DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
333 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94105-2197

MAY 0 9 2005

Regulatory Branch

Subject: File No. 290920N

Mr. Douglas P. Schleusner
Executive Director
Trinity River Restoration Program
P.O. Box 1300
Weaverville, California 96093

Dear Mr. Schleusner:

Thank you for your submittal of November 5, 2004, requesting confirmation of the extent of Corps of Engineers jurisdiction at the Canyon Creek reach of the Trinity River, where there are plans proposed by the Trinity River Restoration Program to construct four mechanical river channel rehabilitation projects: (1) Conner Creek, (2) Pear Tree, (3) Elkhorn, and (4) Valdor Gulch restoration sites. These project sites are all located adjacent to Highway 299, downstream from the Canyon Creek confluence with the Trinity River and downstream of the community of Junction City, in Trinity County, California.

Enclosed is a map showing the extent and location of Corps of Engineers jurisdiction based on a site visit performed by our Eureka Field Office staff, Regulatory Branch, on **March 7, 2005,** (Enclosure 1). We have based this jurisdictional delineation on the current conditions on the site. A change in those conditions may also change the extent of our jurisdiction. This jurisdictional delineation will expire in five years from the date of this letter. However, if there has been a change in circumstances that affects the extent of Corps jurisdiction, a revision may be completed before that date.

All proposed discharges of dredged or fill material into waters of the United States must be authorized by the Corps of Engineers pursuant to Section 404 of the Clean Water Act (CWA) (33 U.S.C. Section 1344). Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands.

Your proposed activity is within our jurisdiction and a permit will be required for your project. Application for Corps authorization should be made to this office using the application form and instructions enclosed with this letter (Enclosure 2). The application must include plans showing the location, extent and character of the proposed activity, prepared in accordance with the requirements contained in this pamphlet. You should note, in planning your project, that upon receipt of a properly completed application and plans, it may be necessary to advertise the proposed work by issuing a Public Notice for a period of 30 days.

Our Nationwide Permits and Regional General Permits have already been issued to authorize certain activities provided specified conditions are met. Your completed application will enable us to confirm that your activity is already authorized. You are advised to refrain from starting your proposed activity until we make a determination that the project is covered by an existing permit. Commencement of work before you receive our notification will be interpreted as a violation of our regulations.

You are advised that the Corps has established an Administrative Appeal Process, as described in 33 C.F.R. Part 331 (65 Fed. Reg. 16,486; March 28, 2000), and outlined in the enclosed flowchart (Enclosure 3) and "Notification of Administrative Appeal Options, Process, and Request for Appeal" form (NAO-RFA)(Enclosure 4). If you do not intend to accept the approved jurisdictional determination, you may elect to provide new information to the District Engineer for reconsideration or submit a completed NAO-RFA form to the Division Engineer to initiate the appeal process. You will relinquish all rights to appeal, unless the Corps receives new information or a completed NAO-RFA form within sixty (60) days of the date of the NAO-RFA.

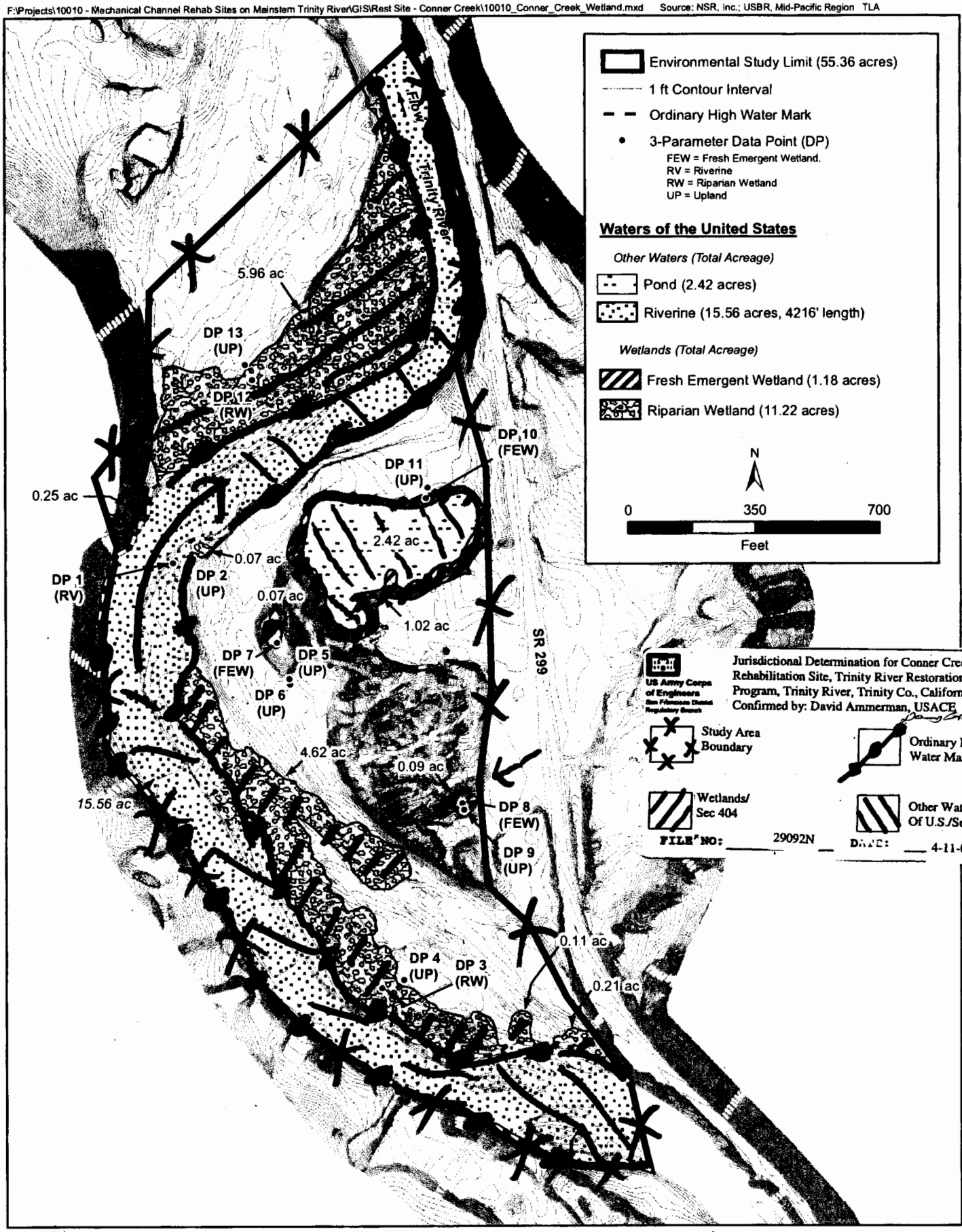
Should you have any questions regarding this matter, please call David Ammerman of our Eureka Office, Regulatory Branch at 707-443-0855. Please address all correspondence to the Eureka Office, USACE, P.O. Box 4863, Eureka, CA 95502, and refer to the File Number at the head of this letter.

Sincerely,

Jane M. Hicks
Chief, Regulatory Branch

Enclosures

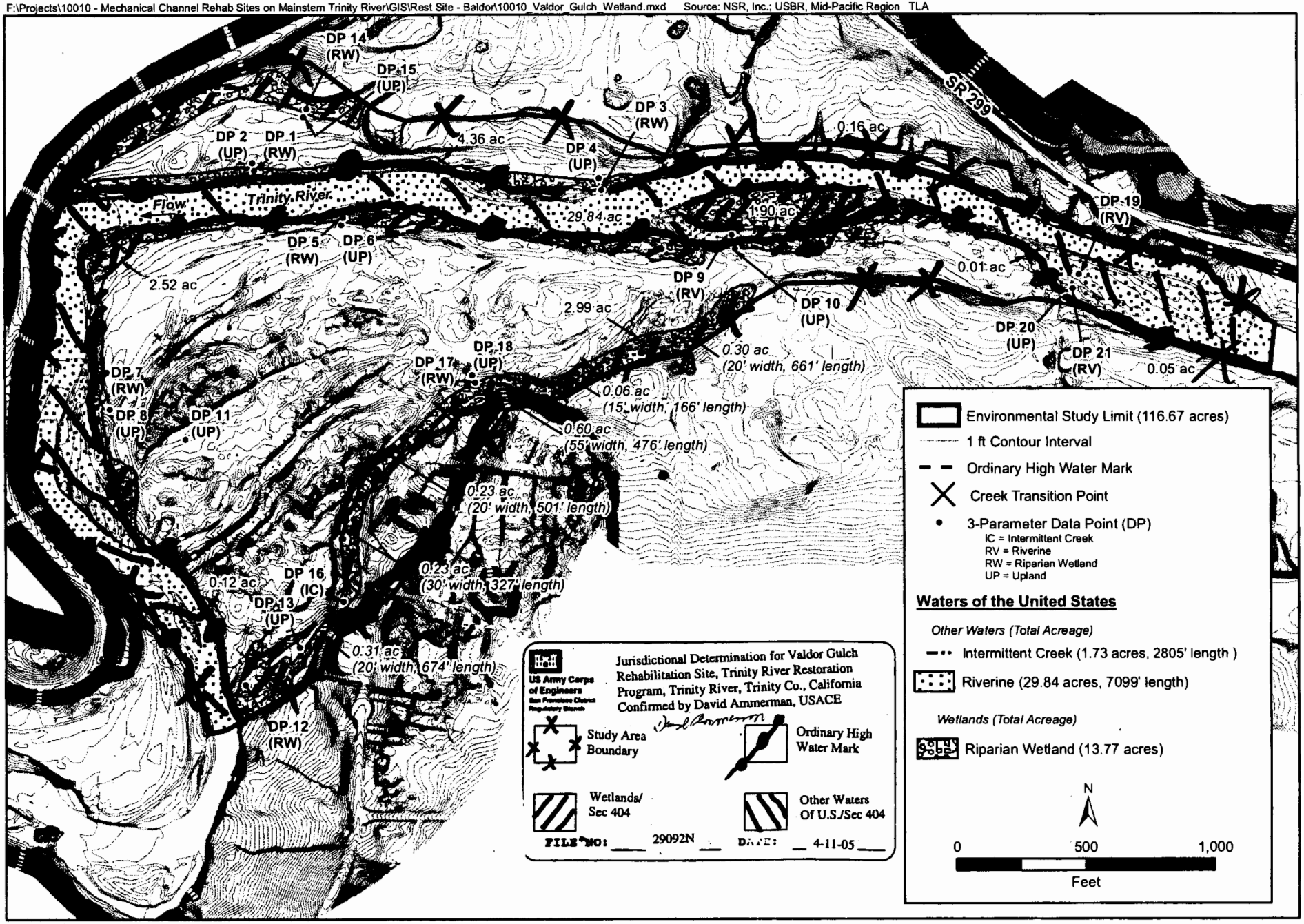
F:\Projects\10010 - Mechanical Channel Rehab Sites on Mainstem Trinity River\GIS\Rest Site - Conner Creek\10010_Conner_Creek_Wetland.mxd Source: NSR, Inc.; USBR, Mid-Pacific Region TLA



Revised Figure 3a-1. Conner Creek Boundaries of Waters of the United States, Including Wetlands March 1, 2005

This delineation of waters of the United States, including wetlands, is subject to verification by the U.S. Army Corps of Engineers (ACOE). NSR advises all parties to treat the information contained herein as preliminary until the ACOE provides written verification of the boundaries of their jurisdiction.

F:\Projects\10010 - Mechanical Channel Rehab Sites on Mainstem Trinity River\GIS\Rest Site - Baldor\10010_Valdor_Gulch_Wetland.mxd Source: NSR, Inc.; USBR, Mid-Pacific Region TLA

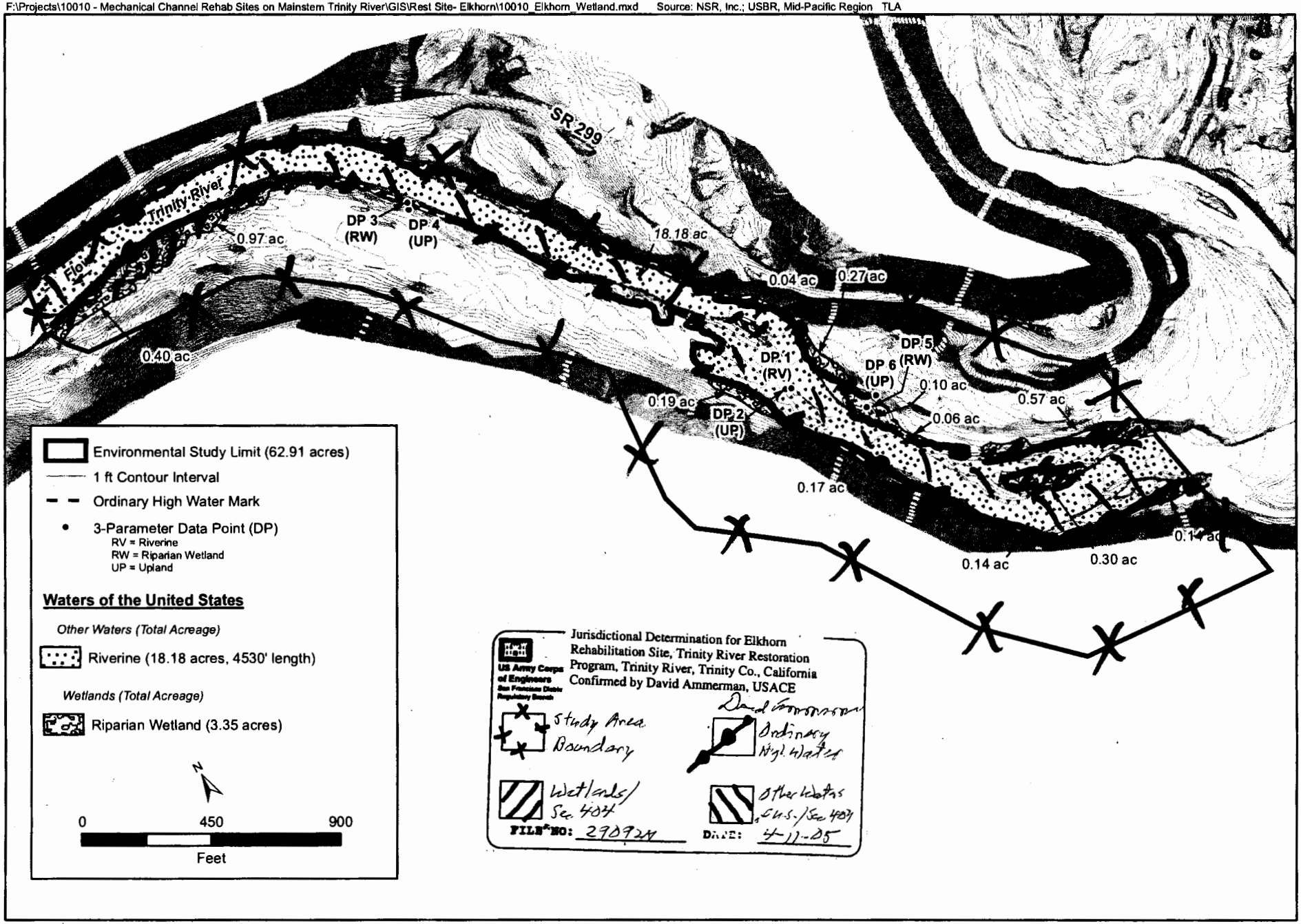


Canyon Creek Rehabilitation Sites: Trinity River Mile 73 to 78

This delineation of waters of the United States, including wetlands, is subject to verification by the U.S. Army Corps of Engineers (ACOE). NSR advises all parties to treat the information contained herein as preliminary until the ACOE provides written verification of the boundaries of their jurisdiction.

Revised Figure 3b-1. Valdor Gulch Boundaries of Waters of the United States, Including Wetlands March 1, 2005

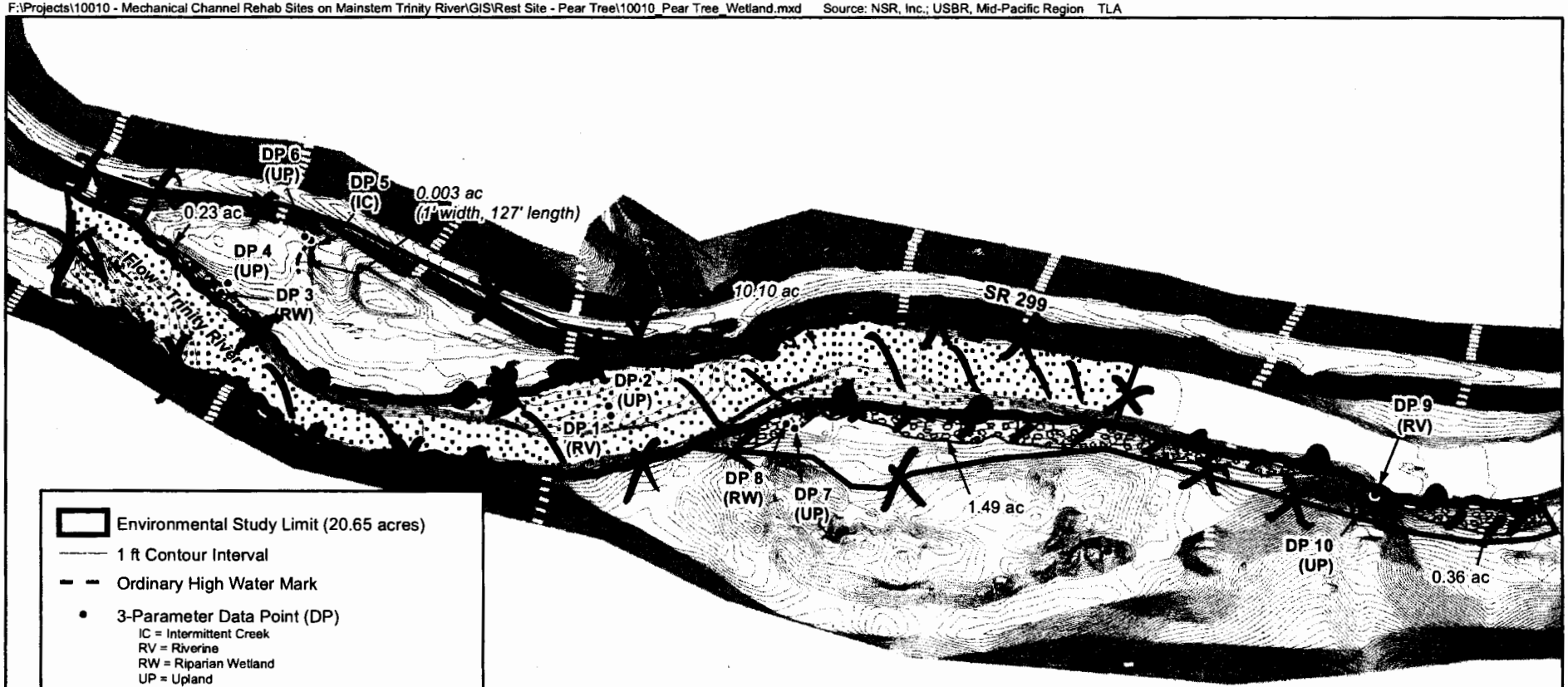
F:\Projects\10010 - Mechanical Channel Rehab Sites on Mainstem Trinity River\GIS\Rest Site- Elkhorn\10010_Elkhorn_Wetland.mxd Source: NSR, Inc.; USBR, Mid-Pacific Region TLA



This delineation of waters of the United States, including wetlands, is subject to verification by the U.S. Army Corps of Engineers (ACOE). NSR advises all parties to treat the information contained herein as preliminary until the ACOE provides written verification of the boundaries of their jurisdiction.

Revised Figure 3c-1. Elkhorn Boundaries of Waters of the United States, Including Wetlands March 1, 2005

F:\Projects\10010 - Mechanical Channel Rehab Sites on Mainstem Trinity River\GIS\Rest Site - Pear Tree\10010_Pear Tree_Wetland.mxd Source: NSR, Inc.; USBR, Mid-Pacific Region TLA



Environmental Study Limit (20.65 acres)

1 ft Contour Interval

Ordinary High Water Mark

3-Parameter Data Point (DP)
- IC = Intermittent Creek
- RV = Riverine
- RW = Riparian Wetland
- UP = Upland

Waters of the United States

Other Waters (Total Acreage)

Intermittent Creek (0.003 acre, 127' length)

Riverine (10.10 acres, 2561' length)

Wetlands (Total Acreage)

Riparian Wetland (2.08 acres)

N

0 350 700

Feet

US Army Corps of Engineers San Francisco District Regulatory Branch

Jurisdictional Determination for Pear Tree Rehabilitation Site, Trinity River Restoration Program, Trinity River, Trinity Co., California Confirmed by David Ammerman, USACE

David Ammerman

Study Area Boundary

Ordinary High Water Mark

Wetlands/ Sec 404

Other Waters Of U.S./Sec 404

FILE NO: 29092N DATE: 4-11-05

This delineation of waters of the United States, including wetlands, is subject to verification by the U.S. Army Corps of Engineers (ACOE). NSR advises all parties to treat the information contained herein as preliminary until the ACOE provides written verification of the boundaries of their jurisdiction.

Revised Figure 3d-1. Pear Tree Boundaries of Waters of the United States, Including Wetlands March 1, 2005

TRINITY RIVER MECHANICAL CHANNEL REHABILITATION PROJECT

CANYON CREEK SUITE

Draft Delineation of Waters of the United States, Including Wetlands

NOVEMBER 2004

Prepared for:
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

Prepared by:
North State Resources, Inc.

TRINITY RIVER MECHANICAL CHANNEL REHABILITATION PROJECT

CANYON CREEK SUITE

Draft Delineation of "Waters of the United States," Including Wetlands

NOVEMBER 2004

Prepared for:
TRINITY RIVER RESTORATION PROGRAM
U.S. DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION
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TRINITY RIVER MECHANICAL CHANNEL REHABILITATION PROJECT CANYON CREEK SUITE

Delineation of "Waters of the United States," Including Wetlands

1. INTRODUCTION

The United States Department of the Interior, Bureau of Reclamation (BOR) is proposing mechanical removal of selected berms currently in place between Lewiston Dam and the North Fork Trinity River as part of a rehabilitation pilot project to restore portions of the Trinity River channel in Trinity County, California. Section 404 of the Federal Clean Water Act (1972) requires a diagnostic environmental characterization of the proposed project area to identify vegetative, hydrologic, and soils traits indicative of wetland habitats before the project begins. The U.S. Army Corps of Engineers (Corps) is authorized to issue permits for the discharge of dredged or fill material into "waters of the United States," including wetlands.

In accordance with Corps methodology, as defined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), North State Resources, Inc. (NSR) conducted wetland delineations at each of the four sites proposed for mechanical channel rehabilitation: Conner Creek, Valdor Gulch, Elkhorn, and Pear Tree.

2. PROJECT BACKGROUND AND LOCATION

a) Project Background: The operation of the Trinity River Division (TRD) of the Central Valley Project (CVP) is the primary influence on the regional hydrology. The TRD consists of a series of dams, tunnels, and power plants that export water from the Trinity River Basin to the Sacramento River Basin. Trinity and Lewiston Dams currently regulate Trinity River flows below River Mile (RM) 112. With a capacity of 2.4 million-acre-feet (maf), Trinity Reservoir is the largest component of the TRD. Releases from Trinity Reservoir are re-regulated in Lewiston Reservoir prior to release downstream into the Trinity River. Lewiston Reservoir also acts as a forebay for the trans-basin export of water into Whiskeytown Reservoir via the Clear Creek Tunnel. Lewiston Dam marks the upstream limit of anadromous salmonids in the Trinity River.

The Trinity River drains a watershed of approximately 2,965 square miles; about one-quarter of this area is above Lewiston Dam. Elevations in the watershed range from 8,888 feet mean sea level (msl) at Sawtooth Mountain in the Trinity Alps to 300 feet msl at the confluence of the Trinity and Klamath Rivers. The Trinity River is the largest tributary to the Klamath River. The mainstem Trinity River flows a total of 170 miles from its headwaters to its confluence with the Klamath River at Weitchpec, 43.5 miles upstream from the Pacific Ocean.

Prior to completion of the TRD, flows in the Trinity River were highly variable, ranging from summer flows of 25 cubic feet per second (cfs) to instantaneous peak flows greater than 100,000 cfs during extreme winter events. Annual hydrographs

typically followed a seasonal pattern of high winter and spring flows followed by low summer and fall flows. Total annual flow volumes at Lewiston historically ranged from 0.27–2.7 maf, with an average of 1.2 maf.

Since operation of the Lewiston Dam began in 1964, an average of 74 percent of the river's flow has been exported annually. In recent years (1985–1997), annual exports have decreased to an average of 732,400 acre-feet (af). Conversely, post-dam Trinity River flows at Lewiston have been as low as 10 percent of pre-dam levels.

The Trinity River rainy season, as defined by the Water Quality Control Board, lasts from October 15 through April 15, when over 90 percent of the annual precipitation falls. During the majority of this period, Trinity River flow and flooding are regulated by the dams upstream of Lewiston.

b) **Project Location**: The proposed project sites are located along an approximately 6.3-mile stretch of mainstem Trinity River between the communities of Junction City and Helena, Trinity County, California. The vicinity of the project is shown in **Figure 1**.

For the purposes of this report, each channel rehabilitation site is referred to by its name, while collectively the sites are referred to as the project area. The Environmental Study Limits (ESLs) for each site are illustrated in the Project Location Map, **Figure 2**.

Conner Creek

The Conner Creek channel rehabilitation site begins at River Mile 77.4 and extends 0.3 miles downstream along the Trinity River. It is found on the *Dedrick, California* 7.5-minute United States Geological Survey (USGS) quadrangle map, Township 34 North, Range 11 West, Sections 1, 35 and 36, MDBM, 040° 45' 15" North latitude by 123° 04' 00" West longitude.

Valdor Gulch

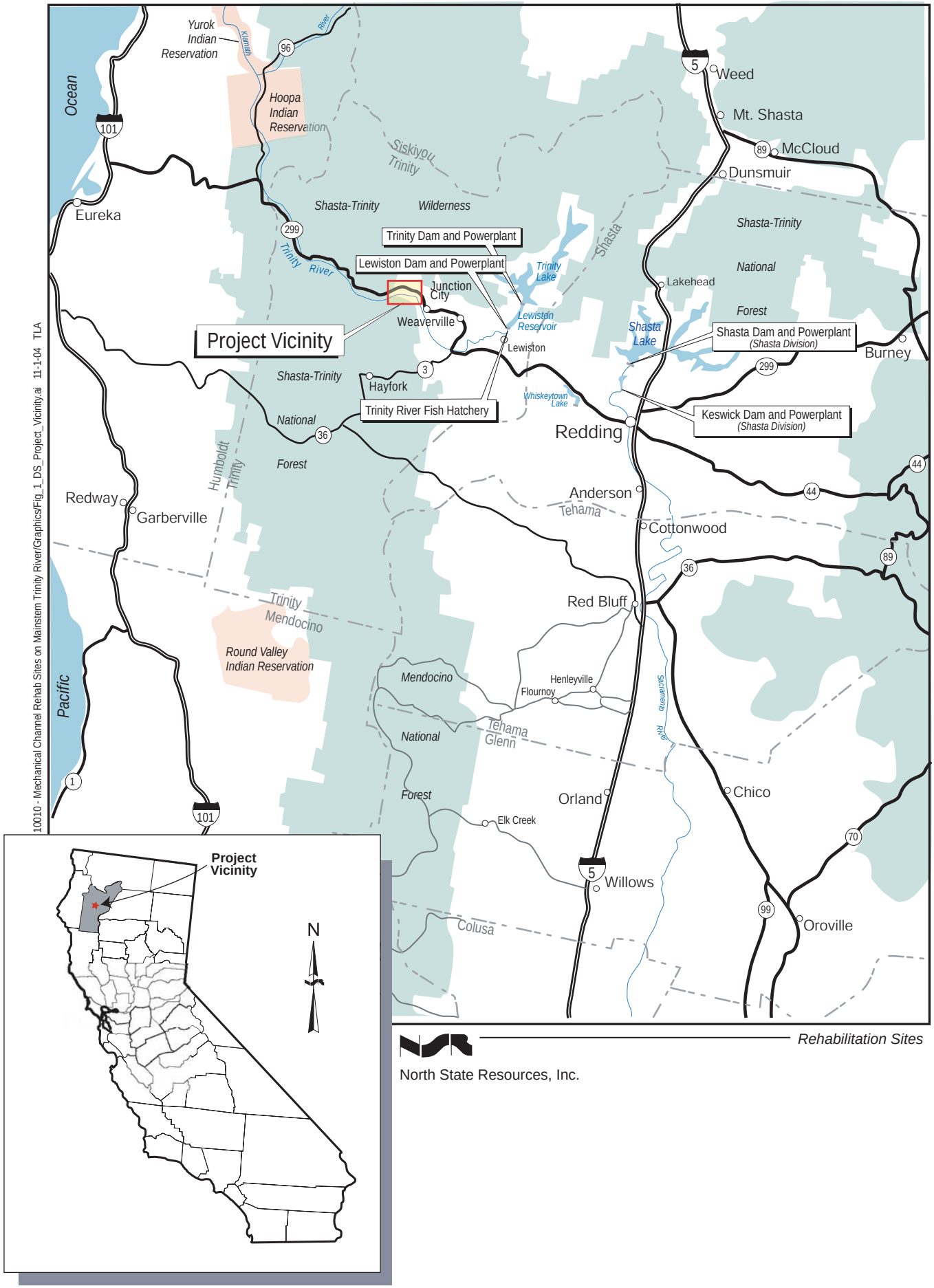
The Valdor Gulch channel rehabilitation site begins at River Mile 75.4 and extends 1.1 miles downstream along the Trinity River. It is found on the *Dedrick, California* 7.5-minute USGS quadrangle map, Township 34 North, Range 11 West, Sections 27 and 35, MDBM, 040° 45' 53" North latitude by 123° 05' 35" West longitude.

Elkhorn

The Elkhorn channel rehabilitation site begins at River Mile 73.6 and extends 0.8 mile downstream along the Trinity River. It is found on the *Dedrick, California* 7.5-minute USGS quadrangle map, Township 34 North, Range 11 West, Sections 27 and 28, MDBM, 040° 45' 53" North latitude by 123° 06' 08" West longitude.

Pear Tree

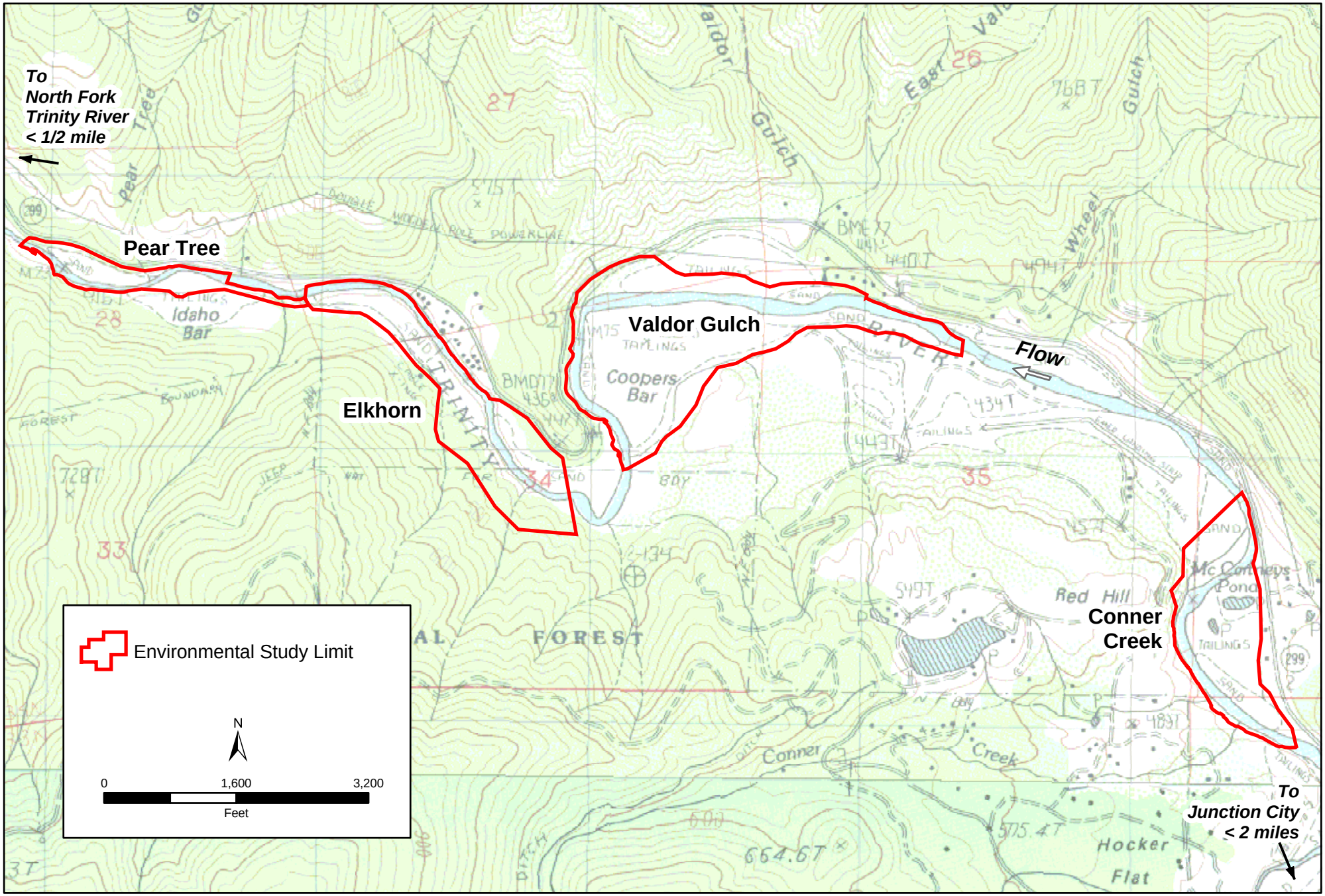
The Pear Tree site begins at River Mile 73.1 and extends 0.3 mile downstream along the Trinity River. It is found on the *Dedrick, California* 7.5-minute USGS quadrangle map, Township 34 North, Range 11 West, Section 28, MDBM, 040° 45' 57" North latitude by 123° 06' 57" West longitude.



10010 - Mechanical Channel Rehab Sites on Mainstem Trinity River/Graphics/Fig_1_DS_Project_Vicinity.ai 11-1-04 TLA

Figure 1
Project Vicinity

F:\Projects\10010 - Mechanical Channel Rehab Sites on Mainstem Trinity River\GIS\10010_Project_Location_Pear-Conner.mxd Source: NSR, Inc.; USBR; USGS 11-01-04 TLA



Rehabilitation Sites

North State Resources, Inc.

Figure 2
Project Location

c) **Acreage**: The entire project area encompasses approximately 251.15 acres. The ESL acreage for each proposed channel rehabilitation site is provided below:

Conner Creek: 54.68 acres

Valdor Gulch: 115.18 acres

Elkhorn: 61.72 acres

CX: 19.57 acres

d) **Proximity to Major Highways and Streets**: All four of the channel rehabilitation sites involved in this project are immediately adjacent to California State Highway 299 West, although not all are accessible directly from the highway. The following sections provide detailed directions for access to each site.

Conner Creek

The Conner Creek channel rehabilitation site spans both sides of the Trinity River. Access is most easily made to the south end of the site (river right), via State Highway 299. Parking is available on the west side of the highway across from Power House Road. Access to the north end (river left) of the site is made via Red Hill Road.

Valdor Gulch

The Valdor Gulch channel rehabilitation site encompasses both banks of the Trinity River. The southern portion of the site is accessed via Red Hill Road. From Red Hill Road, turn west (left) on Conner Creek Road, north (right) on Hocker Meadow Road, and north (right) on McGillivray Ranch Road, and then proceed north through the intersection of Wintu Pass and McGillivray Ranch Roads. McGillivray Ranch Road ends just prior to reaching the Trinity River. Park and walk north/northwest to the site.

Elkhorn

The Elkhorn channel rehabilitation site is located on the southwest bank of the Trinity River. Access requires passing through private property, for which permission is required prior to arrival. Follow Red Hill Road, turn west (left) on Conner Creek Road, north (right) on Hocker Meadow Road, north (right) on McGillivray Ranch Road, then west (left) on Wintu Pass Way to the end. A private drive continues northwest from the end of Wintu Pass Way. Proceed along the private drive past the home, following the road parallel to the corral. At the barn, turn north (right) and follow the road to the river. The site extends along the river to the northwest.

Pear Tree

The Pear Tree channel rehabilitation site is located on the north side of the Trinity River; therefore, access can be made from State Highway 299. A Bureau of Land Management (BLM) access road on the south side of the highway can be used for access to this site.

e) **USGS Hydrologic Unit**: The project area is located within USGS Hydrologic Map Unit Number 18010211.

3. ENVIRONMENTAL SETTING

a) **Current/Recent Land Use**: The Trinity River Basin encompasses the majority of Trinity County and the easternmost portion of Humboldt County. Topography is predominantly mountainous. The basin is heavily forested with little available farming area. Two scenic byways cross the county: State Highway 299 and State Route 3. Lakes and rivers provide recreational opportunities, including fishing and boating. Most of the Hoopa Valley Indian Reservation is within the basin. Land use within the Trinity River Basin is greatly influenced by the large amount of public, tribal, and private forestlands, much of which is used for timber production and other natural resource–related uses. Private uses along the Trinity River are generally limited to scattered residential and commercial development. State Highway 299 is the primary travel corridor through Trinity County, connecting the Central Valley with the coastal communities of Humboldt County.

The Trinity River Basin is sparsely populated. Trinity County had a population of 13,116 in 2001 (United States Census Bureau 2002). Throughout the watershed, residential, commercial, and industrial uses tend to be concentrated on relatively flat areas near the Trinity River or its tributaries, as typified by the population centers of Weaverville, Hayfork, Lewiston, Willow Creek, and Hoopa. Together, these communities house two-thirds of the basin's approximately 15,000 people.

Land ownership within the four proposed channel rehabilitation sites is predominantly private; however, the United States Department of Agriculture (USDA), United States Forest Service (USFS), and the BLM also hold properties within, or adjacent to, the project area.

b) **Site Elevation**: The approximate elevation of each of the sites proposed for channel rehabilitation activities is as follows:

Conner Creek: 1,452 feet msl

Valdor Gulch: 1,422 feet msl

Elkhorn: 1,419 feet msl

Pear Tree: 1,353 feet msl

c) **Climate**:

Type: Mediterranean with moderate winters and hot, dry summers.

Precipitation: Approximately 38 inches annually, most of which falls between October 1 and April 30 (Western Regional Climate Center 2004).

Air temperature: The average annual air temperature is approximately 53 degrees Fahrenheit (º F). The average January high temperature is 46.7º F and the average July high temperature is 93.4º F (Western Regional Climate Center 2004).

Growing season: Approximately 130 days (assume May 24 to September 26).

d) **Site Topography/Landscape**: The four sites share similar landscape and topographical features. All of the sites are immediately adjacent to the Trinity River and are generally flat with relatively steep fill slopes leading from the road to the main

body of the sites located between State Highway 299 and the Trinity River. Dredger tailing piles are present at all sites except Pear Tree.

e) **Hydrology/Hydrologic Features**: The hydrology of the four sites is influenced almost exclusively by the mainstem of the Trinity River and associated operation of the TRD (i.e., Lewiston Dam and Trinity Dam). To a lesser extent, runoff from adjacent roads and hillsides following precipitation events also affects portions of each site. Conner Creek, which joins the Trinity River at the south (upstream) end of the Conner Creek site, and several other unnamed ephemeral and perennial drainages scattered throughout the project area are a source of fine sediment and flow into the Trinity River.

f) **Soils**: Soils within the project area are described in the *Soil Survey of Trinity County, California, Weaverville Area* (USDA 1998). Soil survey maps of the project area are presented in **Appendix A**. Six soil map units were identified within the project area. The Atter soil units (map units 101 and 102) and the Xerofluvents-Riverwash complex (map unit 217) are considered hydric soils. The Xeralfs-Xerorthents complex (map unit 213) is not considered a hydric soil, but may contain hydric inclusions in the form of mining ponds (USDA 1992). Following is a brief characterization of the project area soils:

101 – Atter extremely gravelly loamy sand, 9 to 15 percent slopes. *This very deep, somewhat excessively drained soil is on alluvial fans and stream terraces. It is in areas adjacent to perennial streams. It is formed in alluvium and outwash from hydraulic mining of mixed rock sources. Typically, about 35 percent of the surface is partially covered with cobbles and gravel and with a 1-inch mat of leaves, needles, and twigs. Permeability is rapid in the Atter soil. Available water capacity is very low. Runoff is slow, and the hazard of water erosion is slight. This soil unit is used for homesite development or timber production.* (USDA 1998)

Soils of this type occur at the Conner Creek, Valdor, and Elkhorn channel rehabilitation sites.

102 – Atter-Dumps, dredge tailings-Xerofluvents complex, 2 to 9 percent slopes. *This map unit is on alluvial fans, stream terraces, and flood plains that have been altered by dredging operations. This unit is about 50 percent Atter extremely gravelly loamy sand; 20 percent Dumps, dredge tailings; and 15 percent Xerofluvents. The Atter soil is very deep and is somewhat excessively drained. Permeability is rapid in the Atter soil. Available water capacity is very low. Runoff is slow, and the hazard of water erosion is slight. Dumps and dredge tailings consist of nearly barren mounds deposited along stream channels by dredge mining activities. Permeability is rapid in areas of the Dumps. Runoff is medium, and the hazard of water erosion is slight. Xerofluvents consist of well-drained soils that formed in alluvium derived from mixed rock sources. Permeability is medium or rapid in the Xerofluvents. Available water capacity is very low or low. Runoff is slow or medium, and the hazard of water erosion is slight or moderate. These soils are subject to flooding during prolonged, high-intensity storms. The frequency of the flooding ranges from rare to frequent. Channeling and deposition are common along streambanks. This unit serves mainly as watershed or is used as wildlife habitat or recreational areas. The Xerofluvents provide seasonal habitat for fish and wildlife.* (USDA 1998)

Soils of this type occur at the Conner Creek and Valdor Gulch channel rehabilitation sites.

111 – Brockgulch-Dedrick-Brownbear complex, 50 to 75 percent slopes. *This map unit is on mountains. Areas are dissected by perennial streams. This unit is 35 percent Brockgulch very gravelly loam, 25 percent Dedrick very gravelly loam, and 15 percent Brownbear very gravelly loam. The Brockgulch soil is mostly on exposed south-facing slopes, the Dedrick soil is mostly on exposed spur ridgetops, and the Brownbear soil is mostly on slightly sheltered southeast-facing slopes. The Brockgulch soil is moderately deep and is well drained. It formed in residuum and colluvium derived from metavolcanic rocks. Permeability is moderate in the Brockgulch soil. Available water capacity is very low. Runoff is very rapid, and the hazard of water erosion is severe. The Dedrick soil is shallow and somewhat excessively drained. It formed in residuum and colluvium derived from metavolcanic rocks. Permeability is moderate in the Dedrick soil. Available water capacity is very low. Runoff is very rapid, and the hazard of water erosion is severe. The Brownbear soil is moderately deep and is well drained. It is formed in residuum and colluvium derived from metavolcanic rocks. Permeability is moderate in the Brownbear soil. Available water capacity is low. Runoff is very rapid, and the hazard of water erosion is severe. This unit is mainly used as watershed, recreational, or wildlife habitat. It is also used for wood products. The Brownbear soil is used for timber production.* (USDA 1998)

Soils of this type occur at the Valdor and Elkhorn channel rehabilitation sites.

171 – Marpa-Hoosimbim-Bamtush complex, 50 to 75 percent slopes. *This map unit is on mountains. Areas are dissected by perennial streams. The unit is 35 percent Marpa very gravelly sandy clay loam, 25 percent Hoosimbim extremely gravelly sandy loam, and 20 percent Bamtush extremely gravelly loam. The Marpa soil is moderately deep and is well drained. It formed in residuum and colluvium derived from metavolcanic and metasedimentary rocks. Permeability is moderate in the Marpa soil. Available water capacity is very low or low. Runoff is very rapid, and the hazard of water erosion is severe. The Hoosimbim soil is deep and well drained. It formed in residuum and colluvium derived mostly from metavolcanic rocks and some metasedimentary rocks. Permeability is moderate in the Hoosimbim soil. Available water capacity is very low or low. Runoff is very rapid, and the hazard of water erosion is severe. The Bamtush soil is very deep and is well drained. It formed in residuum and colluvium derived from metavolcanic and some metasedimentary rocks. Permeability is moderate in the Bamtush soil. Available water capacity is low. Runoff is very rapid, and the hazard of water erosion is severe. This unit is used for timber production.* (USDA 1998)

Soils of this type occur at the Elkhorn channel rehabilitation site.

213 – Xeralfs-Xerorthents complex, 5 to 50 percent slopes. *This map unit is on hills and terraces. Much of the soil has been removed by hydraulic mining. Areas are dissected by perennial streams. This unit is about 40 percent Xeralfs and 40 percent Xerorthents. The Xeralfs consist of well-drained soils of variable depths. These soils formed in alluvium from mixed rock sources and material weathered from weakly consolidated nonmarine sediments. Permeability is very slow to moderate in the Xeralfs. Available water capacity is very low to moderate. Runoff is rapid, and the hazard of water erosion is moderate or severe. The Xerorthents consist of well-drained soils of variable depths. These soils formed in alluvium from mixed rock sources and material weathered from schist. Permeability is slow or moderate in the Xerorthents. Available water capacity is very low or low. Runoff is very rapid, and the hazard of water erosion is moderate or severe. This unit is used for homesite development or as watershed land.* (USDA 1998)

Soils of this type occur at the Conner Creek channel rehabilitation site.

217 – Xerofluvents-Riverwash complex, 0 to 5 percent slopes. *This map unit is on flood plains and stream terraces. It formed in alluvium derived from mixed rock sources. This unit is about 45 percent Xerofluvents and 35 percent River wash. Included in mapping are varying areas of the stream channel that are under water during some times of the year. Xerofluvents consist of well-drained soils that formed in alluvium from mixed rock sources. Permeability is moderate to rapid in the Xerofluvents. Available water capacity is very low or low. Runoff is slow or medium, and the hazard of water erosion is slight or moderate. These soils are subject to flooding during prolonged, high-intensity storms. Channeling and deposition are common along streambanks. Riverwash consists of nearly barren, unstabilized, stratified sandy, silty, clayey, stony, cobbly, or gravelly alluvium derived from mixed rock sources. Areas of Riverwash are flooded, channeled, and reworked nearly every winter. This unit is used as watershed areas, recreational areas, or wildlife habitat. A few areas are mined for sand and gravel. Careful management of watershed land, recreational areas, and wildlife habitat is needed to keep surface erosion to a minimum and to maintain the quality of the runoff. Areas of Xerofluvents and Riverwash provide seasonal habitat for fish and wildlife. The excessive removal of aggregates can lower the level of streambeds and widen stream channels and thus can undermine structures, lower the water table in areas adjacent to stream channels, erode streambanks, and increase sedimentation downstream. This sedimentation reduces spawning habitat for fish.* (USDA 1998)

Soils of this type occur at all four channel rehabilitation sites.

g) **Plant Communities**: The project area supports six plant communities: Montane Hardwood-Conifer (MHC), Montane Riparian (MRI), Riverine (RIV), Annual Grassland (AGS), Barren (BAR), and Urban (URB) (Holland 1986; Mayer and Laudenslayer 1988). **Figures 3a through 3d** illustrate these plant communities as well as the jurisdictional boundaries of "waters of the United States," including wetlands, for each site.

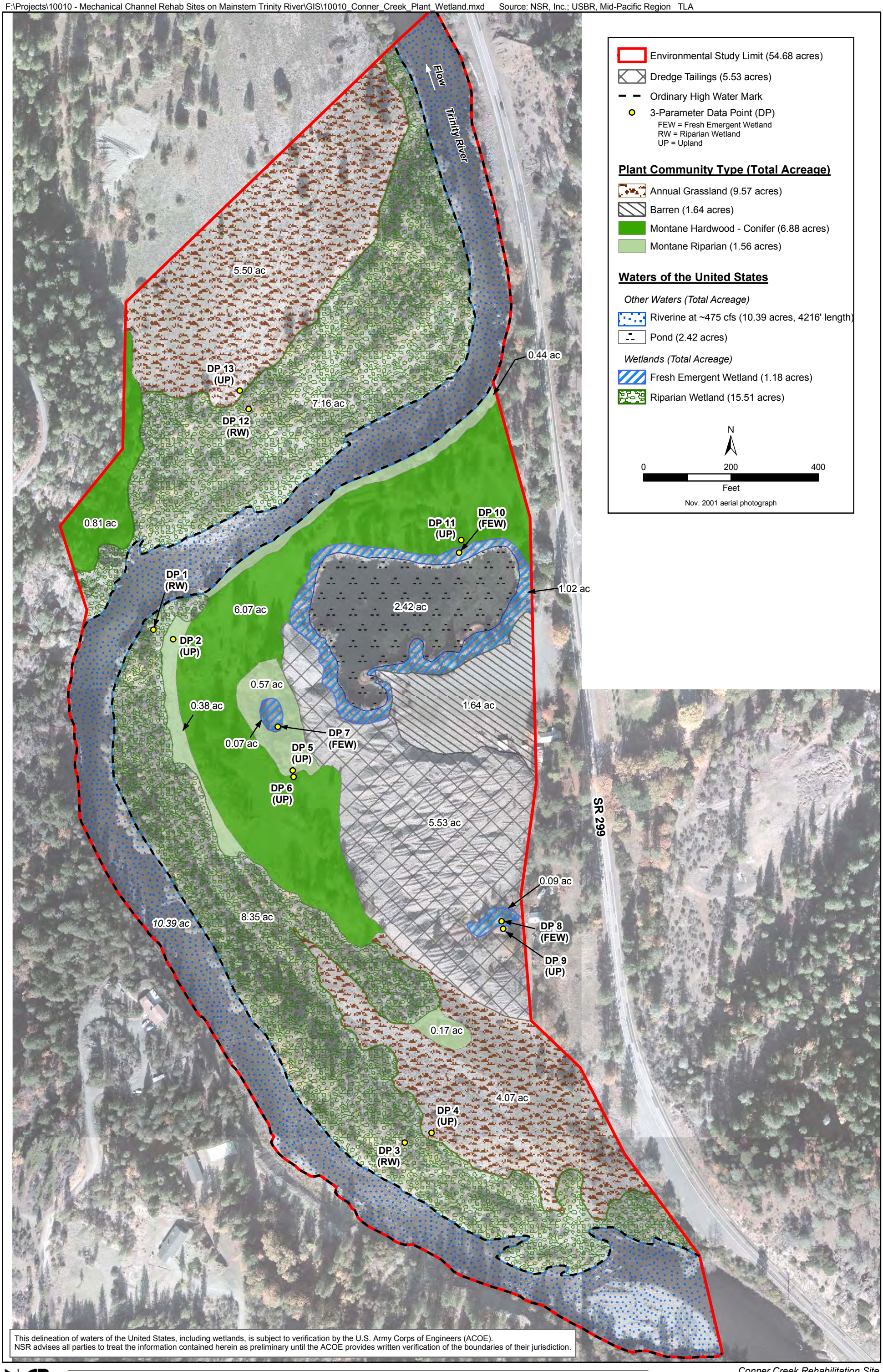
Montane Hardwood-Conifer

In the northern interior of California, the MHC 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, MHC often serves as an ecotone between dense coniferous forest and montane hardwood, mixed chaparral, or open woodland vegetation types.

MHC occurs at all four channel rehabilitation sites. Dominant tree species observed within this plant community include Pacific madrone (*Arbutus menziesii* – UPL[1]), bigleaf maple (*Acer macrophyllum* – FAC), ponderosa pine (*Pinus ponderosa* – FACU*)*, gray pine (*Pinus sabiniana* – UPL), Douglas-fir (*Pseudotsuga menziesii* var. *menziesii* – UPL*)*, canyon live oak (*Quercus chrysolepis*– UPL*)*, and black oak (*Quercus kelloggii* – UPL*)*. Shrub species observed include common manzanita (*Arctostaphylos manzanita* – UPL), buck brush (*Ceanothus cuneatus* – UPL), cascara (*Rhamnus purshiana* – NI), skunkbrush (*Rhus trilobata* – NI*)*, snowberry (*Symphoricarpos albus* var. *laevigatus* – FACU*)*, and poison oak (*Toxicodendron*

[1] UPL = Upland plants; FAC = Facultative plants; FACU = Facultative Upland plants; NI = Plants with no wetland indicator status.

F:\Projects\10010 - Mechanical Channel Rehab Sites on Mainstem Trinity River\GIS\10010_Conner_Creek_Plant_Wetland.mxd Source: NSR, Inc.; USBR, Mid-Pacific Region TLA



Environmental Study Limit (54.68 acres)

Dredge Tailings (5.53 acres)

Ordinary High Water Mark

3-Parameter Data Point (DP)
FEW = Fresh Emergent Wetland
RW = Riparian Wetland
UP = Upland

Plant Community Type (Total Acreage)

Annual Grassland (9.57 acres)

Barren (1.64 acres)

Montane Hardwood - Conifer (6.88 acres)

Montane Riparian (1.56 acres)

Waters of the United States

Other Waters (Total Acreage)

Riverine at ~475 cfs (10.39 acres, 4216' length)

Pond (2.42 acres)

Wetlands (Total Acreage)

Fresh Emergent Wetland (1.18 acres)

Riparian Wetland (15.51 acres)

N

0 200 400

Feet

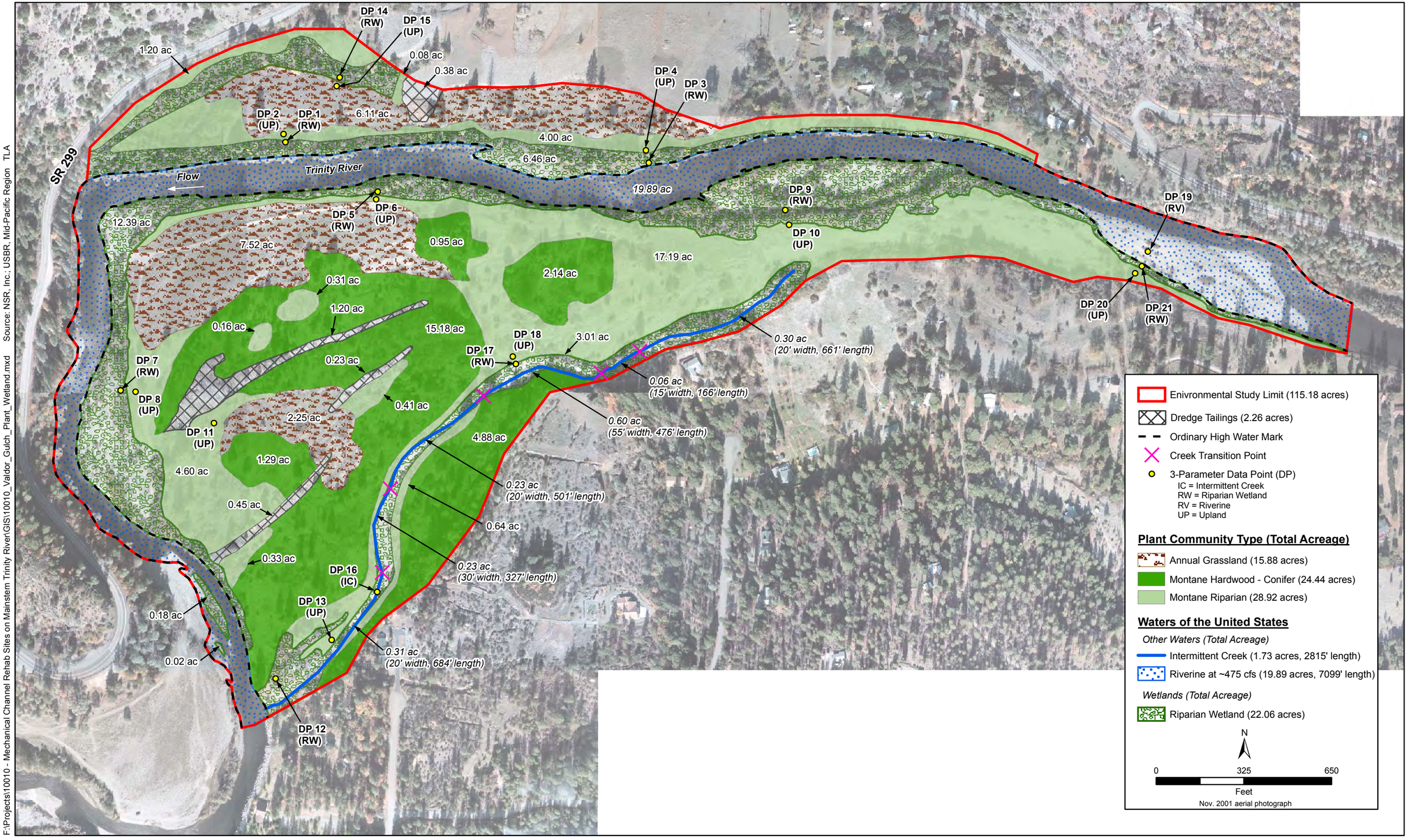
Nov. 2001 aerial photograph

This delineation of waters of the United States, including wetlands, is subject to verification by the U.S. Army Corps of Engineers (ACOE).
NSR advises all parties to treat the information contained herein as preliminary until the ACOE provides written verification of the boundaries of their jurisdiction.

North State Resources, Inc.

Conner Creek Rehabilitation Site

Figure 3a. Conner Creek Plant Community Types and Boundaries of Waters of the United States, Including Wetlands
October 15, 2004



F:\Projects\10010 - Mechanical Channel Rehab Sites on Mainstem Trinity River\GIS\10010_Valdor_Gulch_Plant_Wetland.mxd Source: NSR, Inc.; USBR, Mid-Pacific Region TLA

North State Resources, Inc.

Valdor Gulch Rehabilitation Site

This delineation of waters of the United States, including wetlands, is subject to verification by the U.S. Army Corps of Engineers (ACOE).
NSR advises all parties to treat the information contained herein as preliminary until the ACOE provides written verification of the boundaries of their jurisdiction.

Figure 3b. Valdor Gulch Plant Community Types and Boundaries of Waters of the United States, Including Wetlands
October 15, 2004

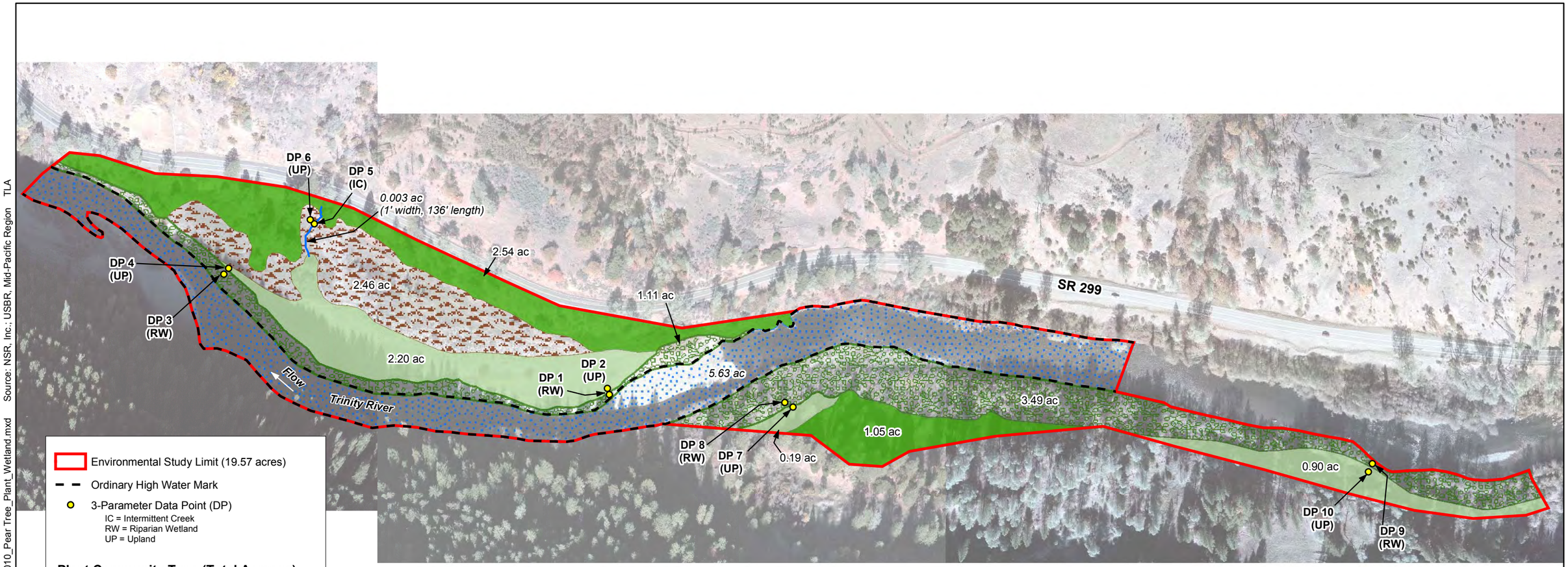
F:\Projects\10010 - Mechanical Channel Rehab Sites on Mainstem Trinity River\GIS\10010_Elkhorn_Plant_Wetland.mxd Source: NSR, Inc.; USBR, Mid-Pacific Region TLA

North State Resources, Inc.

Elkhorn Rehabilitation Site

This delineation of waters of the United States, including wetlands, is subject to verification by the U.S. Army Corps of Engineers (ACOE).
NSR advises all parties to treat the information contained herein as preliminary until the ACOE provides written verification of the boundaries of their jurisdiction.

Figure 3c. Elkhorn Plant Community Types and Boundaries of Waters of the United States, Including Wetlands
October 15, 2004



Environmental Study Limit (19.57 acres)

Ordinary High Water Mark

3-Parameter Data Point (DP)
IC = Intermittent Creek
RW = Riparian Wetland
UP = Upland

Plant Community Type (Total Acreage)

Annual Grassland (2.46 acres)

Montane Hardwood - Conifer (3.59 acres)

Montane Riparian (3.29 acres)

Waters of the United States

Other Waters (Total Acreage)

Intermittent Creek (0.003 acre, 136' length)

Riverine at ~475 cfs (5.63 acres, 2732' length)

Wetlands (Total Acreage)

Riparian Wetland (4.60 acres)

N

0 225 450

Feet

Nov. 2001 aerial photograph

Source: NSR, Inc.; USBR, Mid-Pacific Region TLA

F:\Projects\10010 - Mechanical Channel Rehab Sites on Mainstem Trinity River\GIS\10010_Pear Tree_Plant_Wetland.mxd

North State Resources, Inc.

Pear Tree Rehabilitation Site

This delineation of waters of the United States, including wetlands, is subject to verification by the U.S. Army Corps of Engineers (ACOE).
NSR advises all parties to treat the information contained herein as preliminary until the ACOE provides written verification of the boundaries of their jurisdiction.

Figure 3d. Pear Tree Plant Community Types and Boundaries of Waters of the United States, Including Wetlands
October 15, 2004

diversilobum – UPL). The underlying herbaceous layer includes ripgut brome (*Bromus diandrus* – UPL*)*, cheatgrass (*Bromus tectorum* – UPL*)*, blue wild rye (*Elymus glaucus* – FACU), silver bush lupine (*Lupinus albifrons* – UPL), purple sanicle (*Sanicula bipinnatifida*– UPL), and false hedge-parsley (*Torilis arvensis* – UPL).

Montane Riparian

The MRI plant community occurs adjacent to the ordinary high water mark (OHWM) of the Trinity River at all four channel rehabilitation sites. The montane riparian community is composed of typical riparian plant species that occur in Trinity County. Dominant tree species include bigleaf maple, white alder (*Alnus rhombifolia* – FACW[2]), Oregon ash (*Fraxinus latifolia* – FACW), black cottonwood (*Populus balsamifera* ssp. *trichocarpa* – FACW), and Goodding's black willow (*Salix gooddingii* – OBL). Understory species include mugwort (*Artemisia douglasiana* – FACW), virgin's bower (*Clematis ligusticifolia* – FAC), American dogwood (*Cornus sericea* – FACW), Oregon golden-aster (*Heterotheca oregona* – UPL), dalmatian toadflax (*Linaria genistifolia* ssp. *dalmatica* – UPL), white sweet clover (*Melilotus alba* – FACU+), musk monkeyflower (*Mimulus moschatus* – OBL), straggly gooseberry (*Ribes divaricatum* – FACW), Himalayan blackberry (*Rubus discolor* – FACW*), California blackberry (*R. ursinus* – FACW*), narrow-leaved willow (*Salix exidua* – OBL), arroyo willow (*Salix lasiolepis* – FACW), shining willow (*Salix lucida* – NI), and California wild grape (*Vitis californica* – FACW).

Riverine

Riverine habitat is limited to the open water channel of the mainstem of the Trinity River, which flows through all four sites. Riverine habitat is dominated by run and riffle habitats, with boulder, cobble, gravel, and sand substrates. Vegetation within the active river channel is sparse, with occasional clumps of sedges (*Carex* spp.).

Annual Grassland

The AGS plant community was identified at all four 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 mollis*), ripgut brome, cheatgrass, and hare barley (*Hordeum 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.

Barren

Barren land consists primarily of rock, pavement, and sand. Vegetation is usually not present, although sparse opportunistic grasses/forbs or weedy species may be present.

Urban

URB plant communities are the result of modifying pre-settlement vegetation and introducing new species. These communities have five different types of vegetative structure: tree grove, street strip, shade/lawn, lawn, and shrub cover. Species

[2] FACW = Facultative Wetland plants; OBL = Obligate plants

composition varies with planting design and climate. Urban habitats are not limited to any particular physical setting.

4. DELINEATION METHODS AND REFERENCES

a) **Overall Technical Method**: Determination of wetland status within the ESL of each site was based on field observations made by qualified NSR personnel of onsite soil, vegetation, and hydrological characteristics. This methodology is consistent with the approach for delineation of jurisdictional waters, as defined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). A total of 42 three-parameter (i.e., vegetation, hydrology, and soils) data points, representing wetland and upland features, were characterized and documented throughout the project area. Data forms specific to each site are in **Appendix B**. Photographs of data points are in **Appendix C**.

b) **Date of Field Observations**: Field observations were conducted between June 19 and September 25, 2002, between March 8 and 10, 2004 and during September 2004.

c) **Wetland Vegetation Indicator Status Reference:** Plant species wetland indicator status was determined using the *National List of Plant Species That Occur in Wetlands: California (Region 0)* (Reed 1988).

d) **Hydric Soil Method of Determination:** Positive indicators of hydric soils were observed in the field in accordance with the conventions of the National Cooperative Soil Survey, *Soil Taxonomy* (Soil Survey Staff 1992), the *Field Indicators of Hydric Soils in the United States* (USDA 2002), and the Soil Conservation Service Field Office *Official List of Hydric Soil Map Units for Trinity County, California, Weaverville Area Soil Survey* (USDA 1992).

e) **Wetland Hydrology Method of Determination:** Indicators for wetland hydrology were determined using the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987).

f) **Wetland Mapping:** Boundaries of each wetland feature, the three-parameter data points, and numerous location monuments were mapped by NSR using a Pathfinder Pro Global Positioning System (GPS) capable of sub-meter accuracy (NAD 27 projection). These data were then overlaid onto digital aerial photography of the project area and aligned using monument location data.

5. ATYPICAL SITUATIONS

No atypical situations exist within the project area at any of the four sites proposed for channel rehabilitation activities.

6. DELINEATION RESULTS

a) **Waters of the United States, Including Wetlands:** Five types of "waters of the United States" were mapped within the project area: riverine (perennial stream), intermittent creek, open water pond, riparian wetland, and fresh emergent wetland. These features occupy a total of 101.46 acres of the project area. No occurrence of isolated waters, the term used to define a separate feature that at no time throughout the year is linked to any navigable waters or their tributaries, was found within the project area. In wet years, all overflow within the project area drains into the Trinity River. The jurisdictional waters determined for each of the four sites are summarized in

Tables 1a through 1d. **Figures 3a through 3d** illustrate the boundaries of jurisdictional waters at each site as well as the plant communities.

b) Characteristics of Delineated Features: The riverine (perennial stream), intermittent creek, and open water pond features are classified as "other waters." These features occurring within the project area exhibit a distinct bed and bank and an OHWM. The Corps has jurisdiction over the area within the OHWM of these features. For purposes of wetland delineation we have defined the OHWM as the approximate line of the 1.5 year recurrence interval flood for this area. McBain & Trush (2004) calculated the1.5 year recurrence interval (bankfull flow) at Hocker Flat (River Mile 78 to 79.1) to be approximately 6,600 cfs. This is based on a dam release of 6,000 cfs and tributary accretion of 600 cfs. We have used this same approximate flow to define the extent of the OHWM for these downstream sites (River Miles 77.4 to 72.8).

Table 1a. Characteristics of the Wetland Types in the Trinity River Mechanical Channel Rehabilitation, Canyon Creek Suite Project Area: Conner Creek Site

Jurisdictional Waters Type	Wetland Vegetation Indicators: Typical Dominant Wetland Plant Species			Hydric Soils Indicators	Hydrology Indicators
	Common Name	Scientific Name	Indicator Status[1]		
Riparian Wetland	Narrow-leaved willow	*Salix exigua*	OBL	High organic content in surface layer in sandy soil; frequent flooding; gleyed or low-chroma colors; riverwash; tailings; listed on local hydric soils list; reducing conditions	Drift lines; sediment deposits; water-stained leaves; FAC-neutral test; local soil survey data
	California wild grape	*Vitis californica*	FACW		
	Himalayan blackberry	*Rubus discolor*	FACW*		
	Arroyo willow	*Salix lasiolepis*	FACW		
	White alder	*Alnus rhombifolia*	FACW		
	Goodding's black willow	*Salix gooddingii*	OBL		
	Reed canarygrass	*Phalaris arundinacea*	OBL		
	Black cottonwood	*Populus balsamifera*	FACW		
Fresh Emergent	Narrow-leaved cattail	*Typha angustifolia*	OBL	Aquic moisture regime; long-duration ponding	Inundated; saturated in upper 12"; water marks; drift lines; sediment deposits; water-stained leaves; drainage patterns in wetlands
	Narrow-leaved willow	*Salix exigua*	OBL		
	Perennial ryegrass	*Lolium perenne*	FAC*		
	Himalayan blackberry	*Rubus discolor*	FACW*		

[1]Obligate (OBL) – Plants that almost always occur in wetlands
Facultative Wetland (FACW) – Plants that usually occur in wetlands, but also occur in nonwetlands
Facultative (FAC) – Plants with a similar likelihood of occurring in wetlands and nonwetlands

Table 1b. Characteristics of the Wetland Types in the Trinity River Mechanical Channel Rehabilitation Canyon Creek Suite **Project Area: Valdor Gulch Site**

Jurisdictional Waters Type	Wetland Vegetation Indicators: Typical Dominant Wetland Plant Species			Hydric Soils Indicators	Hydrology Indicators
	Common Name	Scientific Name	Indicator Status[1]		
Riparian Wetland	Narrow-leaved willow	*Salix exigua*	OBL	Frequent flooding; reducing conditions; gleyed or low-chroma colors; riverwash; listed on local hydric soils list	Water marks; drift lines; sediment deposits; FAC-neutral test; saturated in upper 12"; water-stained leaves; inundated; local soil survey data
	California wild grape	*Vitis californica*	FACW		
	Himalayan blackberry	*Rubus discolor*	FACW*		
	California blackberry	*Rubus ursinus*	FACW*		
	California wild rose	*Rosa californica*	FAC+		
	Arroyo willow	*Salix lasiolepis*	FACW		
	White alder	*Alnus rhombifolia*	FACW		
	Oregon ash	*Fraxinis latifolia*	FACW		
	Reed canarygrass	*Phalaris arundinacea*	OBL		
	Spikerush	*Eleocharis acicularis*	OBL		

[1]Obligate (OBL) – Plants that almost always occur in wetlands
Facultative Wetland (FACW) – Plants that usually occur in wetlands, but also occur in nonwetlands
Facultative (FAC) – Plants with a similar likelihood of occurring in wetlands and nonwetlands

Table 1c. Characteristics of the Wetland Types in the Trinity River Mechanical Channel Rehabilitation Canyon Creek Suite **Project Area: Elkhorn Site**

Jurisdictional Waters Type	Wetland Vegetation Indicators: Typical Dominant Wetland Plant Species			Hydric Soils Indicators	Hydrology Indicators
	Common Name	Scientific Name	Indicator Status[1]		
Riparian Wetland	Narrow-leaved willow	*Salix exigua*	OBL	Listed on local hydric soils list; gleyed or low-chroma colors; frequent flooding	Saturated in upper 12"; drift lines; local soil survey data; water-stained leaves; drainage patterns in wetlands; FAC-neutral test
	Himalayan blackberry	*Rubus discolor*	FACW*		
	Smooth scouring rush	*Equisetum laevigatum*	FACW		
	Dusky willow	*Salix melanopsis*	OBL		
	California blackberry	*Rubus ursinus*	FACW*		
	White alder	*Alnus rhombifolia*	FACW		

[1]Obligate (OBL) – Plants that almost always occur in wetlands
Facultative Wetland (FACW) – Plants that usually occur in wetlands, but also occur in nonwetlands
Facultative (FAC) – Plants with a similar likelihood of occurring in both wetlands and nonwetlands

Table 1d. Characteristics of the Wetland Types in the Trinity River Mechanical Channel Rehabilitation Canyon Creek Suite **Project Area: Pear Tree Site**

Jurisdictional Waters Type	Wetland Vegetation Indicators: Typical Dominant Wetland Plant Species			Hydric Soils Indicators	Hydrology Indicators
	Common Name	Scientific Name	Indicator Status[1]		
Riparian Wetland	Narrow-leaved willow	*Salix exigua*	OBL	Frequent flooding; gleyed or low-chroma colors; listed on local hydric soils list	Drift lines; sediment deposits; local soil survey data; FAC-neutral test
	Smooth scouring rush	*Equisetum laevigatum*	FACW		
	Douglas wormwood	*Artemesia douglasiana*	FACW		
	Himalayan blackberry	*Rubus discolor*	FACW*		
	Oregon ash	*Fraxinis latifolia*	FACW		
	Arroyo willow	*Salix lasiolepis*	FACW		

[1]Obligate (OBL) – Plants that almost always occur in wetlands
Facultative Wetland (FACW) – Plants that usually occur in wetlands, but also occur in nonwetlands
Facultative (FAC) – Plants with a similar likelihood of occurring in both wetlands and nonwetlands

The riparian wetland, fresh emergent wetland, and seasonal wet meadow features are classified as jurisdictional wetlands. All three wetland parameters, as defined by the Corps (i.e., vegetation, hydrology, and soils), are satisfied within these wetland features. **Table 2** lists the dominant plant species occurring and the hydric soil and hydrology indicators observed within the wetland features. "Other waters" and the jurisdictional wetland types occurring within the project area are discussed below.

Riverine (Perennial Stream). Inclusion of the Trinity River within each of the four sites is the primary factor influencing wetland features associated with the project area. 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."

An intermittent creek was identified flowing north to south within the Pear Tree site ESL (NSR 2002). A culvert under State Highway 299 conveys waters onto the site. Scouring and deposition, as well as a bed and bank, are evident within this feature. No plant species occur within the OHWM of the intermittent creek because of frequent flooding and scouring within the channel. Positive field indicators of wetland hydrology and hydric soils were observed.

A second intermittent creek was documented at the Valdor site. This feature originates outside of the project area, continuing in an easterly direction within the ESL (along the eastern boundary) and eventually draining to the Trinity River. While vegetation was limited within the OHWM because of frequent flooding and scouring of the channel, positive field indicators of wetland hydrology and hydric soils were observed.

Open-Water Pond. This feature consists of a deep-water area that exhibits perennial inundation. It is unclear if this pond was constructed or is a natural feature. This jurisdictional type is a non-wetland "water of the United States." One open-water pond feature is found at the Conner Creek site. Vegetation was limited within the OHWM because of perennial inundation; positive field indicators of wetland hydrology and hydric soils were observed.

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 MRI habitat at each site. The differences between MRI habitat (a plant community) and Riparian Wetland (a jurisdictional type) include positive field indicators of wetland hydrology and hydric soils in riparian wetlands.

Table 2. Summary of Corps Jurisdictional Waters by Project Site, Trinity River Mechanical Channel Rehabilitation Canyon Creek Suite **Project, Trinity County, California**

Wetland Type	Total Acreage			
	Conner Creek	**Valdor Gulch**	**Elkhorn**	**Pear Tree**
Total Wetlands				
Riparian Wetland	15.51	22.06	8.15	4.60
Seasonal Wet Meadow	--	--	--	--
Fresh Emergent	1.18	--	--	--
Total Wetlands	**16.69**	**22.06**	**8.15**	**4.60**
Other Waters				
Trinity River (Riverine)	10.39	19.89	9.90	5.63
Intermittent Creek	--	1.73	--	0.003
Open-Water Pond	2.42	--	--	--
Total Other Waters	**12.81**	**21.62**	**9.90**	**5.63**
Total Jurisdictional Waters	**29.50**	**43.68**	**18.05**	**10.23**

Riparian wetlands are found within each of the four sites. Riparian wetlands are characterized by a complex of open to dense emergent herbaceous and woody riparian vegetative growth. Herbaceous plant species that almost always occur (>99% probability; OBL) in wetlands and herbaceous plant species that usually occur (>67% to 99% probability; FACW) in wetlands were observed within riparian wetland features. These plant species include torrent sedge (*Carex nudata* – FACW+), tall flatsedge (*Cyperus eragrostis* – FACW), least spikerush (*Eleocharis acicularis* – OBL), smooth scouring rush (*Equisetum laevigatum* – FACW), and reed canarygrass (*Phalaris arundinaceae* – OBL).

Fresh Emergent Wetland. 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 are found at the Conner Creek site and are formed in three different ways: 1) from inundation of lands surrounding the open-water pond; 2) from depressions between tailings piles, and 3) from a depression within the Trinity River overflow area (i.e., ponding occurs within low point allowing emergent vegetation to become established). Fresh emergent wetland criteria were met by the presence of hydrophytic vegetation, hydric soils, and wetland hydrology, including standing surface water. Hydrologic influences on these features include the Trinity River, precipitation, and runoff from adjacent areas. The dominant plant species include narrow-leaf cattail

(*Typha angustifolia* – OBL), Himalyan blackberry (*Rubus discolor* – FACW*), perennial ryegrass (*Lolium perenne* – FAC*), and narrow-leaved willow (*Salix exigua* – OBL).

Because the depression between the tailing piles was inaccessible due to a blackberry thicket and a steep slope, a data point could not be established within this feature; however, a visual assessment of wetland criteria was made.

c) Discussion of Results: Jurisdictional "waters of the United States" occurring within the project area include one perennial stream, two intermittent creeks, one open water pond, ten riparian wetlands, and three fresh emergent wetlands. These features occupy a total of 101.46 acres of the project area and are subject to Corps jurisdiction. No discharge of dredged or fill material into "waters of the United States" is permitted unless authorized under a Corps Nationwide Permit or Individual Permit.

This delineation of "waters of the United States" is subject to verification by the Corps. NSR advises all parties to treat the information contained herein as preliminary until the Corps provides written verification of the boundaries of their jurisdiction.

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Note To Reviewer:

Appendices to the Draft Delineation Report have been omitted from the web version of this document due to size limitations. These appendices are:

Appendix A Soil Map Unit Figure
Appendix B Data Sheets
Appendix C Data Point Phtotographs

These appendices are included on the CD provided with the Executive Summary.

Hard Copies of this information may be requested from the TRRP, Brandt Gutermuth.