3.7 Vegetation, Wildlife, and Wetlands

This section describes the vegetation, wildlife, and wetlands that are known to occur within the Lewiston–Dark Gulch Rehabilitation Sites boundaries and evaluates the impacts of the Proposed Action and alternatives on these resources. The discussion of biological resources is based on a focused literature review, informal consultation with resource agencies, and observations made during site visits. Vegetation communities and wildlife habitats were identified and characterized during field surveys. Fisheries resources are discussed separately in Section 3.6.

3.7.1 Affected Environment/Environmental Setting

Prior to dam construction, Trinity River flows were characterized by high winter and spring flows followed by greatly reduced summer flows with sizeable inter-year variability. Large winter and spring floods maintained multi-age woody riparian vegetation through channel scouring, periodic channel migration, and varying seed distribution during flow recession. The result was a mosaic of early-successional willow-scrub vegetation combined with patches of more mature willow-alder and alder-dominated associations.

Construction of the TRD greatly reduced the magnitude of peak flows, obstructed coarse sediment input from above the dam, and allowed fine sediment to accumulate on channel features that had previously been regularly scoured by flood flows. The result is a more static system that is susceptible to expansion and maturation of woody riparian vegetation. This has had detrimental effects, including formation of riparian berms that effectively armor and anchor the riverbanks, thereby preventing the river from meandering within the channel. Establishment of these berms further exacerbates the encroachment and maturation of woody vegetation.

Riparian vegetation is most prevalent along the Trinity River from the Lewiston Dam to the confluence with the North Fork. This reach includes approximately 330 acres of early-successional willow-dominated vegetation; 170 acres of more mature, later-successional alder-dominated vegetation; and 380 acres of willow-alder mix (U.S. Fish and Wildlife Service et al. 1999). Between the North Fork and the South Fork, the mainstem Trinity River channel is constrained by canyon walls that limit riparian vegetation to a narrow band. In comparison to upstream reaches, peak flows in this reach have been relatively less affected by dam operations. Between the South Fork and the Klamath River, the Trinity River alternates between confined reaches with little riparian vegetation to alluvial reaches with vegetation similar to pre-dam conditions in the reach between Lewiston Dam and the North Fork. At Trinity and Lewiston reservoirs, plant species consist of those typically found in standing water and include floating species, rooted aquatic species, and emergent wetland species. Emergent wetland and riparian vegetation is constrained by fluctuating water levels and steep banks.

Many wildlife species that inhabited river and riparian habitats prior to the TRD still occur along the Trinity River, although species that prefer early-successional stages or require greater riverine structural diversity likely occurred in greater abundance prior to the TRD. Common species present prior to the TRD likely included the rough-skinned newt (*Taricha granulosa*), western aquatic garter snake

(*Thamnophis couchi*), foothill yellow-legged frog (*Rana boylii*), northwestern pond turtle *(Clemmys marmorata marmorata*), and American dipper (*Cinclus mexicanus*). Wildlife species that foraged on the abundant salmon (*Oncorhynchus tshawytscha)* and steelhead (*Oncorhynchus mykiss*) runs, including black bear (*Ursus americanus*), bald eagle (*Haliaeetus leucocephalus*), and other scavengers, were also common along the pre-dam Trinity River (U.S. Fish and Wildlife Service et al. 2000).

The post-dam flow regime established conditions that favored upland habitat at the expense of wetland and aquatic habitat. The shift in habitat types is a causative factor in the current depressed populations of aquatic, semi-aquatic, and wetland wildlife species compared to terrestrial species. Species such as the western pond turtle, an example of a semi-aquatic species, have declined since construction of the TRD in response to diminishing quality and abundance of riverine habitat. In contrast, species that favor mature, late-successional riparian habitats, such as the northern goshawk (*Accipiter gentiles*) and black salamander (*Aneides flavipunctatus*), prefer the current mature conditions (U.S. Fish and Wildlife Service et al. 2000).

Impounded water in reservoirs attracts resting and foraging waterfowl and other species that favor standing or slow-moving water. The TRD reservoirs also provide important foraging habitat for eagles and other raptors that prey on fish and waterfowl.

Vegetation

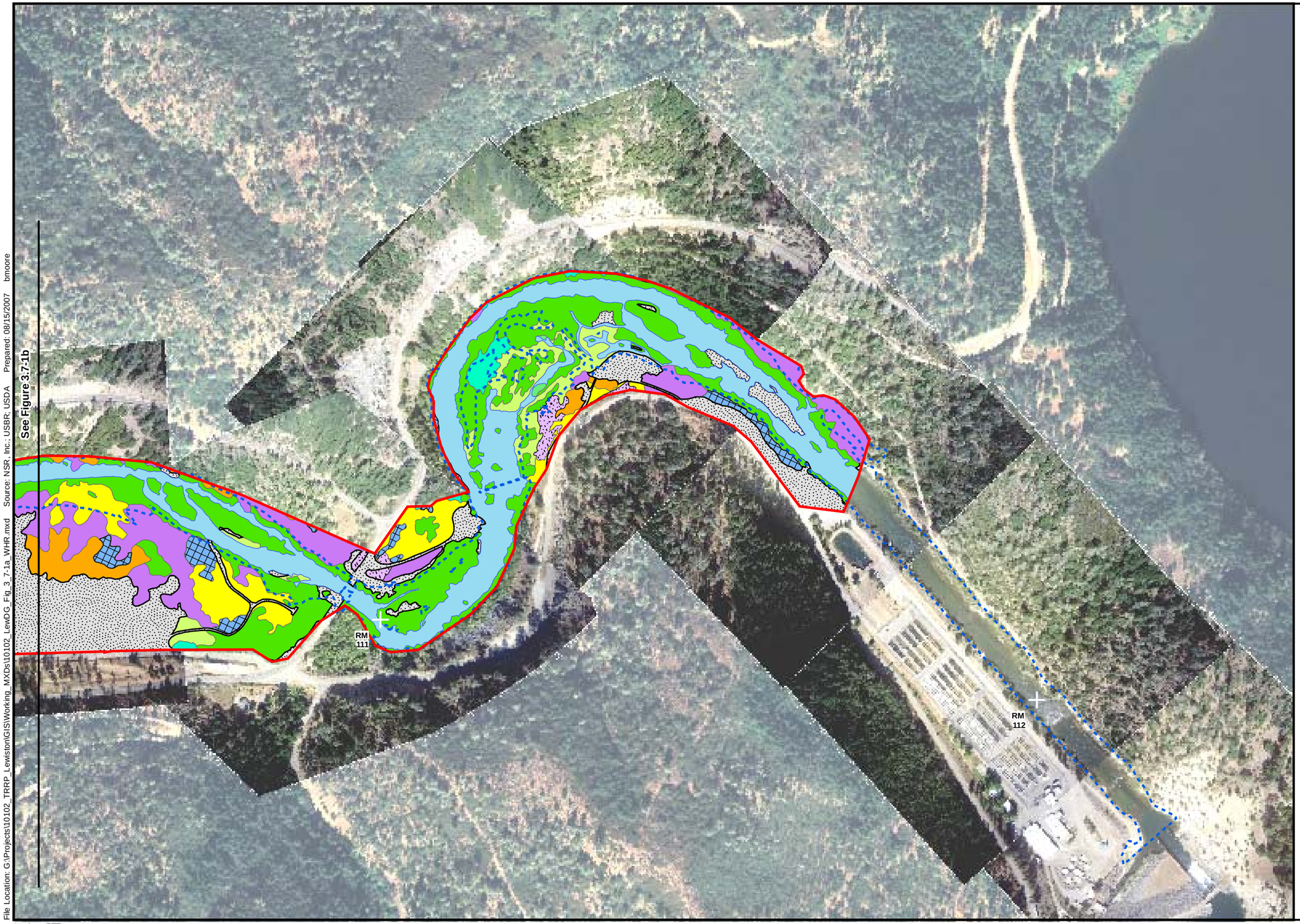
Plant Communities

The following descriptions of plant community types follow the nomenclature used in Sawyer and Keeler-Wolf (1995) and *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer Jr. 1988), except for the foothill pine and open water categories, which are not included in either of these references. Figures 3.7-1a-c illustrate the locations of plant communities mapped throughout the rehabilitation sites.

Fourteen plant communities occur in the project area: annual grassland, barren, foothill pine, fresh emergent wetland, Klamath mixed conifer, mixed chaparral, montane hardwood, montane hardwood-conifer, montane riparian, open water, orchard, perennial grassland, ponderosa pine, and riverine[1]. These communities are discussed in greater detail below. Table 3.7-1 summarizes the plant communities that occur at the sites.

Annual Grassland. The annual grassland plant community occurs at both sites. Located adjacent to areas of riparian vegetation, this plant community is commonly dominated by introduced annual grass species, including wild oats (*Avena fatua*), soft brome (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), cheatgrass (*Bromus tectorum*), and hare barley (*Hordeum murinum* ssp. *leporinum*). Common forbs include broadleaf filaree (*Erodium botrys*), redstem filaree (*E. cicutarium*), California poppy (*Eschscholzia californica*), turkey mullein (*Eremocarpus setigerus*), true clovers (*Trifolium* spp.), burclover (*Medicago polymorpha*), and many others.

[1] The discrepancies in the mapping of plant communities and wetlands result from differing mapping conventions for plant communities and for wetlands. Plant communities were mapped in 2003 during pre-ROD flows of approximately 450 cfs. The wetland delineation used the OHWM based on post-ROD flows of approximately 6,000 cfs.

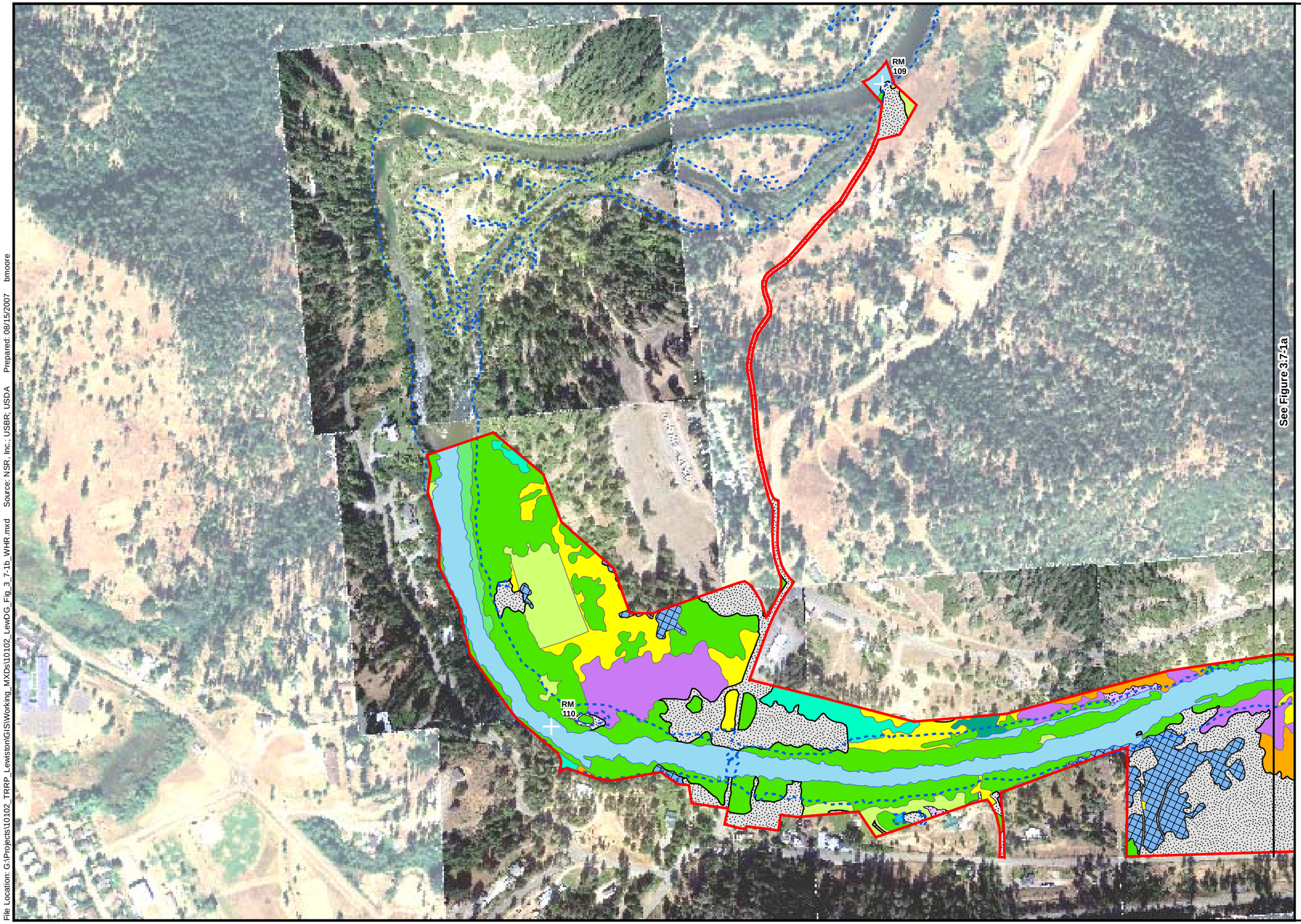


File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_3_7-1a_WHR.mxd Source: NSR, Inc.; USBR; USDA Prepared: 08/15/2007 bmoore

North State Resources, Inc.

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

Figure 3.7-1a
Lewiston - Plant Community Types

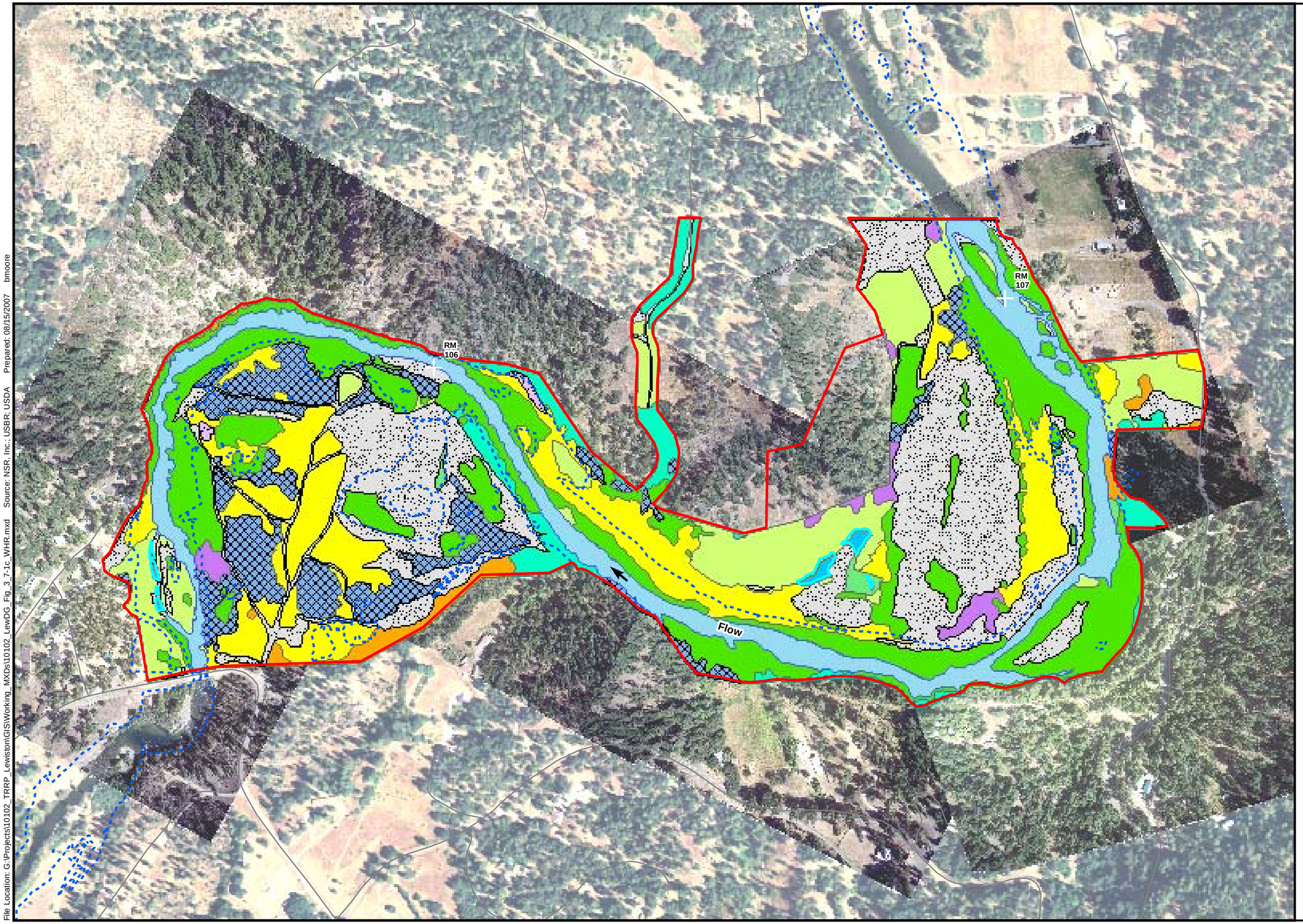


File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_3_7-1b_WHR.mxd Source: NSR, Inc.; USBR; USDA Prepared: 08/15/2007 bmoore

North State Resources, Inc.

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

Figure 3.7-1b
Lewiston - Plant Community Types



Site Boundary (152 acres)

River Mile (RM)

Ordinary High Water Mark (6,000 cfs)

Plant Community

- Orchard (0.01 acre)
- Fresh Emergent Wetland (0.57 acre)
- Riverine (14.99 acres)
- Perennial Grassland (14.48 acres)
- Annual Grassland (22.68 acres)
- Mixed Chaparral (0.34 acre)
- Montane Riparian (33.49 acres)
- Foothill Pine (3.98 acres)
- Klamath Mixed Conifer (14.46 acres)
- Montane Hardwood (2.2 acres)
- Montane Hardwood - Conifer (9.01 acres)
- Open Water (0.51 acre)
- Barren (35.31 acres)

N

1:5,400

450 0 450

Feet

Aerial photography:
July 2005
July 2006

File Location: G:\Projects\10102_TRRP_LewistonGIS\Working_MXDs\10102_LewDG_Fig_3_7-1c_WHR.mxd Source: NSR, Inc.; USBR; USDA Prepared: 08/15/2007 bmoore

North State Resources, Inc.

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

Figure 3.7-1c
Dark Gulch - Plant Community Types

Table 3.7-1. Plant Community Types Present at the Sites

Plant Community Types	Lewiston Site (acres)	Dark Gulch Site (acres)
Annual grassland	9.83	22.68
Barren	24.09	35.31
Foothill pine	12.30	3.98
Fresh emergent wetland	0.95	0.57
Klamath mixed conifer	5.78	14.46
Mixed chaparral	1.10	0.34
Montane hardwood	2.77	2.20
Montane hardwood-conifer	2.63	9.01
Montane riparian	38.07	33.49
Open water	0.03	0.51
Orchard	0.00	0.01
Perennial grassland	6.47	14.48
Ponderosa pine	0.34	0.00
Riverine	27.16	14.99
TOTAL	**131.52**	**150.03**

Barren. Barren land exists at both sites. Vegetation is usually not present, although sparse opportunistic grasses and forbs or weedy species may occur.

Foothill Pine. The foothill pine community occurs at both sites. The dominant overstory species present is gray pine (*Pinus sabiana*). Understory vegetation includes common manzanita (*Arctostaphylos* sp.), buck brush (*Ceanothus cuneatus*), skunkbrush (*Rhus trilobata*), and poison-oak (*Toxicodendron diversilobum*). The underlying herbaceous layer includes ripgut brome, cheatgrass, and false hedge-parsley (*Torilis arvensis*).

Fresh Emergent Wetland. Fresh emergent wetlands were identified at both the Lewiston and Dark Gulch sites. Fresh emergent wetlands are characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. The dominant plant species include narrow-leaf cattail (*Typha angustifolia*), Himalayan blackberry, perennial ryegrass (*Lolium perenne*), and narrow-leaved willow (*Salix exigua*).

Klamath Mixed Conifer. Klamath mixed conifer communities occur at both sites. Klamath mixed conifer habitats typically are tall, dense to moderately open, needle-leaved evergreen forests with patches of broad-leaved evergreen and deciduous low trees and shrubs. The habitat is dominated by tall evergreen conifers up to 60 meters in height and have a rich shrub layer and well-developed herbaceous layers. On more xeric sites, the habitat is generally open, but very diverse forestland, having a well-developed shrub layer. The overstory layer is characterized by a mixture of conifers. Dominant conifers are white fir (*Abies concolor*) and Douglas-fir (*Pseudotsuga menziesii* var. *menziesii*). Occasional broadleaf trees

include golden chinquapin (*Chrysolepis chrysophylla*), canyon live oak (*Quercus chrysolepis*), and black oak (*Q. kelloggii*).

Mixed Chaparral. Mixed chaparral communities occur at both sites. Mixed chaparral is a structurally homogeneous brushland type dominated by shrubs with thick, stiff, heavily cutinized evergreen leaves. The dominant species present include greenleaf manzanita (*Arctostaphylos patula*) and buck brush.

Montane Hardwood. Montane hardwood communities occur at both sites. Dominant tree species observed include Pacific madrone (*Arbutus menziesii*), bigleaf maple (*Acer macrophyllum*), canyon live oak, and black oak. Associated shrub species observed include common manzanita (*Arctostaphylos manzanita*), buck brush, skunkbrush, snowberry (*Symphoricarpos albus* var. *laevigatus*), and poison-oak. The underlying herbaceous layer includes ripgut brome, cheatgrass, blue wild rye (*Elymus glaucus*), silver bush lupine (*Lupinus albifrons*), purple sanicle (*Sanicula bipinnatifida*), and false hedge-parsley.

Montane Hardwood-Conifer. In the northern interior of California, the montane hardwood-conifer community consists of at least one-third conifer and at least one-third broadleaf trees scattered throughout the landscape in a mosaic-like pattern of small pure stands of conifers interspersed with small stands of broad-leaved trees (Holland 1986; Mayer and Laudenslayer 1988). Geographically and biologically, this plant community often serves as an ecotone between dense coniferous forest and montane hardwood, mixed chaparral, or open woodland vegetation types.

This community occurs at both sites. Dominant tree species observed include Pacific madrone, bigleaf maple, ponderosa pine (*Pinus ponderosa)*, gray pine, Douglas-fir, canyon live oak, and black oak. Shrub species observed include common manzanita, buck brush, cascara (*Rhamnus purshiana*), skunkbrush, snowberry, and poison-oak. The underlying herbaceous layer includes ripgut brome, cheatgrass, blue wild rye, silver bush lupine, purple sanicle, and false hedge-parsley.

Montane Riparian. The montane riparian community occurs adjacent to and below the ordinary high water mark (OHWM) of the Trinity River at both sites. This plant community has colonized the riverine area between the low flow channel (identified in plant community mapping) and the OHWM (used in the wetland delineation), as well as other relatively wet locations. This community is composed of riparian plant species that are typical for Trinity County. Dominant tree species include bigleaf maple, white alder (*Alnus rhombifolia*), Oregon ash (*Fraxinus latifolia*), black cottonwood (*Populus balsamifera* ssp. *trichocarpa*), and Goodding's black willow (*Salix gooddingii*). Understory species include mugwort (*Artemisia douglasiana*), virgin's bower (*Clematis ligusticifolia*), American dogwood (*Cornus sericea*), Oregon golden-aster (*Heterotheca oregona*), dalmatian toadflax (*Linaria genistifolia* ssp. *dalmatica*), white sweet clover (*Melilotus alba*), musk monkeyflower (*Mimulus moschatus*), straggly gooseberry (*Ribes divaricatum*), Himalayan blackberry, California blackberry (*R. ursinus*), narrow-leaved willow, arroyo willow (*S. lasiolepis*), shining willow (*S. lucida*), and California wild grape (*Vitis californica*).

Open Water. Open water occurs at both sites. Open water habitat consists of deep-water areas that exhibit perennial inundation. Vegetation is limited to the edges of these features because the water depth inhibits sunlight from reaching the bottom where vegetation would typically be rooted.

Orchard. A small apple orchard occurs within the boundary of the Dark Gulch site.

Perennial Grassland. Perennial grassland occurs at both sites. Perennial grassland habitat typically occurs on ridges and south-facing slopes, alternating with forest and scrub in the valleys and on north-facing slopes. Species present in this habitat include a variety of introduced and native perennial species, including sedge (*Carex* spp.*).*

Ponderosa Pine. The ponderosa pine community occurs at the Lewiston site. The dominant overstory species present is ponderosa pine, and understory vegetation includes common manzanita, buck brush, and poison-oak. The underlying herbaceous layer includes ripgut brome and cheatgrass.

Riverine. Riverine habitat occurs at both sites. Riverine habitat in the project area is dominated by run and riffle areas, with boulder, cobble, gravel, and sand substrates. Vegetation within the active river channel is sparse, with occasional clumps of sedges.

Special-Status Plant Species

For the purposes of this evaluation, special-status plant species are vascular plants that are (1) designated as rare by the CDFG or the USFWS or are listed as threatened or endangered under the California Endangered Species Act (CESA) or the federal Endangered Species Act (ESA); (2) proposed for designation as rare or listed as threatened or endangered; and/or (3) state or federal candidate species for listing as threatened or endangered. Other special-status plant species are included on the California Native Plant Society (CNPS) Lists 1A, 1B, or 2 (California Native Plant Society 2001), the BLM list of sensitive species, or the USFS Region 5 list of sensitive species. Until recently, USFWS maintained a discrete list of species of concern, including special-status plant species. This list is no longer maintained and is therefore not referenced in this discussion.

Plant species designated "BLM sensitive" are not federally or state-listed as endangered or threatened, nor are they proposed or candidates for listing, but they are designated by the BLM State Director for special management consideration. The BLM Manual Section 6840 defines sensitive species as "…those species (1) that are under status review by the USFWS/NMFS; or (2) whose numbers are declining so rapidly that Federal listing may become necessary, or (3) with typically small and widely dispersed populations; or (4) that are inhabiting ecological refugia or other specialized or unique habitats." Existing California-BLM policy concerning the designation of sensitive species identifies two conditions that must be met before a species may be considered as BLM sensitive: (1) a significant population of the species must occur on BLM-administered lands, and (2) the potential must exist for improvement of the species' condition through BLM management. The BLM's policy provides sensitive species with the same level of protection afforded federal candidate species.

A USFS "sensitive species" is any species of plant that has been recognized by the Regional Forester to need special management in order to prevent it from becoming threatened or endangered. The National Forest Management Act (NFMA) requires the USFS to "provide for a diversity of plant and animal communities" [16 U.S.C. 1604(g)(3)(B)] as part of its multiple use mandate. The USFS must maintain "viable populations of existing native and desired non-native species in the planning area" (36 CFR

219.19). The Sensitive Species program is designed to meet this mandate and to demonstrate the USFS' commitment to maintaining biodiversity on National Forest System lands.

A list of special-status plant species considered for the Proposed Action was compiled by performing searches of the California Natural Diversity Database (CNDDB) and CNPS Electronic Inventory database (Appendix K), informally consulting with CDFG and USFWS, and reviewing biological literature for the project region, including the BLM special-status plants list for the Redding Field Office (U.S. Bureau of Land Management 2005). A list of federal special-status species potentially occurring in Trinity County and the *Lewiston* USGS quadrangle was obtained from the USFWS on November 21, 2006. The lists include species potentially occurring in Trinity County and the Lewiston USGS quadrangle that have endangered, threatened, or candidate status (Appendix E). The lists identified one listed plant species, McDonald's rock-cress (*Arabis macdonaldiana*), as being potentially present in Trinity County. However, this species is not expected to occur within the Lewiston quadrangle.

The list of special-status plant species considered for analysis was refined based upon habitat parameters, including elevation and the habitats known to occur at the project sites. Based on this analysis, 23 special-status plant species were identified as potentially occurring at the project sites (Table 3.7-2).

Vegetation Surveys

Floristic (vegetation) inventories and special-status plant surveys were conducted April 11-15, May 2-6, and June 20-22, 2005. These surveys covered the entirety of the Lewiston site and the majority of the Dark Gulch site (the boundary of this site has been enlarged since the surveys were performed). The botanical studies were conducted in accordance with guidelines developed by the CDFG (2000). Surveys were conducted when special-status plant species were most likely to be identifiable (i.e., the blooming period). A comprehensive list of plant species observed at the sites is included in Appendix L. No special-status plant species were detected.

A habitat analysis of the portion of the Dark Gulch site that was not surveyed indicates that, due to a lack of suitable habitat, no federally listed plant species are likely to occur. However, there is a low probability that six non-listed special-status plant species may occur in this area (see Table 3.7-2).

Survey and Manage Species

At the time the technical studies for the Proposed Action were initiated, the USFS and the BLM were required to conduct surveys for Survey and Manage species that were specifically listed in the Northwest Forest Plan ROD (U.S. Department of Agriculture and U.S. Department of the Interior 1994). Subsequently, in 2001, the Department of Agriculture and Department of Interior issued a ROD for Amendments to the Survey and Manage, Protection Buffer, and Other Mitigation Measures Standards and Guidelines (U.S. Department of Agriculture and U.S. Department of Interior 2001). A Supplemental Environmental Impact Statement (SEIS) was prepared to examine an alternative "that replaces the Survey and Manage mitigation requirements with existing USFWS and BLM special status species programs to achieve the goals of the Northwest Forest Plan through a more streamlined process." A new ROD was

Table 3.7-2. Special-Status Plant Species Considered for Analysis

Common Name (*Scientific Name*)	Status[1] (Fed/State/ CNPS)	General Habitat	Flowering Period	Comments
		Federally or State-Listed Species		
McDonald's rock cress (*Arabis macdonaldiana*)	E/E/1B/—	Crevices, cracks, and margins of rocks on barren to shrub-covered, shallow, rocky, ultramafic soils (3,900-7,200 feet).	May–July	Suitable habitat is not present (no ultramafic soils, elevation too low) and the species was not observed during protocol-level surveys.
		Other Special-Status Species		
Bay horsehair lichen (*Sulcaria badia*)	—/—/—†	Hardwood trees (e.g., Oregon white oak) in areas with significant amount of fog and ambient humidity.	N/A	Suitable habitat is present; however, the species was not observed during protocol-level surveys.
Bottlebrush sedge (*Carex hystericina*)	—/—/2*	Marshes, swamps, and wet places along stream banks (1,960–2,000 feet).	June	Suitable habitat is present; however, the species was not observed during protocol-level surveys.
California globe mallow (*Iliamna latibracteata*)	—/—/1B†	Often on burned areas within chaparral, lower montane coniferous forest, North Coast coniferous forest, and riparian scrub (200-6,565 feet).	June–August	Suitable habitat is present. The species was not observed during protocol-level surveys, but there is a low probability that it occurs in the portion of the Dark Gulch site that was not surveyed.
Canyon Creek stonecrop (*Sedum paradisum*)	—/—/1B*†	Granitic, rocky sites within broadleaved upland forest, chaparral, lower montane coniferous forest, and subalpine coniferous forest (960-6,500 feet).	May–July	Suitable habitat is present; however, the species was not observed during protocol-level surveys.
Clustered lady's-slipper (*Cypripedium fasciculatum*)	—/—/4*†	Variety of soil types (including serpentinite) and often but not always associated with streams within mixed conifer or oak forests (1,300-6,000 feet).	March–July	Suitable habitat is not present (no serpentinite), and the species was not observed during protocol-level surveys.
Dudley's rush (*Juncus dudleyi*)	—/—/2	Wetlands or other wet areas in lower montane coniferous forest habitat (1,490-6,560 feet).	July–August	Suitable habitat is present. The species was not observed during protocol-level surveys, but there is a low probability that it occurs in the portion of the Dark Gulch site that was not surveyed.

Table 3.7-2. Special-Status Plant Species Considered for Analysis

Common Name (*Scientific Name*)	Status[1] (Fed/State/ CNPS)	General Habitat	Flowering Period	Comments
Elongate copper moss (*Mielichhoferia elongata*)	—/—/2†	Usually on vernally mesic sites of metamorphic rock within cismontane woodland (1,640-4,265 feet).	N/A	Suitable habitat is present; however, the species was not observed during protocol-level surveys.
English Peak greenbriar (*Smilax jamesii*)	—/—/1B*	Broadleaved upland forest, lower and upper montane coniferous forests, marshes, swamps, and North Coast coniferous forest (2,900-7,500 feet).	May–July	Suitable habitat is present. The species was not observed during protocol-level surveys, but there is a low probability that it occurs in the portion of the Dark Gulch site that was not surveyed.
Flaccid sedge (*Carex leptalea*)	—/—/2	Marshes, swamps, wet meadows, bogs, fens, and wet places along stream banks (0–2,300 feet).	May–July	Suitable habitat is present; however, the species was not observed during protocol-level surveys.
Fox sedge (*Carex vulpinoidea*)	—/—/2	Freshwater marshes, swamps, and riparian woodlands (100-4,000 feet).	May–June	Suitable habitat is present. The species was not observed during protocol-level surveys, but there is a low probability that it occurs in the portion of the Dark Gulch site that was not surveyed.
Heckner's lewisia (*Lewisia cotyledon* var. *heckneri*)	—/—/1B*	Outcrops and cliffs of various rock types, often near streams or rivers, in part to full shade, usually on northern aspects (730-6,900 feet). Occurs in a variety of forest types.	May–July	Suitable habitat is present; however, the species was not observed during protocol-level surveys.
Howell's lewisia (*Lewisia cotyledon* var. *howellii*)	—/—/3*	Rocky places in broadleaf upland and lower montane coniferous forests, chaparral, and cismontane woodland (490-6,600 feet).	April–July	Suitable habitat is present; however, the species was not observed during protocol-level surveys.
Moonwort, grape-fern *(Botrychium* subgenus *Botrychium)*	—/—/2†	Fens, meadows, seeps, marshes, swamps, and mesic sites in fields, shrubby slopes, shady forests, and riparian areas (1,000-6,000 feet).	N/A	Suitable habitat is present; however, the species was not observed during protocol-level surveys.

Table 3.7-2. Special-Status Plant Species Considered for Analysis

Common Name (*Scientific Name*)	Status[1] (Fed/State/ CNPS)	General Habitat	Flowering Period	Comments
Mountain lady's-slipper (*Cypripedium montanum*)	—/—/4*†	Variety of soil types and often but not always associated with streams within mixed conifer, oak, and broad-leaved forests (1,300-6,000 feet).	March–August	Suitable habitat is present; however, the species was not observed during protocol-level surveys.
Northern adder's-tongue fern (*Ophioglossum pusillum*)	—/—/1B†	Marshes, swamps, and other mesic sites within valley and foothill grassland (3,280-6,560 feet).	July	Suitable habitat is present; however, the species was not observed during protocol-level surveys.
Northern clarkia (*Clarkia borealis* ssp. *borealis*)	—/—/1B*†	Chaparral, cismontane woodland, and lower montane coniferous forest (1,310-4,395 feet).	June–September	Suitable habitat is present. The species was not observed during protocol-level surveys, but there is a low probability that it occurs in the portion of the Dark Gulch site that was not surveyed.
Oregon willow herb (*Epilobium oreganum*)	—/—/1B*†	Generally on ultramafic soils of wet, gently sloping stream banks, meadows and fens within lower and upper montane coniferous forests (500-7,800 feet).	June–September	Suitable habitat is present; however, the species was not observed during protocol-level surveys.
Stebbins' harmonia (*Harmonia stebbinsii*)	—/—/1B*	Shallow, rocky, ultramafic substrates; edges between timber and brush, roadsides on gently south-facing slopes (1,300-5,200 feet).	May–July	Suitable habitat is not present (no ultramafic soils) and the species was not observed during protocol-level surveys.
Thread-leaved beardtongue (*Penstemon filiformis*)	—/—/1B*†	Rocky openings in lower montane woodlands and coniferous forests on ultramafic substrates (1,475-6,005 feet).	June–July	Suitable habitat is not present (no ultramafic soils) and the species was not observed during protocol-level surveys.
Veiny arnica (*Arnica venosa*)	—/—/4†	Often on ridge tops and in disturbed areas, such as on old road cuts, within mixed conifer or conifer/oak forest in Trinity and Shasta counties (2,000-5,200 feet).	May–July	Suitable habitat is present. The species was not observed during protocol-level surveys, but there is a low probability that it occurs in the portion of the Dark Gulch site that was not surveyed.

Table 3.7-2. Special-Status Plant Species Considered for Analysis

Common Name (*Scientific Name*)	Status[1] (Fed/State/ CNPS)	General Habitat	Flowering Period	Comments
Wolf's evening primrose (*Oenothera wolfii*)	—/—/1B	Coastal habitats and lower montane coniferous forests; usually on sandy, mesic substrates (9-2,625 feet).	May–October	Suitable habitat is present; however, the species was not observed during protocol-level surveys.
White beaked-rush (*Rhynchospora alba*)	—/—/2	Bogs, fens, meadows, marshes, and swamps (freshwater) (197-6,693 feet).	July–August	Suitable habitat is present; however, the species was not observed during protocol-level surveys.

[1]Status Codes

Federal and State Codes:
E = Endangered; T = Threatened;
† = USFS Sensitive or Endemic
* = BLM Sensitive

CNPS Codes:
List 1B = Rare, Threatened or Endangered in CA and elsewhere
List 2 = Rare, Threatened, or Endangered in CA but common elsewhere
List 3 = More information is needed

issued by the agencies in March 2004 (U.S. Department of Agriculture and Department of the Interior 2004) that documented the decision to remove or modify the Survey and Manage Mitigation Measure Standards and Guidelines. As a result, the implementing agencies discontinued the Survey and Manage program and transferred selected Survey and Manage taxa to agency Special-Status Species Programs (SSSP). However, on January 11, 2006, a U.S. District Court Judge vacated the administration's decision to eliminate the Survey and Manage standard of the Northwest Forest Plan. This decision reinstates the Survey and Manage standard.

Joe Molter, botanist for the BLM, surveyed selected sites involving federal lands associated with the project area for vascular plant species included in the Survey and Manage Standards of the Northwest Forest Plan. A list of vascular plant species with the potential to occur in the project area was compiled by performing an Interagency Species Management System (ISMS) Database search and reviewing the Survey Protocols for the species listed in Table 1-1 of the amended ROD for the Northwest Forest Plan (U.S. Department of Agriculture and U.S. Department of Interior 2001) and USFS and BLM visions for the 2001 Survey and Manage Annual Species Review (USDA Forest Service and Bureau of Land Management 2002). This list included two species with the potential to occur in the project area: clustered lady's slipper and mountain lady's slipper. Neither species was observed during the survey of the sites in 2002.

Jeanne McFarland, botanist for BLM's Arcata Field Office, conducted pre-disturbance surveys in the project area for nonvascular plants and fungi, collectively known as cryptogams, in compliance with the Northwest Forest Plan ROD. The surveys, which were conducted during the summer of 2002, consisted of a close inspection of all suitable substrates for the fungus *Bridgeoporus nobilissimus* (the only pre-disturbance Survey and Manage fungus). No Survey and Manage cryptogamic species were present within the study limits, and no appropriate habitat for these species was identified within the study limits on public lands.

Non-Native and Invasive Plant Species

Non-native and invasive plant species occur throughout the Trinity River corridor, particularly in areas that have been subject to ground-disturbing activities (e.g., roads, recreation sites). Reclamation acknowledges that these species have the potential to inhibit the TRRP's abilities to restore the functions and values associated with riparian and upland vegetation along the Trinity River. As part of the overall TRRP program, Reclamation funded an effort to map the pre-restoration distribution and abundance of non-native species along the mainstem Trinity River corridor to the North Fork Trinity. Ongoing monitoring will determine the response of these non-native species to removing existing vegetation and modifying the River's flow regime. In association with the mapping effort, species-specific management recommendations were developed that will assist Reclamation in developing a successful vegetation restoration component and provides recommendations for applied control and management of invasive species at channel rehabilitation sites. This plan will support Reclamation's desire to ensure that channel rehabilitation projects do not introduce or further spread non-native plants along the Trinity.

Weed Management Areas (WMAs) are local organizations that bring together landowners and managers (private, city, county, state, and federal) in a county, multi-county, or other geographical area to coordinate efforts and expertise against common invasive (noxious) weed species. The WMAs function under the authority of a mutually developed memorandum of understanding (MOU) and are subject to statutory and regulatory weed control requirements. The lead agency for the WMAs is the California Department of Food and Agriculture (CDFA).

The Trinity County Weed Management Cooperative (TCWMC) acts as the local Trinity County WMA. TCWMC cooperators include the Trinity County Department of Agriculture, Trinity County Planning Department, USDA Natural Resources Conservation Service (NCRS), STNF, and the TCRCD. Trinity County has in place weed eradication programs for spotted knapweed (*Centaurea maculosa*), diffuse knapweed (*Centaurea diffusa*), dalmatian toadflax, and plumeless thistle (*Carduus acanthoides*). In addition to these species, the STNF has identified several other high-priority species that occur in close proximity to the site. These species include scotch broom (*Cytisus scoparius*) and Dyer's woad (*Isatis tinctorius*). To the extent possible, the management plan prepared for the TRRP will address all these species, will make predictions concerning project effects on local populations, and will make recommendations for minimizing further spread of invasive plant species.

Trinity County has several policies that discourage the use of synthetic herbicides for weed control. The Board of Supervisors has passed several resolutions declaring forest herbicides a public nuisance, as follows:

- Resolution # 45-91 – April 2, 1991: Declares that the application of forestry herbicides in Trinity County is a public nuisance and that alternatives to forestry herbicides are available that create jobs. The resolution proclaims Trinity County timberlands an herbicide-free zone and requests forest managers to not use herbicides on Trinity County timberlands.
- Resolution re-declaring the application of forest herbicides in Trinity County a public nuisance – April 7, 1997: This resolution identifies dangers associated with herbicide use and declares its use a public nuisance.

- Resolution # 2004-066 – July 20, 2004: This resolution acknowledges Trinity County's history of concerns about spraying herbicides and reaffirms its stance that herbicides are a public nuisance and that Trinity County is an herbicide-free zone.

Over the past 20 years, the lands adjacent to SR 299/Trinity River corridor have been subjected to substantial infestations of tree of heaven, scotch broom, and Himalayan blackberry. Several factors have influenced these infestations, including a lack of historical awareness of the need to manage these species and Trinity County guidance that strongly recommends against the application of herbicides within the County boundaries.

A number of non-native and invasive plant species were observed during the botanical surveys in 2005. These species are typically opportunistic and will colonize particularly in areas of disturbance. The CDFA categorizes invasive species of concern as being an A-, B-, or C-listed plant:

- A = Eradication, quarantine, or other holding action at the state/county level.
- B = Intensive control or eradication, where feasible, at the county level.
- C = Control or eradication as local conditions warrant, at the county level.

Non-native and/or invasive plant species observed at the rehabilitation sites include the A-list species dalmatian toadflax and Himalayan blackberry, and the C-list species yellow star-thistle, Klamathweed, and medusahead (*Taeniatherum caput-medusae*) (Figures 3.7-2a-c).

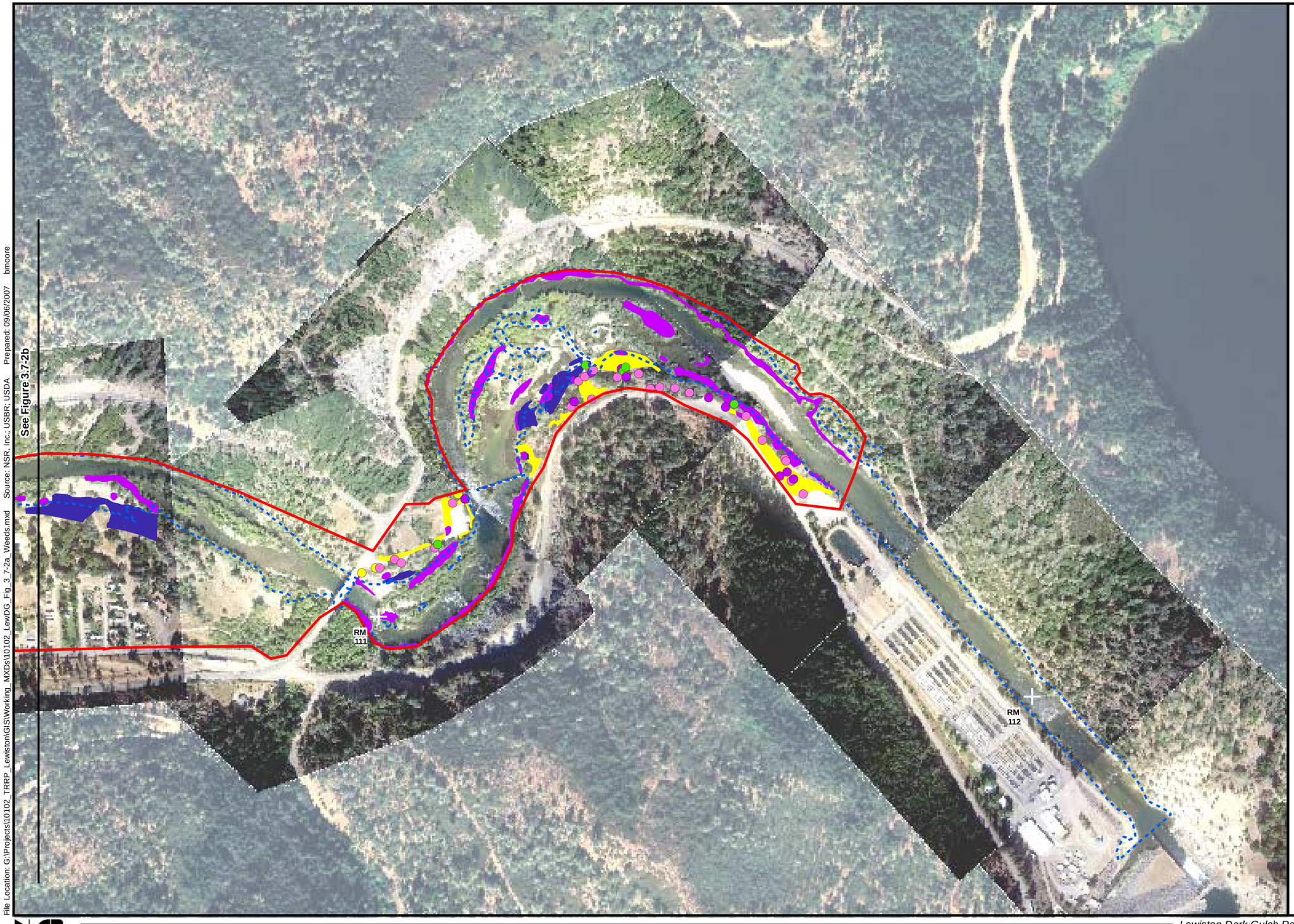
The most apparent non-native/invasive plants at the sites are Himalayan blackberry and dalmation toadflax. In addition to information collected during on-site floristic surveys, the TRRP obtained information from the TCWMC about known populations of non-native and/or invasive plant species within or adjacent to the sites.

Wildlife

Wildlife Habitats

In the project area, several plant communities, described above, occur in a complicated mosaic, providing habitat for a wide variety of wildlife species. Provided below is a discussion of wildlife habitat use in the project area. These habitats correspond to the plant communities described above.

Annual Grassland. Annual grasslands are productive wildlife habitat. Grassland bird species, such as the mourning dove (*Zenaida macroura*), savannah sparrow (*Passerculus sandwichensis*), and white-crowned sparrow (*Zonotrichia leucophrys*), as well as rodents, including the California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), California kangaroo rat (*Dipodomys californicus*), and deer mouse (*Peromyscus maniculatus*), forage on the seed crop this community provides. These species, in turn, attract predators such as the gopher snake (*Pituophis melanoleucus*), American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), and coyote (*Canis latrans*). Reptile species expected to occur here include the western fence lizard (*Sceloporus occidentalis*), western skink (*Eumeces skiltonianus*), western rattlesnake (*Crotalus viridis*), and yellow-bellied racer (*Coluber constrictor*).



Site Boundary (131.5 acres)

River Mile (RM)

Ordinary High Water Mark (6,000 cfs)

Plant Species

Isolated Stands

- Dalmatian toadflax
- Himalayan blackberry
- Klamathweed
- Yellow star-thistle

Consolidated Stands

- Himalayan blackberry (12.981 acres)
- Medusahead (0.008 acre)
- Dalmatian toadflax (7.642 acres)
- Yellow star-thistle (5.087 acres)
- Klamathweed (0.027 acre)

Note: Some areas were not surveyed due to steepness of terrain or no access to private property.

N

1:5,400

450 0 450

Feet

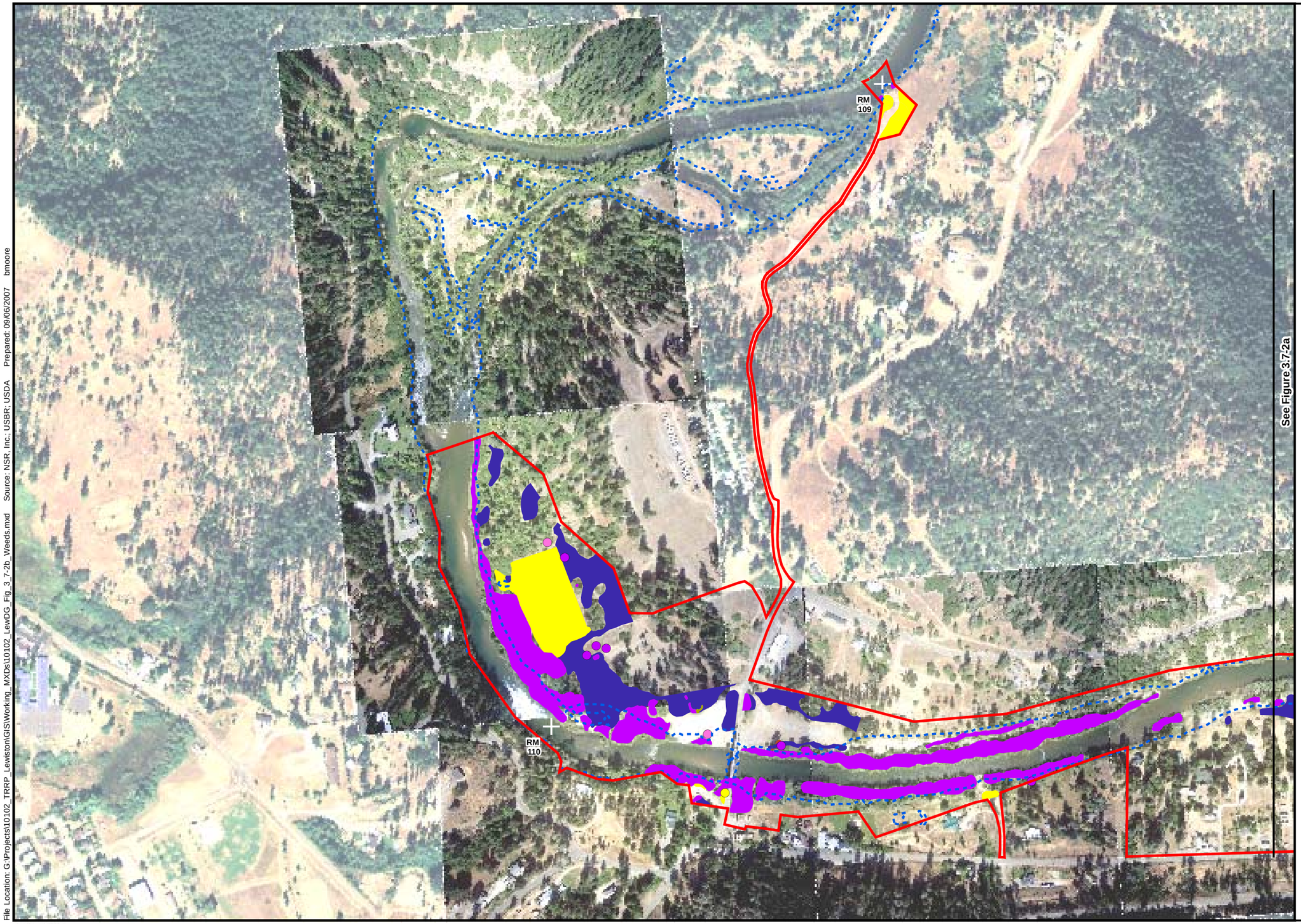
Aerial photography:
July 2005
July 2006

File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_3_7-2a_Weeds.mxd Source: NSR, Inc.; USBR; USDA Prepared: 09/06/2007 bmoore

North State Resources, Inc.

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

Figure 3.7-2a
Non-native and Invasive Plant Species



Site Boundary (131.5 acres)

River Mile (RM)

Ordinary High Water Mark (6,000 cfs)

Plant Species

Isolated Stands

- Dalmatian toadflax
- Himalayan blackberry
- Klamathweed
- Yellow star-thistle

Consolidated Stands

- Himalayan blackberry (12.981 acres)
- Medusahead (0.008 acre)
- Dalmatian toadflax (7.642 acres)
- Yellow star-thistle (5.087 acres)
- Klamathweed (0.027 acre)

Note: Some areas were not surveyed due to steepness of terrain or no access to private property.

N

1:5,400

450 0 450

Feet

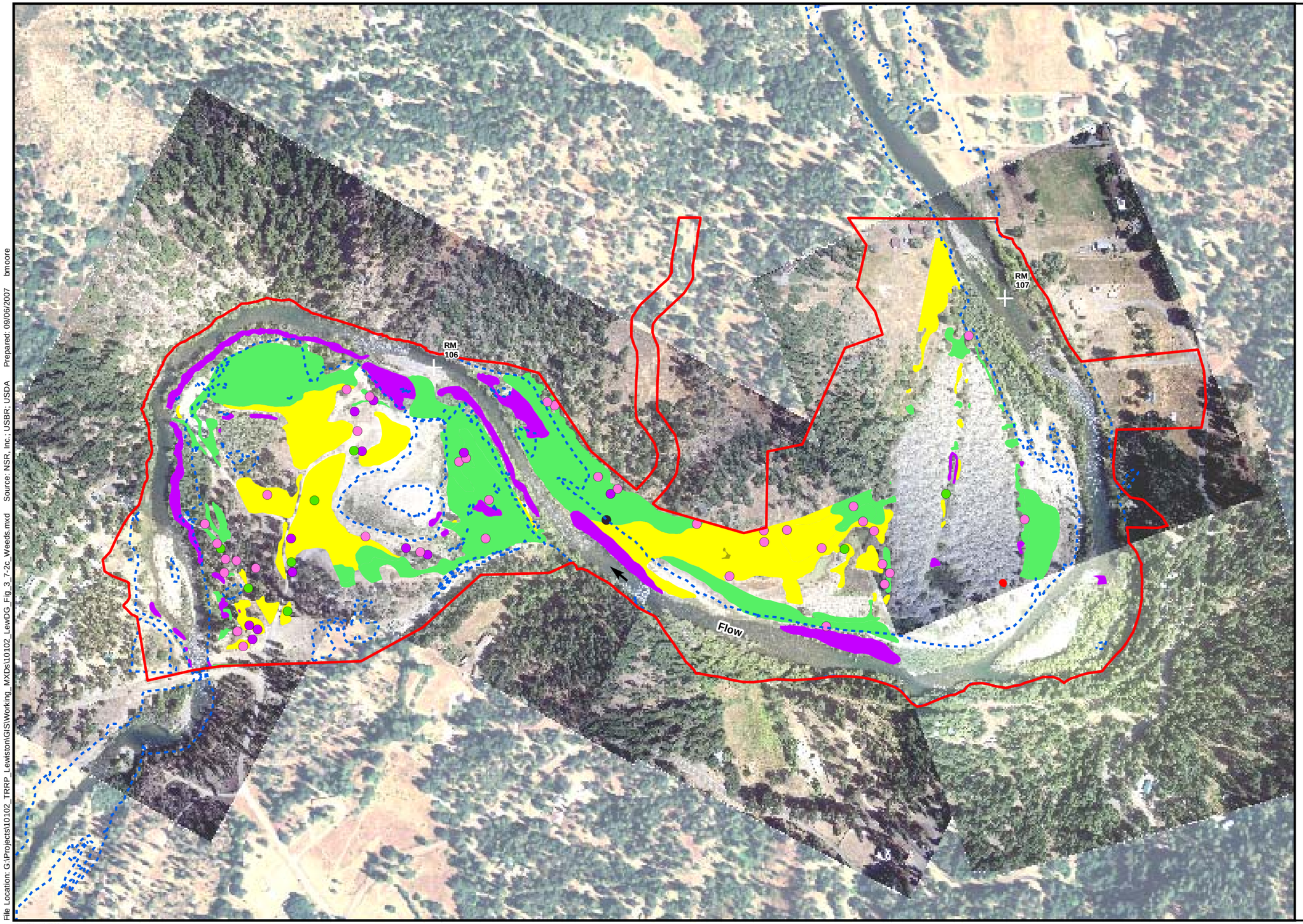
Aerial photography:
2005
2006

File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_3_7-2b_Weeds.mxd Source: NSR, Inc.; USBR; USDA Prepared: 09/06/2007 bmoore

North State Resources, Inc.

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

Figure 3.7-2b
Non-native and Invasive Plant Species



Site Boundary (152 acres)

River Mile (RM)

Ordinary High Water Mark (6,000 cfs)

Plant Species

Isolated Stands

- Dalmatian toadflax
- Himalayan blackberry
- Klamathweed
- Tamarisk

Consolidated Stands

- Black locust (0.024 acre)
- Himalayan blackberry (5.2 acres)
- Dalmatian toadflax (18.581 acres)
- Yellow star-thistle (14.039 acres)
- Klamathweed (0.018 acre)

Note: Some areas were not surveyed due to steepness of terrain or no access to private property.

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_3_7-2c_Weeds.mxd Source: NSR, Inc.; USBR; USDA Prepared: 09/06/2007 bmoore

North State Resources, Inc.

Figure 3.7-2c
Non-native and Invasive Plant Species

Barren. This habitat provides few resources to wildlife species. Some species associated with adjacent habitats likely forage on the bare soil to some extent, and killdeer (*Charadrius vociferus*) may nest here. However, use of this habitat by wildlife is expected to be limited.

Foothill Pine. Numerous birds feed on the seeds of foothill pine, including the northern flicker (*Colaptes auratus*), Steller's jay (*Cyanocitta stelleri*), acorn woodpecker (*Melanerpes formicivorus*), and band-tailed pigeon (*Columba fasciata*). The foliage, bark, and seeds also provide food for gray squirrels (*Sciurus griseus*), and black-tailed deer (*Odocoileus hemionus columbianus*) browse the foliage and twigs.

Fresh Emergent Wetland. Fresh emergent wetlands provide habitat for breeding and larval development of amphibians, such as the western toad (*Bufo boreas*), Pacific chorus frog (*Pseudacris regilla*), and the non-native bullfrog (*Rana catesbeiana*). They also provide habitat for waterbirds, such as the green heron (*Butorides striatus*) and mallard (*Anas platyrhynchos*), as well as roosting and nesting habitat for red-winged blackbirds (*Agelaius phoeniceus*).

Klamath Mixed Conifer. Klamath mixed conifer habitat provides a wide array of nesting and foraging opportunities for wildlife. Species commonly found in this habitat include the mountain quail (*Oreotyx pictus*), hairy woodpecker (*Picoides villosus*), sharp-shinned hawk (*Accipiter striatus*), western gray squirrel, and gray fox (*Urocyon cinereoargenteus*). The leaf litter also provides habitat for the California kingsnake (*Lampropeltis zonata*) and ensatina (*Ensatina eschscholtzii*).

Mixed Chaparral. Mixed chaparral provides habitat for a wide variety of wildlife species. It provides seeds, fruit, and protection from predators and climate. In addition, it provides singing, roosting, and nesting sites for many species of birds, including the California quail (*Callipepla californica*), wrentit (*Chameae fasciata*), and Bewick's wren (*Thryomanes bewickii*). Mammals common in this habitat include the black-tailed jackrabbit (*Lepus californicus*), gray fox, coyote, and deer mouse. Reptiles that make use of this habitat include the western fence lizard and southern alligator lizard (*Elgaria multicarinata*).

Montane Hardwood. Mast crops provided by montane hardwood forests are an important resource for many species, including the acorn woodpecker, Steller's jay, mountain quail, western gray squirrel, and black-tailed deer. In addition, cavities in mature trees provide nesting and denning habitat for species such as the northern flicker, western screech owl (*Otus kennicottii*), American kestrel, and Virginia opossum (*Didelphis virginiana*). In moist areas, many amphibians are found in the detrital layer, including ensatina and western skinks.

Montane Hardwood-Conifer. The variability of the canopy cover and understory vegetation makes montane hardwood-conifer communities suitable for numerous species of wildlife. Hollow trees and logs provide denning sites for mammals such as the coyote, while cavities in mature trees are used by cavity-dwelling species such as the acorn woodpecker, violet-green swallow (*Tachycineta thalassina*), northern flicker, great horned owl (*Bubo virginianus*), raccoon (*Procyon lotor*), and pallid bat (*Antrozous pallidus*). In addition, raptors, such as the red-tailed hawk, construct nests in the upper canopy of mature trees.

Moreover, mast crops and conifer seeds are an important food source for many birds as well as mammals, including the Steller's jay, acorn woodpecker, California quail, black-tailed deer, and western gray squirrel. In moist areas, many amphibians are found in the detrital layer, including ensatina and western fence lizards. Snakes, including the western rattlesnake and sharp-tailed snake (*Contia tenuis*), also occur in this community.

Montane Riparian. Riparian woodlands represent some of the most important wildlife habitats due to their high floristic and structural diversity, high biomass (and therefore high food abundance), and high water availability. In addition to providing breeding, foraging, and roosting habitat for a diverse array of animals, riparian habitats also provide movement corridors for some species, connecting a variety of habitats throughout a region.

The leaf litter, fallen tree branches, and logs associated with the riparian communities in the project area provide cover for the western toad and Pacific chorus frog. The western fence lizard, western skink, and southern alligator lizard are also expected to occur here. Common species nesting and foraging primarily in the riparian tree canopy include the tree swallow (*Tachycineta bicolor*), bushtit (*Psaltriparus minimus*), white-breasted nuthatch (*Sitta carolinensis*), and Nuttall's and downy woodpeckers (*Picoides nuttallii* and *Picoides pubescens*, respectively). Other resident species, such as the spotted towhee (*Pipilo maculatus*) and song sparrow (*Melospiza melodia*), nest and forage on or very close to the ground, usually in dense vegetation. A variety of mammals also occur in riparian communities, including the deer mouse, raccoon, and Virginia opossum.

Open Water. Open water provides foraging habitat to waterfowl, such as the mallard and Canada goose (*Branta canadensis*). In addition, black phoebes (*Sayornis nigricans*), tree swallows, and other birds and bats that feed on insects over water sources likely forage over this wetland. Further, it provides habitat for amphibians and reptiles such as the western toad, Pacific chorus frog, and common garter snake (*Thamnophis sirtalis*).

Perennial Grassland. The suite of animals using this habitat is similar to that found in the annual grasslands. For both grasslands, the value of the habitat is enhanced by the variety of habitats surrounding it, which provide shelter for species that forage in the open grasslands. Perennial grasslands support several herbivores, including black-tail deer, California ground squirrels, Botta's pocket gophers, deer mice, and black-tailed jackrabbits. These species attract predators that breed in adjacent habitats, such as the bobcat (*Lynx rufus*), coyote, red-tailed hawk, and great-horned owl. Reptile species expected to occur here include the western fence lizard, western skink, and gopher snake.

Ponderosa Pine. Ponderosa pine needles, cones, buds, pollen, twigs, seeds, and associated fungi and insects provide food for many species of birds and mammals, including the mountain quail, western gray squirrel, black-tailed deer, and Allen's chipmunk (*Tamias senex*), and the needles are eaten by blue grouse (*Dendragapus obscurus*). Mature trees provide nesting habitat for raptors such as the sharp-shinned hawk and red-tailed hawk, while snags and hollow logs provide shelter for species such as the Virginia opossum and western spotted skunk (*Spilogale gracilis*).

Riverine. The Trinity River provides potential habitat for several native and introduced fish species (see Section 3.6). Amphibians and reptiles expected to occur here include the Pacific chorus frog, western toad, bullfrog, and northwestern pond turtle (*Clemmys marmorata marmorata*). In addition, birds such as the mallard, great blue heron (*Ardea herodias*), osprey (*Pandion haliaetus*), and belted kingfisher (*Ceryle alcyon*) may forage here. Mammals expected to occur in this habitat include the river otter (*Lutra canadensis*), and beaver (*Castor canadensis*), and bats, including the Yuma myotis (*Myotis yumanensis*) and big brown bat (*Eptesicus fuscus*), forage above this habitat during summer evenings.

Special-Status Wildlife Species

For the purposes of this evaluation, special-status wildlife species include species that are (1) listed as threatened or endangered under the CESA or ESA; (2) proposed or petitioned for federal listing as threatened or endangered; and/or (3) state or federal candidates for listing as threatened or endangered. Other special-status wildlife species are identified by the CDFG as Species of Special Concern or California Fully Protected Species, and/or are designated as BLM or USFWS Sensitive.

A list of special-status wildlife species considered for analysis in this environmental document was compiled by performing a CNDDB database search (Appendix K), conducting informal consultations with the CDFG and USFWS, and reviewing biological literature for the general area. Habitat information for special-status wildlife species was excerpted from:

- the California Department of Fish and Game, Habitat Conservation Planning Branch website: http://www.dfg.ca.gov/hcpb/species/species.shtml
- Amphibian and Reptile Species of Special Concern in California (Jennings and Hayes 1994)
- California's Wildlife, Volume II: Birds (Zeiner et al. 1990a)
- California's Wildlife, Volume III: Mammals (Zeiner et al. 1990b)
- California Wildlife Habitat Relationships Program, Version 8.1 (California Department of Fish and Game 2005b).

The special-status animal species that occur in the project vicinity are described in Table 3.7-3 and more detailed species accounts are provided in Appendix M. Federal and state designations, general habitat requirements, and information on each species' potential occurrence at the sites (based on its distributional range and available habitat) are also provided in the table. Conclusions presented are based on the knowledge of local professional biologists and historic survey information.

Some of the species listed in Table 3.7-3 are not expected to occur in the project area because of a lack of suitable habitat or because the project sites are outside the known distributional range of the species. These species include the California red-legged frog (*Rana aurora draytonii*), Cascades frog (*Rana cascadae*), tailed frog (*Ascaphus truei*), marbled murrelet (*Brachyramphus marmoratus*), western yellow-billed cuckoo (*Coccyzus americanus*), bank swallow (*Riparia riparia*), California wolverine (*Gulo gulo luteus*), Oregon snowshoe hare (*Lepus americanus klamathensis*), small-footed myotis (*Myotis ciliolabrum*), and fringed myotis (*Myotis thysanodes*). Some special-status species may occur on the sites only as uncommon to rare visitors, migrants, or transients, but are not expected to breed there. These species include the American peregrine falcon (*Falco peregrinus anatum*), black swift (*Cypseloides*

Table 3.7-3. Special-Status Wildlife Species Considered for Analysis

Common Name (*Scientific Name*)	Status[1] (Fed/State)	General Habitat Description	Present at Project Sites?
		Federally or State-Listed Species	
Trinity bristle snail *(Monadenia setosa)*	—/T	Riparian corridors and canyon slopes with dense deciduous understory in Trinity County.	**Absent.** Species was not detected during mollusk surveys.
California red-legged frog *(Rana aurora draytonii)*	T/SC	Requires aquatic habitat for breeding; also uses a variety of other habitat types, including riparian and upland areas.	**Absent.** Sites are outside the known range of this species.
American peregrine falcon (*Falco peregrinus anatum*)	D/E, FP	Forages in many habitats; requires cliffs for nesting.	**Absent as breeder.** Sites lack suitable nesting habitat, but may occur as forager.
Bald eagle (*Haliaeetus leucocephalus*)	D/E	Uncommon to common in riverine and open wetland habitats. Requires large bodies of water or free-flowing rivers with abundant fish for foraging. Nests in large, live trees that are usually near water and free from human disturbance. Roosts communally in winter in dense, remote conifer stands.	**Absent as breeder.** Suitable nesting habitat is not present at the sites due to the lack of dense, large trees and the moderate level of human disturbance. However, the species was observed at the Lewiston site during a reconnaissance survey in 2006, and the species may forage at both sites.
Bank swallow *(Riparia riparia)*	—/T	Colonial nester on vertical banks or cliffs with fine-textured soils and near water.	**Absent.** The project area does not contain suitable habitat.
Little willow flycatcher (*Empidonax traillii brewsteri*)	—/E[†]	Rare summer resident in wet meadow and montane riparian habitats at 2,000 to 8,000 feet elevation.	**May be present.** Suitable habitat is present. Singing males observed during 2007 breeding bird survey.
Marbled murrelet *(Brachyramphus marmoratus)*	T/E	Marine subtidal and pelagic habitats; requires dense, mature forests of redwood and Douglas-fir for breeding.	**Absent.** Sites are outside the known range of this species.
Northern spotted owl (*Strix occidentalis caurina*)	T/—	In northern California, resides in large stands of old growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats	**Absent.** No suitable habitat identified by Redwood Sciences Lab in 2006 surveys.
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	C/E[†]	Occurs in cottonwood/willow riparian forest.	**Absent.** Project area is outside the currently known range of this species.

Table 3.7-3. Special-Status Wildlife Species Considered for Analysis

Common Name (*Scientific Name*)	Status[1] (Fed/State)	General Habitat Description	Present at Project Sites?
California wolverine (*Gulo gulo luteus*)	—/T, FP†	A variety of habitats within elevations between 1,600 and 14,200 feet. Most commonly inhabits open terrain above timberline.	**Absent.** Sites are outside the known range of this species.
Pacific fisher (*Martes pennanti pacifica*)	C/SC*†	Dens and forages in intermediate to large stands of old-growth forests or mixed stands of old-growth and mature trees with greater than 50% canopy closure. May use riparian corridors for movement.	**Absent as breeder.** Not expected to breed on the sites but it may use the Trinity River as a travel corridor. The species has been recorded within 5 miles of the project area (California Department of Fish and Game 2005a).
Other Special-Status Species			
Cascades frog (*Rana cascadae*)	—/SC†	Open coniferous forests along the sunny, rocky banks of ponds, lakes, streams, and meadow potholes. From 2,600 to 9,000 feet elevation in Cascades and Trinity mountains.	**Absent.** The sites are below the known elevational range of this species.
Foothill yellow-legged frog (*Rana boylii*)	—/SC*†	Cool, fast-moving, rocky streams in a variety of habitats.	**May be present.** Suitable habitat occurs in the project area and the species is known to occur in the Trinity River from the Lewiston Dam to the North Fork Trinity (CNDDB 2003).
Tailed frog (*Ascaphus truei*)	—/SC	Clear, rocky, swift, cool perennial streams in densely forested habitats.	**Absent.** Suitable habitat not present in project area.
Northwestern pond turtle (*Clemmys marmorata marmorata*)	—/SC†	Slow water aquatic habitat with available basking sites. Hatchlings require shallow water with dense submergent or short emergent vegetation. Require an upland oviposition (egg laying) site near the aquatic site.	**May be present.** Riverine and riparian habitats along the Trinity River provide suitable habitat.
Black swift (*Cypseloides niger*)	—/SC	Nests in moist crevices or caves or sea cliffs above the surf, or on cliffs behind, or adjacent to, waterfalls in deep canyons; forages widely over many habitats.	**Absent as breeder.** Project area does not provide suitable breeding habitat; however, may forage over the sites as a migrant.

Table 3.7-3. Special-Status Wildlife Species Considered for Analysis

Common Name (*Scientific Name*)	Status[1] (Fed/State)	General Habitat Description	Present at Project Sites?
California yellow warbler (*Dendroica petechia brewsteri*)	—/SC	Breeds in riparian woodlands, particularly those dominated by willows and cottonwoods.	**May be present.** Montane riparian habitat at both sites provides suitable nesting and foraging habitats.
Cooper's hawk (*Accipiter cooperii*)	—/SC	Nests in woodlands; forages in many habitats in winter and during migration.	**May be present.** Suitable nesting and foraging habitat is present at both sites.
Golden eagle (*Aquila chrysaetos*)	—/SC, FP	Breeds on cliffs or in large trees or electrical towers, forages in open areas.	**Absent as breeder.** Suitable nesting habitat is absent from the sites; however, the species may occur as a forager.
Merlin (*Falco columbarius*)	—/SC	Uses many habitats in winter and during migration.	**Absent as breeder.** Sites are outside the breeding range of this species; however, it may occur as a migrant.
Northern goshawk (*Accipiter gentiles*)	—/SC[†]	Breeds in dense, mature conifer and deciduous forests, interspersed with meadows, other openings and riparian areas; nesting habitat includes north-facing slopes near water.	**May be present.** Suitable nesting and foraging habitat is present at both sites.
Osprey (*Pandion haliaetus*)	—/SC	Ocean shorelines, lake margins, and large, open river courses for both nesting and wintering habitat.	**May be present.** Suitable nesting and foraging habitat is present at both sites.
Ruffed grouse (*Bonasa umbellus*)	—/SC	Valley foothill riparian and surrounding conifer forests at low to middle elevations.	**May be present.** The combination of conifer and riparian areas at the sites provides suitable nesting and foraging habitat.
Sharp-shinned hawk *(Accipiter striatus*)	—/SC	Nests in dense woodlands, typically on north facing slopes near water. Forages in many habitats in winter and during migration.	**May be present.** Suitable nesting and foraging habitat is present in the project area.
Vaux's swift (*Chaetura vauxi*)	—/SC	Prefers redwood and Douglas-fir habitats; nests in hollow trees and snags or, occasionally, in chimneys; forages aerially.	**May be present**. Suitable breeding habitat is present.
Yellow-breasted chat (*Icteria virens*)	—/SC	Breeds in riparian habitats having dense understory vegetation, such as willow and blackberry.	**May be present.** Montane riparian areas provide suitable nesting and foraging habitat.

Table 3.7-3. Special-Status Wildlife Species Considered for Analysis

Common Name (*Scientific Name*)	Status[1] (Fed/State)	General Habitat Description	Present at Project Sites?
Fringed myotis (*Myotis thysanodes*)	—/—*	In mesic habitats, roosts in caves, mines, tunnels, and buildings. Roosts typically in valley foothill hardwood and hardwood-conifer habitats, but forages in open, early-successional-stage habitats near water. Generally at 4,000-7,000 feet.	**Absent.** Project area is below the elevational limits of this species.
Long-eared myotis (*Myotis evotis*)	—/—*	Found in most habitats, but prefers coniferous woodlands. Roosts in buildings, crevices, spaces under bark, and snags. Forages among trees and over brush, usually in close association with water.	**May be present.** Suitable roosting and foraging habitat is present at the sites
Oregon snowshoe hare (*Lepus americanus klamathensis*)	—/SC	Occurs in montane riparian areas with thickets of deciduous trees and dense conifer thickets in Cascade and Trinity mountains. In northern California, occurs only in areas that have snow in the winter (California Department of Fish and Game 1986).	**Absent.** Suitable habitat not present in project area.
Pallid bat (*Antrozous pallidus*)	—/SC*†	Forages over many habitats; roosts in buildings, large oaks or redwoods, rocky outcrops and rocky crevices in mines and caves.	**May be present.** Suitable roosting and foraging habitat is present within the project area.
Ring-tailed cat (*Bassariscus astutus*)	—/FP	Occurs in riparian habitats and brush stands of most forest and shrub habitats. Nests in rock recesses, hollow trees, logs, snags, abandoned burrows, or woodrat nests.	**May be present.** Montane riparian areas provide suitable breeding and foraging habitat.
Townsend's western big-eared bat (*Corynorhinus townsendii*)	—/SC*†	Roosts in colonies in caves, mines, tunnels, or buildings in mesic habitats. Forages along habitat edges, gleaning insects from bushes and trees. Habitat must include appropriate roosting, maternity, and hibernacula sites free from disturbance by humans.	**Absent as breeder.** Sites do not contain suitable roosting habitat; however, the species may be present as a forager.

Table 3.7-3. Special-Status Wildlife Species Considered for Analysis

Common Name (*Scientific Name*)	Status[1] (Fed/State)	General Habitat Description	Present at Project Sites?
American marten (*Martes americana*)	—/—†	Mixed evergreen forests with abundant cavities for denning and nesting and open areas for foraging.	**Absent.** Project area elevation is too low.
Yuma myotis (*Myotis yumanensis*)	—/—*	Forages over water such as ponds, streams, and stock tanks in open woodlands. Roosts in buildings, caves, mines, abandoned swallow nests, bridges, and rock crevices. Common and widespread in California.	**May be present.** Sites contain suitable breeding and foraging habitat.

[1]Status Codes:
Federal and State Codes: E = Endangered; T = Threatened; D = Delisted; C = Candidate; SC = Species of Special Concern (State); FP = California Fully Protected species
* = BLM Sensitive † = USFS Sensitive

niger), bald eagle, golden eagle (*Aquila chrysaetos*), merlin (*Falco columbarius*), Townsend's western big-eared bat (*Corynorhinus townsendii*), and Pacific fisher (*Martes pennanti pacifica*).

Special-status species that may breed in the project area include the foothill yellow-legged frog, northwestern pond turtle, California yellow warbler (*Dendroica petechia brewsteri*), yellow-breasted chat (*Icteria virens*), little willow flycatcher (*Empidonax traillii brewsteri*), Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk, northern goshawk, osprey, ruffed grouse (*Bonasa umbellus*), Vaux's swift (*Chaetura vauxi*), pallid bat, long-eared myotis (*Myotis evotis*), Yuma myotis, and ring-tailed cat (*Bassariscus astutus*).

Wildlife Surveys

Personnel from the USFS Redwood Sciences Laboratory and USFWS performed baseline surveys from April through October 2003 for herpetofauna at sites along 39 miles of the mainstem Trinity River, including sites within the project boundaries (Welsh, Ashton, and Bettaso 2003). Survey results are included in Appendix M, Special-Status Species Descriptions. USFS conducted additional surveys for northern spotted owls and neo-tropical birds during the 2005-2006 field seasons.

Survey and Manage Species

As discussed above, on January 11, 2006, a U.S. District Court judge vacated the administration's decision to eliminate the Survey and Manage standard of the Northwest Forest Plan. This decision reinstated the Survey and Manage standard. A list of wildlife species with the potential to occur in the proposed area was compiled by performing an Interagency Species Management System (ISMS) Database search and reviewing the Survey Protocols for the species listed on Table 1-1 of the amended ROD for the Northwest Forest Plan (U.S. Department of Agriculture and U.S. Department of Interior 2001) and USFS and BLM visions for the 2001 Survey and Manage Annual Species Review (USDA

Forest Service and Bureau of Land Management 2002). The project sites include public lands managed by BLM and USFS.

The only special-status species for which there is suitable habitat on the project sites are mollusks, although the suitable habitat is rare. Surveys for special-status mollusks, including Survey and Manage species, were conducted on the sites during the spring of 2002. No sensitive mollusks were located.

Critical Deer Winter Range

During the late 1960s and early 1970s, deer herds in most of California exhibited serious long-term declines. In 1976 the CDFG developed a state-wide plan to address the problem, and in 1977 a Deer Management Policy was subsequently adopted by the Fish and Game Commission. The CDFG has responsibility for writing and approving deer herd management plans, including designating Critical Winter Range. Critical winter range is that portion of a winter range that deer are dependent upon during severe winter weather. Historically, construction of the Trinity and Lewiston dams inundated 17,000 acres of winter range for this herd (Trinity County 1987). As a result, the remaining winter range has been more heavily utilized, resulting in a reduction in its quality. Critical Winter Range for the Weaverville deer herd occurs on both sides of the Trinity River within the boundary of the Lewiston site.

Jurisdictional Waters (including Wetlands)

Information on the historic location and function of wetlands near the rehabilitation sites is limited. As described in Section 3.3, the historic dredging activities that occurred in the area substantially modified the character and function of the wetlands. An assessment of the geomorphic features at the sites suggests that prior to the dredging activities, the floodplain of the Trinity River was much larger than what has developed in association with the construction and operation of the TRD. Based on this assumption, jurisdictional waters (jurisdictional waters are waters under the jurisdiction of the USACE and consist of riverine and associated wetland habitats) likely declined following dam construction, in part because reduced flows now inundate less of the floodplain. Fringe strands of fresh emergent vegetation, scrub-shrub, and forested wetlands now occur intermittently where a wider belt of wetlands likely existed under pre-dam conditions. The reduction in alternate point bars has also reduced post-dam wetland acreage by curtailing formation of side channels and other meander-related features.

NSR wetland scientists conducted a delineation of jurisdictional waters within the project boundaries. Field observations were conducted between April 11 and 15, 2005, and the resulting wetland delineation is included as Appendix C. The delineation was conducted in accordance with the methodology described in the 1987 Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987). A three-parameter approach (i.e., vegetation, soils, and hydrology) was used to identify and delineate the boundaries of jurisdictional wetlands.

Jurisdictional wetland features were mapped on aerial photographs of the sites (1 inch = 200 feet scale). Table 3.7-4 provides a summary of the types and acreages of waters of the United States occurring within the sites. In addition to riparian wetland, fresh emergent wetland, and intermittent pool, this table

includes "other waters of the United States" (e.g., riverine and intermittent creek features), which are also under the jurisdiction of the USACE.

Six types of jurisdictional features were mapped in the project area: riverine (perennial stream), intermittent creek, open water, ephemeral drainage, riparian wetland, and fresh emergent wetland (Figures 3.7-3a-c). These features, which are described below, occupy a total of 120.26 acres of the project area.

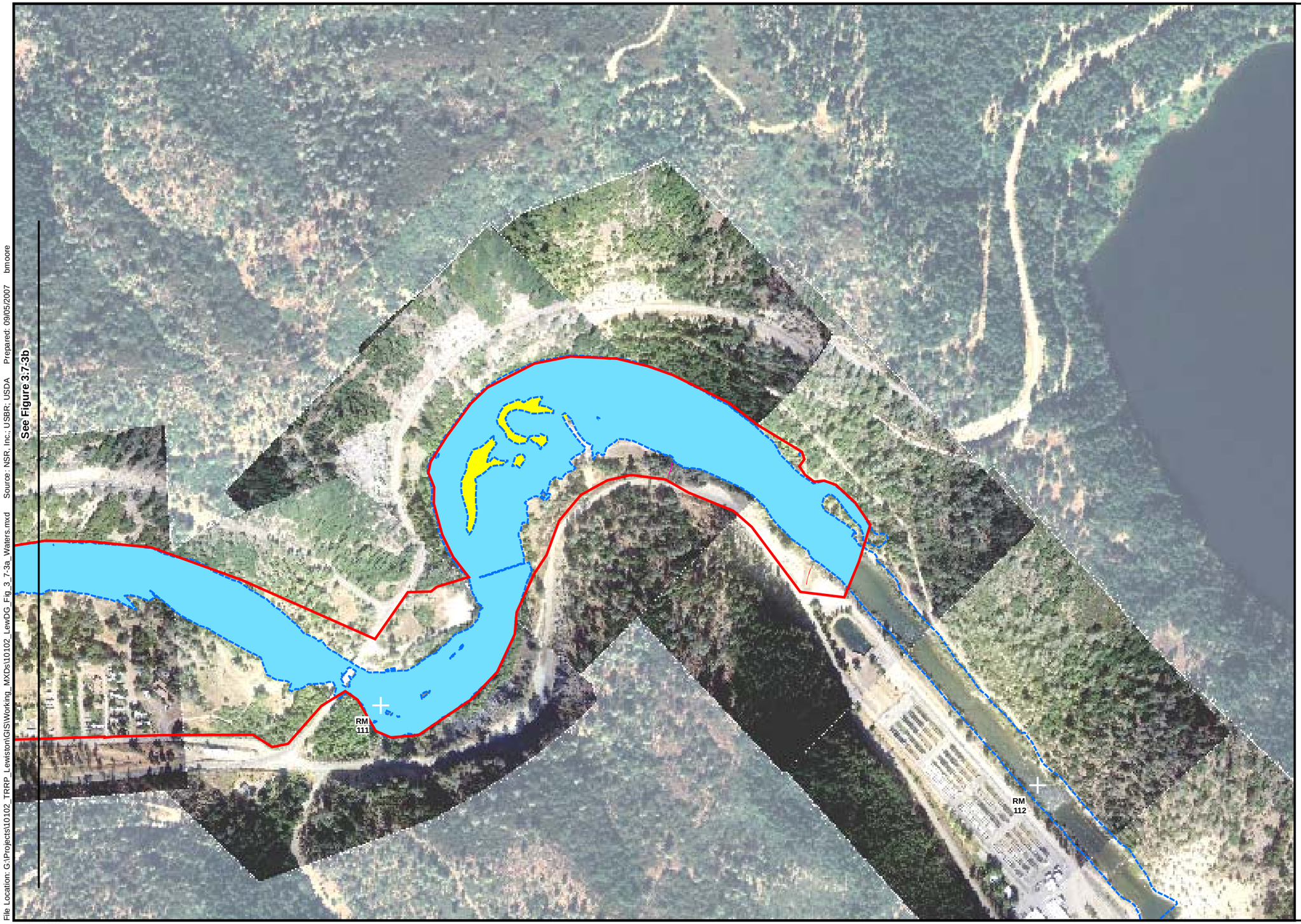
Table 3.7-4. Summary of Jurisdictional Waters

Water Type	Acres	
	Lewiston	**Dark Gulch**
Wetlands		
Riparian wetland	1.257	0.001
Fresh emergent wetland	0.0	0.587
Total wetlands	1.257	0.588
Other Waters		
Trinity River (Riverine)	60.618	57.370
Intermittent creek	0.012	0.006
Open water	0.030	0.379
Ephemeral drainage	0.004	0.003
Total other waters	60.665	57.758
Total Jurisdictional Waters	**61.922**	**58.346**

Riverine. The Trinity River is the primary factor influencing wetland features associated with each of the sites. Riverine (perennial stream) habitat, identified as the river itself, exhibits a distinct bed and bank feature (i.e., scouring), as well as continuous inundation, watermarks, drift lines, and sediment deposits.

Intermittent Creek. Intermittent creek features include natural drainages that convey waters intermittently during the late fall, winter, and spring months, but are usually dry during the summer and early fall months. These features exhibit indicators of scouring and deposition of soil material. Upland plant species often colonize these features during the summer when no water is present. Water sources may include direct precipitation, runoff from upstream channel reaches, and seepage from surrounding soils (groundwater). Intermittent creeks are non-wetland waters of the United States or "other waters." Intermittent creeks were identified at both the Lewiston and Dark Gulch sites.

Open Water. This feature consists of a deep-water area that exhibits perennial inundation. This jurisdictional type is a non-wetland water of the United States or "other waters." Three open-water features were found at the Dark Gulch site and one at the Lewiston site.

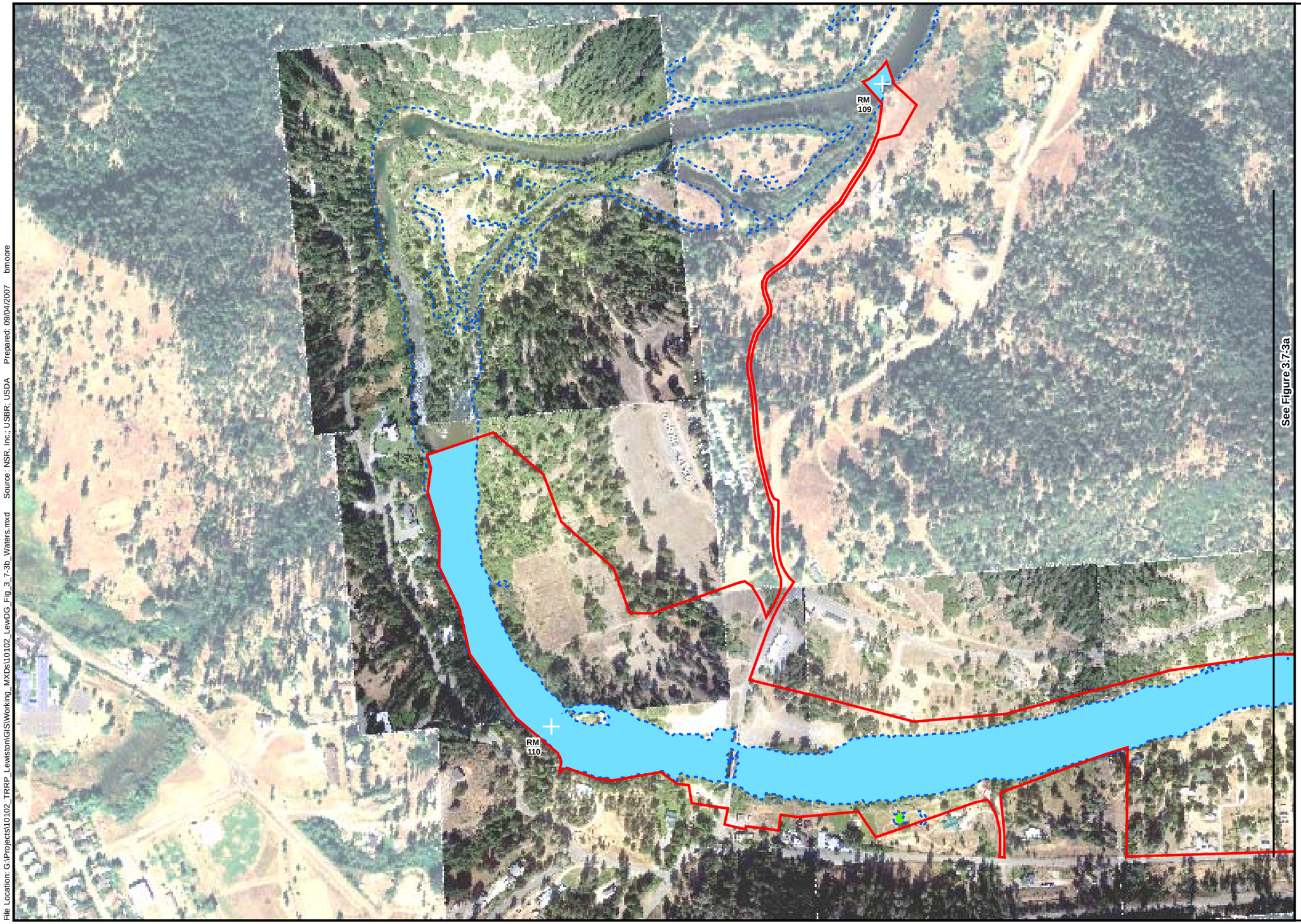


File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_3_7-3a_Waters.mxd Source: NSR, Inc.; USBR; USDA Prepared: 09/05/2007 bmoore

North State Resources, Inc.

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

Figure 3.7-3a
Jurisdictional Waters of the United States



Site Boundary (131.5 acres)

River Mile (RM)

Ordinary High Water Mark (6,000 cfs)

Jurisdictional Waters of the U.S.

Other Waters

- Ephemeral Drainage (0.004 acre)
- Intermittent Stream (0.012 acre)
- Open Water (0.03 acre)
- Riverine (60.617 acres)

Wetlands

- Riparian Wetland (1.256 acres)

N

1:5,400

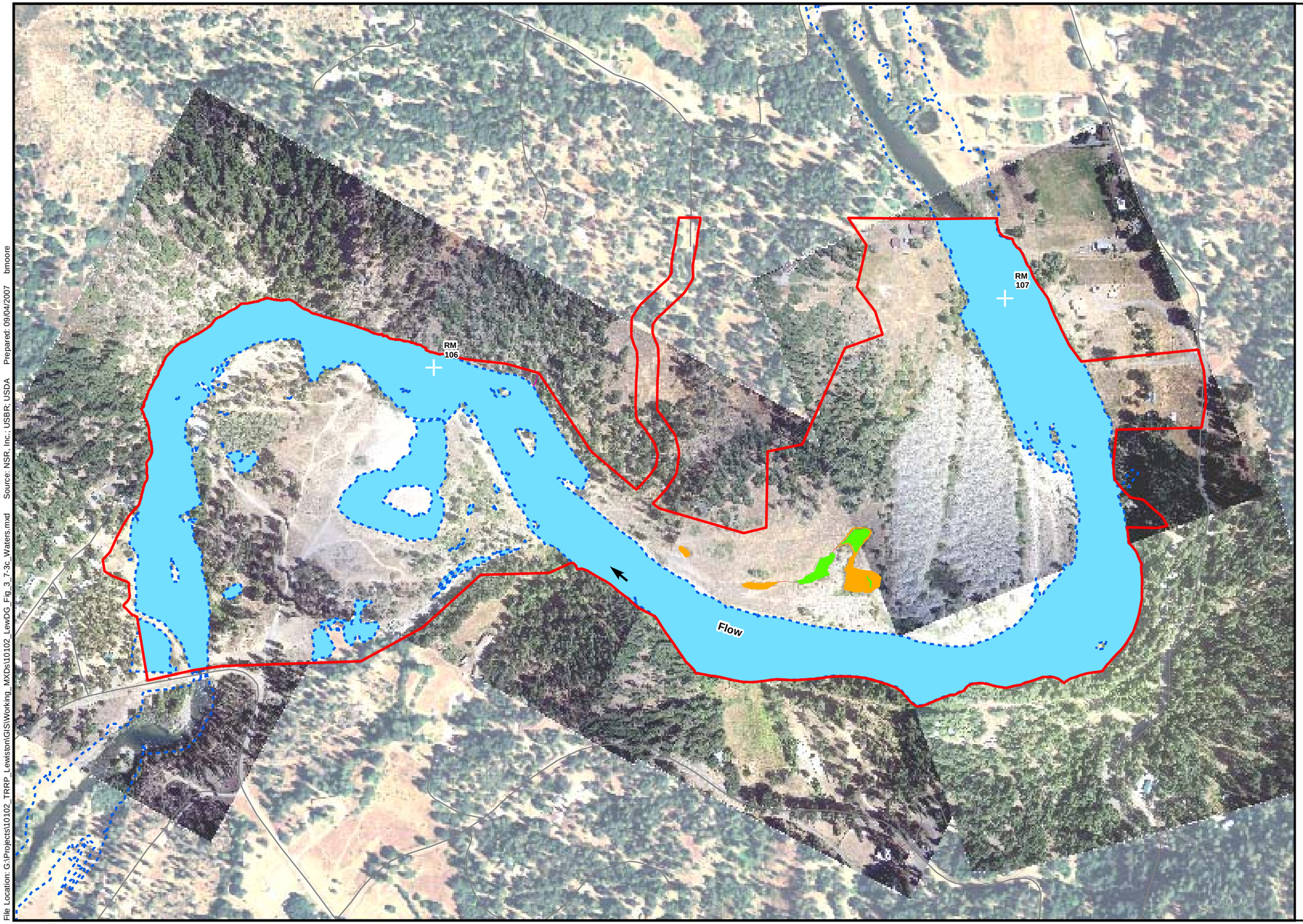
450 0 450

Feet

Aerial photography:
2005
2006

File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_3_7-3b_Waters.mxd Source: NSR, Inc.; USBR; USDA Prepared: 09/04/2007 bmoore

Figure 3.7-3b
Jurisdictional Waters of the United States



Site Boundary (152 acres)

River Mile (RM)

Ordinary High Water Mark (6,000 cfs)

Jurisdictional Waters of the U.S.

Other Waters

- Ephemeral Drainage (0.003 acre)
- Intermittent Stream (0.006 acre)
- Open Water (0.379 acre)
- Riverine (57.371 acres)

Wetlands

- Riparian Wetland (0.001 acre)
- Fresh Emergent Wetland (0.587 acre)

N

1:5,400

450 0 450
Feet

Aerial photography:
July 2005
July 2006

File Location: G:\Projects\10102_TRRP_LewistonGIS\Working_MXDs\10102_LewDG_Fig_3_7-3c_Waters.mxd Prepared: 09/04/2007 bmoore
Source: NSR, Inc.; USBR; USDA

North State Resources, Inc.

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

Figure 3.7-3c
Jurisdictional Waters of the United States

Ephemeral Creek. Ephemeral creek features include natural drainages that convey water during and briefly after storms. Groundwater discharge does not constitute a portion of the flow. Ephemeral creeks are non-wetland waters of the United States or "other waters." Ephemeral creek features were identified at both the Lewiston and Dark Gulch sites.

Riparian Wetland. Features determined to be riparian wetlands consist of areas associated with the Trinity River corridor. Dominant plant species composition is similar in the upland and wetland portions of the montane riparian habitat at each site. The difference between montane riparian habitat (a plant community) and riparian wetland (a jurisdictional type) is riparian wetland necessarily includes wetland vegetation as well as positive field indicators of wetland hydrology and hydric soils whereas riparian habitat consists solely of vegetation.

Riparian wetlands were identified at both the Lewiston and Dark Gulch sites. Riparian wetlands are characterized by a complex of open to dense emergent herbaceous and woody riparian vegetative growth. Plant species observed include torrent sedge (*Carex nudata*), tall flatsedge (*Cyperus eragrostis*), least spikerush (*Eleocharis acicularis*), smooth scouring rush (*Equisetum laevigatum*), and reed canary grass (*Phalaris arundinaceae*).

Fresh Emergent Wetland. Fresh emergent wetlands were identified at the Lewiston and Dark Gulch sites. Fresh emergent wetlands are characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. Vegetation, typically perennial, is present for most of the growing season in most years (Cowardin et al. 1979). Fresh emergent wetlands found at these two sites are formed in three different ways: 1) from inundation of lands surrounding open waters; 2) from depressions between tailings piles; and 3) from a depression within the Trinity River floodplain (i.e., ponding occurs within the low point, allowing emergent vegetation to become established). Hydrologic influences on these features include the Trinity River, precipitation, and runoff from adjacent areas. The dominant plant species include narrow-leaf cattail, Himalayan blackberry, perennial ryegrass, and narrow-leaved willow.

3.7.2 Regulatory Setting

This section describes specific environmental review and consultation requirements for plants, wildlife, and wetlands, and identifies permits and approvals that must be obtained from local, state, and federal agencies before construction of the Proposed Action.

Federal

Executive Order 13112 (Invasive Species)

Executive Order 13112 directs federal agencies to use relevant programs and authorities to:

A. prevent the introduction of invasive species;
B. detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner;
C. monitor invasive species populations accurately and reliably;

D. provide for restoration of native species and habitat conditions in ecosystems that have been invaded;

E. conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species;

F. promote public education on invasive species and the means to address them; and

G. not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions.

Measures to avoid and minimize the introduction and spread of invasive species are provided below under Environmental Consequences/Impacts and Mitigation Measures.

Executive Order 13443 (Facilitation of Hunting Heritage and Wildlife Conservation)

Executive Order 13443 directs federal agencies that have programs and activities that have a measurable effect on public land management, outdoor recreation, and wildlife management, including the Department of the Interior and the Department of Agriculture, to facilitate the expansion and enhancement of hunting opportunities and the management of game species and their habitat. The proposed project is in compliance with this order. Restoration of the Trinity River will improve recreational opportunities, including hunting where legal, on and adjacent to the sites.

U. S. Army Corps of Engineers

Section 404, Clean Water Act

The objective of the Clean Water Act (CWA 1977, as amended) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Discharge of fill material into jurisdictional waters of the United States, including wetlands, is regulated by the USACE under Section 404 of the CWA (33 USC 1251-1376). USACE regulations implementing Section 404 define waters of the United States to include intrastate waters, including lakes, rivers, streams, wetlands, and natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce. Wetlands are defined for regulatory purposes as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3; 40 CFR 230.3). To comply with the Section 404 policy that there be no net loss of wetlands, a proposed action should not affect the total acreage of wetlands within the project boundary.

The placement of structures in "navigable waters of the United States" is also regulated by the USACE under Section 10 of the federal Rivers and Harbors Act (33 USC 401 et seq.). Projects are permitted under either individual or general (i.e., nationwide) permits. The specific applicability of the permit types is determined by the USACE on a case-by-case basis. Based on a preliminary conversation with the USACE (San Francisco District – Eureka Field Office), the project is expected to be permitted under Nationwide Permit Number 27 (Wetland and Riparian Restoration and Creation Activities).

U.S. Fish and Wildlife Service

Federal Endangered Species Act

The ESA defines "take" (Section 9) and generally prohibits the "taking" of a species listed as endangered or threatened (16 USC. 1532, 50 CFR 17.3). Under the ESA, the "take" of a federally listed species is deemed to occur when an intentional or negligent act or omission causes the agent of the action "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The term "harm" includes acts that actually kill or injure wildlife. Such acts may include significant habitat modification or degradation when it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.

Section 7 of the ESA requires federal agencies, in consultation with the Secretary of the Interior, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of designated critical habitat for these species. Informal consultation with the USFWS concerning effects to the northern spotted owl was conducted by Reclamation. Based on this informal consultation, the known distribution of spotted owl nests in the area (provided by the USFS), and Trinity River bird distribution data provided by the Redwood Sciences Laboratory, Reclamation determined that a biological assessment was not required since the Proposed Action would have no effect on the northern spotted owl or its critical habitat.

National Forest System Land and Resource Management Planning Rule

National Forests that have an LRMP developed under the National Forest System Land and Resource Management Planning Rule (1982 Planning Rule) (36 CFR 219) are directed to (1) at the project scale, analyze the effects of proposed projects on the habitats of each management indicator assemblage affected by such projects, and (2) at the National Forest or bioregional scale, monitor habitat trends of forest management indicator assemblages as identified by the LRMP, and monitor the populations trends for their selected representative species. The required Management Indicators Assemblages Report is included as Appendix N. The report concluded that the proposed project will not significantly alter the essential character or core habitat attributes of the area. Species associated with habitat in the project area are likely to continue to use the area as they have in the past and those that breed or reproduce either in the project area or adjacent to it will likely continue to breed and reproduce as they have in the past, barring confounding factors such as disease or predation that may independently affect the population trends of the associated species.

Migratory Bird Treaty Act (MBTA)

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Most of the birds found in the study area are protected under the MBTA. Thus, project construction has the potential to directly take nests, eggs, young, or individuals of protected species. Further, construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to the abandonment of nests, which would be

a violation of the MBTA. Measures that may be instituted to help ensure compliance with the MBTA include the following:

- Grading and other construction activities shall be scheduled to avoid the nesting season to the extent possible. The nesting season for most birds in Trinity County extends from March through July.

If the nesting season cannot be avoided, the following measures shall be instituted:

- A qualified biologist shall conduct pre-construction surveys no more than 1 week prior to the initiation of construction in any given area to ensure that no nests of species protected by the MBTA would be disturbed during project implementation.
- If an active nest more than half completed is found, a construction-free buffer zone shall be established around the nest. The size of the buffer zone shall be determined by a qualified biologist in consultation with USFWS and/or CDFG.

If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrate (e.g., bushes, trees, grass, buildings, and burrows) that will be removed by the project should be removed before the onset of the nesting season (March 15) to help preclude nesting. Pre-removal surveys are required for some species. Removal of vegetation or structures should be completed outside of the nesting season (i.e., between August 1 and February 28).

State

California Department of Fish and Game

California Endangered Species Act

Under the CESA, the CDFG is responsible for maintaining a list of endangered and threatened species (California Fish and Game Code 2070). The CDFG also maintains a list of "candidate species," which are species that the CDFG formally notices as being under review for addition to the list of endangered or threatened species. The CDFG also maintains lists of "species of special concern," which serve as species "watch lists."

Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project area and determine whether the proposed project could have a significant impact on such species. In addition, the CDFG encourages informal consultation on any proposed project that may affect a candidate species.

Project-related impacts to species listed as threatened or endangered under CESA would be considered significant. State-listed species are fully protected under the mandates of the CESA. "Take" of protected species incidental to otherwise lawful management activities may be authorized under California Fish and Game Code Section 2081. Authorization from the CDFG would be in the form of an Incidental Take Permit. Three state-listed species may occur on the site: American peregrine falcon, bald eagle, and little willow flycatcher. An Incidental Take Permit may be required for the little willow flycatcher, which may

breed on the site. Potential impacts to these three species are addressed below under Environmental Consequences/Impacts and Mitigation Measures.

Native Plant Protection Act

The Native Plant Protection Act (California Fish and Game Code Sections 1900-1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered, as defined by CDFG. Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the project.

State Wetland Policy

The State's Wetland Policy is to achieve "no net loss" in the quality and quantity of wetland/riparian habitats from any project. As a result of ongoing discussions between the TRRP and CDFG (a trustee and responsible agency for this project under CEQA), there is agreement that projects that result in impacts to riparian vegetation[2] require mitigation using a one-to-one areal replacement ratio. For every acre of riparian vegetation removed by this project, one acre of similar riparian vegetation will be replaced such that there will always be no net loss in quantity and quality (= structure + function + wildlife value) of riparian habitat. Replacement of vegetation may occur via replanting or natural revegetation.

Overall this agreement will ensure that there is no net loss of riparian habitat along the TRRP activity reach (40 miles downstream of the Lewiston dam to the North Fork Trinity) and that both fish and wildlife habitat needs and CDFG's responsibility as a trustee agency are met.

Birds of Prey

Under Section 3503.5 of the California Fish and Game Code, it is unlawful to take, possess, or destroy any birds in the orders of Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird, except as otherwise provided by this code or any regulation adopted pursuant thereto.

"Fully Protected" Species

California statutes also accord "fully protected" status to a number of specifically identified birds, mammals, reptiles, amphibians, and fish. These species cannot be "taken," even with an incidental take permit (California Fish and Game Code, Sections 3505, 3511, 4700, 5050, and 5515). "Fully protected" species potentially occurring in the project area include the American peregrine falcon, golden eagle, and ring-tailed cat.

[2] In this document, "riparian" includes both riparian wetlands as defined by the USACE and montane riparian vegetation as described in California Wildlife Habitat Relationships (California Department of Fish and Game 2005).

California Regional Water Quality Control Board

Section 401 Water Quality Certification

The Regional Water Board is responsible for enforcing and protecting water resources associated with the proposed project. The Regional Water Board also regulates the discharge of wastes to surface waters through the National Pollutant Discharge Elimination System (NPDES) permit process. Waste Discharge Requirements are established in NPDES permits to protect beneficial uses.

The Regional Water Board requires that a project proponent apply for and obtain a CWA Section 401 Water Quality Certification for any project that requires a CWA Section 404 permit from the USACE. Since the Proposed Action and Alternative 1 would have the potential to affect water quality in the Trinity River, Reclamation will prepare and submit to the Regional Water Board an application for Section 401 Water Quality Certification and/or Waste Discharge Requirements (Dredge/Fill). The application will be submitted to the Regional Water Board when the pre-construction notification is sent to the USACE. The Regional Water Board is likely to impose water quality limitations and project conditions through issuance of waste discharge requirements or Section 401 Certification.

In addition, a Notice of Intent (NOI) application to comply with the General Permit for Storm Water Discharges Associated with Construction Activities will be prepared and submitted by the contractor to the State Water Resources Control Board following award of the project construction contract and completion of the NEPA/CEQA process.

Local

Trinity County General Plan Goals and Objectives

The Trinity County General Plan contains goals and policies designed to guide the future physical development of the county, based on current conditions. The following goals and policies related to vegetation, wildlife, and wetland issues associated with the Proposed Action were taken from the applicable elements of the General Plan (Trinity County 2001). The General Plan includes the Lewiston Community Plan (Trinity County 1986).

County-Wide Goals and Objectives—Environmental

Goal: To strive to conserve those resources of the county that are important to its character and economic well-being:

- By assuring that developments occurring on these lands are compatible with the resources.
- By strongly supporting the county as “lead agency” or as an integral participant in any state or federal project within the county so that all agencies are made aware of local desires and all plans are coordinated.
- By utilizing a sound resource-related planning process in decision-making.
- By protecting not only rare and endangered species, but also required habitat for more plentiful species.

Lewiston Community Plan Goals and Objectives

This plan includes the area centered on the Trinity River from Lewiston Lake to slightly downstream of the confluence of Grass Valley Creek and the Trinity River.

Natural Resources

Goal: To preserve and maintain open space as a means of providing habitat for all species of wildlife.

- Retain open space for habitat uses.

Goal: To protect areas of special habitat considerations within the Plan area.

- Discourage intensive use of areas including the Great Blue Heron (*Ardea herodias*) rookery site downstream of Salt Flat. (Since the Lewiston Community Plan was adopted on September 16, 1986, the rookery has been abandoned. The rookery was abandoned when the TRSSH was modified to exclude bird species that prey on fish).
- Encourage retention of riparian habitat areas.
- Work with property owners adjacent to the Trinity River to retain existing riparian vegetation.

Project Consistency with the Trinity County General Plan and Community Plans

This section compares the goals and objectives of the proposed project to the relevant local planning polices (i.e., Trinity County General Plan, Lewiston Community Plan) to determine if there are any inconsistencies.

The goals and objectives described in Chapter 1 are generally compatible with the applicable General Plan goals and policies summarized above, and the project activities will not be inconsistent with these goals and objectives. The overall goal of the Proposed Action is to rehabilitate the sites so that they function in a manner that is closer to historic conditions (i.e., pre-Lewiston Dam). Although there will be some mechanical vegetation removal along the Trinity River floodplain, which is a Scenic Conservation Overlay Zone, the proposed project will include both riparian and upland revegetation efforts intended to provide a more diverse plant assemblage than what is currently present, thereby enhancing the long-term aesthetic values of the river corridor.

3.7.3 Environmental Consequences/Impacts and Mitigation Measures

Significance Criteria

Significance criteria used to analyze the potential impacts of the project on vegetation, wildlife, and wetland resources include factual and scientific information and regulatory standards of county, state, and federal agencies, including the CEQA Guidelines. These criteria have been developed to establish thresholds to determine the significance of impacts pursuant to CEQA (Section 15064.7) and should not be confused with a "take" or adverse effect under the ESA. Additionally, significance criteria do not apply for purposes of NEPA.

Impacts on vegetation would be significant if implementation of the project would result in any of the following:

- potential to substantially reduce the number or restrict the range of an endangered or threatened plant species or a plant species that is a candidate for state listing or proposed for federal listing as endangered or threatened;
- potential for substantial reductions in the habitat of any native plant species including those that are listed as endangered or threatened or are candidates or proposed for endangered or threatened status;
- potential for causing a native plant population to drop below self-sustaining levels;
- potential to eliminate a native plant community;
- substantial adverse effect, either directly or through habitat modifications, on any plant identified as a sensitive or special-status species in local or regional plans, policies, or regulations;
- substantial adverse effect on the quantity or quality of riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations;
- a conflict with any local policies or ordinances regarding protection or control of vegetation resources;
- a conflict with, or violation of, the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, state, or federal habitat conservation plan relating to the protection of plant resources; or
- an increased potential for spread of non-native and invasive plant species.

Impacts on wildlife would be significant if implementation of the project would result in any of the following:

- mortality of state or federally listed wildlife species, or species that are candidates for listing or proposed for listing;
- potential for reductions in the number, or restrictions of the range, of an endangered or threatened wildlife species or a wildlife species that is a candidate for state listing or proposed for federal listing as endangered or threatened;
- potential for substantial reductions in the habitat of any wildlife species, including those that are listed as endangered or threatened or are candidates or proposed for endangered or threatened status;
- potential for causing a wildlife population to drop below self-sustaining levels;
- substantially block or disrupt major terrestrial wildlife migration, or travel corridors;
- substantial adverse effect, either directly or through habitat modifications, on any wildlife species identified as a sensitive or special-status species in local or regional plans, policies, or regulations;
- substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations;
- a conflict with any state or local policies or ordinances protecting wildlife resources; or

- a conflict with, or violation of, the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, state, or federal habitat conservation plan relating to the protection of wildlife species.

Impacts on wetlands would be significant if they would result in any of the following:

- substantial adverse effect on any riparian habitat;
- substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means;
- a conflict with any state or local policies or ordinances protecting wetland and/or riparian resources; or
- a conflict with, or violation of, the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, state, or federal habitat conservation plan relating to the protection of wetland resources.

Impacts and Mitigation Measures

Table 3.7-5 summarizes the potential vegetation, wildlife, and wetlands impacts that would result from the No-Action Alternative, the Proposed Action, and Alternative 1.

Table 3.7-5. Summary of Vegetation, Wildlife, and Wetland Impacts for the No-Action Alternative, the Proposed Action, and Alternative 1

No-Action Alternative	Proposed Action	Alternative 1	Proposed Action with Mitigation	Alternative 1 with Mitigation
Impact 3.7-1.	Construction activities associated with the project could result in the loss of jurisdictional waters (e.g., wetlands).			
NI	S	S	LS	LS
Impact 3.7-2.	Implementation of the project would result in the loss of upland plant communities.			
NI	LS	LS	N/A[1]	N/A[1]
Impact 3.7-3.	Construction of the project could result in the loss of individuals of a special-status plant species.			
NI	S	S	LS	LS
Impact 3.7-4.	Construction activities associated with the project could result in impacts to the state-listed little willow flycatcher.			
NI	S	S	LS	LS
Impact 3.7-5.	Construction activities associated with the project could result in impacts to foothill yellow-legged frogs.			
NI	S	S	LS	LS

Table 3.7-5. Summary of Vegetation, Wildlife, and Wetland Impacts for the No-Action Alternative, the Proposed Action, and Alternative 1

No-Action Alternative	Proposed Action	Alternative 1	Proposed Action with Mitigation	Alternative 1 with Mitigation
Impact 3.7-6.	Construction activities associated with the project could result in impacts to northwestern pond turtles.			
NI	S	S	LS	LS
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.			
NI	S	S	LS	LS
Impact 3.7-8.	Construction activities associated with the project could disrupt active special-status raptor nests.			
NI	S	S	LS	LS
Impact 3.7-9.	Construction activities associated with the project could result in impacts to special-status bats and the ring-tailed cat.			
NI	S	S	LS	LS
Impact 3.7-10.	Construction activities associated with the project could result in the temporary loss of non-breeding habitat for several special-status birds.			
NI	LS	LS	N/A[1]	N/A[1]
Impact 3.7-11.	Construction activities associated with the project could result in impacts to BLM and USFS sensitive species.			
NI	S	S	LS	LS
Impact 3.7-12.	Construction activities associated with the project could restrict terrestrial wildlife movement through the project area.			
NI	LS	LS	N/A[1]	N/A[1]
Impact 3.7-13.	Implementation of the project could result in the spread of non-native and invasive plant species.			
NI	S	S	LS	LS

Notes:
LS = Less than Significant S = Significant SU = Significant Unavoidable
NI = No Impact B = Beneficial N/A = Not Applicable
[1]Because this potential impact is less than significant, no mitigation is required.

Impact 3.7-1: Construction activities associated with the project could result in the loss of jurisdictional wetlands. ***No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, no loss of jurisdictional wetlands would occur because the project would not be constructed.

Proposed Action

Construction activities associated with the Proposed Action would result in temporary impacts to jurisdictional waters (e.g., wetland features) within the sites (Figures 3.7-4a-c). Table 3.7-6 lists acres of jurisdictional waters that would be affected by the Proposed Action. Construction of the Proposed Action would result in a direct temporary impact to 22.50 acres of jurisdictional waters. Temporary impacts to jurisdictional waters would be considered significant.

Table 3.7-6. Expected Maximum Areas of Disturbance to Jurisdictional Waters

Jurisdictional Water Type	Approximate Area of Disturbance (Acres)	
	Proposed Action	**Alternative 1**
Lewiston		
Riparian wetland	0.000	1.257
Fresh emergent wetland	0.000	0.000
Trinity River (riverine)	11.251	19.800
Intermittent creek	0.000	0.006
Open water	0.000	0.000
Ephemeral drainage	0.000	0.004
Lewiston Total	**11.251**	**21.065**
Dark Gulch		
Riparian wetland	0.000	0.001
Fresh emergent wetland	0.000	0.001
Trinity River (riverine)	11.250	14.630
Intermittent creek	0.000	0.000
Open water	0.000	0.000
Ephemeral drainage	0.000	0.000
Dark Gulch Total	**11.250**	**14.632**

Alternative 1

Table 3.7-6 lists acres of jurisdictional waters that would be affected by Alternative 1. Construction activities associated with Alternative 1 would result in a direct temporary impact to 35.70 acres of jurisdictional waters (Figure 3.7-5a-c). Temporary impacts to jurisdictional waters would be considered a significant impact.

Mitigation Measures

No-Action Alternative

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

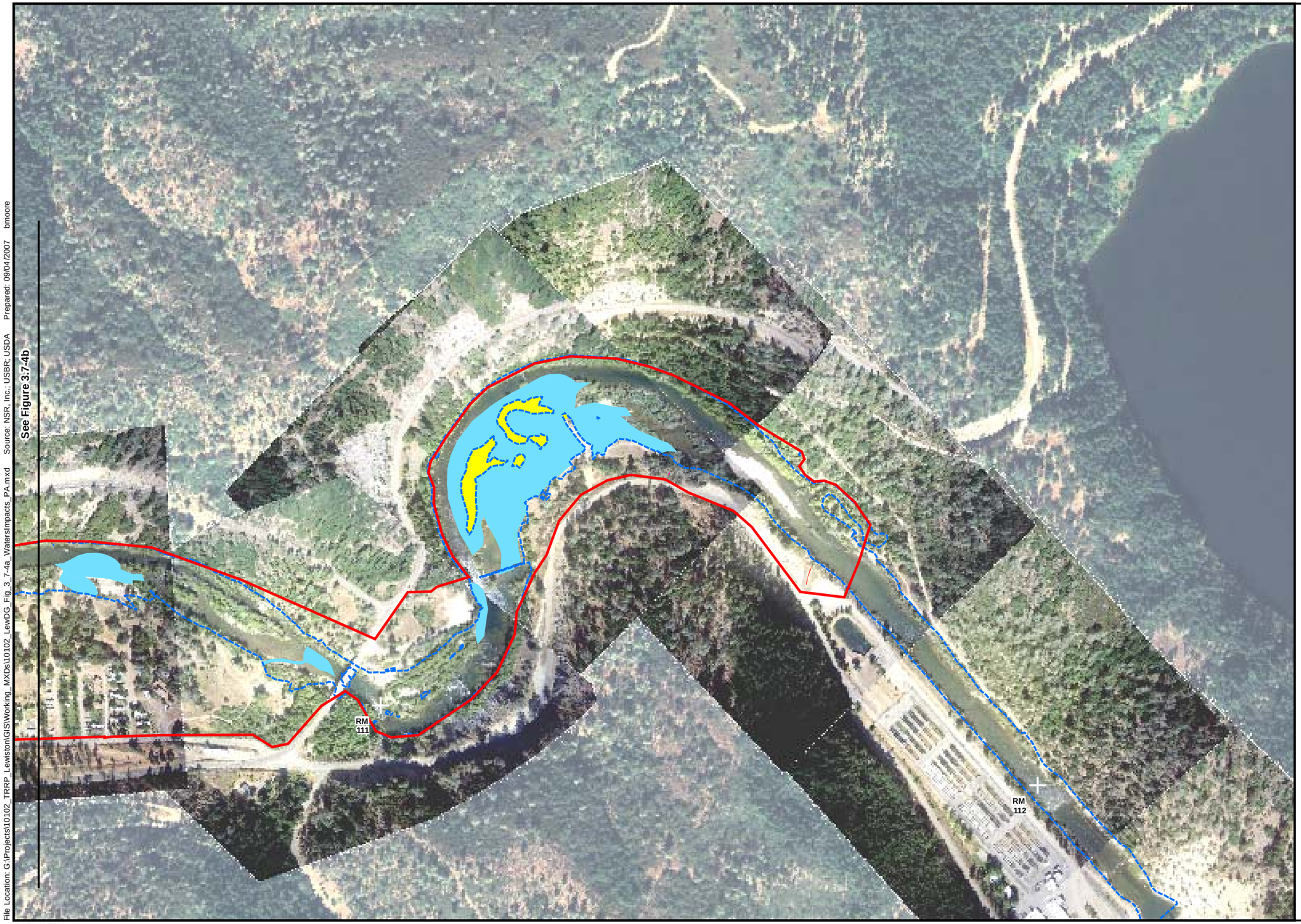
Proposed Action and Alternative 1

In order to avoid and minimize impacts to jurisdictional wetlands, the following mitigation measures will be implemented:

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.

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.

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 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.



Site Boundary (131.5 acres)

River Mile (RM)

Ordinary High Water Mark (6,000 cfs)

Impacts to Jurisdictional Waters

Wetlands

Riparian Wetland (1.256 acres)

Other Waters

Riverine (15.872 acres)

Intermittent Stream (0.002 acres)

Ephemeral Drainage (0.004 acres)

N

1:5,400

450 0 450

Feet

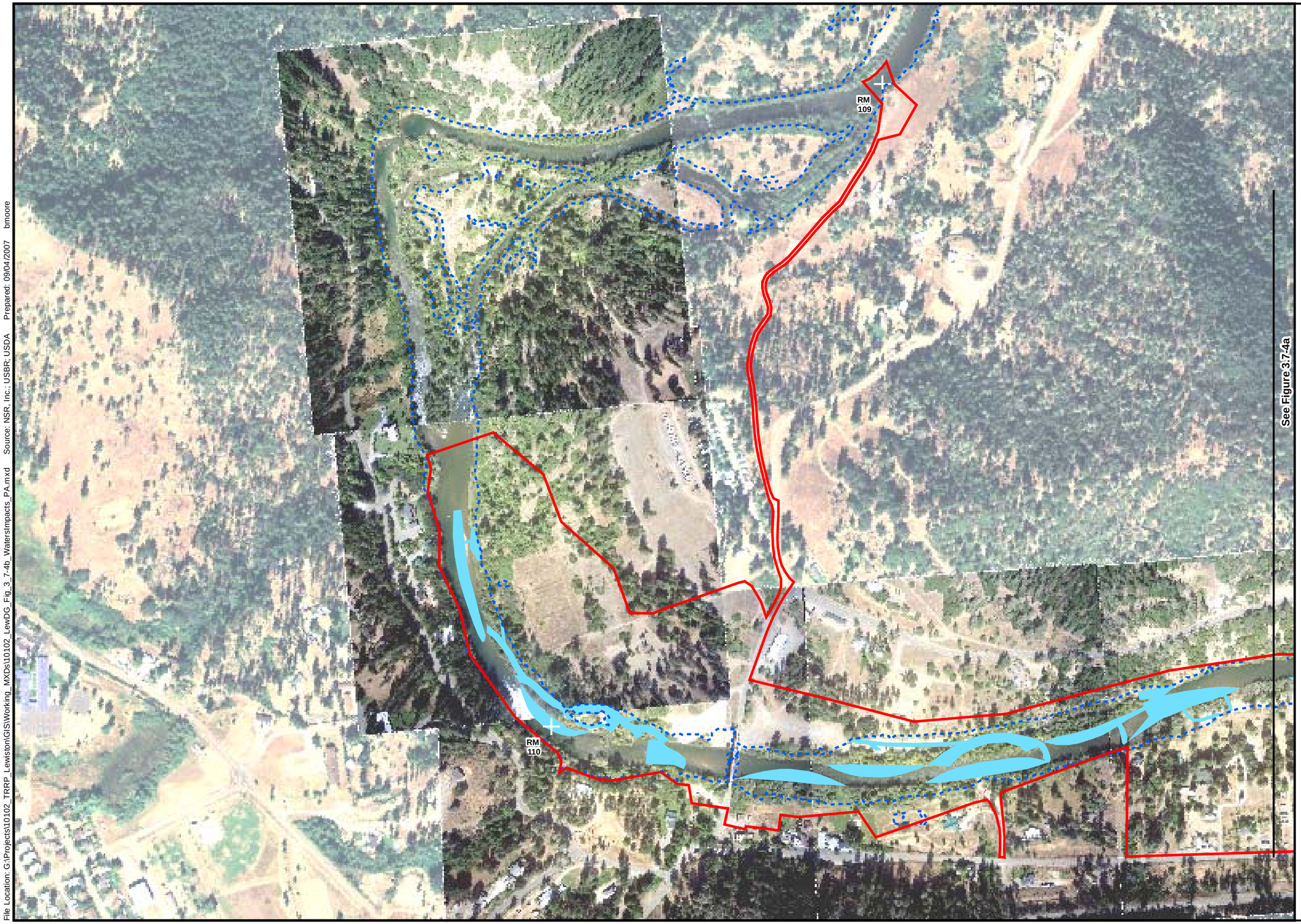
Aerial photography:
2005
2006

File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_3_7-4a_WatersImpacts_PA.mxd Source: NSR, Inc.; USBR; USDA Prepared: 09/04/2007 bmoore

North State Resources, Inc.

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

Figure 3.7-4a
Impacts of Proposed Action to Jurisdictional Waters of the United States



Site Boundary (131.5 acres)

River Mile (RM)

Ordinary High Water Mark (6,000 cfs)

Impacts to Jurisdictional Waters

Wetlands

Riparian Wetland (1.256 acres)

Other Waters

Riverine (15.872 acres)

Intermittent Stream (0.002 acre)

Ephemeral Drainage (0.004 acre)

N

1:5,400

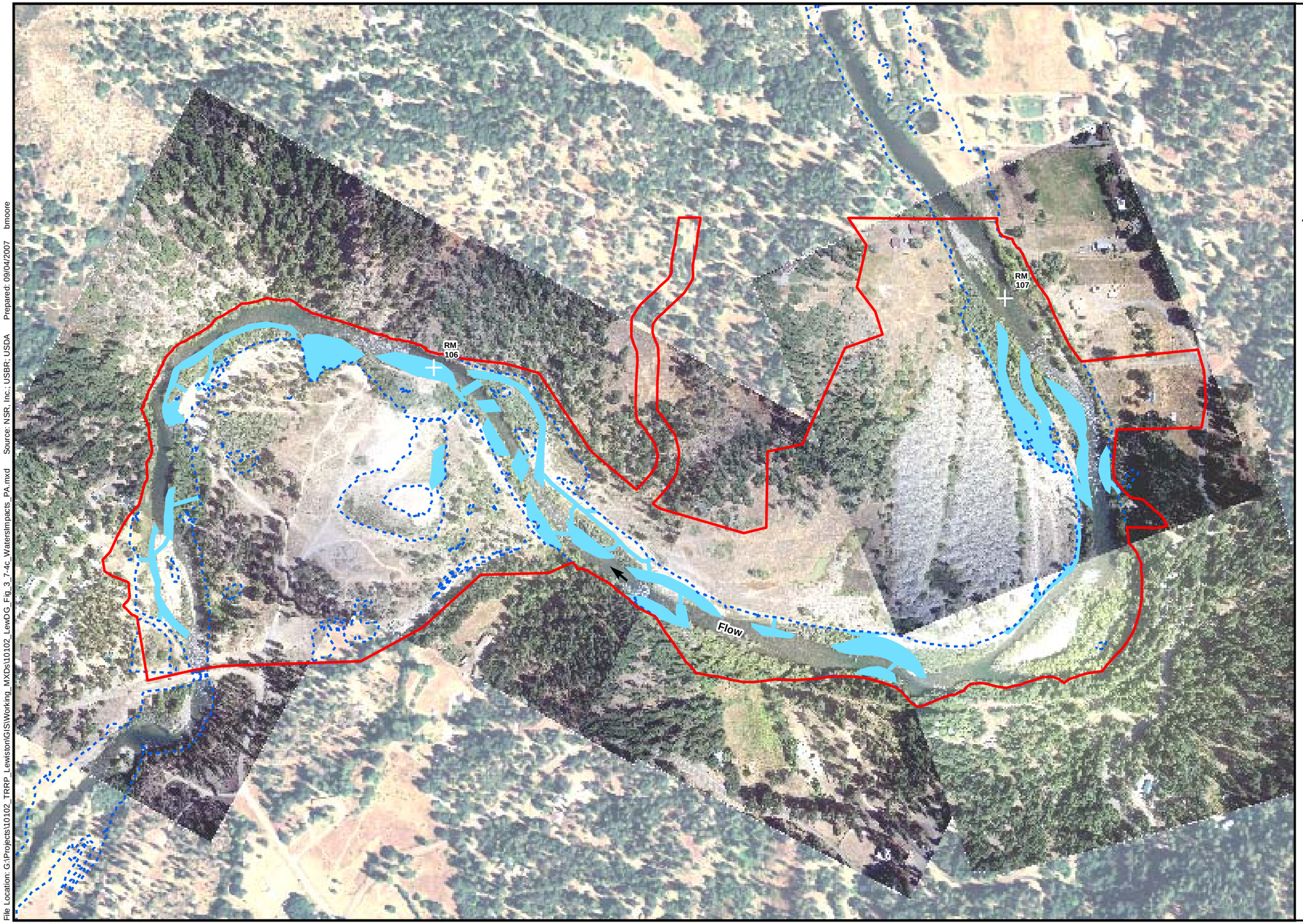
450 0 450

Feet

Aerial photography:
2005
2006

File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_3_7-4b_WatersImpacts_PA.mxd Source: NSR, Inc.; USBR; USDA Prepared: 09/04/2007 bmoore

Figure 3.7-4b
Impacts of Proposed Action to Jurisdictional Waters of the United States



Site Boundary (144.85 acres)

River Mile (RM)

Ordinary High Water Mark (6,000 cfs)

Impacts to Jurisdictional Waters

Other Waters

Riverine (11.25 acres)

N

1:5,400

450 0 450

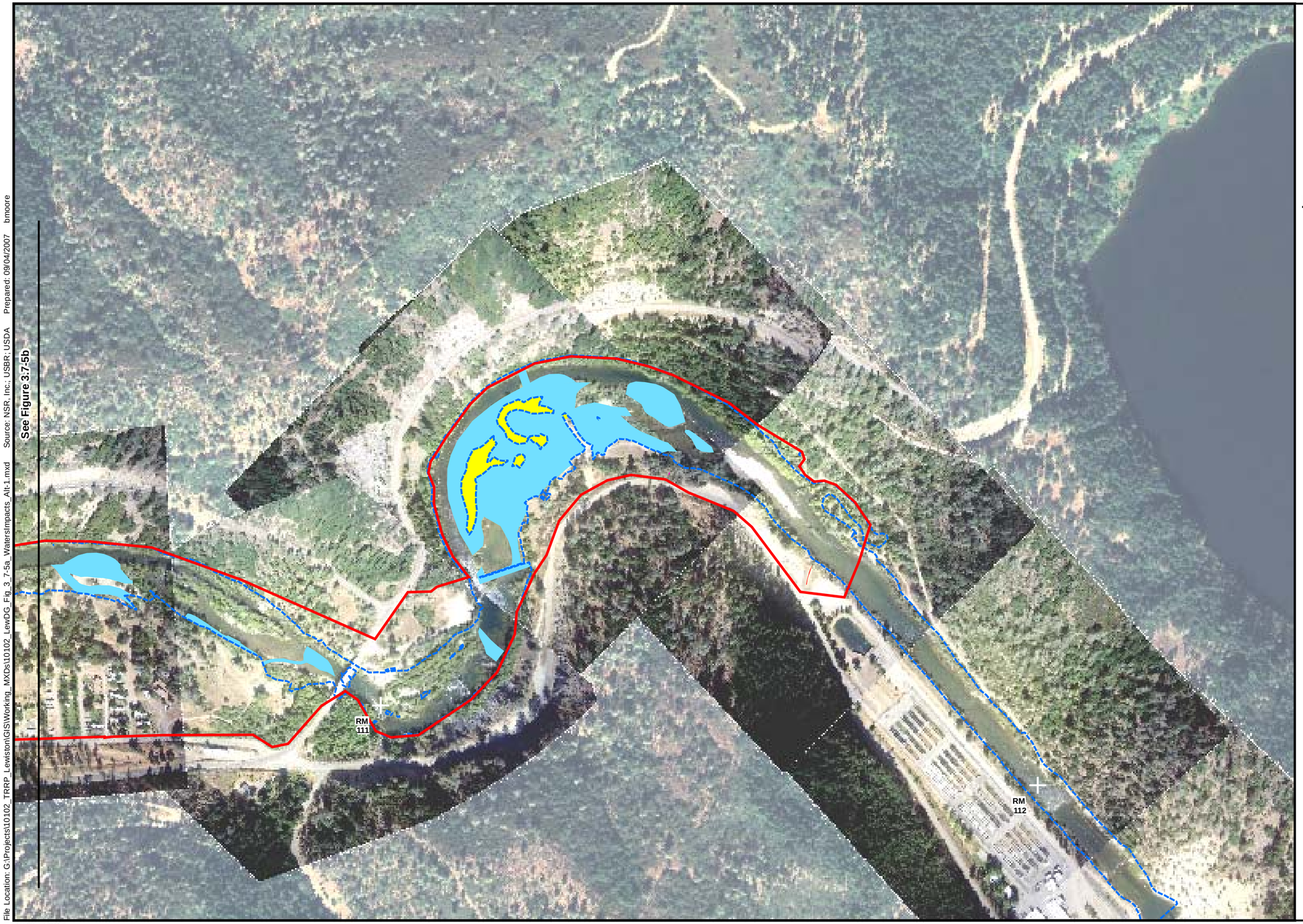
Feet

Aerial photography:
July 2005
July 2006

File Location: G:\Projects\10102_TRRP_LewistonGIS\Working_MXDs\10102_LewDG_Fig_3_7-4c_WatersImpacts_PA.mxd Prepared: 09/04/2007 bmoore
Source: NSR, Inc.; USBR; USDA

North State Resources, Inc.

Figure 3.7-4c
Impacts of Proposed Action to Jurisdictional Waters of the United States

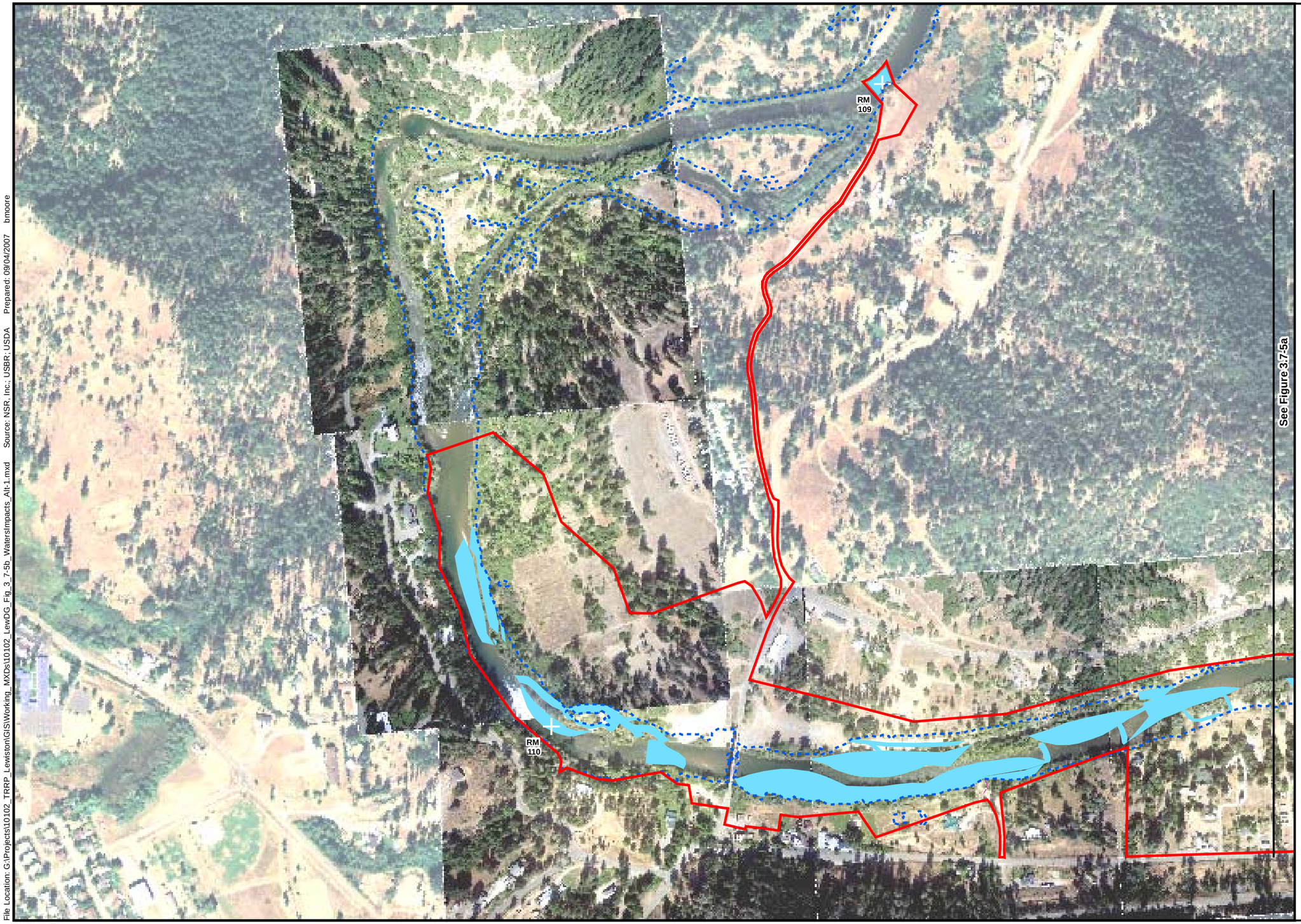


File Location: G:\Projects\10102_TRRP_LewistonGIS\Working_MXDs\10102_LewDG_Fig_3_7-5a_WatersImpacts_Alt-1.mxd Source: NSR, Inc.; USBR; USDA Prepared: 09/04/2007 bmoore

North State Resources, Inc.

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

Figure 3.7-5a
Impacts of Alternative 1 to Jurisdictional Waters of the United States



Site Boundary (131.5 acres)

River Mile (RM)

Ordinary High Water Mark (6,000 cfs)

Impacts to Jurisdictional Waters

Riparian Wetland (1.256 acre)

Other Waters

Riverine (19.798 acres)

Intermittent Stream (0.005 acre)

Ephemeral Drainage (0.004 acre)

N

1:5,400

450 0 450

Feet

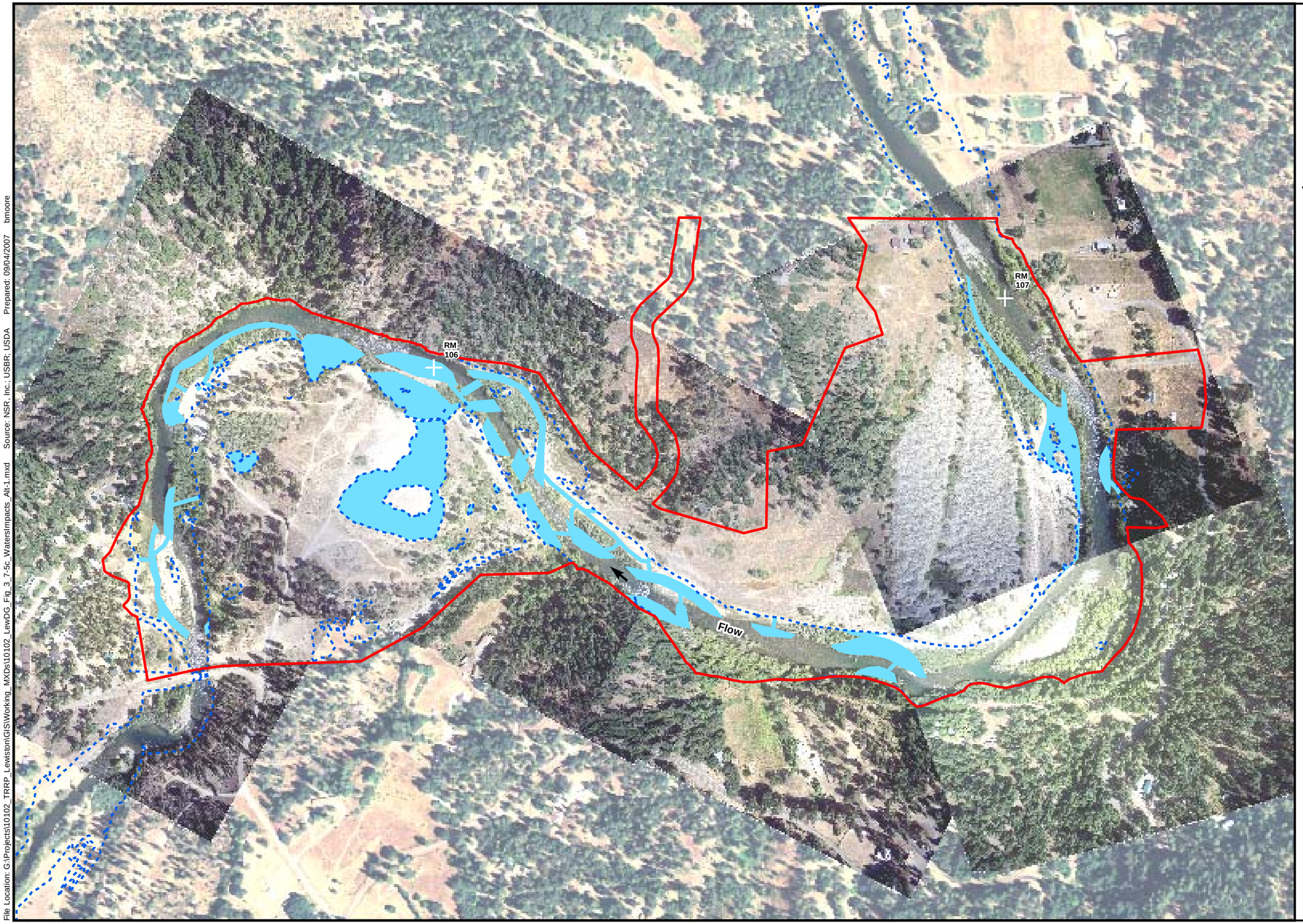
Aerial photography:
2005
2006

File Location: G:\Projects\10102_TRRP_Lewiston\GIS\Working_MXDs\10102_LewDG_Fig_3_7-5b_WatersImpacts_Alt-1.mxd Source: NSR, Inc.; USBR; USDA Prepared: 09/04/2007 bmoore

North State Resources, Inc.

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

Figure 3.7-5b
Impacts of Alternative 1 to Jurisdictional Waters of the United States



Site Boundary (152 acres)

River Mile (RM)

Ordinary High Water Mark (6,000 cfs)

Impacts to Jurisdictional Waters

Wetlands

Riparian Wetland (0.001 acre)

Fresh Emergent Wetland (0.001 acre)

Other Waters

Riverine (14.623 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_3_7-5c_WatersImpacts_Alt-1.mxd Source: NSR, Inc.; USBR; USDA Prepared: 09/04/2007 bmoore

North State Resources, Inc.

Figure 3.7-5c
Impacts of Alternative 1 to Jurisdictional Waters of the United States

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.

Significance after Mitigation

Less than significant

Impact 3.7-2: Implementation of the project would result in the loss of upland plant communities. No Impact for the No-Action Alternative; Less-than-Significant Impact for the Proposed Action and Alternative 1

No-Action Alternative

Under the No-Action Alternative, no construction-related impacts to upland plant communities would occur because the project would not be constructed.

Proposed Action

Table 3.7-7 indicates the total acreage of temporary impacts to upland plant communities as a result of the Proposed Action. The temporary modification of 35.00 acres would result in impacts to the various upland plant communities that occur within the boundaries of the project sites. While the project activities will modify the contour and slope of the upland areas, these areas will be subject to natural recruitment of native plants, supplemented by planting programs consistent with the TRRP vegetation management objectives. Over time, these upland areas would be revegetated to the degree that site conditions allow. The temporary impact to 35.00 acres of upland habitat is not considered significant due to the relative abundance of these upland plant community types within the sites and local area. A combination of replanting and natural revegetation will occur to ensure that riparian habitat values on the Trinity River meet wildlife needs. Current needs for revegetation will be determined via monitoring,

coordination with local resource agencies, and adaptively managing to meet changing needs and desired future conditions. Temporary access routes and staging areas will be restored to their original condition upon completion of work. Additionally, any affected upland areas will be seeded with native plant species.

Alternative 1

Alternative 1 would result in impacts to upland habitats similar to those of the Proposed Action but a larger number of acres of upland habitat would be affected. Table 3.7-7 indicates the total acreage of temporary impacts to upland plant communities as a result of Alternative 1. The temporary impact of modifying 55.73 acres of upland habitat is not considered significant due to the relative abundance of these upland plant community types within the sites and local area. Furthermore, a proportion of the impacted montane riparian habitat communities would be replaced with an early and diverse stage of riparian community that is relatively rare along the river. A combination of replanting and natural revegetation will occur to ensure that riparian habitat values on the Trinity River meet wildlife needs. Current needs for revegetation will be determined via monitoring, coordination with local resource agencies, and adaptively managing to meet changing needs and desired future conditions. Temporary access routes and staging areas will be restored to their original condition upon completion of work. Additionally, any affected upland areas will be seeded with native plant species.

Table 3.7-7. Expected Maximum Areas of Disturbance to Upland Plant Communities

Upland Plant Community Type	Approximate Areas of Disturbance (acres)	
	Proposed Action	Alternative 1
Lewiston Site		
Annual grassland	0.897	1.825
Barren	0.885	1.229
Foothill pine	0.879	1.302
Klamath mixed conifer	0.021	0.275
Mixed chaparral	0.367	0.367
Montane hardwood	0.117	0.117
Montane hardwood-conifer	0.599	0.599
Montane riparian	6.904	10.588
Perennial grassland	2.207	2.283
Ponderosa pine	0.020	0.000
Lewiston Total	**12.896**	**18.585**

Table 3.7-7. Expected Maximum Areas of Disturbance to Upland Plant Communities

Upland Plant Community Type	Approximate Areas of Disturbance (acres)	
	Proposed Action	Alternative 1
Dark Gulch Site		
Annual grassland	4.889	7.376
Barren	5.995	12.464
Foothill pine	1.710	1.608
Klamath mixed conifer	1.141	4.105
Mixed chaparral	0.030	0.048
Montane hardwood	0.150	0.150
Montane hardwood-conifer	1.572	1.988
Montane riparian	6.319	8.834
Perennial grassland	0.298	0.573
Ponderosa pine	0.000	0.000
Dark Gulch Total	**22.104**	**37.146**
Project Total	**35.0**	**55.73**

Mitigation Measures

No-Action Alternative, Proposed Action, Alternative 1, and Alternative 2

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Impact 3.7-3: Construction of the project could result in the loss of individuals of a special-status plant species. ***No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, no construction-related impacts to a special-status plant species would occur because the project would not be constructed.

Proposed Action and Alternative 1

Floristic (vegetation) inventories and special-status plant surveys were conducted over the entirety of the Lewiston site and most of the Dark Gulch site. A habitat analysis of those portions of the Dark Gulch site not included in the comprehensive floristic surveys was performed after blooming season. This indicated that the non-surveyed areas do not provide suitable habitat for federally listed plant species and that these species are not likely to occur. However, there is a possibility that six special-status plant species—

California globe mallow, Dudley's rush, English Peak greenbriar, fox sedge, northern clarkia, and veiny arnica—may occur in these areas.

Mitigation Measures

No-Action Alternative

Since no significant impact was identified, no mitigation is required.

Proposed Action, Alternative 1, and Alternative 2

The following measures shall be implemented at the Dark Gulch site to avoid or minimize project-related impacts to California globe mallow, Dudley's rush, English Peak greenbriar, fox sedge, northern clarkia, and veiny arnica:

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.

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.

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.

Significance after Mitigation

Less than Significant

Impact 3.7-4: Construction activities associated with the project could result in impacts to the state-listed little willow flycatcher. ***No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, no construction-related impacts to the little willow flycatcher would occur because the project would not be constructed.

Proposed Action

Suitable montane riparian habitat for the little willow flycatcher is present at the sites, and singing males were detected during the 2007 survey. Consequently, the potential for nesting exists at these sites (Redwood Science Laboratory, unpublished data) . The Proposed Action would result in a small,

temporary reduction of foraging habitat for this species. However, implementation of Mitigation Measure 3.7-1 will ensure that there is no net loss of riparian habitat and a long-term increase in riparian habitat diversity. Due to the small and temporary nature of the impacts and the regional abundance of similar habitats, the project is not expected to have a significant impact on habitat for the little willow flycatcher. However, the removal of riparian vegetation and the noise associated with construction activities could disturb individuals nesting on or adjacent to the sites. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Loss of fertile eggs or nesting little willow flycatchers or any activities resulting in nest abandonment would be considered a significant impact.

Alternative 1

Construction-related impacts to little willow flycatchers under Alternative 1 would be similar to those under the Proposed Action but a larger number of acres of montane riparian habitat would be affected.

Mitigation Measures

No-Action Alternative

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Proposed Action and Alternative 1

The following mitigation measures shall be implemented to avoid or minimize potential impacts to the little willow flycatcher:

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.

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.

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.

Significance after Mitigation

Less than Significant

Impact 3.7-5: Construction activities associated with the project could result in impacts to the foothill yellow-legged frog. ***No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, no construction-related impacts to the foothill yellow-legged frog would occur.

Proposed Action

The project sites provide suitable habitat for the foothill yellow-legged frog, and the species is known to occur in the Trinity River (CNDDB 2003). Construction activities associated with the Proposed Action may affect foothill yellow-legged frogs directly and indirectly. Potential direct effects include mortality of individuals due to equipment and vehicle traffic, disturbance of boulders or cobbles that support egg masses, and the loss of riparian vegetation cover. The species may also be indirectly affected if construction activities result in degradation of aquatic habitat and water quality due to erosion and sedimentation, accidental fuel leaks, and spills. These impacts would be significant. However, over the long term, the project will benefit the species through the creation of additional and higher quality habitat, such as feathered edges and backwaters that will provide habitat for tadpoles.

Alternative 1

Construction-related impacts to breeding foothill yellow-legged frogs under Alternative 1 would be similar to those under the Proposed Action.

Mitigation Measures

No-Action Alternative

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Proposed Action and Alternative 1

In order to avoid and/or minimize impacts to the foothill yellow-legged frog, the following measures shall be implemented:

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 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.

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.

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.

5d The mitigation measure associated with the disturbance to riparian habitat (Mitigation Measure 3.7-1) will be fully implemented.

Significance after Mitigation

Less than significant.

Impact 3.7-6: Construction activities associated with the project could result in impacts to the northwestern pond turtle. ***No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, no construction-related impacts to the northwestern pond turtle would occur because the project would not be constructed.

Proposed Action

The project area provides suitable habitat for the northwestern pond turtle. Thus, construction activities associated with the Proposed Action could affect pond turtles directly and indirectly. Potential direct effects include mortality of individuals due to equipment and vehicle traffic, disturbance to nests in upland areas, and the loss of riparian cover. The species may also be indirectly affected if construction activities result in degradation of aquatic habitat and water quality due to erosion and sedimentation, accidental fuel leaks, and spills. These impacts would be significant. However, over the long term, the project will benefit the species through the creation of additional and higher quality habitat. For example, removal of riparian berms will improve access to potential upland nesting and overwintering sites, and the creation of side channels will provide slow-water basking and foraging habitat.

Alternative 1

Construction-related impacts to northwestern pond turtles under Alternative 1 would be similar to those under the Proposed Action.

Mitigation Measures

No-Action Alternative

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Proposed Action and Alternative 1

In order to avoid and/or minimize impacts to the northwestern pond turtle, the following measures shall be implemented:

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.

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.

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.

6d The mitigation measure associated with the disturbance to riparian habitat (Mitigation Measure 3.7-1) shall be fully implemented.

Significance after Mitigation

Less than Significant

Impact 3.7-7: Construction activities associated with the project could result in impacts to nesting California yellow warblers, yellow-breasted chats, Vaux's swifts, and ruffed grouse. ***No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, no construction-related impacts to nesting yellow warblers, yellow-breasted chats, Vaux's swifts, and ruffed grouse would occur.

Proposed Action

The riparian habitat associated with the Trinity River corridor in the project area provides suitable nesting and foraging habitat for the California yellow warbler and yellow-breasted chat. The conifer habitat in the project area provides habitat for the Vaux's swift and ruffed grouse. All four species are designated as Species of Special Concern by CDFG.

The Proposed Action would result in a small, temporary reduction of foraging and/or roosting habitat for these species. However, implementation of Mitigation Measure 3.7-1 will ensure that there is no net loss of riparian habitat. Furthermore, the Proposed Action would result in a long-term increase in riparian habitat diversity, increasing the quality of the habitat for the California yellow warbler and the yellow-breasted chat. Thus, due to the small and temporary nature of the impacts and the regional abundance of similar habitats, the project is not expected to have a significant impact on habitat for the California yellow warbler, yellow-breasted chat, Vaux's swift, and ruffed grouse. However, the removal of riparian vegetation and the noise associated with construction activities could disturb individuals nesting on or adjacent to the sites. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Loss of fertile eggs or nesting individuals or any activities resulting in nest abandonment would be a significant impact.

Alternative 1

Construction-related impacts to nesting California yellow warblers, yellow-breasted chats, Vaux's swifts, and ruffed grouse under Alternative 1 would be similar to, but greater than, those under the Proposed Action because the area of disturbance would be larger.

Mitigation Measures

No-Action Alternative

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Proposed Action and Alternative 1

In order to avoid and/or minimize impacts to nesting California yellow warblers, yellow-breasted chats, Vaux's swifts, and ruffed grouse, the following measures shall be implemented:

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.

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.

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.

Significance after Mitigation

Less than significant

Impact 3.7-8: Construction activities associated with the project could disrupt nesting by special-status raptors. ***No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, no construction-related impacts to active raptor nests would occur because the project would not be constructed.

Proposed Action

Suitable nesting habitat for the northern goshawk, osprey, Cooper's hawk, and sharp-shinned hawk, which are designated as California Species of Special Concern, occurs at the sites. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Loss of fertile eggs or nesting raptors, or any activities resulting in raptor nest abandonment, would be a significant impact.

Alternative 1

Construction-related impacts to nesting special-status raptors under Alternative 1 would be similar to, but greater than, those under the Proposed Action due to the larger area of disturbance.

Mitigation Measures

No-Action Alternative

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Proposed Action and Alternative 1

In order to avoid and/or minimize impacts to nesting special-status raptors, the following measures shall be implemented:

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.

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.

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.

Significance after Mitigation

Less than significant

Impact 3.7-9: Construction activities associated with the project could result in impacts to special-status bats and the ring-tailed cat. ***No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, no construction-related impacts to breeding special-status bats or the ring-tailed cat would occur because the project would not be constructed.

Proposed Action

The Trinity River riparian corridor, including the project area, provides suitable roosting and/or foraging habitat for four bat species: the long-eared myotis, pallid bat, Yuma myotis, and Townsend's western big-eared bat. Species-specific surveys for bats were not conducted at the site; therefore, their presence is assumed. Two of these bat species (long-eared myotis bat and pallid bat) may roost in trees (e.g., spaces under tree bark or in cavities) as well as caves and buildings, while the other two species (Townsend's western big-eared bat and Yuma myotis) prefer to nest in structures such as buildings, caves, and mines. The project area does not provide suitable roosting habitat for the Townsend's western big-eared bat or the Yuma myotis. For the long-eared myotis and pallid bat (species that roost in trees), habitat preference is typically woodland and forest habitat. It is unlikely that these bats would roost in the willows and alders typically found immediately along the Trinity River. However, they may roost in habitats more likely to contain large trees with cavities or loose bark, such as montane hardwood and foothill pine. Impacts to habitat containing potential roost trees will occur at the sites. Noise and visual disturbances associated with construction activities may disrupt bats roosting within and directly adjacent to the project area. Further, removing large trees with cavities could result in the direct loss of colonies, which would be considered a significant impact.

Each of these bat species has the potential to forage at the project site. Foraging habitat typically consists of forested habitats in close association with water. Construction activities associated with the Proposed Action could temporarily alter the foraging patterns of these species; however, this would be considered a less-than-significant impact based on the abundance of suitable foraging habitat in the vicinity of the Proposed Action. No long-term impediments to foraging habitat associated with the Proposed Action are anticipated.

The Trinity River riparian corridor also provides habitat for the ring-tailed cat. The willows and alders typically found immediately along the river are unlikely to provide suitable denning habitat for this species due to their small size and lack of large cavities/snags. However, other habitats in the project area, such as montane hardwood and montane hardwood conifer habitats, may provide suitable denning sites. Thus, removal of large trees with cavities or snags could result in the loss of ring-tailed cats, which would be considered a significant impact. Construction activities would also result in a short-term reduction in foraging habitat for this species. However, the project would ultimately result in an increase in habitat and an increase in habitat quality for this species. Thus, due to the abundance of similar habitat in the area, the temporary loss of foraging habitat would be a less-than-significant impact.

Alternative 1

Construction-related impacts to special-status bats and the ring-tailed cat under Alternative 1 would be similar to, but greater than, those under the Proposed Action due to the larger area of disturbance.

Mitigation Measures

No-Action Alternative

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Proposed Action and Alternative 1

In order to avoid and/or minimize impacts to roosting special-status bats and the ring-tailed cat, the following measures shall be implemented:

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.

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 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.

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.

Significance after Mitigation

Less than significant

Impact 3.7-10: Construction activities associated with the project could result in the temporary loss of non-breeding habitat for special-status birds. ***No Impact for the No-Action Alternative; Less-than-Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, no construction-related impacts to non-breeding habitat for sensitive species would occur because the project would not be constructed.

Proposed Action

The Trinity River riparian corridor, including the project area, provides both foraging and perching habitat for bald eagles, golden eagles, American peregrine falcons, merlins, and black swifts, but suitable nesting habitat is absent. The nearest recorded bald eagle nesting site is located less than 1 mile to the north of the Lewiston site on the shores of Lewiston Reservoir (CNDDB 2003). Construction activities associated with the project could temporarily alter the foraging patterns of these species; however, this impact would be considered less than significant based on the abundance of suitable foraging habitat in the vicinity of the proposed project. No long-term impediments to foraging habitat associated with the

Proposed Action are anticipated. The loss of potential perch trees would not affect the abundance of these species or their use of the Trinity River for foraging habitat.

Alternative 1

Construction-related impacts to non-breeding habitat for special-status birds under Alternative 1 would be similar to, but greater than, those under the Proposed Action due to the larger area of disturbance.

Mitigation

No-Action Alternative, Proposed Action, and Alternative 1

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Impact 3.7-11: Construction activities associated with the project could result in impacts to BLM and USFS sensitive species. No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1 except for the Pacific fisher, and Less-than-Significant Impact for the Proposed Action and Alternative 1 for the Pacific fisher

No-Action Alternative

Under the No-Action Alternative, no construction-related impacts to BLM or USFS sensitive species would occur because the project would not be constructed.

Proposed Action and Alternative 1

Nine of the wildlife species with potential to occur at the sites are designated BLM or USFS sensitive species: foothill yellow-legged frog, northwestern pond turtle, northern goshawk, little willow flycatcher, Pacific fisher, long-eared myotis bat, pallid bat, Townsend's western big-eared bat, and Yuma myotis bat (see Table 3.7-1). With the exception of the Pacific fisher, potential impacts to these species are discussed as separate impacts above. The Pacific fisher may use the Trinity River as a travel corridor; however, suitable denning habitat is not present at the sites. Therefore, the impact would be less than significant.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

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.

Significance after Mitigation

N/A

Impact 3.7-12: Construction activities associated with the project could restrict the movement of terrestrial wildlife through the sites. ***No Impact for the No-Action Alternative; Less-than-Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, construction-related restriction of terrestrial wildlife movement through the sites would not occur because the project would not be constructed.

Proposed Action and Alternative 1

The Trinity River corridor provides habitat and travel corridors for such species as Pacific fisher, American marten, black-tailed deer, river otter, beaver, common merganser (*Mergus merganser*), green heron (*Butorides virescens*), black-crowned night heron (*Nycticorax nycticorax*), wood duck (*Aix sponsa*), belted kingfisher, cliff swallow (*Hirundo pyrrhonota*), bank swallow, and raccoon. The riparian vegetation along the Trinity River, in association with adjacent and/or nearby mixed-conifer and montane hardwood-conifer habitat, provides connected habitat within an area that has been fragmented by rural residential development and road building. Black-tailed deer inhabit shrublands, forests, and oak woodlands and use riparian vegetation for cover. However, construction noise and activity will not significantly impede the seasonal migration of the Weaverville deer herd from high-elevation summer habitats to lower elevation Critical Winter Range in the project vicinity. Construction noise could also temporarily alter foraging patterns of resident wildlife species, and vegetation removal along the river could temporarily disrupt wildlife movement through the area. However, no long-term impediments to wildlife movement within the sites are anticipated as a result of implementing the Proposed Action. Therefore, this would be a less-than-significant impact.

Mitigation Measures

No-Action Alternative, Proposed Action, and Alternative 1

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Impact 3.7-13: Implementation of the project could result in the spread of non-native and invasive plant species. ***No Impact for the No-Action Alternative; Significant Impact for the Proposed Action and Alternative 1***

No-Action Alternative

Under the No-Action Alternative, the spread of non-native and invasive plant species would not occur as a result of construction activities because the project would not be constructed.

Proposed Action

Implementation of the proposed project could result in the spread of non-native and invasive plant species (e.g., dalmatian toadflax, yellow star-thistle, Himalayan blackberry, and Klamathweed) during ground-disturbing activities. This would be considered a significant impact. However, further spread of weeds is not anticipated with implementation of the mitigation measures described below.

Alternative 1

The spread of non-native and invasive plant species as a result of implementation of Alternative 1 would be similar to the Proposed Action.

Mitigation Measures

No-Action Alternative

Since no significant impact was identified, no mitigation is required.

Significance after Mitigation

N/A

Proposed Action and Alternative 1

In order to avoid and/or minimize the potential introduction and/or spread of noxious weeds, the following measures shall be implemented:

13a When using imported erosion control materials (as opposed to rock and dirt berms), use only certified weed-free materials, mulch, and seed.

13b Preclude the use of rice straw in riparian areas.

13c Limit any import or export of fill to material known to be weed free.

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.

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.

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.

Significance after Mitigation

Less than significant