Trinity River downstream of Lewiston Dam will be replaced by natural recruitment, replanting, or any combination thereof, at an areal ratio of 1:1, within a 5- year time-frame. These measures shall support the TRRP objective to restore the existing homogeneous vegetation pattern with a more diverse assemblage of riparian vegetation, including provisions for incorporation of native species that can resist invasion by noxious plant species. Because the existing Trinity River channel is encroached upon (up to 300 percent) by a homogeneous riparian vegetation community thought to be less suitable for fish and wildlife habitat, the Plan need not require strict replacement based on original stem counts and species.	Pre-Construction Post-Construction	Reclamation	
Mitigation Measure 5c Reclamation shall initiate a 5-year mitigation monitoring program following the first growing season after project implementation. After a period of 3 years, Reclamation, in consultation with the USACE, Regional Water Board and CDFG, will determine the need, if any, for additional plantings and will assess and/or remedy any loss of riparian habitat, including jurisdictional wetlands within the site boundaries, defined in the EA/EIR, to ensure that no-net loss of wetlands and riparian habitat occurs within the 5-year monitoring period. Monitoring the response of riparian habitat to the channel rehabilitation project after 3 years into the 5-year vegetation recovery period will allow Reclamation to take	Post-Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
any additional necessary actions to meet the goal of no net-loss of riparian habitat within the boundaries of the Lewiston–Dark Gulch sites.			
Mitigation Measure 5d Reclamation shall complete a post-project wetland delineation and vegetation habitat evaluation as a basis for comparing pre- and post-project conditions and submit the results to the USACE, Regional Water Board, and CDFG. This complete post-project vegetation survey will occur approximately 5 years after revegetation is completed. In the event that this delineation identifies a net loss in riparian habitat, Reclamation shall enhance or reestablish riparian vegetation that will function as SRA habitat within the boundaries of the rehabilitation sites. Potential options to accomplish this objective include increasing the density and diversity of riparian vegetation to supplement natural recruitment, and introducing riparian plants in locations to expand riparian habitat. In the event that conditions within the boundaries of the Lewiston–Dark Gulch sites preclude adequate onsite mitigation, Reclamation may consider alternate locations for riparian vegetation mitigation within the Trinity River corridor, subject to approval by the USACE, the Regional Water Board, and CDFG.	Post-Construction	Reclamation	
Impact 3.6-6 Implementation of the project would result in fish passage being temporarily impaired during the in-stream construction phase.			
Mitigation Measure 6a Fill gravels used on the low water crossings, streambeds and stream banks will be composed of washed, spawning-sized gravels from a local Trinity Basin source. Gravel will be washed to remove any silts, sand, clay, and organic matter and will be free of contaminants such as petroleum products. Washed gravel will pass the Caltrans cleanliness test #227 with a value of 85 or greater.	Construction	Reclamation	
Mitigation Measure 6b Reclamation or its contractor shall construct the low-flow channel crossings to allow adequate depth and velocity for adult and juvenile salmonids to safely pass. Flows associated with storm events are not considered critical as the width and hydrologic conditions associated with low-flow channel crossings in the Trinity River are not considered to limit fish passage at elevated flows and would be comparable to hydrologic conditions in local riffle and run features. For low-flow channel crossings at base flows, velocities shall not exceed 2 fps to allow for juvenile fish passage. Minimum water depth at low-flow shall not be less than 12 inches in 2/3 of the river channel to provide adequate depth for adult salmon and steelhead passage.	Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
Mitigation Measure 6c The number of vehicle and equipment crossings of the Trinity River will be minimized.			
Chapter 3.7 Vegetation, Wildlife, and Wetlands			
Impact 3.7-1 Construction activities associated with the project could result in the loss of jurisdictional waters (e.g., wetlands).			
Mitigation Measure 1a Prior to the start of construction activities, Reclamation shall retain a qualified biologist to identify potential construction access routes necessary for the project to ensure that these features avoid and/or minimize to the fullest extent impacts to jurisdictional waters. In addition, Reclamation shall clearly identify, and flag in the field, biologically sensitive areas (e.g., jurisdictional waters and riparian habitat) to be protected, and will provide the contractor specific instructions to avoid any construction activity within these features. Reclamation shall inspect and maintain marked areas on a regular basis throughout the construction phase.	Pre-Construction	Reclamation	
Mitigation Measure 1b Reclamation shall develop a Riparian Revegetation and Monitoring Plan, subject to approval by the USACE, Regional Water Board, and CDFG, prior to implementing the proposed project. The plan shall include measures that ensure that all riparian vegetation (a key parameter of jurisdictional wetlands) removed by TRRP projects within the 40-mile corridor of the Trinity River downstream of Lewiston Dam is replaced by natural recruitment, replanting, or any combination thereof at an areal ratio of 1:1 within a 5-year time frame. Because the present Trinity River channel is encroached (up to 300 percent) with riparian vegetation that is homogenous in nature, this plan need not require strict replacement based on original stem counts and species. The plan shall acknowledge that the ultimate goals of the TRRP include functional riparian habitat and no net-loss of jurisdictional wetlands throughout the 40-mile reach of the Trinity River below the TRD. Because riparian habitat and jurisdictional wetlands will respond to river restoration with some degree of spatial and temporal variability, areal habitat coverages within a river reach will remain relatively consistent while habitat changes at specific locations may be measurable.	Pre-Construction Construction	Reclamation	
Mitigation Measure 1c Floodplain values and functions will be enhanced by the project as well as by ROD flows. Consequently, substantial new areas beyond those identified in pre-project plant community delineations are expected to convert to riparian habitats (in some cases, jurisdictional wetlands), both seasonal and perennial, within a 3–5 year post-project window. Reclamation will take advantage of opportunities during or after project construction	Pre-Construction Post-Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
to enhance wetland functions within project boundaries or to create conditions required for functional jurisdictional wetlands (i.e., hydrology, vegetation, and hydric soils) to persist over time. For example, excavation of areas upslope (beyond the 6,000 cfs OHWM line) to a depth coincident with medium or low-flow (2000-450 cfs) conditions may provide opportunities to establish the hydrologic conditions necessary for establishing functional jurisdictional wetlands. Reclamation shall initiate a 5-year mitigation-monitoring program after the first growing season following project implementation. After a period of 2 years, the need for additional wetland enhancement will be evaluated. At that time, Reclamation, in consultation with the USACE, Regional Water Board, and CDFG, will determine whether there is a need to further enhance or create additional areas of jurisdictional wetlands within the project boundary defined in the EIR so that there will be no net loss of wetlands at the end of the 5-year monitoring period. Determining the need to further enhance or create additional wetland areas after 2 years of monitoring will provide a 3-year period for Reclamation to take additional pro-active measures towards meeting the goal of no net loss of jurisdictional wetland habitat within the boundaries of the sites. Reclamation shall conduct a post-project wetland delineation 5 years after project construction for comparison to the pre-construction wetland delineation. In the event that a post-project wetland delineation identifies a net loss of jurisdictional wetlands within the sites, the TRRP, in consultation with the USACE, the Regional Water Board, and CDFG, will implement additional mitigation measures to further enhance or create additional jurisdictional wetlands within the boundaries of the Lewiston–Dark Gulch Rehabilitation Sites. In the event the conditions within the boundary of these sites preclude the ability to adequately mitigate onsite, Reclamation may consider alternate locations for jurisdictional wetland mitigation within the local Trinity River corridor, subject to approval by the USACE, the Regional Water Board, and CDFG.			
Impact 3.7-3 Construction of the project could result in the loss of individuals of a special-status plant species.			
Mitigation Measure 3a A qualified botanist will visit the unsurveyed portion of the Dark Gulch site to determine habitat suitability at those locations for California globe mallow, Dudley's rush, English Peak greenbriar, fox sedge, northern clarkia, and veiny arnica. If suitable habitat is determined to be available, surveys shall be conducted during the blooming periods for these species (i.e., May–July) to determine (1) if the species occur and (2) the quality, location, and extent of any populations. If either of these species is found within 250 feet of any proposed disturbance, the following measures shall be implemented.	Pre-Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
Mitigation Measure 3b Prior to the start of disturbance, exclusionary fencing shall be erected around the known occurrences. If necessary, a qualified botanist should be present to assist with locating these special-status plant populations. The exclusionary fencing shall be periodically inspected throughout each period of construction and be repaired as necessary.	Pre-Construction Construction	Reclamation	
Mitigation Measure 3c If a population cannot be fully avoided, the applicant shall retain a qualified botanist to contact CDFG to determine the appropriate salvage and relocation measures.	Pre-Construction Construction	Reclamation	
Impact 3.7-4 Construction activities associated with the project could result in impacts to the state-listed little willow flycatcher			
Mitigation Measure 4a Grading and other construction activities shall be scheduled to avoid the nesting season to the extent possible. The nesting season for this species in Trinity County extends from June 15 through July 31. If construction occurs outside of the breeding season, no further mitigation is necessary. If the breeding season cannot be completely avoided, Mitigation measures 4b and 4c shall be implemented.	Pre-Construction Construction	Reclamation	
Mitigation Measure 4b A qualified biologist shall conduct a minimum of one pre-construction survey for the little willow flycatcher within the project sites and a 250-foot buffer around the sites. The survey shall be conducted no more than 15 days prior to the initiation of construction in any given area. The pre-construction survey shall be used to ensure that no nests of this species within or immediately adjacent to the project sites would be disturbed during project implementation. If an active nest is found, CDFG shall be contacted prior to the start of construction to determine the appropriate mitigation measures.	Pre-Construction	Reclamation	
Mitigation Measure 4c If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrate (e.g., shrubs and trees) that will be removed by the project shall be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.	Pre-Construction	Reclamation	
Impact 3.7-5 Construction activities associated with the project could result in impacts to the foothill yellow-legged frog.			
Mitigation Measure 5a If any construction in the Trinity River channel will occur prior to August 1 of any construction season, a pre-construction survey for yellow-legged frog larvae and/or eggs shall be conducted by a qualified biologist. This survey would need to be	Pre-Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
conducted within the construction boundary no more than 2 weeks prior to the start of in-stream construction activities. If larvae or eggs are detected, the biologist shall relocate them to a suitable location outside of the construction boundary.			
Mitigation Measure 5b In the event that a yellow-legged frog is observed within the construction boundary, the contractor shall temporarily halt in-stream construction activities until the frog has been moved to a safe location with suitable habitat outside of the construction limits.	Construction	Reclamation	
Mitigation Measure 5c Mitigation measures presented in Section 3.5 (Water Quality) for addressing erosion and sedimentation and accidental spills shall be fully implemented to mitigate for potential indirect impacts to dispersal habitat for the yellow-legged frog due to sedimentation and accidental spills.	Construction	Reclamation	
Mitigation Measure 5d The mitigation measure associated with the disturbance to riparian habitat (Mitigation Measure 3.7-1) will be fully implemented.	Pre-Construction Construction	Reclamation	
Impact 3.7-6 Construction activities associated with the project could result in impacts to the northwestern pond turtle.			
Mitigation Measure 6a A minimum of one survey for pond turtle nests shall be conducted during the nesting season (generally late June-July) prior to construction. A qualified biologist shall be retained by Reclamation to conduct the survey. If a pond turtle nest is found, the biologist shall flag the site and determine whether construction activities can avoid affecting the nest. If the nest cannot be avoided, the nest shall be excavated by the biologist and reburied at a suitable location outside of the construction limits.	Pre-Construction	Reclamation	
Mitigation Measure 6b In the event that a pond turtle is observed within the construction limits, the contractor shall temporarily halt construction activities until the turtle has been moved to a safe location within suitable habitat outside of the construction limits.	Construction	Reclamation	
Mitigation Measure 6c Mitigation measures presented in Section 3.5 (Water Quality) for addressing erosion and sedimentation and accidental spills shall be fully implemented to mitigate for the potential indirect impacts to potential dispersal habitat due to sedimentation and accidental spills.	Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
Mitigation Measure 6d The mitigation measure associated with the disturbance to riparian habitat (Mitigation Measure 3.7-1) shall be fully implemented.	Pre-Construction Construction	Reclamation	
Impact 3.7-7 Construction activities associated with the project could result in impacts to nesting Vaux's swifts, ruffed grouse, yellow warblers, and yellow-breasted chats.			
Mitigation Measure 7a Grading and other construction activities shall be scheduled to avoid the nesting season for these species to the extent possible. The nesting season for these species in Trinity County extends from March 15 through August. If construction occurs outside the breeding season, no further mitigation is necessary. If construction during the breeding season cannot be completely avoided, measures 7b and 7c shall be implemented.	Construction	Reclamation	
Mitigation Measure 7b A qualified biologist shall conduct a minimum of one preconstruction survey for these species within the project site and a 250-foot buffer around the site. The survey shall be conducted no more than 15 days prior to the initiation of construction in any given area. The preconstruction survey shall be used to ensure that no nests of these species within or immediately adjacent to the project sites would be disturbed during project implementation. If an active nest is found, a qualified biologist shall determine the extent of a construction-free buffer zone to be established around the nest.	Pre-Construction	Reclamation	
Mitigation Measure 7c If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting habitat (e.g., shrubs and trees) that will be removed by the project shall be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.	Construction	Reclamation	
Impact 3.7-8 Construction activities associated with the project could disrupt nesting by special-status raptors.			
Mitigation Measure 8a Construction shall be scheduled to avoid the nesting season for raptors to the extent feasible. The nesting season for most raptors in Trinity County extends from February 15 through July 31. Thus, if construction can be scheduled to occur between August 1 and February 14, the nesting season will be avoided and no impacts to nesting raptors would be expected. If it is not possible to schedule construction during this time, the following mitigation measures shall be implemented.	Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
Mitigation Measure 8b Pre-construction surveys for nesting raptors shall be conducted by a qualified biologist to ensure that no nests will be disturbed during project implementation. These surveys shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the biologist shall inspect all trees immediately adjacent to the impact areas for raptor nests. If an active raptor nest is found close enough (i.e., within 500 feet) to the construction area to be disturbed by these activities, the biologist, in consultation with the CDFG, shall determine the extent of a construction-free buffer zone to be established around the nest.	Pre-Construction	Reclamation	
Mitigation Measure 8c If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting habitat (i.e., trees) that will be removed by the project shall be removed before the onset of the nesting season, if feasible. This will help preclude nesting and substantially decrease the likelihood of direct impacts.	Pre-Construction	Reclamation	
Impact 3.7-9 Construction activities associated with the project could result in impacts to special-status bats and the ring-tailed cat.			
Mitigation Measure 9a A pre-construction survey for roosting bats and ring-tailed cats shall be conducted prior to any removal of trees ≥12 inches in diameter at 4.5 feet above grade. The survey shall be conducted by a qualified biologist. No activities that would result in disturbance to active roosts of special-status bats or dens of ring-tailed cats shall proceed prior to completion of the surveys. If no active roosts or dens are found, no further action is needed. Because bats are known to abandon young when disturbed, if a maternity roost is located, a qualified bat biologist shall determine the extent of a construction-free zone to be implemented around the roost. If a bat maternity roost or hibernaculum or a ring-tailed cat den is present, Measures 9b and/or 9c shall be implemented. CDFG shall also be notified of any active bat nurseries within the disturbance zones.	Pre-Construction Construction	Reclamation	
Mitigation Measure 9b If an active maternity roost or hibernaculum is found, the project shall be redesigned to avoid the loss of the tree occupied by the roost, if feasible. If the project cannot be redesigned to avoid removal of the occupied tree, demolition of that tree shall commence before bat maternity colonies form (i.e., prior to March 1) or after young are volant (flying) (i.e., after July 31). The disturbance-free buffer zones described above shall be observed during the bat maternity roost season (March 1–July 31). If a non-breeding bat hibernaculum is found in a tree scheduled to be razed, the individuals shall be safely evicted, under the direction of a qualified bat biologist (as determined by a Memorandum of Understanding with CDFG), by opening the roosting area to allow air to flow through the	Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
cavity. Demolition shall then follow no sooner than the following day (i.e., there will be no less than one night between initial disturbance for air flow and the demolition). This action will allow bats to leave during dark hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight. Trees with roosts that need to be removed shall first be disturbed at dusk, just prior to removal that same evening, to allow bats to escape during the darker hours.			
Mitigation Measure 9c If an active ring-tailed cat nest is found, the project will be redesigned to avoid the loss of the tree occupied by the nest if feasible. If the project cannot be redesigned to avoid removal of the occupied tree, demolition of that tree shall commence outside of the breeding season (February 1 to August 30). If a non-breeding den is found in a tree scheduled to be razed, the individuals shall be safely evicted under the direction of a qualified biologist. Trees with dens that need to be removed shall first be disturbed at dusk, just prior to removal that same evening, to allow ring-tailed cats to escape during the darker hours.	Construction	Reclamation	
Impact 3.7-11 Construction activities associated with the project could result in impacts to BLM and USFS sensitive species.			
Since no significant impacts for the Pacific fisher were identified, no mitigation is required. Mitigation measures 4a-c will reduce impacts to the little willow flycatcher to a less-than-significant level. Mitigation measures 5a-d will reduce the impacts to the foothill yellow-legged frog to a less-than-significant level. Mitigation measures 6a-d will reduce the impacts to the northwestern pond turtle to a less-than-significant level. Mitigation measures 8a-c will reduce the impacts to the northern goshawk to a less-than-significant level, and mitigation measures 9a-b will reduce the impacts to special-status bat species to a less-than-significant level.	Pre-Construction Construction	Reclamation	
Impact 3.7-13 Implementation of the project could result in the spread of non-native and invasive plant species.			
Mitigation Measure 13a When using imported erosion control materials (as opposed to rock and dirt berms), use only certified weed-free materials, mulch, and seed.	Construction	Reclamation	
Mitigation Measure 13b Preclude the use of rice straw in riparian areas.	Construction	Reclamation	
Mitigation Measure 13c Limit any import or export of fill to material known to be weed free.	Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
Mitigation Measure 13d Require the construction contractor to thoroughly wash all equipment prior to entering the worksite. Equipment shall be inspected to ensure that it is free of plant parts as well as soils, mud, or other debris that may carry weed seeds.	Construction	Reclamation	
Mitigation Measure 13e Use a mix of native grasses, forbs, and non-persistent non-native species for seeding disturbed areas that are subject to infestation by non-native and invasive plant species. Where appropriate, a heavy application of mulch will be used to discourage introduction of these species. Use of planting plugs of native grass species may be considered to accelerate occupation of disturbed sites and increase the likelihood of reestablishing a self-sustaining population of native plant species.	Post-Construction	Reclamation	
Mitigation Measure 13f Within the first 3 to 5 years post-project, if it is determined that the project has caused non-native invasive vegetation to out-compete desired planted or native colonizing riparian vegetation, opportunities to control these non-native species shall be considered. When implementing weed control techniques, the approach will consider using all available control methods known for a weed species. Control methods will be consistent with those adopted by the TCWMC and the Trinity County Board of Supervisors.	Post-Construction	Reclamation	
Chapter 3.8 Recreation			
Impact 3.8-1 Construction associated with the project could disrupt recreation activities in the Trinity River.			
Mitigation Measure 1a Reclamation or its contractor shall provide precautionary signage to warn recreational users of the potential safety hazards associated with project construction activities. Signs and/or buoys shall be placed within and directly adjacent to the project boundary along the Trinity River in accordance with the requirements specified in Title 14, Article 6 of the California Code of Regulations. Notification signs shall be posted at the Bucktail Hole River Access and at the privately owned River Oaks Resort, Trinity River Resort and RV Park, and the Old Lewiston Bridge RV Resort. Additionally, public notification of proposed project construction activities and associated safety hazards shall be circulated in the local *Trinity Journal* newspaper.	Construction	Reclamation	
Mitigation Measure 1b Reclamation will repair and/or replace any facilities that may be inadvertently impacted by project activities at the Sven-Olbertson Watchable Wildlife Area or the Bucktail Hole River Access. This measure would include installation of interpretive	Post-Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
signage consistent with the requirements of the STNF and BLM. A pre-construction meeting with STNF and BLM will be used to identify the level of vegetative screening that will be retained at these recreation sites.			
Impact 3.8-2 Construction of the project could result in an increased safety risk to recreational users.			
Mitigation Measure 2a *Please see mitigation measure 1a above.*	Construction	Reclamation	
Impact 3.8-3 Construction associated with the project could lower the river's aesthetic value for recreationists by increasing turbidity levels in the Trinity River.			
Mitigation Measure 3a Turbidity increases associated with project construction activities shall not exceed the Regional Water Board water quality objectives for turbidity in the Trinity River basin. Turbidity levels are defined in nephelometric turbidity units (NTUs). The current threshold for turbidity levels in the Trinity Riverlisted in the Basin Plan for the North Coast Region (2001) is summarized below. Turbidity shall not be increased by more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.	Construction	Reclamation	
Mitigation Measure 3b To ensure that turbidity levels do not exceed the threshold listed above during river's edge and in-channel project construction activities, Reclamation or its contractor shall monitor turbidity levels 50 feet upstream and 500 feet downstream of the point of river's edge and in-channel construction activities. At a minimum, field turbidity measurements shall be collected whenever a visible increase in turbidity is observed. Monitoring frequency shall be a minimum of every 2 hours during periods of increased turbidity.	Construction	Reclamation	
Mitigation Measure 3c Reclamation or its contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that describes BMPs for the project. Decompaction or furrowing of riparian areas is expected to stop delivery of storm water to the river; however, BMPs, including silt fences, sediment filters, dewatering activities, and routine monitoring to verify effectiveness, may be necessary. Proper implementation of erosion and sediment controls and dewatering activities shall be adequate to minimize sediment inputs into the Trinity River until river levels rise and inundate the floodplain. All sediment	Pre-Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
containment devices and erosion control devices will be inspected daily during the construction period to ensure that the devices are functioning properly. Excavated and stored materials will be kept in upland sites with erosion control properly installed and maintained. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.			
Chapter 3.11 Air Quality			
Impact 3.11-1: Implementation of the proposed project could cause a substantial adverse change in the significance of a known cultural resource.			
Mitigation Measure 1a Inadvertent Discoveries. In the unlikely event that any cultural resources or human remains are encountered during project implementation, all work in the area will halt and the Bureau of Reclamations' Regional Archaeologist will be notified immediate for further guidance on how to proceed. If human remains are identified as Native American, they will be treated according to provisions set forth in the Native American Protection and Repatriation Act as well as Reclamations' Directives and Standards.	Construction	Reclamation	
Impact 3.11-2: Implementation of the proposed project could potentially result in disturbance of undiscovered prehistoric or historic resources.			
Mitigation Measure 2a Prior to initiation of construction or ground-disturbing activities, all construction workers shall be alerted to the possibility of discovering cultural resources. This includes prehistoric and/or historic resources. Personnel shall be instructed that upon discovery of buried cultural resources, work within 50 feet of the find shall be halted and Reclamation's designated archaeologist consulted. Once the find has been identified, Reclamation will make the necessary plans for treatment of the cultural resources and for the evaluation and resolving adverse affect to historic properties pursuant to the PA for compliance with the NHPA.	Pre-Construction	Reclamation	
Mitigation Measure 2b If human remains are encountered on non-federal lands during construction, work in that area must be halted, and the Trinity County Coroner's Office shall be immediately contacted. If the remains are determined to be of Native American origin, the Native American Heritage Commission (NAHC) will be notified within 24 hours of determination, as required by Public Resources Code, Section 5097. The NAHC will notify	Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
designated Most Likely Descendants, who will provide recommendations for the treatment of the remains within 24 hours. The NAHC will mediate any disputes regarding treatment of remains. If Native American human remains and associated items are discovered on Federal lands, they will be treated according to provisions set forth in the Native American Protection and Repatriation Act (25 U.S.C. 3001) as well as Reclamations' Directives and Standards. If the find is determined to be a historical resource or a unique archaeological resource, as defined by CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or other appropriate mitigation shall be made available. Work may continue on other parts of the proposed project while mitigation for historical or unique archaeological resources takes place.			
Chapter 3.12 Air Quality			
Impact 3.12-1 Construction activities associated with the project could result in an increase in fugitive dust and associated particulate matter (PM_{10} and $PM_{2.5}$) levels.			
Mitigation Measure 1a Reclamation shall include provisions in the construction bid documents specifying that the contractor shall implement a dust control program to limit fugitive dust and particulate matter emissions. The dust control program may include, but will not be limited, to the following elements, as appropriate: • Inactive construction areas will be watered as needed to ensure dust control. • Pursuant to the California Vehicle Code (Section 23114), all trucks hauling soil or other loose material to and from the construction site shall be covered or shall maintain adequate freeboard to ensure retention of materials within the truck's bed (e.g., ensure 1-2 feet vertical distance between top of load and the trailer). • Excavation activities and other soil-disturbing activities shall be conducted in phases to reduce the amount of bare soil exposed at any one time. Mulching with weed-free materials may be used to minimize soil erosion, as described in Section 3.3, Geology, Fluvial Geomorphology, and Soils, and Section 3.5, Water Quality. • Watering with either equipment and/or manually shall be conducted on all stockpiles, dirt/gravel roads, and exposed or disturbed soil surfaces, as necessary, to reduce airborne dust. • All paved access roads, parking areas, and staging areas shall be swept (with water sweepers), as required by Reclamation.	Pre-Construction Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
• Roads shall be swept (with water sweepers) if visible soil material is carried onto adjacent public roads, as required by Reclamation. • All ground-disturbing activities with the potential to generate dust shall be suspended when winds exceed 20 miles per hour, as directed by the NCUAQMD. • Reclamation or its contractor shall designate a person to monitor dust control and to order increased watering as necessary to prevent transport of dust offsite. This person will also respond to citizen complaints.			
Impact 3.12-2 Construction activities associated with the project could result in an increase in construction vehicle exhaust emissions.			
Mitigation Measure 2a Reclamation shall include provisions in the construction bid documents specifying that the contractors shall comply with NCUAQMD Rule 104 (3.0) Particulate Matter. This compliance could occur through the use of portable internal combustion engines registered and certified under the state portable equipment regulation (Health & Safety Code 41750 through 41755).	Pre-Construction Construction	Reclamation	
Impact 3.12-3 Construction activities associated with the project and removal of vegetation could result in vegetative materials that managers will decide to burn.			
Mitigation Measure 3a Piles will consist only of dried vegetative materials. Burn piles will be no larger than 10 feet in diameter. Field personnel will be on site during all hours of burning and materials necessary to extinguish fires will be available at all times.	Construction	Reclamation	
Mitigation Measure 3b In general, all requirements of a NCUAQMD "NON-Standard" burn permit will be met for burning. Burn management planning may include but not be limited to: • Ensure that burning occurs only on approved burn days as defined by the NCUAQMD (determined via calling 1-866-BURN-DAY) • Burning will only occur during suitable conditions to ensure control of ignited fires. For instance: Water to wet the litter and duff layer and penetrate the mineral soil layer to 1/4 inch or more will be present, wind speeds will be low (< 10 mph), and temperature will be low (< 80° F) • Piles may be covered with a 5-foot x 5-foot sheet of 4-mil polyethylene plastic to promote drying of the slash. At least 3/4 of each pile surface would be covered and the	Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
plastic anchored to preserve a dry ignition point. Dry fuel conditions will minimize smoke emissions. • Slash piles would not be constructed on logs, stumps, on talus slopes, within 25 feet of wildlife trees with nest structures, in roadways or in drainage ditches. Piles will not be placed within 10 feet of trees intended to be saved (reserved trees), or within 25 feet of a unit boundary.			
Mitigation Measure 3c Notification of the public and the NCUAQMD will occur each day. Depending on wind direction and proximity to roads, signs or personnel will notify residents and traffic on nearby access routes.	Construction	Reclamation	
3.14 Aesthetics			
Impact 3.14-1 Implementation of the project could result in the degradation and/or obstruction of a scenic view from key observation areas.			
In order to minimize impacts to visual resources resulting from the removal of vegetation within the project area, mitigation measures 1a through 1c (e.g., revegetation), as described in Section 3.7 (Vegetation, Wildlife, and Wetlands), will be implemented where applicable for either alternative. Visual impacts related to water quality (i.e., the potential for increased turbidity to adversely impact the aesthetic quality of the river) will be mitigated through the implementation of mitigation measures 3a through 3c, as described in Section 3.8 (Recreation). These measures will be implemented where applicable for either alternative.	Pre-Construction Construction Post-Construction	Reclamation	
Chapter 3.16 Noise			
Impact 3.16-1 Construction activities associated with the project would result in temporary noise impacts to nearby sensitive receptors.			
Mitigation Measure 1a Construction activities near residential areas would be scheduled between 7:00 AM and 7:00 PM, Monday through Saturday. No construction activities shall be scheduled for Sundays or other hours and days established by the local jurisdiction (i.e., Trinity	Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
County). The contractor may submit for variances in construction activity hours, as needed.			
Mitigation Measure 1b Reclamation shall require in construction specifications that the contractor maintain all construction equipment with manufacturer's specified noise muffling devices.	Pre-Construction Construction	Reclamation	
Mitigation Measure 1c Reclamation shall require in construction specifications that the contractor place all stationary noise-generating equipment as far away as feasibly possible from sensitive noise receptors or in an orientation minimizing noise impacts (i.e., behind existing barriers, storage piles, unused equipment).	Pre-Construction Construction	Reclamation	
Chapter 3.17 Public Services and Utilities/Energy			
Impact 3.17-3 Implementation of the project could result in disruption to emergency services or disruption to school bus routes or student travel routes during the construction phase.			
Mitigation Measure 3a Reclamation shall stipulate in the contract specifications for construction that the contractor must stage construction work and temporary closures in a manner that will allow for access by emergency service providers.	Pre-Construction Construction	Reclamation	
Mitigation Measure 3b Reclamation shall stipulate in the contract specifications that the contractor must provide 72-hour notice to the local emergency providers (i.e., TCSD, Cal Fire, Lewiston Volunteer Fire Department, and Trinity Life Support Ambulance) prior to the start of temporary closures.	Pre-Construction Construction	Reclamation	
Chapter 3.18 Transportation/Traffic Circulation			
Impact 3.18-3. Implementation of the project would obstruct access to adjacent land uses.			
Mitigation Measure 3a Construction bid documents will require that access be maintained throughout the construction period for all private residences adjacent to the project boundary and access roads on the left side of Trinity River.	Pre-Construction Construction	Reclamation	

Mitigation Measure	Timing/ Implementation	Responsible Parties (task)	Verification (date/initials)
Mitigation Measure 3b During the construction phase of the project, Reclamation shall limit the amount of daily construction equipment traffic by staging most construction equipment and vehicles within the project boundary throughout the work period.	Construction	Reclamation	
Impact 3.18-4. Construction activities would increase wear-and-tear on local roadways.			
Mitigation Measure 4a Reclamation or its contractor shall perform a pre-construction survey of federal, state, and private roads to determine the existing roadway conditions of the construction access routes. An agreement would be entered into prior to construction that would detail the pre-construction conditions and post-construction requirements for potential roadway rehabilitation.	Pre-Construction Construction Post-Construction	Reclamation	
Impact 3.18-5. Construction activities could pose a safety hazard to motorists, bicyclists, equestrians, pedestrians, and construction workers.			
Mitigation Measure 5a Reclamation shall include provisions in the contract specifications that require the construction contractor to prepare and implement a traffic control plan that would include provision and maintenance of temporary access through the construction zone, reduction in speed limits through the construction zone, signage and appropriate traffic control devices, illumination during hours of darkness or limited visibility, use of safety clothing/vests to ensure visibility of construction workers by motorists, and fencing as appropriate to separate pedestrians and bicyclists from construction activities.	Pre-Construction Construction	Reclamation	

APPENDIX B

Aquatic Conservation Strategy Consistency Evaluation

Aquatic Conservation Strategy—Consistency Evaluation

Introduction

This document evaluates and determines the consistency of the proposed Lewiston-Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7 (project) with the Aquatic Conservation Strategy (ACS) in the Record of Decision (ROD) for the Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Related Species within the Range of the Northern Spotted Owl. The ACS was developed to restore and maintain the ecological health of watersheds and aquatic ecosystems contained within them on public lands. The ACS was incorporated into the 1994 Shasta-Trinity National Forest's Land and Resource Management Plan (1994 LRMP).

The intent of this evaluation is to ensure that the decision maker has the information necessary to determine whether the proposed management activity is consistent with the ACS objectives. This evaluation incorporates information provided in the Upper Trinity River Watershed Analysis (Shasta-Trinity National Forest. 2005) and the Mainstem Trinity River Watershed Analysis (Bureau of Land Management. 1995), supported by the Environmental Assessment/Draft Environmental Impact Report for the project (EA/Draft EIR) and other information in the administrative record to assist the decision maker. In order to make the finding that a project or management action "meets" or "does not prevent attainment" of the ACS objectives, the decision maker must ensure that management actions that do not maintain the existing condition or lead to improved conditions in the long term would not be implemented.

The ACS acknowledges that species-specific strategies aimed at defining explicit standards for habitat elements would be insufficient for protecting even the targeted species. The intent of the ACS is to maintain and restore ecosystem health at watershed and landscape scales to protect habitat for fish and other riparian-dependent species and resources and to restore currently degraded habitats. This approach seeks to prevent further habitat degradation and restore habitat over broad landscapes as opposed to implementing individual projects or focusing on small watersheds. Because the ACS is based on natural disturbance processes, the ROD recognized that it is a long-term strategy that may take decades, and possibly more than a century, to accomplish all of its objectives.

The ACS contains four components: riparian reserves, key watersheds, watershed analysis, and watershed restoration. Each component is integral to improving the health of the aquatic ecosystems encompassed by the ROD. A detailed discussion of these components is provided in the ROD.

As part of the 1994 LRMP, the STNF adopted the specific land allocations described in Attachment A to the ROD. Under the 1994 LRMP, these land allocations are managed primarily to protect and enhance late-successional and old growth forest–related species. The attachment also includes the Standards and Guidelines (S&Gs) that were incorporated into the 1994 LRMP to ensure compliance with the ROD. Through the land allocation process, a hierarchy of seven land allocations was developed for the STNF that corresponds to the hierarchy described in Attachment A to the ROD.

1. Congressional Reserved Areas – Includes Wilderness, federal Wild and Scenic Rivers, National Monuments and other federal lands not administered by the Forest Service or Bureau of Land Management (BLM).

2. Late Successional Reserves – Lands identified with an objective to protect and enhance conditions for late-successional and old-growth forest ecosystems.

3. Adaptive Management Areas – Areas with objectives to develop and test new management approaches to integrate ecological and economic health and other social objectives.

4. Managed Late-Successional Areas – Specific Late Successional areas in the drier provinces where regular and frequent fire is a natural part of the ecosystem.

5. Administratively Withdrawn Areas – Areas identified in current Forest and District Plans or draft plan preferred alternatives. These areas include recreation and visual areas, back country and other areas where management emphasis precludes scheduled timber harvest.

6. Riparian Reserves – As a key component of the ACS, Riparian Reserves provide an area along all streams, wetlands, ponds, lakes and unstable/potentially unstable areas where riparian dependent resources receive primary emphasis. These reserves are important to the terrestrial ecosystem as well, providing connectivity corridors and dispersal habitat for certain terrestrial species.

7. Matrix – The matrix consists of those federal lands outside the six previous allocations.

There are two of these land allocations within the project boundary described in the EA/Draft EIR: Riparian Reserves and Matrix. This evaluation focuses on Riparian Reserves as illustrated on Figure B-1, Lewiston Riparian Reserves, and

Figure B-2, Dark Gulch Riparian Reserves. These riparian reserves are consistent with the direction provided by the BLM and the STNF. In general, the figures illustrate the riparian reserves associated with the Trinity River corridor on lands subject to the ACS.

The following sections of this evaluation address the project's consistency with the four components of the ACS and the nine ACS objectives described in Attachment B to the ROD.

Components of the Aquatic Conservation Strategy

Riparian Reserves

The project area contains Riparian Reserves, as defined in the STNF's 1994 LRMP. As shown on Figures B-1 and B-2, these areas are adjacent, or in close proximity to, the Trinity River in the vicinity of Lewiston, California. The designated widths of the Riparian Reserves are consistent with the S&Gs described in the Northwest Forest Plan and on page 4-54 of the STNF 1994 LRMP. The width of the Riparian Reserves correlate with the floodplain of the Trinity River, as well as a buffer around riparian features identified during the wetland delineation process. Table 1 at the end of this document provides the S&Gs that were integrated into the project.

Key Watersheds

There are no key watersheds within or downstream of the project sites. The STNF does manage key watersheds in the upper Trinity River watershed, primarily associated with the Salmon-Trinity Alps Wilderness Area. This component of the ACS is therefore not applicable to the project described in the EA/Draft EIR.

Watershed Analysis

Watershed analysis has been conducted by the BLM and the STNF for the lands surrounding the project sites. These analyses did not identify specific recommendations regarding the Riparian Reserve widths; therefore the S&Gs established under the ACS are applicable to this project. Site-specific investigations confirmed that these widths, shown on Figures B-1 and B-2, are adequate to ensure consistency with the ACS.

Watershed Restoration

By its nature, the project is a comprehensive ecosystem restoration project intended to restore the physical processes and biological resources of the

mainstem Trinity River. While some short-term impacts may occur to riparian-dependent species, the scale of the Trinity River Restoration Program (TRRP), including this project, ensures that restoration of ecological processes and functions will be consistent with the ACS.

Aquatic Conservation Strategy Objectives

The following section evaluates the consistency of the preferred alternative with the nine ACS objectives listed in Attachment B of the ROD.

The lands managed by the STNF within the range of the northern spotted owl will be managed to:

1. *Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations, and communities are uniquely adapted.*

The project by its nature is intended to restore the landscape processes, specifically the alluvial and riparian functions, that have been impaired by construction of the Trinity River Division of the Central Valley Project. The activities that are proposed on federal lands subject to the ACS are an integral part of the larger project and are intended to assist BLM and the STNF in attaining this ACS objective.

2. *Maintain and restore spatial and temporal connectivity within and between watersheds. Lateral, longitudinal, and drainage network connections include floodplains, wetlands, upslope areas, headwater tributaries, and intact refugia. These network connections must provide chemically and physically unobstructed routes to areas critical for fulfilling life history requirements of aquatic and riparian-dependent species.*

The project boundary illustrated in the EA/Draft EIR was developed to ensure that project activities are implemented in a manner that complements the functional values offered by the Trinity River between the Lewiston and Dark Gulch sites. The TRRP, BLM, and STNF have been involved in the identification and prioritization of channel rehabilitation sites for a number of years. The project has been designed to acknowledge the inter-relationship between aquatic and riparian habitats that occur throughout this reach. Specifically, the project includes a number of activities to enhance the connectivity of aquatic and riparian habitat along a 6-mile reach of the Trinity River. Modification of a large weir and the construction of functional side-channel habitat are examples of restoring connectivity for a variety of aquatic and riparian-dependent species, including a number of special-status species recognized by BLM and the STNF. The intent of this project is to assist the BLM and STNF in attaining this ACS objective.

3. *Maintain and restore the physical integrity of the aquatic system, including shorelines, banks and bottom configurations.*

A fundamental component of the project is the activities intended to restore the bed, banks, and floodplain of the Trinity River. The modification of grade control, expansion of functional floodplain habitat, and efforts to enhance the coarse sediment supply are examples of the activities intended to restore the physical integrity of the aquatic system. Collectively, these efforts are designed to restore the alluvial character of the Trinity River that was impaired by reductions in flow and sediment upstream. The intent of this project is to assist the BLM and STNF in attaining this ACS objective.

4. *Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems. Water quality must remain within the range that maintains the biological, physical, and chemical integrity of the system and benefits survival, growth, reproduction, and migration of individuals composing aquatic and riparian communities.*

By its nature, the project will require removal of vegetation and extensive grading activities, including construction within the active channel of the Trinity River. The TRRP, in cooperation with BLM and the STNF, has incorporated Best Management Practices to ensure that effects on water quality are minimized. Additionally, mitigation measures were developed to further reduce potentially significant effects on water quality from construction activities. In addition to compliance with the ACS, the project will require the following discretionary approvals related to the Clean Water Act: Section 401 water quality certification and Section 404 permit and waste discharge requirements. These authorizations are intended to ensure that the preferred alternative meets the water quality standards established by the Regional Water Quality Control Board, North Coast Region (Regional Water Board). As proposed, this project would be consistent with the requirements of the Regional Water Board and therefore would not prevent attainment of this ACS objective.

5. *Maintain and restore the sediment regime under which aquatic ecosystems evolved. Elements of the sediment regime include the timing, volume, rate, and character of sediment input, storage, and transport.*

A fundamental element of the TRRP is restoration of the sediment regime in a manner that enhances the alluvial character of the 40-mile reach of the Trinity River downstream of Lewiston Dam. This project would ensure that the coarse sediment fraction of the sediment regime will be replenished on an ongoing basis consistent with the timing, volume, and rates appropriate for the scaled down channel. The project also incorporates elements of the larger coarse sediment supplementation plan prepared for the 40-mile reach of the Trinity River. While there may be a change in the timing or volume of sediment input, overall the project is intended to assist BLM and the STNF in attainment of this ACS objective.

6. *Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing. The timing, magnitude, duration, and spatial distribution of peak, high, and low flows must be protected.*

The preferred alternative will not influence any in-stream flows. No modifications to the flow regime of the Trinity River or its tributaries are proposed; therefore, this ACS objective would be met.

7. *Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.*

The activities to modify the bed, banks, and floodplains of the Trinity River within the project boundaries are designed to maintain and/or restore the hydrologic connection between the river and adjacent wetland/riparian habitat. By reducing the floodplain elevations, the current flow regime could provide additional opportunities to establish functional, connected wetland habitat adjacent to the Trinity River. This project would be consistent with this ACS objective.

8. *Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.*

A fundamental objective of the TRRP is to restore the species composition and structural diversity of native plant communities that occur along the mainstem Trinity River. The modifications proposed to the floodplain and upland activity areas will provide conditions that are receptive to re-introduction of a diverse assemblage of native riparian vegetation, and reduce the potential for non-native, invasive, and noxious plant species. Woody material removed as part of the rehabilitation activities will be incorporated into the project as appropriate to enhance channel complexity and edge habitat. Overall, this natural recruitment of riparian communities, supplemented by riparian planting efforts, will ensure that this project meets this ACS objective.

9. *Maintain and restore habitat to support well-distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species.*

A fundamental objective of the TRRP is to restore the aquatic, riparian, and upland habitat along the 40-mile reach of the mainstem Trinity River. The project activities emphasize creation and/or rehabilitation of aquatic and riparian habitat within the project boundaries. Collectively these activities are intended to generate geomorphic responses downstream that will further the overall habitat enhancement objectives by reestablishing the alluvial processes

that were impaired by the construction and operation of the TRD. The activities that are proposed on federal lands subject to the ACS are an integral part of the larger project and are intended to assist BLM and the STNF in attaining this ACS objective.

Conclusion

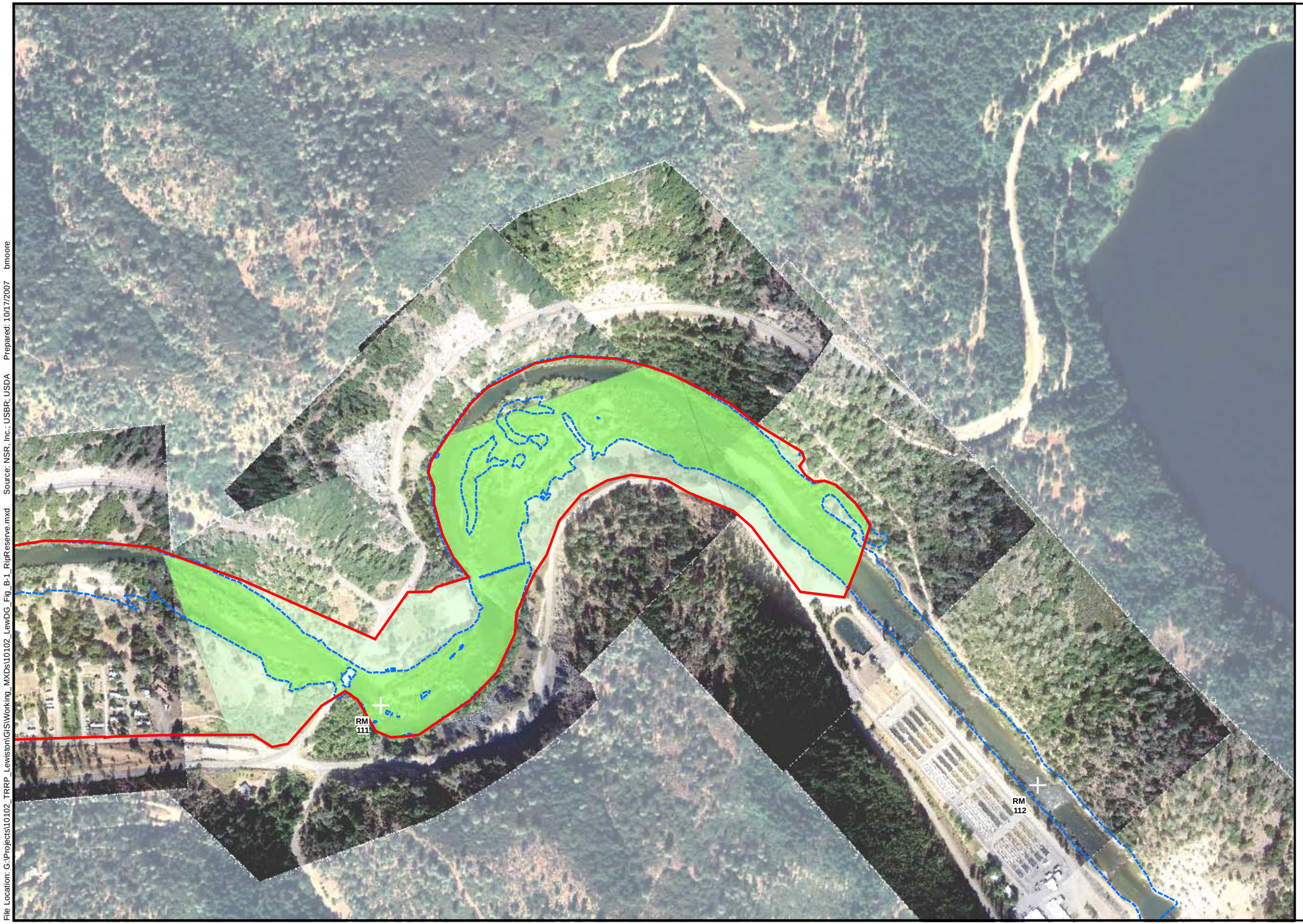
Based on this evaluation, I find that the project described in the Finding Of No Significant Impact (FONSI) has been designed and would be constructed in a manner that does not prevent future attainment of the Aquatic Conservation Strategy objectives. The management actions incorporated into the preferred alternative will maintain the existing condition or lead to improved conditions in the long term, consistent with the intent of the Aquatic Conservation Strategy..

Table 1. ACS Applicable Standards and Guidelines

All Land Allocations		
Survey and Manage	2	Survey prior to ground disturbing activities.
Riparian Reserves		
Timber Management	TM 1-c	Apply silvicultural practices for Riparian Reserves to control stocking, reestablish and manage stands, and acquired desired vegetation characteristics needed to attain ACS objectives.
Roads Management	RF-1	Federal, state, and county agencies should cooperate to achieve consistency in road design, operation, and maintenance necessary to attain Aquatic Conservation Strategy objectives.
	RF-2	For each existing or planned road, meet Aquatic Conservation Strategy objectives by:
	RF-2a	Minimizing road and landing locations in Riparian Reserves.
	RF-2b	Completing watershed analyses (including appropriate geotechnical analyses) prior to construction of new roads or landings in Riparian Reserves.
	RF-2c	Preparing road design criteria, elements, and standards that govern construction and reconstruction.
	RF-2d	Preparing operation and maintenance criteria that govern road operation, maintenance, and management.
	RF-2e	Minimizing disruption of natural hydrologic flow paths, including diversion of streamflow and interception of surface and subsurface flow.
	RF-2f	Restricting sidecasting as necessary to prevent the introduction of sediment to streams.
	RF-3	Determine the influence of each road on the Aquatic Conservation Strategy objectives through watershed analysis. Meet Aquatic Conservation Strategy objectives by:
	RF-3a	Reconstructing roads and associated drainage features that pose a substantial risk.

	RF-3b	Prioritizing reconstruction based on current and potential impact to riparian resources and the ecological value of the riparian resources affected.
	RF-3c	Closing and stabilizing, or obliterating and stabilizing roads based on the ongoing and potential effects to Aquatic Conservation Strategy objectives and considering short-term and long-term transportation needs.
	RF-4	New culverts, bridges and other stream crossings shall be constructed, and existing culverts, bridges and other stream crossings determined to pose a substantial risk to riparian conditions will be improved, to accommodate at least the 100-year flood, including associated bedload and debris. Priority for upgrading will be based on the potential impact and the ecological value of the riparian resources affected. Crossings will be constructed and maintained to prevent diversion of streamflow out of the channel and down the road in the event of crossing failure.
	RF-5	Minimize sediment delivery to streams from roads. Outsloping of the roadway surface is preferred, except in cases where outsloping would increase sediment delivery to streams or where outsloping is unfeasible or unsafe. Route road drainage away from potentially unstable channels, fills, and hillslopes.
	RF-7	Develop and implement a Road Management Plan or a Transportation Management Plan that will meet the Aquatic Conservation Strategy objectives. As a minimum, this plan shall include provisions for the following activities:
	RF-7a	Inspections and maintenance during storm events.
	RF-7b	Inspections and maintenance after storm events.
	RF-7c	Road operation and maintenance, giving high priority to identifying and correcting road drainage problems that contribute to degrading riparian resources.
	RF-7d	Traffic regulation during wet periods to prevent damage to riparian resources.
	RF-7e	Establish the purpose of each road by developing the Road Management Objective.
Recreation Management	RM-1	New recreational facilities within Riparian Reserves, including trails and dispersed sites, should be designed to not prevent meeting Aquatic Conservation Strategy objectives. Construction of these facilities should not prevent future attainment of these objectives. For existing recreation facilities within Riparian Reserves, evaluate and mitigate impact to ensure that these do not prevent, and to the extent practicable contribute to, attainment of Aquatic Conservation Strategy objectives.

	LH-3	Locate new support facilities outside Riparian Reserves. For existing support facilities inside Riparian Reserves that are essential to proper management, provide recommendations to FERC that ensure Aquatic Conservation Strategy objectives are met. Where these objectives cannot be met, provide recommendations to FERC that such support facilities should be relocated. Existing support facilities that must be located in the Riparian Reserves will be located, operated, and maintained with an emphasis to eliminate adverse effects that retard or prevent attainment of Aquatic Conservation Strategy objectives.
	LH-4	For activities other than surface water developments, issue leases, permits, rights-of-way, and easements to avoid adverse effects that retard or prevent attainment of Aquatic Conservation Strategy objectives. Adjust existing leases, permits, rights-of-way, and easements to eliminate adverse effects that retard or prevent the attainment of Aquatic Conservation Strategy objectives. If adjustments are not effective, eliminate the activity. Priority for modifying existing leases, permits, rights-of-way and easements will be based on the actual or potential impact and the ecological value of the riparian resources affected.
General Riparian Area Management	RA-2	Fell trees in Riparian Reserves when they pose a safety risk. Keep felled trees on-site when needed to meet coarse woody debris objectives.
	RA-3	Herbicides, insecticides, and other toxicants, and other chemicals shall be applied only in a manner that avoids impacts that retard or prevent attainment of Aquatic Conservation Strategy objectives.



Site Boundary (131.52 acres)

River Mile (RM)

Ordinary High Water Mark (6,000 cfs)

U.S. Forest Service

Riparian Reserve (30.1 acres)

N

1:5,400

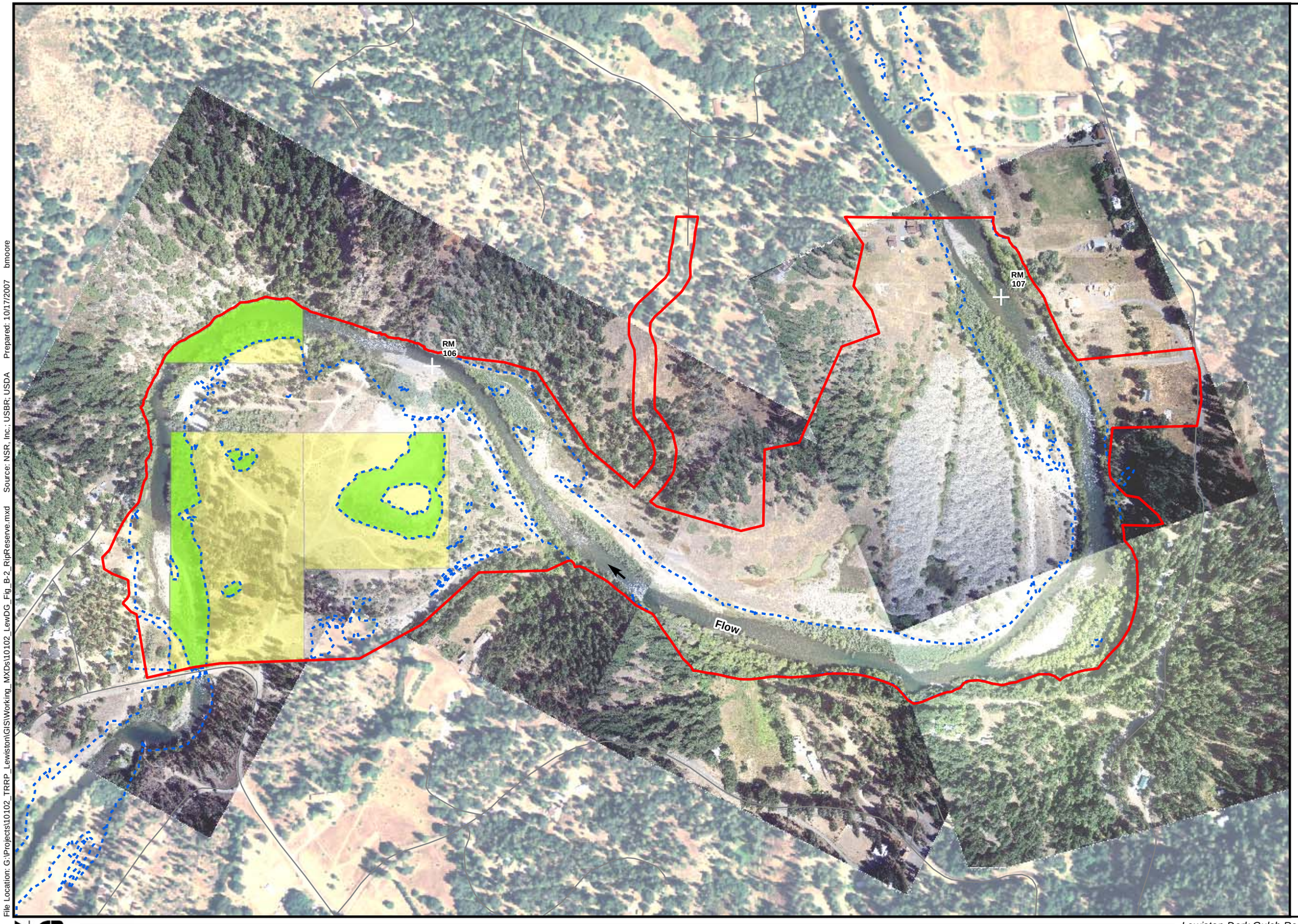
450 0 450

Feet

Aerial photography:
2005
2006

File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_B-1_RipReserve.mxd Source: NSR, Inc.; USBR; USDA Prepared: 10/17/2007 bmoore

Figure B-1
Lewiston Riparian Reserve



Site Boundary (152.02 acres)

River Mile (RM)

Ordinary High Water Mark (6,000 cfs)

Bureau of Land Management

Riparian Reserve (9.19 acres)

N

1:5,400

450 0 450

Feet

Aerial photography:
July 2005
July 2006

File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_B-2_RiprReserve.mxd Source: NSR, Inc.; USBR; USDA Prepared: 10/17/2007 bmoore

North State Resources, Inc.

Lewiston-Dark Gulch Rehabilitation Project: Trinity River Mile 105.4-111.7

Figure B-2
Dark Gulch Riparian Reserve