

U.S. 50 Stateline Core/Loop Road Project NES

Draft Natural Environment Study

U.S. 50 Stateline Core/Loop Road Project

South Lake Tahoe, El Dorado County, California

Stateline, Douglas County, Nevada

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EA 03-1E3300

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April 2012

STATE OF CALIFORNIA
Department of Transportation
City of South Lake Tahoe
City of Stateline, NV

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California Department of Transportation, District 3

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Nevada Department of Transportation

Summary

The Tahoe Transportation District (TTD), in cooperation with the Tahoe Regional Planning Agency (TRPA), California Department of Transportation (Caltrans), Nevada Department of Transportation (NDOT), City of South Lake Tahoe, California, Douglas County, Nevada, and Federal Highway Administration (FHWA) proposes to realign U.S Highway 50 (U.S. 50) to divert traffic on U.S. Highway 50 (U.S. 50) around the tourist centers of the City of South Lake Tahoe, California and the community of Stateline, Nevada.

Project Description

Proposed Improvements

The proposed project would realign both directions of U.S 50 around the casino gaming center between Pioneer Trail in California and Lake Parkway in Nevada. Existing Highway 50 between Park Avenue in California and Lake Parkway would have one lane in each direction and would become a City of South Lake Tahoe local street in California and a Douglas County street in Nevada. Low impact development (LID) and streetscape type improvements would be constructed on the existing U.S 50 to develop a pedestrian friendly environment that could be utilized in the future for special community events. New storm water facilities would be constructed, and sidewalks, landscaping, and street furnishings would be furnished adjacent to Highway 50. Utilities would be installed or relocated as needed. Bike lanes would be provided on Highway 50, and the area would be enhanced for non-vehicular traffic to encourage using other modes of transportation.

Alternatives

Two build alternatives and one no build alternative have been selected for evaluation.

Build Alternative C

With this build alternative, Lake Parkway East, or the mountainside, would be expanded to accommodate traffic passing through the area and the U.S. 50 designation in both directions would be moved to this expanded alignment. The roadway would be extended west of Park Avenue, passing to the south and west of the Village Center shopping complex to a new traffic signal at an intersection formed by the existing U.S. 50 to the east and to the northwest and Pioneer Trail to the west. A signal would also be provided at the new U.S. 50/Harrah's driveway intersection. The new U.S. 50 would provide two travel lanes in each direction, with turn pockets

at major intersections and driveways. In addition, this alternative would provide a traffic signal at Friday Avenue on the three-lane alignment to facilitate pedestrian crossings at this location. Streetscape and LID type improvements would be made to the existing U.S. 50 to promote multi-modal transportation, treat storm water runoff and to support economic growth through community revitalization of the area.

Build Alternative D

This build alternative is identical to Alternative C, except that double-lane roundabouts would be constructed at the U.S. 50/Pioneer Trail intersection and at the U.S. 50/Lake Parkway intersection. As it is not possible to provide driveway access within or immediately adjacent to the roundabout, a one-way eastbound drive would be provided along the north side of the western roundabout to provide access to the driveways along the north side of the existing U.S. 50.

No Build Alternative

The No-Build Alternative considers that no improvements will be made to U.S. 50. The current road alignment and lane configuration will remain the same. The No-Build Alternative does not meet the project purpose and need identified earlier in this report.

Biological Study Area

The Biological Study Area (BSA) defined for the project comprises approximately 80.11 acres. The BSA is partially within California and partially within Nevada. The BSA is mostly developed by some natural communities are present including Jeffrey pine series (native and urban), montane meadow habitat, montane riparian habitat, and low sagebrush series. Ruderal vegetation and developed areas are also present.

The project will result in minor impacts to montane meadow and montane riparian habitat. Avoidance and minimization measures will be implemented to minimize impacts to these habitats, and compensatory mitigation will be required to offset permanent impacts.

Special status species potentially occurring in the BSA include broad-nerved hump moss, long-legged myotis, mule deer, and northern leopard frog. No federally or State listed species are expected to occur in the BSA. Avoidance and minimization measures will be implemented to minimize impacts to these species. Compensatory mitigation is not required.

Nesting birds are also likely to be present in the BSA, and avoidance and minimization measures will be implemented to minimize disturbance to nesting birds.

The project will result in minor permanent impacts to wetlands and other waters under the jurisdiction of the Army Corps of Engineers (ACOE), the Lahontan Regional Water Quality Control Board (RWQCB), the Nevada Department of Environmental Protection (NDEP), and the Tahoe Regional Planning Agency (TRPA). Consequently, permits will be required from these agencies. The project will not impact streams or riparian vegetation in the California portion of the BSA; therefore, approvals are not required from the California Department of Fish and Game.

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List of Abbreviated Terms

ac	Acre(s)
ACOE	Army Corps of Engineers
BSA	Biological Study Area
Caltrans	California Department of Transportation
CDFG	California Department of Fish and Game
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CWA	Clean Water Act
ESA	Environmentally Sensitive Area
FESA	Federal Endangered Species Act
EO	Executive Order
FHWA	Federal Highway Administration
FT	federally threatened
ft	Foot/feet
in	Inch(es)
mi	Mile(s)
mph	Miles per hour
MNBMC	Migratory Non-game Bird of Management Concern
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NWP	Nation wide Permit
OHWM	Ordinary High Water Mark
PCWQCA	Porter-Cologne Water Quality Control Act
RWQCB	Regional Water Quality Control Board
ST	State threatened
USFWS	United States Fish and Wildlife Service

Chapter 1. Introduction

The Tahoe Transportation District (TTD), in cooperation with the Tahoe Regional Planning Agency (TRPA), California Department of Transportation (Caltrans), Nevada Department of Transportation (NDOT), City of South Lake Tahoe, California, Douglas County, Nevada, and Federal Highway Administration (FHWA) proposes to build to realign U.S Highway 50 (U.S. 50) to divert through traffic on U.S. 50 around the tourist centers of the City of South Lake Tahoe, California and the community of Stateline, Nevada. The project location and vicinity are shown on Figures 1 and 2.

1.1. Project History

In late 2002, the TRPA initiated a transportation planning effort to address significant traffic congestion and other issues in the U.S. 50 corridor. The corridor extends from the Pioneer Trail intersection in the City of South Lake Tahoe, California, to Nevada State Route 207, or Kingsbury Grade, in Douglas County, Nevada. The 1.1 mile (mi) long corridor encompasses a planning area that is approximately 300 acres (ac).

The U.S. 50 corridor experiences significant traffic congestion during peak periods, especially during the summer months. The corridor also has inadequate facilities for pedestrians and bicyclists. There are also possibilities for enhancing transit in the corridor to reduce the current dependence on the private automobile, and for enhancing scenic quality.

The Tahoe Regional Planning Compact (Compact) of 1980 calls for the consideration of a Loop Road system around the area. The TRPA Community Plans for the area call for a number of improvements to meet TRPA's environmental thresholds and other requirements. Project goals include the following:

- Identify options to reduce traffic congestion and improve traffic flow patterns, while maintaining the current overall capacity of the roadway network in the project area
- Identify options to improve pedestrian and bicycle access, public safety, and transit services in the project area
- Develop design solutions that reflect the community and the adjoining land uses
- Help achieve scenic resources, recreation, air quality, water quality and other TRPA thresholds

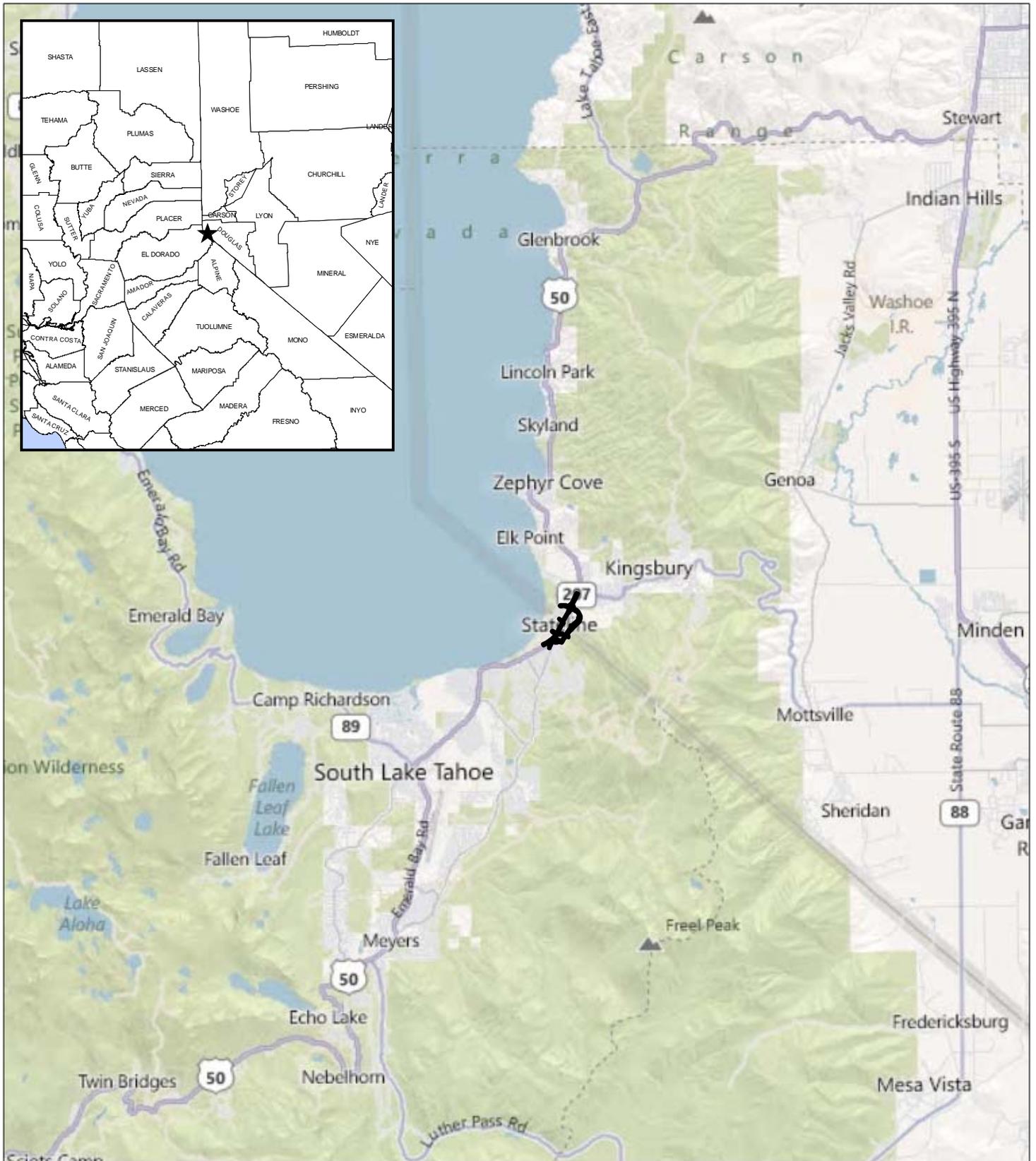
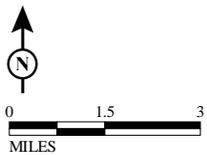


FIGURE 1



LEGEND

 Project Location



SOURCE: Microsoft Bing Maps - Roads (2010)

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*U.S. 50 Stateline Core / Loop Road Project
 South Lake Tahoe, El Dorado County, California
 Stateline, Douglas County, Nevada
 03-ED-50-PM 9.00-80.44
 EA 03-1E330K
 Regional Location*

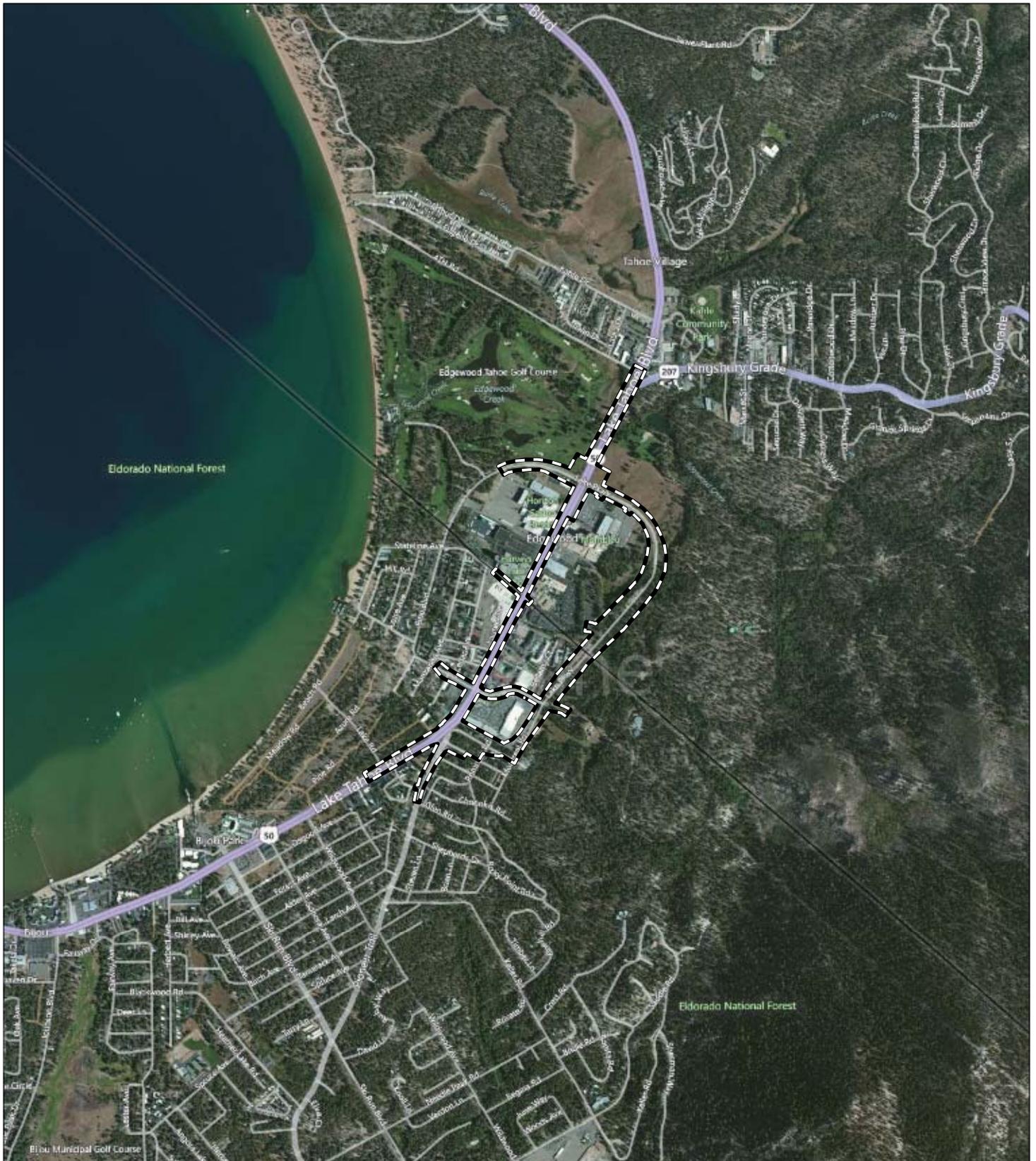
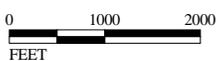


FIGURE 2a



LEGEND

 Biological Study Area



SOURCE: Microsoft Bing Maps - Aerial (2010)

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*U.S. 50 Stateline Core / Loop Road Project
 South Lake Tahoe, El Dorado County, California
 Stateline, Douglas County, Nevada
 03-ED-50-PM 9.00-80.44
 EA 03-1E330K
 Project Vicinity on Aerial Base*

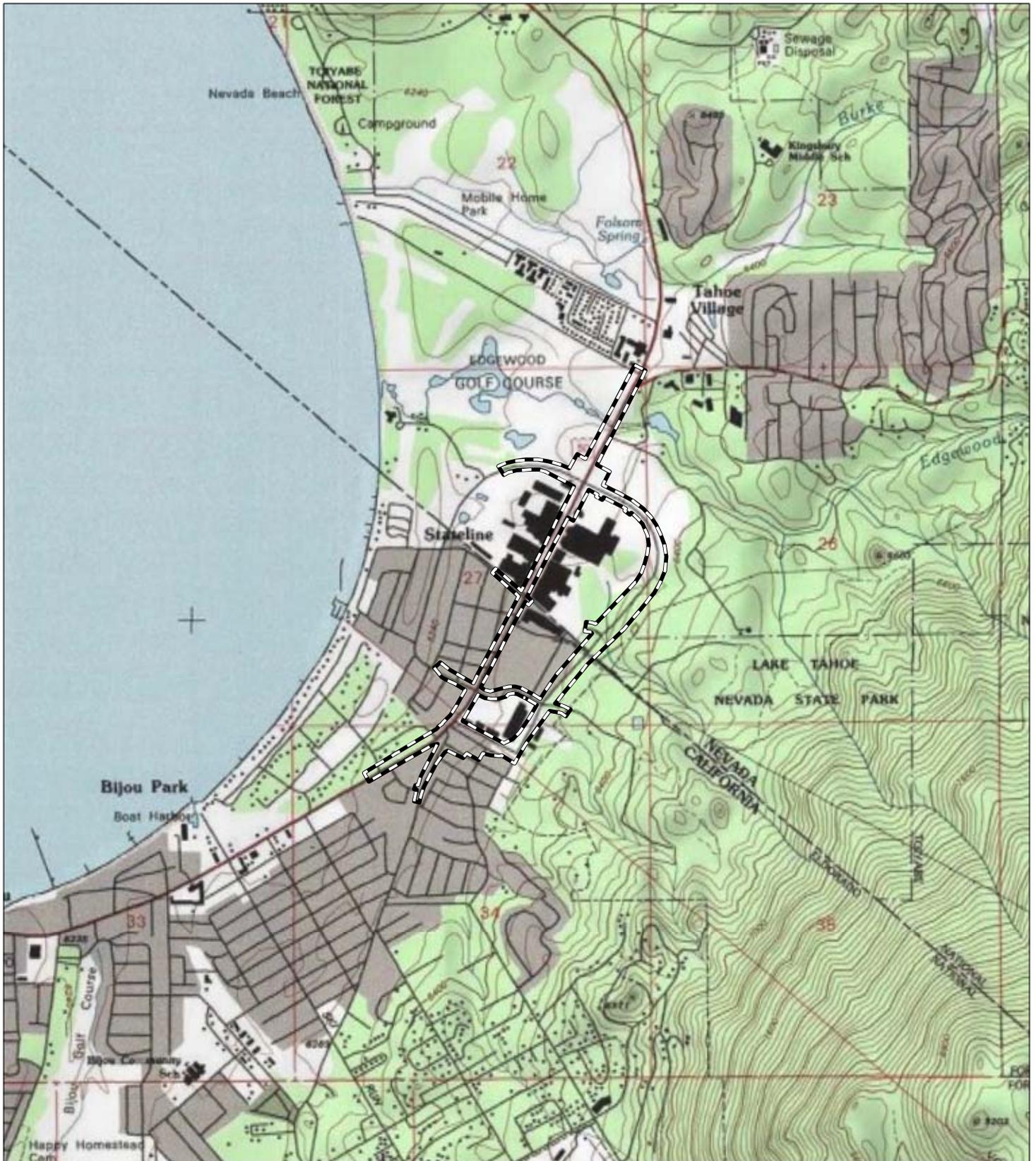


FIGURE 2b



LEGEND

 Biological Study Area



0 1000 2000
FEET

SOURCE: USGS Topo Map (South Lake Tahoe 7.5-Minute Quad)

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*U.S. 50 Stateline Core / Loop Road Project
South Lake Tahoe, El Dorado County, California
Stateline, Douglas County, Nevada
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EA 03-1E330K*

Project Vicinity on Topographic Base

- Balance transportation needs with other community goals such as economic vitality and visitors' interests
- Reflect the need to address snow removal and emergency access requirements.

1.1.1. Purpose and Need

Purpose:

The purpose of this project is to make improvements to the corridor consistent with the Loop Road System concept, reduce congestion; improve vehicle, pedestrian, and bicycle safety; advance multi-modal transportation opportunities; improve the environmental quality of the area; enhance visitor and community experience; and promote the economic vitality of the area.

Need:

Article V(2) of the Tahoe Regional Planning Compact (Public Law 96-551), 1980 (the Compact), requires a transportation plan for the integrated development of a regional system of transportation within the Tahoe Region. The Compact requires the transportation plan to include consideration of the completion of the Loop Road System in the States of California and Nevada. Improvements are required to the corridor to meet the intent of the Loop Road System concept.

Ongoing and proposed resort redevelopment in the project area has increased pedestrian traffic, creating a need for improved pedestrian safety, mobility, multi-modal transportation options. Improvements to pedestrian facilities, bicycle lanes, and mass transit are needed to connect the outlying residential and retail-commercial uses with employment and entertainment facilities, including hotels and gaming interests. Currently, there are no bike lanes on US 50 through the project area, and sidewalks are either not large enough to meet the increased demand, or do not exist. These issues impact the visitor and community experience within the area.

Environmental improvements are needed in the area to help achieve the Tahoe Regional Planning Agency's (TRPA's) environmental thresholds, including water quality and air quality. Improvements to stormwater runoff collection and treatment facilities are needed to meet TRPA and Lahontan Regional Water Quality Control Board regulations and requirements. Reduction of vehicle congestion and reducing the number of vehicles on the roadway through enhanced pedestrian and multi-modal opportunities is needed to provide for improved air quality. Landscape improvements are needed to enhance the scenic resource element of the project area to facilitate

compliance with TRPA's Scenic Threshold and to enhance the community and tourism experience.

The project is needed to mitigate severe summer and winter peak period traffic congestion along US 50 in the project area. During peak hours, traffic often operates at Level of Service "F" (breakdown) when tourism is at its peak during the summer and winter months.

1.2. Project Description

1.2.1. Current Conditions

The transportation conditions in the U.S 50-Stateline Planning Area suffer because there are inadequate facilities to meet the current and forecast future demands of the people residing or staying in the area, visiting it, or traveling through it. These inadequate conditions result in periods of traffic congestion during the peak summer and winter seasons, degrade and discourage the bicycle and pedestrian travel experience, and negatively impact the ability to operate effective transit services. These inadequate conditions result in secondary impacts to the area's businesses, workers, residents, and visitors and detract from the overall "Tahoe Experience." In particular, the existing roadway configuration significantly detracts from the visual quality of this important activity center, and also presently limits the options available to improve the area's scenic quality.

The resulting traffic volumes are expected to increase by 33 percent in the eastbound direction and 22 percent in the westbound direction along U.S. 50 west of Park Avenue between 2003 and 2030. Traffic volumes along U.S. 50 west of Lake Parkway are expected to increase by much less: 14 percent in the eastbound direction and 13 percent in the westbound direction.

1.2.2. Proposed Improvements

The proposed project would realign both directions of U.S. 50 around the casino gaming center between Pioneer Trail in California and Lake Parkway in Nevada. Existing Highway 50 between Park Avenue in California and Lake Parkway would have one-lane in each direction and would become a City of South Lake Tahoe local street in California and a Douglas County Street in Nevada. Streetscape and low impact development (LID) type improvements would be made to enhance the experience for bicycles and pedestrians and to support economic vitality in the area. New storm water facilities would be constructed, and sidewalks, landscaping, and street furnishings would be furnished adjacent to U.S 50. The streetscape would

incorporate the design elements that have been implemented as part of the Village Center and Heavenly Village redevelopment and that are planned as part of Redevelopment Project Number 3. Utilities would be installed or relocated as needed. Bike lanes would be provided on Highway 50, and the area would be enhanced for non-vehicular traffic to encourage using other modes of transportation.

1.2.3. Alternatives

Two build alternatives and one no build alternative have been selected for evaluation of impacts for the bypass road that diverts through traffic on U.S. 50 around the tourist centers of South Lake Tahoe and Stateline. The two build alternatives are shown in Figures 3a and 3b.

1.2.3.1. Build Alternative C

With this build alternative, Lake Parkway East, or the mountainside, would be expanded to accommodate traffic passing through the area. The U.S. 50 designation in both directions would be moved to this expanded mountainside alignment. The roadway would be extended west of Park Avenue, passing to the south and west of the Village Center shopping complex to a new traffic signal at an intersection formed by the existing U.S. 50 to the east and to the northwest and Pioneer Trail to the west. A signal would also be provided at the new U.S. 50/Harrah's driveway intersection. The new U.S. 50 would provide two travel lanes in each direction, with turn pockets at major intersections and driveways. In addition, this alternative would provide a traffic signal at Friday Avenue on the three-lane alignment to facilitate pedestrian crossings at this location.

1.2.3.2. Build Alternative D

This build alternative is identical to Alternative C, except that modern double-lane roundabouts would be constructed at the U.S. 50/Pioneer Trail intersection and at the U.S. 50/Lake Parkway intersection. As it is not possible to provide driveway access within or immediately adjacent to the roundabout, a one-way eastbound drive would be provided along the north side of the western roundabout to provide access to the driveways along the north side of the existing U.S. 50.

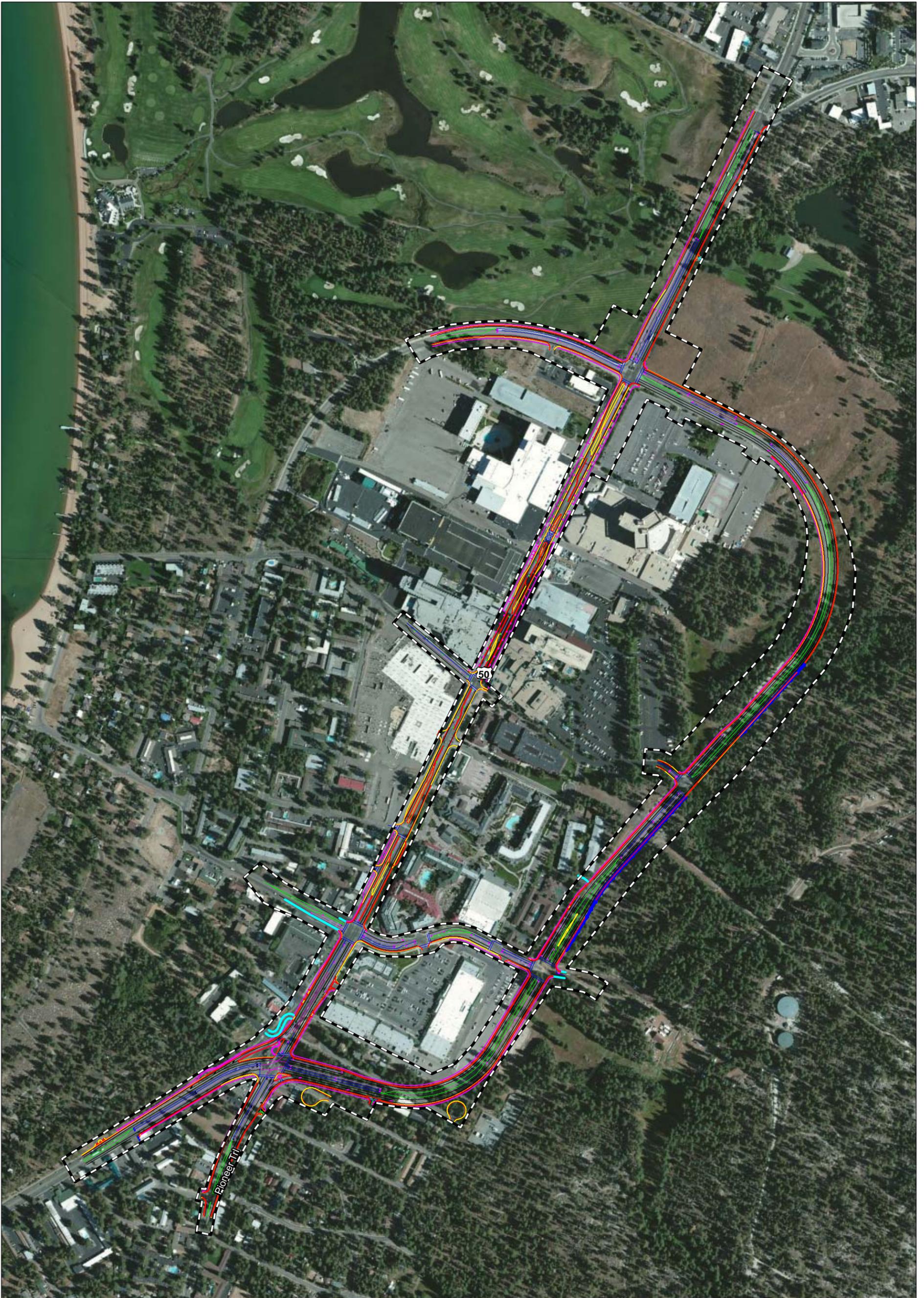
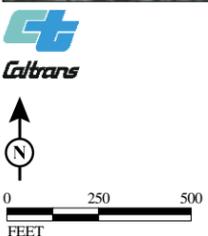


FIGURE 3a



LEGEND

 Biological Study Area

*U.S. 50 Stateline Core / Loop Road Project
 South Lake Tahoe, El Dorado County, California
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 Project Design - Alternative C*

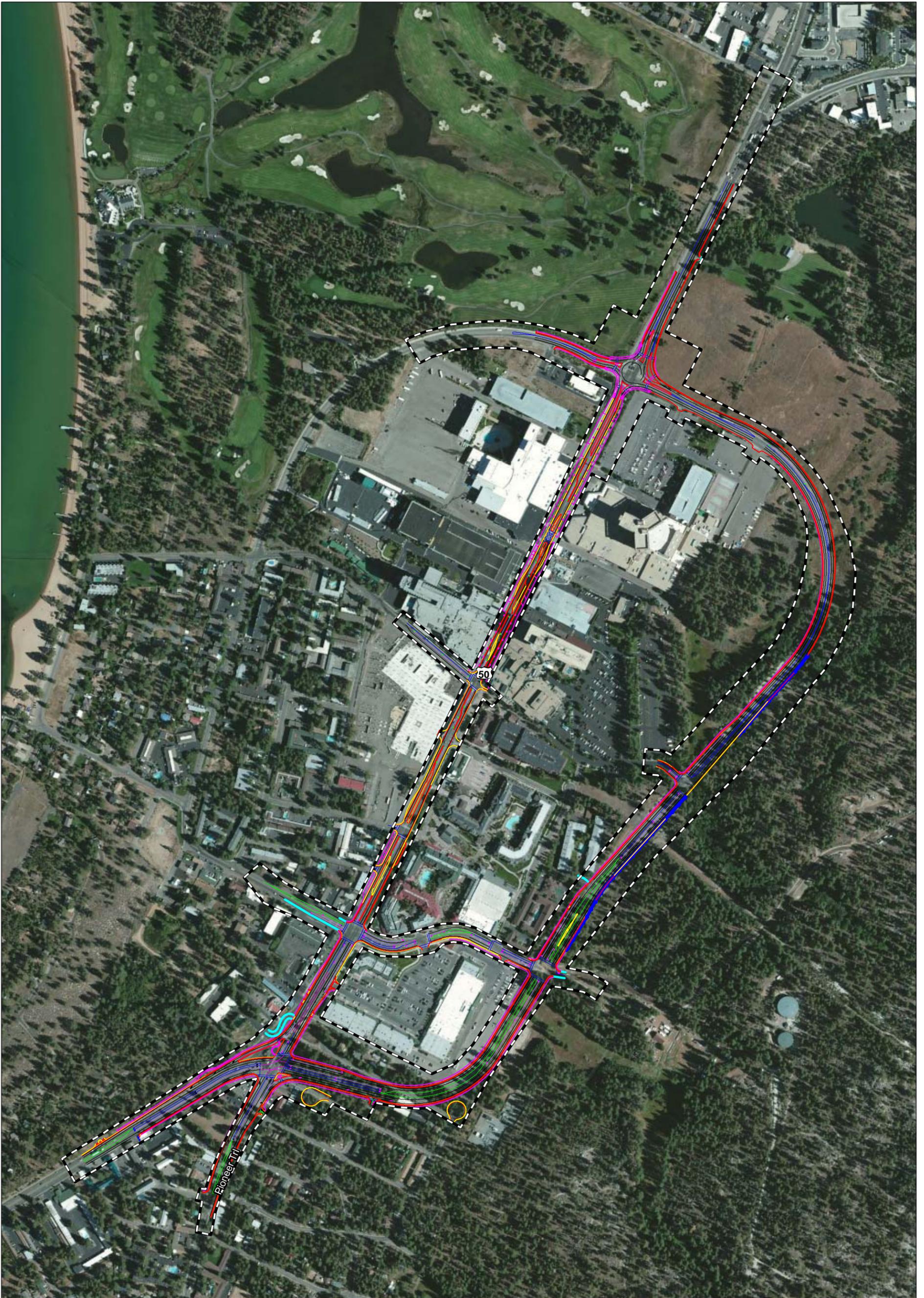
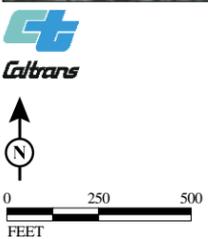


FIGURE 3b



LEGEND

 Biological Study Area

*U.S. 50 Stateline Core / Loop Road Project
 South Lake Tahoe, El Dorado County, California
 Stateline, Douglas County, Nevada
 03-ED-50-PM 9.00-80.44
 EA 03-1E330K
 Project Design - Alternative D*

1.2.3.3. No Build Alternative

The No-Build Alternative considers that no improvements will be made to U.S. 50. The current road alignment and lane configuration will remain the same. If the No-Build Alternative were selected, a number of environmental conditions would decline when compared with the build alternatives. Levels of service would degrade to unacceptable levels, resulting in severe congestion and gridlock.

The No-Build Alternative does not meet the project purpose and need identified earlier in this report.

Chapter 2. Study Methods

2.1. Regulatory Requirements

2.1.1. Special Status Species

Special status species include plants and animals that are: 1) listed as rare, threatened, or endangered by the federal government, California, or Nevada; 2) are on formal lists as candidates for listing as threatened or endangered; 3) are on formal lists as species of concern; or 4) are otherwise recognized at the State, federal, or local level as sensitive.

2.1.1.1. Federal Endangered Species Act

Under the Federal Endangered Species Act (FESA), it is unlawful to “take any species listed as threatened or endangered.” “Take” is defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” An activity is defined as “take” even if it is unintentional or accidental. Take provisions under FESA apply only to listed fish and wildlife species under the jurisdiction of the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS). Consultation with USFWS or NMFS could be required if a project “may affect” a listed species.

When a species is listed, the USFWS and/or the NMFS, in most cases, must officially designate specific areas as critical habitat for the species. Consultation with USFWS and/or the NMFS is required for projects that include a federal action or federal funding and if the project may affect designated critical habitat.

2.1.1.2. California Endangered Species Act

Under the California Endangered Species Act (CESA), it is unlawful to “take” any species listed as rare, threatened, or endangered. Under CESA, “take” means to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA take provisions apply to fish, wildlife, and plant species. Take may result whenever activities occur in areas that support a listed species. Consultation with CDFG is required if a project will result in “take” of a listed species.

2.1.1.3. Nevada Administrative Code and Revised Statutes (Wildlife and Plants)

Through the Nevada Administrative Code (NAC) Sections 501 and 503, and the Nevada Revised Statutes (NRS) Section 501, the Nevada Department of Wildlife (NDOW) is charged to protect and conserve and restore native species of fish and

vertebrates. Species are classified by NDOW as endangered, threatened, sensitive, protected, game, non-game, and unprotected.

Through NRS Section 527, the Nevada Division of Forestry (NDOF) manages Nevada's rare, at-risk, and endangered plant species on both public and private lands. Per NRS 527, it is unlawful to "cut, destroy, mutilate, pick, or remove any flora declared endangered by the State Forester Firewarden from any lands owned by the State of Nevada or the United States without a permit. The State Forester Firewarden has the authority to designate a species as threatened with extinction and also has the ability (under approval of the State Department of Natural Resources) to enter into agreements with other local agencies and parties to protect species that are threatened with extinction.

2.1.1.4. Tahoe Regional Planning Agency Special Interest and Sensitive Plant Species

The Conservation Element of the TRPA Goals and Policies includes a list of sensitive plant species and special interest wildlife species. Development within the Lake Tahoe Basin must comply with TRPA thresholds for sensitive plants and special interest wildlife species.

2.1.2. Waters of the U.S. and Other Jurisdictional Waters

2.1.2.1. Army Corps of Engineers

Under Section 404 of the Clean Water Act (CWA), ACOE regulates the discharge of dredged or fill material into waters of the U.S. Waters of the U.S. are those waters that have a connection to interstate commerce, either direct via a tributary system or indirect through a nexus identified in the ACOE regulations. In non-tidal waters, the lateral limit of jurisdiction under Section 404 extends to the ordinary high water mark (OHWM) of a water body or, where adjacent wetlands are present, beyond the OHWM to the limit of the wetlands. The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area" (33 CFR 328.3). In tidal waters, the lateral limit of jurisdiction extends to the high tide line or, where adjacent wetlands are present, to the limit of the wetlands.

Wetlands

Wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for a life in saturated soil conditions.”

Non-wetland Waters

Non-wetland waters essentially include any body of water, not otherwise exempted, that displays an OHWM.

2.1.2.2. Regional Water Quality Control Board

In California, pursuant to Section 401 of the CWA, the State Water Resources Control Board must certify all activities requiring a 404 permit. The RWQCB regulates these activities and issues water quality certifications for those activities requiring a 404 permit. In addition, the RWQCB has authority to regulate the discharge of “waste” into waters of the State pursuant to the Porter-Cologne Water Quality Control Act (PCWQCA).

2.1.2.3. California Department of Fish and Game

CDFG, through provisions of Section 1602 of the California Fish and Game Code, is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be substantially adversely affected. Streams and rivers are defined by the presence of a channel bed and banks, and at least an ephemeral or intermittent flow of water. CDFG regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFG.

2.1.2.4. Nevada Division of Environmental Protection

In Nevada, Section 10 and Section 404 activities in wetlands or streams must be certified by Nevada Division of Environmental Protection (NDEP) to meet state and federal water quality standards pursuant to Section 401 of the CWA. In addition, pursuant to NRS 445A.415, NDEP also regulates project affecting “waters of the state.”

2.1.2.5. Tahoe Regional Planning Agency

TRPA defines a stream environment zone (SEZ) as a biological community that derives its characteristics from the presence of surface water or a seasonal high groundwater table. SEZs exhibit the ability to rapidly incorporate nutrients into the usually dense vegetation and moist to saturated soils. An SEZ is delineated by the

presence of drainage ways and floodplains, including adjacent marshes, meadows, and riparian areas.

2.1.3. Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits actions that will result in “take” of migratory birds, their eggs, feathers, or nests. “Take” is defined in the MBTA as “any means or any manner to hunt, pursue, wound, kill, possess, or transport, any migratory bird, nest, egg, or part thereof.”

Migratory birds are also protected, as defined in the MBTA, under Section 3513 of the California Fish and Game Code.

2.1.4. California Fish and Game Code (Breeding Birds)

Section 3503 of the California Fish and Game Code prohibits the take, possession, or needless destruction of the nest or eggs of any bird, except as otherwise provided by the California Fish and Game Code or other regulation.

2.1.5. Executive Order 11990 – Protection of Wetlands

Executive Order (EO) 11990 mandates a “no net loss” of habitats referred to as “wetlands” under the wetlands definition above in section 2.1.2.1.

2.1.6. Executive Order 13112- Invasive Species

Under EO 13112, an invasive species is defined as “an alien species (a species not native to a particular ecosystem) whose introduction does or is likely to cause economic and environmental harm or harm to human health.” Invasive species are determined by the Invasive Species Council.

In addition to other mandates, EO 13112 mandates federal agencies whose actions may affect the status of invasive species to “not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species...”

2.2. Studies Required

Prior to conducting any field studies, the limits of the BSA were established, as shown in Figure 4. The BSA, totaling 80.11 ac, consists of the project footprint, existing roadways, and access and staging areas. The BSA also includes lands beyond the footprint that could potentially be affected by project construction and/or were determined necessary to inventory in order to perform an adequate analysis of project impacts.

The studies required to fully document the environmental conditions of the BSA included vegetation delineation mapping, jurisdictional waters delineation, and a focused plant survey.

2.2.1. Literature Review

A list of special status wildlife and plant species potentially occurring within the BSA and surrounding area was compiled to evaluate potential impacts resulting from project construction. Sources used to compile the list include the following:

- California Natural Diversity Database (CNDDDB), the USFWS Sacramento Field Office online list, and the CNPS Online Edition referencing the South Lake Tahoe, Emerald Bay, and Meeks Bay, California 7.5' USGS quadrangles.
- USFWS Northern Nevada Field Office online list for Douglas County, Nevada
- TRPA list of sensitive plants and special interest wildlife species.

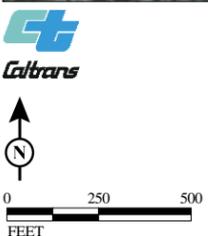
These lists are included in Appendix A.

The special status species lists obtained from the sources listed above were reviewed to determine which species could potentially occur within the vicinity of the BSA. The cumulative list (shown in Table 4, Section 3.2) includes numerous species representing a variety of habitat types. The list includes each species' protection status, habitat information, status in the BSA, and supporting comments as necessary.

The determination of whether a species could potentially occur within the BSA was based on the availability of suitable habitat within and adjacent to the BSA, as well as known occurrences of the species in or adjacent to the BSA according to the CNDDDB. Species requiring specific habitat not present in the vicinity of the project were eliminated as potentially occurring and are not discussed further. Those species that could potentially occur in the BSA based on habitat suitability are discussed in Sections 4.2 and 4.3.



FIGURE 4



LEGEND

 Biological Study Area

*U.S. 50 Stateline Core / Loop Road Project
 South Lake Tahoe, El Dorado County, California
 Stateline, Douglas County, Nevada
 03-ED-50-PM 9.00-80.44
 EA 03-1E330K
 Biological Study Area*

SOURCE: Basemap - Microsoft Bing Maps - Aerial (2010); Mapping LSAAssociates, Inc. (2011)

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2.2.2. Field Surveys

The following field surveys were conducted.

2.2.2.1. Plant Communities Mapping

Plant communities in the BSA were classified according to *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995), as appropriate. The names of the plant species are consistent with Hickman (1993). Developed areas were also mapped. Plant communities were mapped during two separate site visits, on June 6, 2010 and July 20, 2011.

2.2.2.2. Jurisdictional Waters Delineation

A preliminary wetland delineation was conducted in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and the 2010 Western Mountains, Valleys and Coast Regional Supplement. Data was collected during two separate site visits, on June 6, 2010 and July 20, 2011.

2.2.2.3. Focused Plant Survey

Surveys for special status plants were conducted during on September 22, 2009, and June 6, 2010. The purpose of the September 2009 survey was to target late-blooming species such as Tahoe yellow cress (*Rorippa umbellata*), while the June 2010 survey was schedule to coincide with plants blooming earlier in the season. All species in the BSA were identified to at least the *Genus* level to determine if the specimen was the target species.

2.3. Survey Dates and Personnel

Table 1 below provides a summary of the field surveys performed for this project.

Table 1: Survey Dates and Personnel

Date	Personnel	Task
9/22/09	J. Halderman	Special status plant survey
6/6/10	J. Bray, J. Halderman	Jurisdictional delineation, special status plants survey, plant communities mapping
7/20/11	M. Trueblood	Jurisdictional delineation; plant communities mapping

2.4. Agency Coordination and Professional Contacts

No agency coordination was undertaken during preparation of this document.

2.5. Limitations That May Influence Results

No problems or limitations were encountered during the research, field work, or document preparation that influenced the results presented herein.

Chapter 3. Results: Environmental Setting

3.1. Description of the Existing Biological and Physical Conditions

3.1.1. Biological Study Area

The BSA comprises 80.11 ac and is located along the southeastern shore of Lake Tahoe. The BSA is located partly in California, in the City of South Lake Tahoe, and partly in Nevada, in the community of Stateline. The project is located on the 7.5' USGS South Lake Tahoe quadrangle, Township 13 North, Range 18 East, Section 27.

The BSA is located approximately 4.5 mi northeast of the junction of SR-89 and U.S. 50. The BSA extends primarily along U.S. 50 and Lake Parkway, but also extends along short sections of Pioneer Trail, Park Avenue, and Stateline Avenue.

Land use in the BSA consists primarily of developed land uses including commercial and residential development, and roadways, but some undeveloped areas occur along the eastern edge of the BSA.

3.1.2. Physical Conditions

The BSA is located in the Sierra Nevada range on the southeastern shore of Lake Tahoe. Lands in the BSA slope gently to the west, towards Lake Tahoe. The elevation of the BSA is approximately 6,300 ft above sea level.

The BSA is mostly developed. The few undeveloped areas in the BSA support coniferous forest, riparian and meadow wetlands, or ruderal vegetation. Developed areas in the BSA include residential and commercial structures and the existing roadways.

3.1.3. Biological Conditions in the Biological Study Area

3.1.3.1. Natural Communities

As noted above, vegetation communities were classified based on the descriptions in Sawyer and Keeler-Wolf (1995), as applicable. Five natural communities were identified in the BSA: Jeffrey pine series (native and urban), montane meadow habitat, montane riparian habitat, and low sagebrush series. Natural communities comprise 24.27 ac of the BSA, as summarized in Table 2.

Natural communities in the BSA are shown in Figure 5, along with non-natural vegetation communities and developed areas.

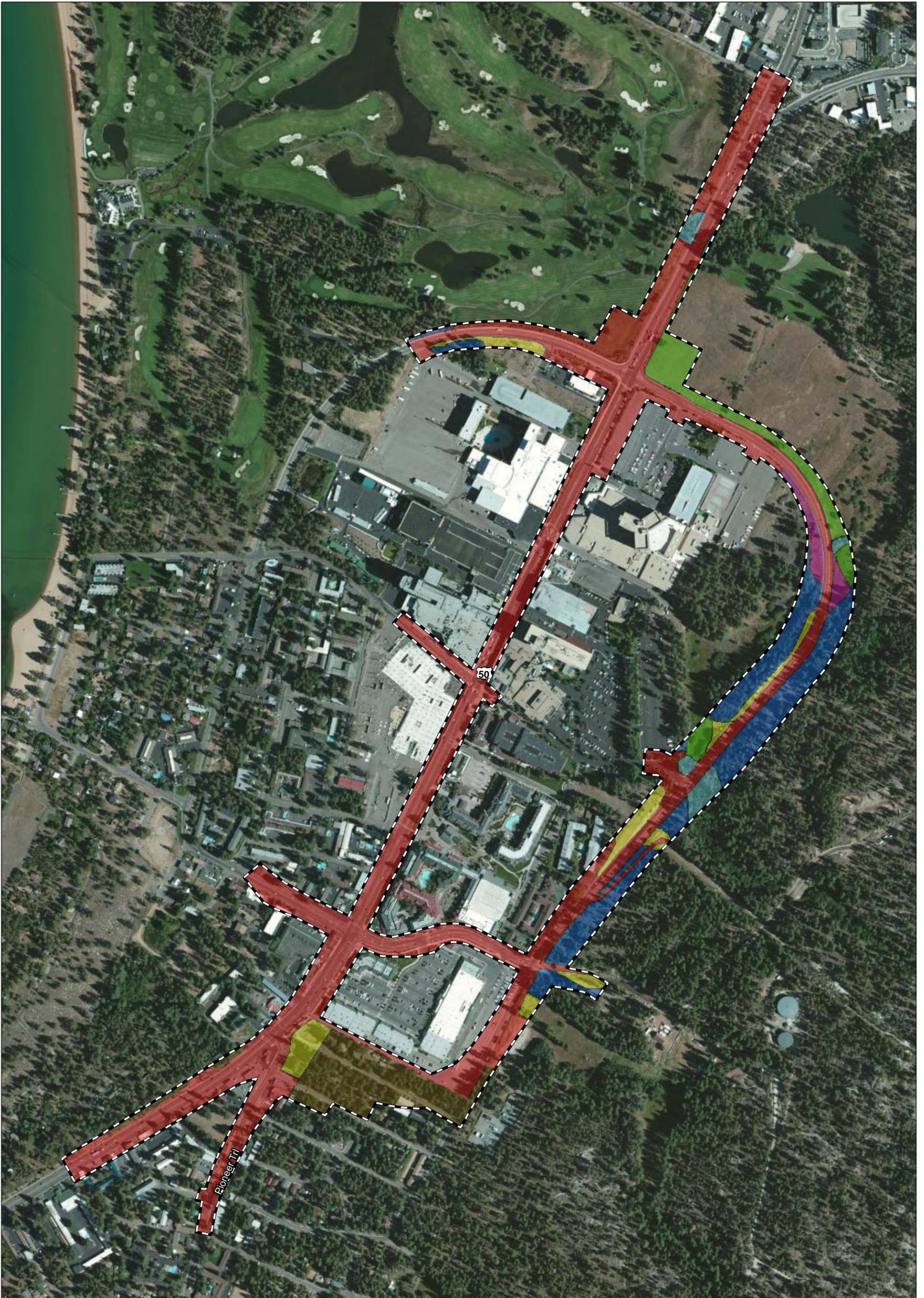
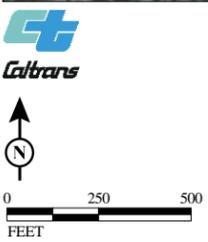


FIGURE 5



LEGEND

-  Biological Study Area
- Plant Communities/Land Uses (80.10 ac)**
-  Jeffrey Pine Series (10.11 ac)
-  Montane Meadow (4.44 ac)
-  Montane Riparian (1.50 ac)
-  Low Sagebrush Series (1.33 ac)
-  Urban Jeffrey Pine Series (6.88 ac)
-  Ruderal (4.13 ac)
-  Developed (51.71 ac)

*U.S. 50 Stateline Core / Loop Road Project
 South Lake Tahoe, El Dorado County, California
 Stateline, Douglas County, Nevada
 03-ED-50-PM 9.00-80.44
 EA 03-1E330K*

Plant Communities/Land Uses

SOURCE: Basemap - Microsoft Bing Maps - Aerial (2010); Mapping - LSA Associates, Inc. (2011)

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Jeffrey Pine Series

Jeffrey pine communities are distributed through the Klamath Mountains into southwestern Oregon, across the Sierra Nevada into western Nevada, and southward into the Transverse and Peninsular Ranges into northern Baja California. Jeffrey pine vegetation communities range in elevation from approximately 200 to 9,500 feet. In the BSA, Jeffrey Pine Series comprises 10.11 ac, and primarily occurs along Park Avenue in the eastern portion of the BSA. The dominant tree species is Jeffrey pine (*Pinus jeffreyi*); other tree species present include Douglas-fir (*Pseudotsuga menziesii*), white fir (*Abies concolor*), and quaking aspen (*Populus tremuloides*). Woody understory species include bitterbrush (*Purshia tridentata*), mountain sagebrush (*Artemisia tridentata vaseyana*) and gooseberry (*Ribes* sp.). Common herbaceous species include mules ears (*Wyethia mollis*), squirrel tail grass (*Elymus elymoides*), blue wild rye, (*Elymus glaucus*), and common yarrow (*Achillea millefolia*).

Urban Jeffrey Pine Series

This community consists of single family residential and similar developed areas where the understory component of the Jeffrey Pine community has been eliminated but the overstory component (i.e., Jeffrey pine trees) is mostly intact. Urban Jeffrey Pine Series comprises 6.88 ac in the southern portion of the BSA near Pioneer Trail.

Montane Meadow Habitat

Montane meadows are distributed throughout the mountains of the Sierra Nevada and occur within almost every forest type, including Jeffrey pine. Montane meadows are often, but not always, jurisdictional wetlands. Montane meadow habitat in the BSA comprises 4.45 ac and is comprised of both wetlands and upland components. The majority of the montane meadow habitat in the BSA is located at the north end of the BSA on the north side of Lake Parkway; a few small areas of seasonal wetlands were identified in this area but most of this area of montane meadow is upland. A small, wetland area of montane meadow is located adjacent to the parking lot for Harrah's casino. The meadow is fed by a drainage that originates on the east side of Lake Parkway and flows beneath the road via a culvert. Of the 4.45 ac of montane meadow in the BSA, 0.46 ac is wetlands.

The montane meadow habitat is dominated by herbaceous hydrophytes including sedges (*Carex amplifolia*, *C. aquatilis*), creeping spikerush (*Eleocharis macrostachya*), corn lily (*Veratrum californicum* var. *californicum*), and Oregon

checkerbloom (*Sidlacea oregano spicata*). A small thicket of Lemmon's willow (*Salix lemmonii*) was also present in the wettest portion of the meadow.

Montane Riparian Habitat

The riparian communities in the BSA could not be characterized to a single community using Sawyer and Keeler-Wolf (1995), but were a mix of several willow and alder series'. Consequently, the riparian communities in the BSA were termed generically as montane riparian habitat. Montane riparian habitat in the BSA is located primarily along Edgewood Creek and two unnamed drainages in the eastern part of the BSA. This community comprises 1.50 ac, of which 0.24 ac is wetlands.

In the BSA, the predominant overstory species included Lemmon's willow, arroyo willow (*S. lasiolepis*) and mountain alder (*Alnus incana tenuifolia*); quaking aspen, and white fir were also present. Representative woody understory species included mountain rose (*Rosa woodsii* var. *ultramontana*), serviceberry (*Amelanchier alnifolia* var. *pumila*), and sapling overstory species. Common herbaceous species included sedges, balitic rush (*Juncus balticus*), and common horsetail (*Equisetum arvense*).

Table 2: Natural Communities, Non-Natural Communities, and Develop Areas in the BSA (acres)

Community/Land Use	Area
Natural Communities	
Jeffrey Pine Series	10.11
Urban Jeffrey Pine Series	6.88
Montane Meadow	4.45
Montane Riparian	1.50
Low Sagebrush Series	1.33
<i>Subtotal Natural Communities</i>	<i>24.27</i>
Non-Natural Communities	
Ruderal	4.13
<i>Subtotal Vegetation Communities</i>	<i>4.13</i>
Developed	51.71
Total	80.11

Low Sagebrush Series

Sagebrush communities typically occurs along the eastern and north-eastern borders of California, occupying dry slopes and flats in elevations ranging from approximately 1,600 to 10,500 feet. Low sagebrush series is one of several different types of sagebrush communities (e.g., Big sagebrush series) that have been described by Sawyer and Keeler-Wolf (1995).

The low sagebrush community on the project site is dominated by low sagebrush (*Artemisia arbuscula*) but associated shrubs such as bitterbrush and rabbitbrush are also present. In addition, a variety of grasses and herbaceous plant species were observed within this community including squirrel tail grass, blue wildrye, mules ears, and common yarrow. Low sagebrush in the BSA comprises 1.33 acres.

3.1.3.2. Non-Natural Communities

This section describes non-natural vegetation communities (e.g., ruderal). Within the BSA, the only non-natural vegetation community consists of ruderal vegetation.

Ruderal

Ruderal vegetation occurs in areas that have been disturbed by human activities such that natural communities no longer exist. In the BSA, ruderal vegetation typically occurs along road shoulders or adjacent areas; ruderal vegetation is also found in two detention basins near the junction of Pioneer Trail and U.S. 50. Ruderal vegetation in the BSA comprises 4.13 ac, with 0.14 ac of ruderal wetland area in the detention basins and an isolated seasonal wetland. Plant species occurring in ruderal this areas include cheatgrass (*Bromus tectorum*), ripgut brome (*B. diandrus*), shield cress (*Lepidium perfoliatum*), bull thistle (*Cirsium vulgare*), prickly lettuce (*Lactuca serriola*), field pennycress (*Thlaspi arvense*), and common plantain (*Plantago major*).

3.1.3.3. Description of Common Animal Species

The natural communities in the BSA provide relatively low habitat value for most wildlife species due to the location adjacent to heavily traveled roadways and a large developed area. Nevertheless, these communities do provide habitat for many common animal species. The sections below discuss animal species observed and/or likely to occur within the BSA.

Amphibians and Reptiles

Common amphibian and reptile species observed or expected to occur in the BSA include chorus frog (*Hyla regilla*), common toad (*Bufo bufo*), western fence lizard

(*Sceloporus occidentalis*), western terrestrial garter snake (*Thamnophis elegans elegans*), and mountain kingsnake (*Lampropeltis zonata*).

Birds

Common bird species observed or expected to occur in the BSA include brown creeper (*Certhia americana*), hairy woodpecker (*Picoides villosus*), northern flicker (*Colaptes auratus*), white-breasted nuthatch (*Sitta carolinensis*), Steller's jay (*Cyanocitta stelleri*), gray flycatcher (*Empidonax wrightii*), mountain chickadee (i), and mourning dove (*Zenaida macroura*).

Mammals

Common mammal species observed or expected to occur in the BSA include raccoon (*Procyon lotor*), coyote (*Canis latrans*), golden-mantled ground squirrel (*Spermophilus lateralis*), and Douglas' squirrel (*Tamiasciurus douglasii*), chipmunks (*Tamias* sp.). Mule deer (*Odocoileus hemionus*) and black bear (*Ursus americanus*) likely also periodically occur in the BSA.

3.1.3.4. Migration Corridors

There are no migration routes or wildlife corridors within the BSA. Drainage features, such as Edgewood Creek and the other unnamed drainage in the BSA, often provide potential movement corridors for wildlife. However, once downstream (west) of the BSA, these two drainage features flow into a golf course and a developed area, respectively. Consequently, the value of these features as potential wildlife movement corridors is substantially lessened.

3.1.3.5. Aquatic Resources

Aquatic resources within the BSA consist of Edgewood Creek, two small unnamed drainages, areas of wetland montane meadow, and several seasonal wetlands located in the upland montane meadow and ruderal communities.

The primary aquatic feature in the BSA is Edgewood Creek. Edgewood Creek is a perennial stream that is located at the north end of the BSA, and flows east to west under U.S. 50, ultimately discharging into Lake Tahoe. Edgewood Creek supports a relatively well developed riparian canopy upstream of U.S. 50; however, downstream of U.S. 50. the creek flows through a golf course and, as a result, has been substantially modified.

The two unnamed drainages are located in the eastern portion of the BSA. These two drainages were historically part of the same stream and tributary to Edgewood Creek.

Currently, these drainages converge immediately east of Lake Parkway, flow under the road via a metal culvert, and through a montane meadow before flowing into underground drains near the north end of the Harrah's parking lot.

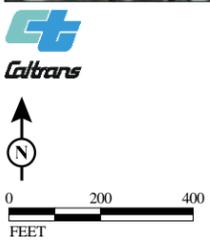
As described above in Section 3.1.3.1, the largest area of wetland montane meadow is located west of Lake Parkway near the Harrah's parking lot. The hydrologic regime of this wetland meadow area is supported by flows from the two unnamed drainages mentioned above.

Several seasonal wetlands are located in the upland portion of the montane meadow community and one seasonal wetland is located in a ruderal community along Lake Parkway in the northwest portion of the BSA. These seasonal wetlands are typically supported by localized runoff and/or snowmelt.

The potential wetlands areas in the BSA, as described above, were found to support hydrophytic vegetation, hydric soils, and wetland hydrology sufficient to meet ACOE criteria for wetlands. Aquatic features not supporting these wetland features were determined to non-wetlands waters. Wetland data sheets are included in Appendix B. Figure 6 shows the potential jurisdictional waters in the BSA, which are also summarized below in Table 3.

Table 3: Potential Jurisdictional Waters in the BSA (acres)

Features	Area
Wetlands	
Montane Meadow	0.46
Montane Riparian	0.24
Ruderal (detention basins)	0.14
Unnamed Drainage	0.05
<i>Subtotal Wetlands</i>	<i>0.89</i>
Nonwetlands	
Montane Riparian	0.04
Unnamed Drainage	0.05
<i>Subtotal Non-wetlands</i>	<i>0.09</i>
Total	0.98



- LEGEND**
-  Biological Study Area
 -  Data Point
 - Potential Jurisdictional Waters of the U.S. (0.982 ac)**
 -  Non-Wetland Waters (0.095 ac)
 -  Wetlands (0.887 ac)

SOURCE: Basemap - Microsoft Bing Maps - Aerial (2010); Mapping - LSA Associates, Inc. (2011)
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FIGURE 6

U.S. 50 Stateline Core / Loop Road Project
South Lake Tahoe, El Dorado County, California
Stateline, Douglas County, Nevada
 03-ED-50-PM 9.00-80.44
 EA 03-1E330K
 Potential Jurisdictional Waters of the U.S.

The aquatic resources within the BSA described above are expected to be under the jurisdiction of ACOE, RWQCB, NDEP, and TRPA. No streams or riparian vegetation are located in the California portion of the BSA; therefore, approvals are not required from the CDFG.

3.1.3.6. Invasive Species

No invasive plant species were observed in the BSA.

3.2. Regional Species and Habitats of Concern

Table 4 provides a list of special status species that could potentially occur in the BSA, or the surrounding six quadrangles listed in Section 2.2.1. A review was conducted of the specific habitats required by each species listed in Table 4, and the specific habitats and habitat conditions present in the BSA. Based on this evaluation, it was determined whether the species listed in Table 4 had a potential to occur in the BSA. Special status species that were observed, or determined to potentially occur in the BSA based on availability of suitable habitat or other factors (e.g., observed sign in the BSA) are discussed more fully in Sections 4.2 and 4.3 of this report. Species determined unlikely to occur in the BSA based on these same factors are documented accordingly in the table and not discussed further in this report.

Table 4: Special Status Species Potentially Occurring within the BSA and Vicinity

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/ Absent	Rationale
Mammals					
<i>Gulo gulo luteus</i>	California wolverine	CT	Found in the North Coast Mountains and the Sierra Nevada in a wide variety of high elevation habitats. Needs a water source and uses caves, logs, and burrows for cover and den areas. Uses dense cover for resting and reproduction and hunts in more open areas. Can travel long distances. Prefers areas with low human disturbance.	A	No suitable habitat is present in the BSA. The Jeffrey pine community in the BSA and surrounding area is interspersed with development and does not provide the dense cover required by this species.
<i>Lepus americanus tahoensis</i>	Sierra Nevada snowshoe hare	CSC	Upper montane riparian areas in the Sierra Nevada. Prefers dense cover. Found in thickets of deciduous trees and shrubby understories of young conifers, especially near meadows.	A	No suitable habitat is present in the BSA. The montane riparian habitat in the BSA is not extensive enough to provide the dense cover required by this species
<i>Martes americana sierrae</i>	Sierra marten	None	Dense coniferous or mixed forests with 40 to 60 percent canopy cover and an herbaceous understory to support food source (rodents). Dens in rotten logs; may also use rock slides and slash piles.	A	No suitable habitat is present in the BSA. The Jeffrey pine community in the BSA and surrounding area is interspersed with development and does not provide the dense cover required by this species.
<i>Martes pennanti (pacifica)</i>	Pacific fisher	FC; CSC	Intermediate to large-tree stages of coniferous forest and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs, and rocky areas for cover and denning. Needs large areas of mature dense forest.	A	No suitable habitat is present in the BSA. The Jeffrey pine community in the BSA and surrounding area is interspersed with development and does not provide the dense cover required by this species.
<i>Myotis volans</i>	Long-legged myotis	None	Most common in woodland and forest habitats above 4,000 ft. Feeds over water and open habitats. Roosts in large diameter snags, mines, caves, and abandoned buildings.	HP	No suitable roost habitat is present in the BSA but this species could forage over the montane meadow and or drainages in the BSA. See discussion in Chapter 4.
<i>Ochotona princeps schisticeps</i>	Gray-headed pika	None	Restricted to rock and talus slopes; may inhabit abandoned mining sites. Forages within 20 ft. of its rocky habitat.	A	No suitable habitat is present in the BSA.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/ Absent	Rationale
<i>Odocoileus hemionus</i>	Mule deer	TRPA	Occurs in early to intermediate successional stages of most forest, woodland, and brush habitats. Prefers a mosaic of vegetation that provides woody cover, meadow and shrubby openings, and free water.	HP	The Jeffrey pine forest, low sagebrush, montane meadow, and montane riparian communities in the BSA provide suitable, though not optimal, habitat for this species. See discussion in Chapter 4.
Birds					
<i>Accipiter gentilis</i>	Northern goshawk	CSC; TRPA	Uses mature/old growth, dense coniferous forests at mid to high elevation. Usually nests in large, live tree on north slopes near water. Uses old nests and maintains alternate nest sites. Hunts in wooded areas; uses snags/dead tree tops as plucking perches.	A	No suitable habitat is present in the BSA. The Jeffrey pine community in the BSA and surrounding area is interspersed with development and does not provide the dense cover required by this species.
<i>Aquila chrysaetos</i>	Golden eagle	CFP; TRPA	Occurs in rolling foothills, mountain areas, sage-juniper flats, and deserts. Nests in cliffs and in large trees in open areas. Rugged, open habitats with canyons and escarpments are most commonly used for nesting.	A	No suitable habitat is present in the BSA.
<i>Centrocercus urophasianus</i>	Greater sage-grouse	FC	Large, interconnected expanses of sagebrush with healthy, native understories.	A	No suitable habitat is present in the BSA.
<i>Empidonax traillii</i>	Willow flycatcher	CE	Inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters; 2,000 – 8,000 ft elevation; requires dense willow thickets for nesting/roosting. Low, exposed branches are used for singing posts/hunting perches.	A	The montane riparian habitat in the BSA is not dense enough or extensive enough to provide suitable habitat for this species.
<i>Falco peregrinus</i>	Peregrine falcon	FD; CE; TRPA	Prefers open areas near water with cliffs and canyons nearby for roosting. Nests near water, on cliffs, banks, ledges.	A	No suitable habitat is present in the BSA. This species could forage in Lake Tahoe but no suitable nesting habitat is present in the BSA.
<i>Haliaeetus leucocephalus</i>	Bald eagle	FD; CE; TRPA	Requires large bodies of water; occurs near ocean shore, lakes, reservoirs, and rivers. Usually nests within 1 mile of water, in large, dominant trees with open branches.	A	No suitable nesting habitat is present in the BSA. This species could forage in Lake Tahoe but no suitable nest trees were observed in or near the BSA.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/ Absent	Rationale
<i>Pandion haliaetus</i>	Osprey	CWL; TRPA	Nests on ocean shores, bays, freshwater lakes, and larger streams. Large nests built in tree-tops within 15 miles of a good fish-producing body of water	A	No suitable nesting habitat is present in the BSA. This species could forage Lake Tahoe but no suitable nest trees were observed in or near the BSA.
<i>Riparia riparia</i>	Bank swallow	CT	Open and partly open situations, frequently near flowing water. Colonial nester in steep sand, dirt, or gravel banks, in burrows dug near the top of the bank, along the edge of inland water or along the coast, or in gravel pits, road embankments, etc.	A	No suitable habitat is present in the BSA.
<i>Xanthocephalus xanthocephalus</i>	Yellow-headed blackbird	CSC	Breeds in loose colonies, in prairie wetlands and along western lakes and marshes where tall reeds and rushes are present. Nests are woven and attached to reeds, and are always placed over water. Forages in wetlands and surrounding grasslands or croplands.	A	No suitable habitat is present in the BSA.
Multiple waterfowl species	Waterfowl	TRPA	Wetlands and waters such as lakes, streams, drainages, marshes, and wet meadows.	A	No suitable habitat is present in the BSA. The few wetland areas of montane meadow in the BSA are no extensive enough to provide habitat for waterfowl.
Amphibians					
<i>Bufo canorus</i>	Yosemite toad	FC	Mountain meadows bordered by forests. Breeds in shallow edges of snow melt pools and ponds, or along edges of lakes and slow-moving streams. Moist upland areas are important summer habitats for adults.	A	No suitable habitat is present in the BSA.
<i>Lithobates pipiens</i>	Northern leopard frog	CSC	Found near permanent or semi-permanent water in a variety of habitats. Highly aquatic; shoreline cover, submerged and emergent aquatic vegetation are important habitat characteristics.	HP	Edgewood Creek and the larger of the two unnamed drainages could provide habitat for this species. See discussion in Chapter 4.
<i>Rana sierrae</i>	Sierra Nevada yellow-legged frog	FC; CSC	Always encountered within a few feet of water; partly shaded, shallow streams, and riffles with a rocky substrate. Tadpoles may require up to 2 years completing their aquatic development.	A	No suitable habitat is present in the BSA. Neither Edgewood Creek nor the unnamed tributaries have rocky substrates.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/ Absent	Rationale
<i>Rana muscosa</i>	Mountain yellow-legged frog	FC; CSC	Partly shaded, shallow streams, and riffles with a rocky substrate. Endangered populations exist in the San Jacinto, San Gabriel, and San Bernardino Mountains only.	A	No suitable habitat is present in the BSA. Neither Edgewood Creek or the unnamed tributaries have rocky substrates
Fish					
<i>Oncorhynchus clarkii henshawi</i>	Lahontan cutthroat trout	FT	Historically occurred in all accessible cold waters of the Lahontan Basin. Requires gravel riffles in streams for spawning.	A	No suitable habitat is present in the BSA.
Invertebrates					
<i>Capnia lacustra</i>	Lake Tahoe benthic stonefly	None	Endemic to Lake Tahoe. Associated with deep-water plant beds formed by bryophytes, filamentous algae, and stoneworts. Most abundant at depths of 200 – 360 ft.	A	No suitable habitat is present in the BSA.
<i>Helisoma newberryi</i>	Great Basin ram's horn	None	Large lakes and slow rivers. Large spring sources and spring-fed creeks. Burrow in soft mud. May be invisible even when abundant. (Taylor 1981).	A	No suitable habitat is present in the BSA.
<i>Pseudocopaodes eunus obscurus</i>	Carson wandering skipper	FE	Grassland habitats on alkaline substrates, below 5,000 ft. Salt grass (<i>Distichlis spicata</i>) is the larval host plant. Currently known from 2 populations; one in Washoe County, Nevada, and one in Lassen County, California.	A	No suitable habitat is present in the BSA.
Plants					
<i>Arabis rigidissima</i> var. <i>demota</i>	Galena Creek rock cress	CNPS 1B, TRPA	Broad-leaved upland forest and upper montane coniferous forest on rocky sites. 7,400-8,400 ft. Blooms in August.	A	No suitable habitat is present in the BSA. The BSA is well below the elevation range for this species.
<i>Boechera tularensis</i>	Tulare rockcress	CNPS 1B	Rocky slopes, subalpine coniferous forest, upper montane coniferous forest; 5,900-11,000 ft. Blooms June-July.	A	No suitable habitat is present in the BSA.
<i>Botrychium ascendens</i>	Upswept moonwort	CNPS 2	Meadows, seeps, and other mesic areas in lower montane coniferous forests; 5,000-7,500 ft. Blooms July-August.	HP,A	Potential habitat is present but this species was not observed during focused plant surveys in September 2009 and June 2010.
<i>Brasenia schreberi</i>	Watershield	CNPS 2	Freshwater marshes and swamps; 100-7,200 ft. Blooms June-September.	HP,A	Potential habitat is present but this species was not observed during focused plant surveys in September 2009 and June 2010.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/ Absent	Rationale
<i>Bruchia bolanderi</i>	Bolander's bruchia	CNPS 2	Meadows, seeps, and mesic areas in upper and lower montane coniferous forests; 5,500-9,200 ft.	HP,A	Potential habitat is present but this species was not observed during focused plant surveys in September 2009 and June 2010.
<i>Carex davyi</i>	Davy's sedge	CNPS 1B	Subalpine coniferous forest; upper montane coniferous forest; 4,900-10,500 ft. Blooms May-August.	HP,A	Potential habitat is present but this species was not observed during focused plant surveys in September 2009 and June 2010.
<i>Carex lasiocarpa</i>	Woolly-fruited sedge	CNPS 2	Lake margins, freshwater marshes, swamps, bogs, and fens; 5,900-6,900 ft. Blooms June-July.	HP,A	Potential habitat is present but this species was not observed during focused plant surveys in September 2009 and June 2010.
<i>Carex limosa</i>	Mud sedge	CNPS 2	Marshes, meadows, seeps, swamps, bogs and fens in lower and upper montane coniferous forests; 4,000 – 9,000 ft. elevation.	HP,A	Potential habitat is present but this species was not observed during focused plant surveys in September 2009 and June 2010.
<i>Draba asterophora</i> var. <i>asterophora</i>	Tahoe draba	CNPS 1B, TRPA	Alpine boulder and rock fields, subalpine coniferous forests; 8,200-11,500 ft. Blooms July-August.	A	No suitable habitat is present in the BSA. The BSA is well below the elevation range for this species.
<i>Draba asterophora</i> var. <i>macrocarpa</i>	Cup Lake draba	CNPS 1B, TRPA	Subalpine coniferous forest; 8,200-9,200 ft . Blooms July–August	A	No suitable habitat is present in the BSA. The BSA is well below the elevation range for this species.
<i>Glyceria grandis</i>	American manna grass	CNPS 2	Bogs, fens, seeps, meadows, marshes, streambanks, and lake margins; 50 – 6,500 ft. elevation.	HP,A	Potential habitat is present but this species was not observed during focused plant surveys in September 2009 and June 2010.
<i>Ivesia webberi</i>	Webber's ivesia	FC	Great Basin scrub; lower montane coniferous forest; pinyon and juniper woodland. Often on sandy or gravelly soils; 3,300-6,800 ft. Blooms May-July.	HP,A	Potential habitat is present but this species was not observed during focused plant surveys in September 2009 and June 2010.
<i>Lewisia longipetala</i>	Long-petaled lewisia	TRPA	Alpine boulder and rock fields in subalpine coniferous forest; 8,200-9,600 ft. Blooms July–August	A	No suitable habitat is present in the BSA. The BSA is well below the elevation range for this species.
<i>Meesia uliginosa</i>	Broad-nerved hump moss	CNPS 2	Bogs and fens, meadows and seeps, upper montane and subalpine coniferous forest growing on mesic soils; 4,200 – 9,200 ft. elevation.	HP	Potential habitat for this species is present in the BSA. Mosses were not targeted during the focused plant surveys so this species could potentially occur. See discussion in Chapter 4.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Rorippa subumbellata</i>	Tahoe yellow-cress	FC; CE CNPS 1B	Known only to occur in the Lake Tahoe area; in decomposed granite sand. Blooms May-September.	A	No suitable habitat is present in the BSA.
<i>Scutellaria galericulata</i>	Marsh skullcap	CNPS 2	Meadows, seeps, marshes and swamps in lower montane coniferous forests; 0-7,000 ft. Blooms June-September.	HP,A	Potential habitat is present but this species was not observed during focused plant surveys in September 2009 and June 2010.
<i>Stuckenia filiformis</i>	Slender-leaved pondweed	CNPS 2	Marshes, swamps, and assorted shallow freshwater areas; 1,000-7,000 ft. Blooms May-July.	HP,A	Potential habitat is present but this species was not observed during focused plant surveys in September 2009 and June 2010.

Status	
A= Absent. No habitat present and no further work needed.	CNPS
HP= Habitat Present. Habitat is, or may be present. The species may be present.	CNPS 1A = Presumed extinct in California
P= Present. Species is present.	CNPS 1B = Rare or Endangered in California and elsewhere
CH= Project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.	CNPS 2 = Rare or Endangered in California, more common elsewhere
Federal	State
FE = Endangered	SE = Endangered
FT = Threatened	ST = Threatened
FPE = Proposed Endangered	SR = Rare
FPT = Proposed Threatened	SFP = State Fully Protected
FC = Candidate	SC = Candidate
FD = Delisted	WL = Watch List
	CSC = Species of Special Concern
TRPA = TRPA Special Interest Species or Sensitive Plant Species	

Chapter 4. Results: Biological Resources, Discussion of Impacts and Mitigation

Alternative C and Alternative D are very similar and, therefore, have similar impacts to biological resources. However, Alternative C has a slightly wider footprint at the northern part of the alignment and results in slightly greater impacts to biological resources. Therefore, for purposes of this discussion and to consider a worst case scenario, the footprint for Alternative C was used to evaluate project impacts to biological resources.

4.1. Natural Communities of Special Concern

Montane meadow and montane riparian habitats are wetland and riparian communities that are considered sensitive under CEQA and NEPA. These habitats may also be under the jurisdiction of ACOE, RWQCB, NDEP, and TRPA. Potential permitting requirements for impacts to these communities are discussed in Section 5.3.

4.1.1. Montane Meadow

4.1.1.1. Survey Results

As described in Section 3.1.3.1, montane meadows are often, but not always, jurisdictional wetlands. Montane meadow habitat in the BSA comprises 4.45 ac and is comprised of both wetlands (0.46 ac) and upland (3.98 ac) components. The majority of the montane meadow habitat in the BSA is located at the north end of the BSA on the north side of Lake Parkway; a few small areas of seasonal wetlands were identified in this area but most of this area of montane meadow is upland. A small wetland area of montane meadow is located adjacent to the parking lot for Harrah's casino (Figure 6).

4.1.1.2. Avoidance and Minimization Efforts

1. During construction, work areas, including access routes, shall be clearly flagged or fenced prior to start of construction to avoid impacting adjacent natural communities.
2. Following project completion, all graded areas shall be revegetated with native species approved by a qualified biologist.

4.1.1.3. Project Impacts

The project will result in permanent impacts to 0.05 ac of seasonal wetland areas of montane meadow, consisting of three isolated wetlands located near the north end of Lake Parkway. In this area, the roadway will be widened to the northeast and resulting filling of the wetland montane meadow. No temporary impacts are expected.

4.1.1.4. Compensatory Mitigation

Mitigation shall be accomplished using one of the following methods, or by using a combination of the methods, contingent upon approval by the ACOE, RWQCB, NDEP, and TRPA:

1. Preservation, creation, and/or restoration of the impacted resources at a minimum ratio of 3:1.
2. Purchase of credits at an approved mitigation bank at a minimum 1:1 mitigation ratio.
3. Payment of in-lieu fees per the current Corps, Sacramento District in-lieu fee schedule or equivalent program.
4. All mitigation lands shall be protected in perpetuity through recordation of a conservation easement or equivalent method.

4.1.1.5. Cumulative Impacts

Impacts to montane meadow in the general vicinity of the project likely will occur during public works projects similar in scope to the subject project. Considering the amount of montane meadow habitat available for this species in the region relative to the amount of habitat in the BSA, and implementation of the avoidance and minimization measures listed above, the project will not substantially contribute to cumulative effects for montane meadow.

4.1.2. Montane Riparian

4.1.2.1. Survey Results

As described in Section 3.1.3.1, the riparian communities in the BSA could not be characterized to a single community using Sawyer and Keeler-Wolf (1995), but were a mix of several willow and alder series'. Consequently, the riparian communities in the BSA were termed generically as montane riparian habitat. Montane riparian habitat in the BSA is located primarily along Edgewood Creek and two unnamed drainages in the eastern part of the BSA. This community comprises 1.50 ac, of which 0.24 ac is wetlands.

4.1.2.2. Avoidance and Minimization Efforts

Refer to Section 4.1.1.2 for Avoidance and Minimization Efforts.

4.1.2.3. Project Impacts

The project will result in permanent impacts to the montane riparian habitat in the eastern part of the BSA where Lake Parkway would be widened, and in the northern part of the BSA where U.S. 50 would be widened. Impacts to montane riparian habitat would total 0.23 ac, of which 0.02 ac are wetlands. No temporary impacts to montane riparian habitat are expected.

4.1.2.4. Compensatory Mitigation

Refer to Section 4.1.1.4 for Compensatory Mitigation.

4.1.2.5. Cumulative Impacts

Impacts to montane riparian habitat in the general vicinity of the project likely will occur during public works projects similar in scope to the subject project. Considering the amount of montane riparian habitat available for this species in the region relative to the amount of habitat in the BSA, and implementation of the avoidance and minimization measures listed above, the project will not substantially contribute to cumulative effects for montane riparian habitat.

4.2. Special Status Plant Species

Special status animal species known to occur or potentially occur within the BSA are listed in Table 3. Based on the results of focused plant surveys and the habitats present in the BSA, only one special status plant listed in Table 4, broad-nerved hump moss, was determined to potentially occur in the BSA.

4.2.1. Broad-Nerved Hump Moss

Broad-nerved hump-moss is a CNPS 2 species that is known to occur in bogs and fens, meadows and seeps in upper montane and subalpine coniferous forests.

4.2.1.1. Survey Results

The seasonal wetlands in the BSA do not provide suitable habitat for broad-nerved hump moss, but the perennial wetlands associated with one of the unnamed drainages and the wetland area of montane meadow near Harrah's are potential habitat for this species. These areas were covered during the focus plant surveys of the BSA, however, mosses were not targeted during these surveys. There are two records for broad-nerved hump moss in the CNDDDB in the vicinity of the BSA, located approximately 5 and 7 miles southwest of the BSA, respectively. Since potential

wetland habitat for this species occurs in the BSA and this species is known from the vicinity, broad-nerved hump moss could occur in the BSA.

4.2.1.2. Avoidance and Minimization Efforts

1. Prior to the start of construction, a biologist or botanist qualified to survey for mosses shall conduct a survey for broad-nerved hump moss in the BSA. The survey will be limited to suitable habitat within the proposed work area (i.e., that will be impacted by project construction).
2. If broad-nerved hump moss is identified within the work area, it shall be salvaged and transplanted upstream (east) of the work area.
3. During construction, work areas, including access routes, shall be clearly flagged or fenced prior to start of construction to avoid impacting adjacent natural communities.

4.2.1.3. Project Impacts

The project will impact 0.02 ac of wetland in the unnamed drainage where this species could potentially occur. Impacts will occur during widen of Lake Parkway. The project will not impact the wetland portion of the montane meadow near Harrah's. No temporary impacts are expected.

4.2.1.4. Compensatory Mitigation

No compensatory mitigation is proposed with implementation of the measures in 4.2.1.2.

4.2.1.5. Cumulative Impacts

Impacts to broad-nerved hump moss in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Considering the amount of habitat available for this species in the region relative to the amount of habitat in the BSA, and implementation of the avoidance and minimization measures listed above, the project will not substantially contribute to cumulative effects for broad-nerved hump moss.

4.3. Special Status Animal Species

Special status animal species known to occur or potentially occur within the BSA are listed in Table 4. Based on the habitats present in the BSA, only three special status animal species listed in Table 3 were determined to potentially occur in the BSA: long-legged myotis, mule deer, and northern leopard frog.

4.3.1. Long-legged Myotis

Long-legged has no status but is included in the CNDDDB. This species is most common in woodland and forest habitats above 4,000 ft. This species forages over water and open habitats, and roost in large diameter snags, mines, caves, and abandoned buildings.

4.3.1.1. Survey Results

No suitable roost habitat for long-legged myotis was identified in the BSA but the montane meadow areas within the BSA could provide foraging habitat. However, the close proximity of roadways and developed areas to the potential foraging habitat likely diminishes the overall value of the habitat. There is one CNDDDB record for long-legged myotis from the general vicinity of the BSA, located approximately 11 miles to the northwest on the west shore of Lake Tahoe. No bats or sign (e.g., guano, urine staining) were observed during the site surveys, however, focused emergence surveys were not conducted. Since suitable foraging habitat is present, and it is likely that suitable roost habitat in the form of large diameter snags are present in the vicinity of the BSA, long-legged myotis could potentially forage in the BSA.

4.3.1.2. Avoidance and Minimization Efforts

1. Nighttime work activities shall be avoided to the extent feasible to minimize potential effects to foraging bats.

4.3.1.3. Project Impacts

The project will result in permanent impacts to 1.26 ac of montane meadow during widening of Lake Parkway, which is potential foraging habitat for long-legged myotis. The impacts will be limited to a narrow strip of montane meadow adjacent to Lake Parkway. The close proximity of the roadway along the entire length of the impacted habitat diminishes the overall value of the habitat. Consequently, the loss of this habitat is not considered a substantial impact to long-legged myotis.

4.3.1.4. Compensatory Mitigation

No compensatory mitigation is proposed with implementation of the measures in 4.3.1.2.

4.3.1.5. Cumulative Impacts

Impacts to long-legged myotis in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Considering the amount of habitat available for this species in the region relative to the amount of habitat in the BSA, and implementation of the avoidance

and minimization measures listed above, the project will not substantially contribute to cumulative effects for long-legged myotis.

4.3.2. Mule Deer

Mule deer is a TRPA Special Interest Species. Mule deer are a common ungulate that occurs in early to intermediate successional stages of most forest, woodland, and brush habitats. Mule deer prefers a mosaic of vegetation that provides woody cover, meadow and shrubby openings, and free water.

4.3.2.1. Survey Results

The Jeffrey pine forest, low sagebrush, montane meadow, and montane riparian communities provide suitable foraging and cover habitat for mule deer, though the proximity of these habitats to busy roadways and development diminishes the overall value of the habitat. No mule deer or sign were observed in the BSA during site surveys, but due to the presence of suitable habitat, this species could occur.

4.3.2.2. Avoidance and Minimization Efforts

1. During construction, work areas, including access routes, shall be clearly flagged or fenced prior to start of construction to avoid impacting adjacent natural communities.

4.3.2.3 Project Impacts

The project will permanently impact 3.22 ac of suitable habitat for mule deer consisting of Jeffrey pine forest (1.40 ac), low sagebrush (0.33 ac), montane meadow (1.26 ac), and montane riparian (0.23 ac). The impacts will be limited to a narrow strip of habitat adjacent to Lake Parkway. The close proximity of the roadway along the entire length of the impacted habitats diminishes the overall value of the habitat. Consequently, the loss of this habitat is not considered a substantial impact to mule deer.

4.3.2.3. Compensatory Mitigation

No compensatory mitigation is proposed with implementation of the measures in 4.3.2.2.

4.3.2.4. Cumulative Impacts

Impacts to mule deer in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Considering the amount of habitat available for this species in the region relative to the amount of habitat in the BSA, and implementation of the avoidance and

minimization measures listed above, the project will not substantially contribute to cumulative effects for mule deer.

4.3.3. Northern Leopard Frog

The northern leopard frog is a California Species of Special Concern. This highly aquatic frog generally occurs near freshwater ponds and marshes in a variety of habitats. Suitable habitat for northern leopard frog typically includes dense shoreline cover and submerged and emergent aquatic vegetation. They are well adapted to cold and can be found above 9,800 ft elevation.

Northern leopard frogs eat a wide variety of animals including crickets, flies, worms, and smaller frogs. This species is preyed upon by many different animals such as snakes, raccoons, other frogs.

4.3.3.1. Survey Results

Edgewood Creek and the two unnamed drainages provide potential habitat for northern leopard frog in the BSA. However, none of these features supports dense shoreline vegetation required by this species so this habitat is only marginal for northern leopard frog. There are four CNDDDB records for northern leopard frog in the vicinity of the BSA, between 3 and 7 miles to the southwest. Northern leopard frogs were not observed in the BSA during site surveys, but since at least marginally suitable habitat is present in the BSA and this species is known from the vicinity, northern leopard frog could occur.

4.3.3.2. Avoidance and Minimization Efforts

1. A qualified biologist or herpetologist shall conduct a survey for northern leopard frog in the BSA within 24 hours prior to the start of construction. The survey will be limited to suitable habitat within the proposed work area (i.e., that will be impacted by project construction) including Edgewood Creek and the two unnamed drainages.
2. If northern leopard frogs are identified in the BSA, they will be relocated to a suitable location within the same drainage.
3. During construction, work areas, including access routes, shall be clearly flagged or fenced prior to start of construction to avoid impacting adjacent natural communities.

4.3.3.3. Project Impacts

The project will permanently impact 0.23 ac of montane riparian habitat that is marginally suitable for northern leopard frog. The impacts will be occur during road

widening at Edgewood Creek and at where the two unnamed drainages flow beneath Lake Parkway. The montane riparian habitat on the project site is of marginal quality for northern leopard frog due to the lack of dense shoreline vegetation. Consequently, the loss of this habitat is not considered a substantial impact to northern leopard frog.

4.3.3.4. Compensatory Mitigation

No compensatory mitigation is proposed with implementation of the measures in 4.3.3.2.

4.3.3.5. Cumulative Impacts

Impacts to northern leopard frog in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Considering the amount of habitat available for this species in the region relative to the amount of habitat in the BSA, and implementation of the avoidance and minimization measures listed above, the project will not substantially contribute to cumulative effects for northern leopard frog.

Chapter 5. Results: Permits and Technical Studies for Special Laws or Conditions

5.1. Federal Endangered Species Act Consultation Summary

The proposed project will not affect federally listed species. Consequently, consultation under Section 7 of FESA is not required.

5.2. California Endangered Species Act Consultation Summary

The proposed project will not affect any species listed as threatened or endangered under CESA. Therefore, no CESA consultation is required.

5.3. Wetlands and Other Waters Coordination Summary

The project will impact wetlands and non-wetlands waters subject to regulation by the ACOE, RWQCB, NDEP, and TRPA, as summarized below in Table 5.

Table 5: Impacts to Potential Jurisdictional Waters in the BSA (acres)

Features	Area
Wetlands	
Montane Meadow	0.05
Montane Riparian	0.02
Ruderal (detention basins, etc.)	0.02
Unnamed Drainage	0.05
Subtotal Wetlands	0.14
Nonwetlands	
Montane Riparian	0.00
Unnamed Drainage	0.04
Subtotal Non-wetlands	0.04
Total	0.18

5.3.1. Army Corps of Engineers

The waters of the U.S. in the BSA that will be affected by the project are regulated by the ACOE under Section 404 of the CWA. It is expected that the discharge of fill into

waters of the U.S from the subject project, totaling, 0.18 ac, can be authorized by the ACOE using Nationwide Permit (NWP) 14 – Linear Transportation Projects.

5.3.2. Regional Water Quality Control Board

Discharges into waters of the U.S. under Section 404 of the CWA also require a Water Quality Certification from the RWQCB, pursuant to Section 401 of the CWA. The RWQCB may opt to waive the water quality certification and instead issue waste discharge requirements pursuant to their authority under the PCWQCA. Of the 0.18 ac of impact to waters of the U.S. resulting from project implementation, only 0.01 ac occur within the portion of the BSA that is within California.

5.3.3. California Department of Fish and Game

There are no drainage features or riparian habitat within the portion of the BSA that is within California. Therefore, a Streambed Alteration Agreement will not be required.

5.3.4. Nevada Department of Environmental Protection

The project will fill 0.17 ac of waters of the U.S. in the Nevada portion of the BSA. Certification will be required by NDEP to ensure the project meets state and federal water quality standards. A Temporary Permit for Working in Waterways may also be required.

5.3.5. Tahoe Regional Planning Agency

The montane riparian habitat and wetland area of montane meadow near Harrah's would likely be designated SEZ's due to the presence of riparian vegetation and near surface groundwater. Impacts to SEZ's, totaling 0.28 ac (0.23 ac of montane riparian habitat and 0.05 ac of unnamed drainage), would require a permit from TRPA.

5.4. Executive Order 11990 – Protection of Wetlands

The project will result in minor permanent impacts to wetlands. The project has been designed to avoid impacts to wetlands, where feasible. The measures in Sections 4.1.1.1 and 4.1.2.1 will also minimize impacts to wetlands during and after construction. Based upon the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetland and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.

5.5. Invasive Species

To avoid the introduction of invasive species into the BSA during project construction, contract specifications shall include, at a minimum, the following measures.

1. All earthmoving equipment to be used during project construction shall be thoroughly cleaned before arriving on the project site.
2. All seeding equipment (i.e., hydroseed trucks) shall be thoroughly rinsed at least three times prior to beginning seeding work.
3. To avoid spreading any non-native invasive species already existing on-site, to off-site areas, all equipment shall be thoroughly cleaned before leaving the site.

5.6. Migratory Bird Treaty Act and California Fish and Game Code (Breeding Birds)

The trees and shrubs in the BSA provide suitable nesting habitat for a variety of bird species. The following seasonal work restrictions will be implemented during construction to minimize the potential for take of nesting birds:

1. If work must begin during the nesting season (March 1 to August 31), a qualified biologist shall survey all trees and shrubs in the BSA for presence of nesting birds. This survey shall occur no more than 10 days prior to the start of construction. If no nesting activity is observed, work may proceed as planned. If an active nest is discovered, brightly colored fencing shall be installed around the drip line of the nest tree, and maintained in good condition until the end of the nesting season or until the young have fledged, as determined by a qualified biologist.

Chapter 6. References

- California Department of Fish and Game. 2011. Rarefind 3 personal computer program. CDFG Natural Diversity Database. Natural Heritage Division. Sacramento, CA.
- California Native Plant Society. 2011. 7th Inventory of Rare and Endangered Vascular Plants of California - Online Edition.
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- Jennings, M.R. and M.P. Hayes. 1994. Amphibian and reptile species of special concern in California. California Dept. of Fish and Game, Inland Fisheries Division, Rancho Cordova, CA. Contract No. 8023.
- Sawyer, John O. and Todd Keeler-Wolf. 1995. A Manual of California Vegetation. California Native Plant Society. Sacramento, CA.
- Tahoe Regional Planning Agency. 2007. 2006 Threshold Evaluation Report. September 2007. Stateline, NV.
- U.S. Fish and Wildlife Service. 2011. Online Threatened and Endangered Species Lists. Sacramento Fish and Wildlife Office.
- U.S. Fish and Wildlife Service. 2011. Northern Nevada Field Office Online List of Federally Threatened Species.

Appendix A Species Lists

California Department of Fish and Game
 Natural Diversity Database
 Selected Elements by Scientific Name - Portrait
 U.S. 50/Stateline - Glenbrook, Meeks Bay, Emerald Bay, and South Lake Tahoe Quadrangles

Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1 Accipiter gentilis northern goshawk	ABNKC12060			G5	S3	SC
2 Botrychium ascendens upswept moonwort	PPOPH010S0			G2G3	S1.3?	2.3
3 Brasenia schreberi watershield	PDCAB01010			G5	S2	2.3
4 Bruchia bolanderi Bolander's bruchia	NBMUS13010			G3	S2	2.2
5 Capnia lacustra Lake Tahoe benthic stonefly	IIPLE03200			G1	S1	
6 Carex lasiocarpa woolly-fruited sedge	PMCYP03720			G5	S1.3?	2.3
7 Carex limosa mud sedge	PMCYP037K0			G5	S3	2.2
8 Draba asterophora var. asterophora Tahoe draba	PDBRA110D1			G2T2	S2	1B.2
9 Empidonax traillii willow flycatcher	ABPAE33040		Endangered	G5	S1S2	
10 Fen	CTT51200CA			G2	S1.2	
11 Glyceria grandis American manna grass	PMPOA2Y080			G5	S1.3?	2.3
12 Gulo gulo California wolverine	AMAJF03010	Candidate	Threatened	G4	S1	
13 Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S2	
14 Helisoma newberryi Great Basin rams-horn	IMGASM6020			G1Q	S1	
15 Lepus americanus tahoensis Sierra Nevada snowshoe hare	AMAEB03012			G5T3T4Q	S2?	SC
16 Lithobates pipiens northern leopard frog	AAABH01170			G5	S2	SC
17 Martes americana sierrae Sierra marten	AMAJF01014			G5T3T4	S3S4	
18 Martes pennanti (pacifica) DPS Pacific fisher	AMAJF01021	Candidate		G5	S2S3	SC
19 Meesia uliginosa broad-nerved hump moss	NBMUS4L030			G4	S2	2.2
20 Myotis volans long-legged myotis	AMACC01110			G5	S4?	
21 Ochotona princeps schisticeps gray-headed pika	AMAEA0102H			G5T2T4	S2S4	
22 Oncorhynchus clarkii henshawi Lahontan cutthroat trout	AFCHA02081	Threatened		G4T3	S2	
23 Pandion haliaetus osprey	ABNKC01010			G5	S3	

California Department of Fish and Game
 Natural Diversity Database
 Selected Elements by Scientific Name - Portrait
 U.S. 50/Stateline - Glenbrook, Meeks Bay, Emerald Bay, and South Lake Tahoe Quadrangles

Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
24 Rana sierrae Sierra Nevada yellow-legged frog	AAABH01340	Candidate	unknown code...	G1	S1	SC
25 Riparia riparia bank swallow	ABPAU08010		Threatened	G5	S2S3	
26 Rorippa subumbellata Tahoe yellow cress	PDBRA270M0	Candidate	Endangered	G1	S1.1	1B.1
27 Scutellaria galericulata marsh skullcap	PDLAM1U0J0			G5	S2.2?	2.2
28 Stuckenia filiformis slender-leaved pondweed	PMPOT03090			G5	S1S2	2.2
29 Xanthocephalus xanthocephalus yellow-headed blackbird	ABPBXB3010			G5	S3S4	SC

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

**Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the Counties and/or
U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 111021020936

Database Last Updated: September 18, 2011

Quad Lists

Listed Species

Fish

Oncorhynchus (=Salmo) clarki henshawi
Lahontan cutthroat trout (T)

Candidate Species

Amphibians

Bufo canorus
Yosemite toad (C)

Rana muscosa
mountain yellow-legged frog (C)

Mammals

Martes pennanti
fisher (C)

Plants

Rorippa subumbellata
Tahoe yellow-cress (C)

Quads Containing Listed, Proposed or Candidate Species:

SOUTH LAKE TAHOE (522B)

EMERALD BAY (523A)

MEEKS BAY (538D)

County Lists

No county species lists requested.

Key:

- (E) *Endangered* - Listed as being in danger of extinction.
- (T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
- (P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.
- Critical Habitat* - Area essential to the conservation of a species.
- (PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
- (C) *Candidate* - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts.

[More info](#)

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be January 19, 2012.

Plant List

5 matches found. *Click on scientific name for details*

Search Criteria

Rare Plant Rank is one of [1A, 1B, 2], Found in Quad 38119H8

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Botrychium ascendens	upswept moonwort	Ophioglossaceae	perennial rhizomatous herb	2.3	S1.3?	G2G3
Bruchia bolanderi	Bolander's bruchia	Bruchianaceae	moss	2.2	S2	G3
Draba asterophora var. asterophora	Tahoe draba	Brassicaceae	perennial herb	1B.2	S2	G2T2
Meesia uliginosa	broad-nerved hump moss	Meesiaceae	moss	2.2	S2	G4
Rorippa subumbellata	Tahoe yellow cress	Brassicaceae	perennial rhizomatous herb	1B.1	S1	G1

Suggested Citation

California Native Plant Society (CNPS). 2011. Inventory of Rare and Endangered Plants (online edition, v8-01a). California Native Plant Society. Sacramento, CA. Accessed on Friday, October 21, 2011.

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Contributors

Jenkins Family

Bilisoly Bequest Grant

[California Natural Diversity Database](#)

[The Calflora Database](#)

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Plant List

1 matches found. *Click on scientific name for details*

Search Criteria

Rare Plant Rank is one of [1A, 1B, 2], Found in Quad 39120A1

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Rorippa subumbellata	Tahoe yellow cress	Brassicaceae	perennial rhizomatous herb	1B.1	S1	G1

Suggested Citation

California Native Plant Society (CNPS). 2011. Inventory of Rare and Endangered Plants (online edition, v8-01a). California Native Plant Society. Sacramento, CA. Accessed on Friday, October 21, 2011.

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Plant List

11 matches found. *Click on scientific name for details*

Search Criteria

Rare Plant Rank is one of [1A, 1B, 2], Found in Quad 38120H1

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Boechera tularensis	Tulare rockcress	Brassicaceae	perennial herb	1B.3	S2	G2
Botrychium ascendens	upswept moonwort	Ophioglossaceae	perennial rhizomatous herb	2.3	S1.3?	G2G3
Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb	2.3	S2	G5
Carex davyi	Davy's sedge	Cyperaceae	perennial herb	1B.3	S2	G2
Carex lasiocarpa	woolly-fruited sedge	Cyperaceae	perennial rhizomatous herb	2.3	S1.3?	G5
Carex limosa	mud sedge	Cyperaceae	perennial rhizomatous herb	2.2	S3	G5
Glyceria grandis	American manna grass	Poaceae	perennial rhizomatous herb	2.3	S1.3?	G5
Meesia uliginosa	broad-nerved hump moss	Meesiaceae	moss	2.2	S2	G4
Rorippa subumbellata	Tahoe yellow cress	Brassicaceae	perennial rhizomatous herb	1B.1	S1	G1
Scutellaria galericulata	marsh skullcap	Lamiaceae	perennial rhizomatous herb	2.2	S2.2?	G5
Stuckenia filiformis	slender-leaved pondweed	Potamogetonaceae	perennial rhizomatous herb	2.2	S1S2	G5

Suggested Citation

California Native Plant Society (CNPS). 2011. Inventory of Rare and Endangered Plants (online edition, v8-01a). California Native Plant Society. Sacramento, CA. Accessed on Friday, October 21, 2011.

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Pacific Southwest Region

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Nevada's Protected Species by County

U.S. FISH AND WILDLIFE SERVICE
NEVADA FISH AND WILDLIFE OFFICE

NEVADA'S ENDANGERED, THREATENED, PROPOSED AND
CANDIDATE SPECIES BY COUNTY
(Updated August 5, 2011)

CARSON CITY RURAL AREA

Amphibian

C Mountain yellow-legged frog *Rana muscosa*
(Sierra Nevada Distinct
Population Segment)

Bird

C Greater sage-grouse *Centrocercus urophasianus*

Fish

T Lahontan cutthroat trout *Oncorhynchus clarkii henshawi*

Invertebrate

E Carson wandering skipper *Pseudocopaeodes eunus obscurus*

Plant

C Tahoe yellow cress *Rorippa subumbellata*

CHURCHILL COUNTY

Bird

C Greater sage-grouse *Centrocercus urophasianus*

Fish

T Lahontan cutthroat trout *Oncorhynchus clarkii henshawi*

CLARK COUNTY

Amphibian

C Relict leopard frog *Rana onca*

Birds

E Southwestern willow flycatcher ● *Empidonax traillii extimus*

C Yellow-billed cuckoo (Western U.S. Distinct Population Segment)	<i>Coccyzus americanus</i>
E Yuma clapper rail	<i>Rallus longirostris yumanensis</i>

Invertebrate

C Mt. Charleston blue butterfly	<i>Icaricia shasta charlestonensis</i>
---------------------------------	--

Fishes

E Bonytail chub ●	<i>Gila elegans</i>
E Colorado pikeminnow *	<i>Ptychocheilus lucius</i>
E Humpback chub *	<i>Gila cypha</i>
T Lahontan cutthroat trout	<i>Oncorhynchus clarkii henshawi</i>
E Moapa dace	<i>Moapa coriacea</i>
E Pahrump poolfish	<i>Empetrichthys latos</i>
E Razorback sucker ●	<i>Xyrauchen texanus</i>
E Virgin River chub + ●	<i>Gila seminuda</i>
E Woundfin ●	<i>Plagopterus argentissimus</i>

Plant

C Las Vegas Buckwheat	<i>Eriogonum corymbosum</i> var . <i>nilesil</i>
-----------------------	--

Reptile

T Desert tortoise (Mojave population) ●	<i>Gopherus agassizii</i>
--	---------------------------

DOUGLAS COUNTY

Amphibian

C Mountain yellow-legged frog (Sierra Nevada Distinct Population Segment)	<i>Rana muscosa</i>
---	---------------------

Bird

C Greater sage-grouse	<i>Centrocercus urophasianus</i>
-----------------------	----------------------------------

Fish

T Lahontan cutthroat trout	<i>Oncorhynchus clarkii henshawi</i>
----------------------------	--------------------------------------

Invertebrate

E Carson wandering skipper	<i>Pseudocopaeodes eunus obscurus</i>
----------------------------	---------------------------------------

Plants

C Tahoe yellow cress	<i>Rorippa subumbellata</i>
C Webber's ivesia	<i>Ivesia webberi</i>

ELKO COUNTY

Amphibian

C Columbia spotted frog (Great Basin Distinct Population Segment)	<i>Rana luteiventris</i>
---	--------------------------

Birds

C Greater sage-grouse	<i>Centrocercus urophasianus</i>
C Yellow-billed cuckoo (Western U.S. Distinct Population Segment)	<i>Coccyzus americanus</i>

Fishes

T Bull trout (Jarbidge River)	<i>Salvelinus confluentus</i>
E Clover Valley speckled dace	<i>Rhinichthys osculus oligoporus</i>
E Independence Valley speckled dace	<i>Rhinichthys osculus lethoporus</i>

T Lahontan cutthroat trout	<i>Oncorhynchus clarkii henshawi</i>
Plants	
C Goose Creek Milkvetch	<i>Astragalus Anserinus</i>
C Whitebark pine	<i>Pinus albicaulis</i>

ESMERALDA COUNTY

Bird	
C Greater sage-grouse	<i>Centrocercus urophasianus</i>
Reptile	
T Desert tortoise (Mojave population) ●	<i>Gopherus agassizii</i>

EUREKA COUNTY

Amphibian	
C Columbia spotted frog (Great Basin Distinct Population Segment)	<i>Rana luteiventris</i>
Bird	
C Greater sage-grouse	<i>Centrocercus urophasianus</i>
Fish	
T Lahontan cutthroat trout	<i>Oncorhynchus clarkii henshawi</i>

HUMBOLDT COUNTY

Bird	
C Greater sage-grouse	<i>Centrocercus urophasianus</i>
Fishes	
T Desert dace ●	<i>Eremichthys acros</i>
T Lahontan cutthroat trout	<i>Oncorhynchus clarkii henshawi</i>
Invertebrate	
C Elongate mud meadows Springsnail	<i>Pyrgulopsis notidicola</i>
Plant	
C Soldier Meadow cinquefoil	<i>Potentilla basaltica</i>
C Whitebark pine	<i>Pinus albicaulis</i>

LANDER COUNTY

Bird	
C Greater sage-grouse	<i>Centrocercus urophasianus</i>
Fish	
T Lahontan cutthroat trout	<i>Oncorhynchus clarkii henshawi</i>

LINCOLN COUNTY

Birds	
C Greater sage-grouse	<i>Centrocercus urophasianus</i>
E Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>

C Yellow-billed cuckoo (Western U.S. Distinct Population Segment) *Coccyzus americanus*

Fishes

T Big Spring spinedace • *Lepidomeda mollispinis pratensis*
E Hiko White River springfish • *Crenichthys baileyi grandis*
E Pahrnagat roundtail chub *Gila robusta jordani*
E White River springfish • *Crenichthys baileyi baileyi*

Plants

C Las Vegas Buckwheat *Eriogonum corymbosum* var . *nilesil*
T Ute lady's tresses *Spiranthes diluvialis*

Reptile

T Desert tortoise (Mojave population) • *Gopherus agassizii*

LYON COUNTY

Birds

C Greater sage-grouse *Centrocercus urophasianus*
C Yellow-billed cuckoo (Western U.S. Distinct Population Segment) *Coccyzus americanus*

Fish

T Lahontan cutthroat trout *Oncorhynchus clarkii henshawi*

Plant

C Churchill Narrows buckwheat *Eriogonum diatomaceum*

MINERAL COUNTY

Birds

C Greater sage-grouse *Centrocercus urophasianus*
C Yellow-billed cuckoo (Western U.S. Distinct Population Segment) *Coccyzus americanus*

Fishes

E Hiko White River springfish *Crenichthys baileyi grandis*
T Lahontan cutthroat trout *Oncorhynchus clarkii henshawi*
T Railroad Valley springfish *Crenichthys nevadae*

NYE COUNTY

Amphibian

C Columbia spotted frog (Great Basin Distinct Population Segment) *Rana luteiventris*

Birds

C Greater sage-grouse *Centrocercus urophasianus*
C Yellow-billed cuckoo (Western U.S. Distinct Population Segment) *Coccyzus americanus*
E Southwestern willow flycatcher *Empidonax traillii extimus*

Fishes

E Ash Meadows Amargosa pupfish • *Cyprinodon nevadensis mionectes*

E Ash Meadows speckled dace •	<i>Rhinichthys osculus nevadensis</i>
E Devil's Hole pupfish	<i>Cyprinodon diabolis</i>
T Lahontan cutthroat trout	<i>Oncorhynchus clarkii henshawi</i>
T Railroad Valley springfish •	<i>Crenichthys nevadae</i>
E Warm Springs pupfish	<i>Cyprinodon nevadensis pectoralis</i>
E White River spinedace •	<i>Lepidomeda albivallis</i>

Invertebrate

T Ash Meadows naucorid •	<i>Ambrysus amargosus</i>
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Plants

E Amargosa niterwort	<i>Nitrophila mohavensis</i>
T Ash Meadows blazing star •	<i>Mentzelia leucophylla</i>
T Ash Meadows gumplant •	<i>Grindelia fraxinoprattensis</i>
T Ash Meadows ivesia (mousetail) •	<i>Ivesia eremica</i> (= <i>I. kingii</i> var. <i>eremica</i>)
T Ash Meadows milkvetch •	<i>Astragalus phoenix</i>
T Ash Meadows sunray •	<i>Enceliopsis nudicaulis</i> var. <i>corrugata</i>
T Spring-loving centaury •	<i>Centaureium namophilum</i>

Reptile

T Desert tortoise (Mojave population) •	<i>Gopherus agassizii</i>
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PERSHING COUNTY

Bird

C Greater sage-grouse	<i>Centrocercus urophasianus</i>
-----------------------	----------------------------------

STOREY COUNTY

Fishes

E Cui-ui	<i>Chasmistes cujus</i>
T Lahontan cutthroat trout	<i>Oncorhynchus clarkii henshawi</i>

WASHOE COUNTY

Amphibian

C Mountain yellow-legged frog (Sierra Nevada Distinct Population Segment)	<i>Rana muscosa</i>
---	---------------------

Bird

C Greater sage-grouse	<i>Centrocercus urophasianus</i>
-----------------------	----------------------------------

Fishes

E Cui-ui	<i>Chasmistes cujus</i>
T Lahontan cutthroat trout	<i>Oncorhynchus clarkii henshawi</i>
T Warner sucker	<i>Catostomus warnerensis</i>

Invertebrate

E Carson wandering skipper	<i>Pseudocopaeodes eunus obscurus</i>
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Plants

E Steamboat buckwheat	<i>Eriogonum ovalifolium</i> var. <i>williamsiae</i>
C Tahoe yellow cress	<i>Rorippa subumbellata</i>
C Webber's ivesia	<i>Ivesia webberi</i>

C Whitebark pine

Pinus albicaulis

WHITE PINE COUNTY

Bird

C Greater sage-grouse

Centrocercus urophasianus

Fishes

E Pahrump poolfish

Empetrichthys latos

E White River spinedace

Lepidomeda albivallis

E = Endangered	T = Threatened	C = Candidate
Δ = Proposed for delisting	● = Designated Critical Habitat in County	* = Believed extirpated from Nevada
+ = Endangered only in the Virgin River, Muddy River population is a sensitive species.		

Last updated: August 5, 2011

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Appendix B Wetland Data Sheets

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS CO. Sampling Date: 6-6-10
 Applicant/Owner: _____ State: _____ Sampling Point: 1
 Investigator(s): J. BRAY, J. HALDERMAN Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MURA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes _____ No _____		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____		
Remarks: <u>DATA POINT LOCATED IN LOW-FLOW CHANNEL OF A RETENTION BASIN.</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>SALIX LEMONII</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____	(A)
2. _____				Total Number of Dominant Species Across All Strata: _____	(B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: _____	(A/B)
4. _____				Prevalence Index worksheet:	
<u>15</u> = Total Cover				Total % Cover of:	Multiply by:
Sapling/Shrub Stratum (Plot size: _____)				OBL species _____	x 1 = _____
1. _____				FACW species _____	x 2 = _____
2. _____				FAC species _____	x 3 = _____
3. _____				FACU species _____	x 4 = _____
4. _____				UPL species _____	x 5 = _____
5. _____				Column Totals: _____	(A) _____ (B)
_____ = Total Cover				Prevalence Index = B/A = _____	
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators:	
1. <u>ELEOCHARIS MACROSTACHY</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	<input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation	
2. <u>CAREX NEBRASCENSIS</u>	<u>35</u>	<u>Y</u>	<u>OBL</u>	___ 2 - Dominance Test is >50%	
3. _____				___ 3 - Prevalence Index is ≤3.0 ¹	
4. _____				___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. _____				___ 5 - Wetland Non-Vascular Plants ¹	
6. _____				___ Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
8. _____					
9. _____					
10. _____					
11. _____					
<u>75</u> = Total Cover				Hydrophytic Vegetation Present?	
Woody Vine Stratum (Plot size: _____)				Yes <input checked="" type="checkbox"/> No _____	
1. _____					
2. _____					
_____ = Total Cover					
% Bare Ground in Herb Stratum <u>25</u>					
Remarks:					

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1								ORGANIC
8								SILTY, LOBBLY, SAND

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

SOIL TOO UNCONSOLIDATED TO DETERMINE COLOR. SOIL WAS DETERMINED TO BE A PROBLEM INDICATOR AND, THEREFORE, WAS NOT USED IN THE WETLAND DETERMINATION.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): 9" +

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): 9" +

Wetland Hydrology Present? Yes No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS CO. Sampling Date: 6-6-10
 Applicant/Owner: _____ State: _____ Sampling Point: 1A
 Investigator(s): J. BRAY, J. HALDERMAN Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MURAZZA Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>	
Remarks: <u>DATA POINT LOCATED ABOVE LOW-FLOW CHANNEL OF RETENTION BASIN.</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
4. _____	_____	_____	_____	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species _____	x 1 = _____
3. _____	_____	_____	_____	FACW species _____	x 2 = _____
4. _____	_____	_____	_____	FAC species _____	x 3 = _____
5. _____	_____	_____	_____	FACU species _____	x 4 = _____
= Total Cover				UPL species _____	x 5 = _____
Herb Stratum (Plot size: _____)				Column Totals: _____ (A)	_____ (B)
1. <u>POA PRAEENSIS</u>	<u>100</u>	<u>Y</u>	<u>FACU</u>	Prevalence Index = B/A = _____	
2. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:	
3. _____	_____	_____	_____	___ 1 - Rapid Test for Hydrophytic Vegetation	
4. _____	_____	_____	_____	___ 2 - Dominance Test is >50%	
5. _____	_____	_____	_____	___ 3 - Prevalence Index is ≤3.0 ¹	
6. _____	_____	_____	_____	___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
7. _____	_____	_____	_____	___ 5 - Wetland Non-Vascular Plants ¹	
8. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation ¹ (Explain)	
9. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
10. _____	_____	_____	_____	= Total Cover	
11. _____	_____	_____	_____	= Total Cover	
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
= Total Cover					
% Bare Ground in Herb Stratum _____					
Remarks:					

SOIL

Sampling Point: 1A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
<u>6</u>							<u>SILTY SAND</u>	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Indicators for Problematic Hydric Soils³:

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

SOIL TOO UNCONSOLIDATED TO DETERMINE COLOR

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): <u>> 6" #</u>	
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): <u>> 6</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS Co. Sampling Date: 6-6-10
 Applicant/Owner: _____ State: _____ Sampling Point: 2
 Investigator(s): J. BRAY, J. HALDERMAN Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MULEA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____	
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Herb Stratum (Plot size: _____)				
1. <u>CAREX AQUATILIS</u>	<u>80</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. <u>JUNCUS BALTICUS</u>	<u>20</u>	<u>N</u>	<u>OBL</u>	
3. <u>VERATRUM CALIFORNICUM</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	
4. <u>SIDALCEA OREGANA</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>125</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks:				

SOIL

Sampling Point: Z

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
16	10YR 2/1	100					SANDY LOAM	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): 11"

Saturation Present? (includes capillary fringe) Yes No Depth (inches): SURFACE

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS Co. Sampling Date: 6-6-10
 Applicant/Owner: _____ State: _____ Sampling Point: 2A
 Investigator(s): J. BRAY, J. HALDERMAN Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MURA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes _____	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____			
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)	
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)	
4. _____				Prevalence Index worksheet:	
= Total Cover					
Sapling/Shrub Stratum (Plot size: _____)				Total % Cover of:	Multiply by:
1. <u>PINUS JEFFREYI</u>	<u>10</u>	<u>Y</u>	<u>UPL</u>	OBL species _____ x 1 = _____	
2. _____				FACW species _____ x 2 = _____	
3. _____				FAC species _____ x 3 = _____	
4. _____				FACU species _____ x 4 = _____	
5. _____				UPL species _____ x 5 = _____	
<u>10</u> = Total Cover				Column Totals: _____ (A)	_____ (B)
Herb Stratum (Plot size: _____)				Prevalence Index = B/A = _____	
1. <u>POA PRATENSIS</u>	<u>20</u>	<u>N</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>VICIA VILLOSA</u>	<u>40</u>	<u>Y</u>	<u>UPL</u>		
3. <u>JUNCUS BALTICUS</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>		
4. <u>CAREX KOBUSCOWSKUS</u>	<u>15</u>	<u>N</u>	<u>OBL</u>		
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
<u>115</u> = Total Cover					
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	
1. _____					
2. _____					
= Total Cover					
% Bare Ground in Herb Stratum <u>0</u>					
Remarks:					

SOIL

Sampling Point: 2A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
12	10YR 2/1						Sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (Ft) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): > 12"

Saturation Present? (includes capillary fringe) Yes No Depth (inches): > 12"

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROADS City/County: STATELINE, DOUGLAS Co. Sampling Date: 6-6-10

Applicant/Owner: _____ State: _____ Sampling Point: 3

Investigator(s): J. BRAY, J. HALDERMAN Section, Township, Range: T13N R18E

Landform (hillslope, terrace, etc.): MULEA 22A Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____	
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																
1. <u>ALNUS</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)															
2. _____																			
3. _____																			
4. _____																			
_____ = Total Cover				Prevalence Index worksheet: <table style="width:100%; border: none;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> Prevalence Index = B/A = _____		Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____
Total % Cover of:	Multiply by:																		
OBL species _____	x 1 = _____																		
FACW species _____	x 2 = _____																		
FAC species _____	x 3 = _____																		
FACU species _____	x 4 = _____																		
UPL species _____	x 5 = _____																		
Column Totals: _____	(A) _____ (B) _____																		
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																
1. _____																			
2. _____																			
3. _____																			
4. _____																			
5. _____																			
_____ = Total Cover																			
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.															
1. <u>CAREX AQUATILIS</u>	<u>80</u>	<u>Y</u>	<u>OBSL</u>																
2. <u>JUNCUS BALTICUS</u>	<u>20</u>	<u>Y</u>	<u>OBSL</u>																
3. _____																			
4. _____																			
5. _____																			
6. _____																			
7. _____																			
8. _____																			
9. _____																			
10. _____																			
11. _____																			
_____ = Total Cover																			
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____															
1. _____																			
2. _____																			
_____ = Total Cover																			
% Bare Ground in Herb Stratum _____																			
Remarks:																			

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
4	10YR 2/1						SANDY LEAN	
3	10YR 3/3						LEAN SAND	
5	10YR 2/1						SANDY LEAN	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): 13"

Saturation Present? (includes capillary fringe) Yes No Depth (inches): 0

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROADS City/County: STATELINE, DOUGLAS Co. Sampling Date: 6-6-10
 Applicant/Owner: _____ State: _____ Sampling Point: 3A
 Investigator(s): J. BRAY, J. HALDERMAN Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MURA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes _____	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>50</u> (A/B)
4. _____	_____	_____	_____	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species _____	x 1 = _____
3. _____	_____	_____	_____	FACW species _____	x 2 = _____
4. _____	_____	_____	_____	FAC species _____	x 3 = _____
5. _____	_____	_____	_____	FACU species _____	x 4 = _____
= Total Cover				UPL species _____	x 5 = _____
Herb Stratum (Plot size: _____)				Column Totals:	_____ (A) _____ (B)
1. <u>CAREX NEBRASCENSIS</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	Prevalence Index = B/A = _____	
2. <u>JUNCUS BALTICUS</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators:	
3. <u>POT PRATENSIS</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
4. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
5. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	
6. _____	_____	_____	_____		
7. _____	_____	_____	_____	= Total Cover	
8. _____	_____	_____	_____		
9. _____	_____	_____	_____	= Total Cover	
10. _____	_____	_____	_____		
11. _____	_____	_____	_____	= Total Cover	
12. _____	_____	_____	_____		
Woody Vine Stratum (Plot size: _____)				= Total Cover	
1. _____	_____	_____	_____	= Total Cover	
2. _____	_____	_____	_____		
% Bare Ground in Herb Stratum <u>10</u>				= Total Cover	
Remarks:					

SOIL

Sampling Point: 3A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
12	10YR 3/2						SILTY loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): 712

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): 712

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROADS City/County: STATELINE, DOUGLAS Co. Sampling Date: 6-6-10
 Applicant/Owner: _____ State: _____ Sampling Point: 4
 Investigator(s): J. BRAY, J. HALDERMAN Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MURA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <u>DATA POINT LOCATED ON RELATIVELY STEEP SLOPE ABOVE MEADOW.</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width:100%; border: none;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____ (A)	_____ (B)																	
Sapling/Shrub Stratum (Plot size: _____)	1. _____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
_____ = Total Cover																		
Herb Stratum (Plot size: _____)	1. <u>JUNCUS BALTICUS</u>	<u>20</u>	<u>Y</u> <u>OBL</u>															
2. <u>POA PRATENSIS</u>	<u>20</u>	<u>N</u> <u>FACU</u>																
3. <u>TRIPLOIDON DUBIOS</u>	<u>10</u>	<u>N</u> <u>UPL</u>																
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
_____ = Total Cover																		
Woody Vine Stratum (Plot size: _____)	1. _____	_____	_____															
2. _____	_____	_____	_____															
_____ = Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																		
Remarks:																		

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 5 - Wetland Non-Vascular Plants¹
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No _____

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
6	10YR 3/7		5YR 3/4	10	RM	M	SANDY LOAM	
7.5	10YR 2/2							

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): 712

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): 712

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS CO. Sampling Date: 6-6-10
 Applicant/Owner: _____ State: _____ Sampling Point: 5
 Investigator(s): J. BRAY, J. HALDERMAN Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MURAZZA Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____	
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>ALNUS INCANA TENUIFOLIA</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. <u>SALIX LASIOLEPIS</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. <u>ABIES CONCOLOR</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
4. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<u>105</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>CAREX AMPHIFOLIA</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>VERATRUM CALIFORNICUM</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
3. <u>EQUISETUM ARVENSE</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>85</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>15</u>				
Remarks:				

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
14	10YR 2/1						Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): 10

Saturation Present? (includes capillary fringe) Yes No Depth (inches): 0

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS CO. Sampling Date: 6-6-10
 Applicant/Owner: _____ State: _____ Sampling Point: SA
 Investigator(s): J. BRAY, J. HALDERMAN Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MURA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes _____	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>SALIX LASIOLOPUS</u>	30	Y	FACW	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. <u>POPULUS TREMULOIDES</u>	40	Y	FAC	Total Number of Dominant Species Across All Strata:	5 (B)
3. <u>ABIES CONCOLOR</u>	5	N	UPL	Percent of Dominant Species That Are OBL, FACW, or FAC:	20 (A/B)
4. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
75 = Total Cover					
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>AMELANCHIER ALNIFOLIA VAR PUMILA</u>	20	Y	FACU		
2. <u>ROSA WOODSII VAR ULTRAMONTANA</u>	5	N	FACU		
3. _____					
4. _____					
5. _____					
25 = Total Cover					
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
1. <u>FOURCROON ARVENSE</u>	15	Y	FAC		
2. <u>ELYMUS SPALUCUS</u>	20	Y	FACU		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
35 = Total Cover					
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	
1. _____					
2. _____					
_____ = Total Cover					
% Bare Ground in Herb Stratum <u>20</u>					
Remarks:					

SOIL

Sampling Point: 5A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
14	10YR 2/2						SANDY LOAM	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Indicators for Problematic Hydric Soils³:

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): > 14

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): > 14

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS Co. Sampling Date: 6-6-10
 Applicant/Owner: _____ State: _____ Sampling Point: 6
 Investigator(s): J. BRAY, J. HALDERMAN Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MURAZZA Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)			
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)			
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)			
4. _____	_____	_____	_____				
_____ = Total Cover							
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:			
1. <u>Y</u>	_____	_____	_____			Total % Cover of: _____ Multiply by: _____	
2. _____	_____	_____	_____	OBL species _____ x 1 = _____			
3. _____	_____	_____	_____	FACW species _____ x 2 = _____			
4. _____	_____	_____	_____	FAC species _____ x 3 = _____			
5. _____	_____	_____	_____	FACU species _____ x 4 = _____			
_____ = Total Cover				UPL species _____ x 5 = _____			
				Column Totals: _____ (A) _____ (B)			
				Prevalence Index = B/A = _____			
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
1. <u>CAREX NEBRASCENSIS</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>				
2. <u>JUNCUS BALTIUS</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>				
3. <u>CAREX PRAEGRAVILIS</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>				
4. _____	_____	_____	_____				
5. _____	_____	_____	_____				
6. _____	_____	_____	_____				
7. _____	_____	_____	_____				
8. _____	_____	_____	_____				
9. _____	_____	_____	_____				
10. _____	_____	_____	_____				
11. _____	_____	_____	_____				
<u>110</u> = Total Cover							
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____			
1. _____	_____	_____	_____				
2. _____	_____	_____	_____				
_____ = Total Cover							
% Bare Ground in Herb Stratum <u>0</u>							
Remarks:							

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
8	10YR 2/7						SILTY SAND	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
Very Organic Soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): 78

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): 78

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS Co. Sampling Date: 6-6-10
 Applicant/Owner: _____ State: _____ Sampling Point: 6A
 Investigator(s): J. BRAY, J. HALDERMAN Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MURA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>POA SECUNDA</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>POTENTILLA BRACIUS</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
3. <u>BROMUS TECTORUM</u>	<u>15</u>	<u>N</u>	<u>UPL</u>	
4. <u>PLANTAGO MAJOR</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>15</u> _____ = Total Cover				
Remarks: _____				

Hydrophytic Vegetation Present? Yes _____ No

SOIL

Sampling Point: 6A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
8	10YR 3/3						SILTY SAND	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): 78

Saturation Present? Yes _____ No Depth (inches): 78

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

SOIL

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	10YR 2/1	100%	—	—	C	M		Sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

2 cm Muck (A10)
 Red Parent Material (TF2)
 Very Shallow Dark Surface (TF12)
 Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Inundated marshy soil - Redox features obscured.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (2 or more required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)
	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
	<input type="checkbox"/> Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>2-3"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>surface</u>	
Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>surface</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS Co. Sampling Date: 7-20-11

Applicant/Owner: _____ State: CA/NV Sampling Point: 7

Investigator(s): Mike Trueblood Section, Township, Range: T13N R18E

Landform (hillslope, terrace, etc.): MURA 22A Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____	
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix sp.</u>	<u>50%</u>	<u>Yes</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
<u>50%</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Carex amplifolia</u>	<u>60%</u>	<u>Yes</u>	<u>Obl</u>	Hydrophytic Vegetation indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Scirpus microcarpus</u>	<u>30%</u>	<u>Yes</u>	<u>Obl</u>	
3. <u>Larrea arizonae</u>	<u>20%</u>	<u>No</u>	<u>Obl</u>	
4. <u>Lymnaea trilineata</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>100%</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 60 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS CO. Sampling Date: 7-20-11
 Applicant/Owner: _____ State: CA/NV Sampling Point: 7a
 Investigator(s): Mike Trueblood Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MLRA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland?	Yes _____	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____			
Remarks: <u>upland Data point</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix lemmonii</u>	<u>40%</u>	<u>Yes</u>	<u>Obl</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	
<u>40%</u> = Total Cover				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: _____)				Total % Cover of: _____ Multiply by: _____
1. _____	_____	_____	_____	OBL species _____ x 1 = _____
2. _____	_____	_____	_____	FACW species _____ x 2 = _____
3. _____	_____	_____	_____	FAC species _____ x 3 = _____
4. _____	_____	_____	_____	FACU species _____ x 4 = _____
5. _____	_____	_____	_____	UPL species _____ x 5 = _____
_____ = Total Cover				Column Totals: _____ (A) _____ (B)
Herb Stratum (Plot size: _____)				Prevalence Index = B/A = _____
1. <u>Poa pratensis</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>larkspur grass</u>	<u>60%</u>	<u>Yes</u>	<u>-</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>90%</u> = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: _____				

SOIL

Sampling Point: 7a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features					Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²			
0-13"	10R2/2	100%							dark clay lean

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No Depth (inches):

Water Table Present? Yes _____ No Depth (inches): 713"

Saturation Present? Yes _____ No Depth (inches): 713"
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 60 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS CO. Sampling Date: 7-20-11
 Applicant/Owner: _____ State: CA/NV Sampling Point: 8
 Investigator(s): Mike Trueblood Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MLRA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				OBL species _____ x 1 = _____
1. _____	_____	_____	_____	FACW species _____ x 2 = _____
2. _____	_____	_____	_____	FAC species _____ x 3 = _____
3. _____	_____	_____	_____	FACU species _____ x 4 = _____
4. _____	_____	_____	_____	UPL species _____ x 5 = _____
5. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)
_____ = Total Cover				Prevalence Index = B/A = _____
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ 5 - Wetland Non-Vascular Plants ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Mimulus guttatus</u>	<u>30%</u>	<u>Yes</u>	<u>Obl</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Juncus balticus</u>	<u>20%</u>	<u>Yes</u>	<u>Obl</u>	
3. <u>Rumex crispus</u>	<u>1%</u>	<u>No</u>	<u>Facw</u>	
4. <u>Lycopus triticeoides</u>	<u>49%</u>	<u>Yes</u>	<u>Fac</u>	
5. <u>Carex aquatilis</u>	<u>5%</u>	<u>No</u>	<u>Obl</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>100%</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				

SOIL

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	10YR 2/2	100%	-	-	-	-	-	dark silty loam
6-12"	2.5Y 3/2	85%	7.5YR 3/4	15%	C	M	-	Sand

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input checked="" type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No Depth (inches): -

Water Table Present? Yes No Depth (inches): 712"

Saturation Present? (includes capillary fringe) Yes No Depth (inches): 712"

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 60 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS CO. Sampling Date: 7-20-11
 Applicant/Owner: _____ State: CA/NV Sampling Point: 8a
 Investigator(s): Mike Trueblood Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MLRA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes _____	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>			
Remarks: <u>upland Data point</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)		
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)		
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)		
4. _____	_____	_____	_____	Prevalence index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____		
_____ = Total Cover						
Sapling/Shrub Stratum (Plot size: _____)						
1. _____	_____	_____	_____			
2. _____	_____	_____	_____			
3. _____	_____	_____	_____			
4. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
5. _____	_____	_____	_____			
_____ = Total Cover						
Herb Stratum (Plot size: _____)						
1. <u>Bromus diandrus</u>	<u>30%</u>	<u>Yes</u>	<u>UPL</u>			
2. <u>Potentilla gracilis</u>	<u>20%</u>	<u>NO</u>	<u>FACW</u>			
3. <u>Trifolium longipes</u>	<u>30%</u>	<u>Yes</u>	<u>FACW</u>			
4. <u>Tropaeolum sp.</u>	<u>15%</u>	<u>NO</u>	<u>UPL</u>			
5. _____	_____	_____	_____			
6. _____	_____	_____	_____			
7. _____	_____	_____	_____			
8. _____	_____	_____	_____			
9. _____	_____	_____	_____			
10. _____	_____	_____	_____			
11. _____	_____	_____	_____			
<u>105%</u> = Total Cover						
Woody Vine Stratum (Plot size: _____)						
1. _____	_____	_____	_____			
2. _____	_____	_____	_____			
_____ = Total Cover						
% Bare Ground in Herb Stratum _____						
Remarks: _____						
<table style="width:100%;"> <tr> <td style="width:30%;">Hydrophytic Vegetation Present?</td> <td>Yes _____</td> <td>No <input checked="" type="checkbox"/></td> </tr> </table>				Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>
Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>				

SOIL

Sampling Point: 8a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9"	2.5YR 3/3	100%	—	—	—	—		Sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): —

Water Table Present? Yes _____ No Depth (inches): 79"

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): 79"

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS CO. Sampling Date: 7-20-11
 Applicant/Owner: _____ State: CA/MV Sampling Point: 9
 Investigator(s): Mike Trueblood Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MLRA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Carex aquatilis</u>	<u>20%</u>	<u>Yes</u>	<u>Obl</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. <u>Lolium hybrid</u>	<u>50%</u>	<u>Yes</u>	<u>Fac</u>	
3. <u>Suncus sp.</u>	<u>10%</u>	<u>No</u>	<u>Fac</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>80%</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: <u>vegetation slightly hydric due to snow melt hydrology</u> <u>Lolium is a hybrid of Lolium multi-storum and Lolium perenne</u>				

SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2"	10YR3/2	100%	—	—	—	—		Sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): —

Water Table Present? Yes _____ No Depth (inches): 27"

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): 27"

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: snow melt saturates this area in late spring. likely

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region
 S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 60 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS CO. Sampling Date: 7-20-11
 Applicant/Owner: _____ State: CA/NV Sampling Point: 10
 Investigator(s): MIKE TRUEBLOOD Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MLCA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: _____	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
= Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	_____	_____	_____	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ 5 - Wetland Non-Vascular Plants ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Herb Stratum (Plot size: _____)	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. <u>rumex crispus</u>	<u>25%</u>	<u>Yes</u>	<u>Obl</u>	
2. <u>belium hybrid</u>	<u>5%</u>	<u>No</u>	<u>Fac</u>	
3. <u>Trifolium lempiper</u>	<u>25%</u>	<u>Yes</u>	<u>Facw</u>	
4. <u>Carex aquatilis</u>	<u>35%</u>	<u>Yes</u>	<u>Obl</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>90%</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	_____	_____	_____	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum _____ = Total Cover				
Remarks: _____				

SOIL

Sampling Point: 10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3"	10YR 2/2	100%						dark sandy loam
6-10"	2.5Y 3/2	85%	2.5YR 3/4	15%	C	M		Sandy roadside ditch

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input checked="" type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils ³ : <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes No Depth (inches): —

Water Table Present? Yes No Depth (inches): 710"

Saturation Present? Yes No Depth (inches): 710"

(includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: annual grassland meadow generally flows to roadway shoulder, wetland hydrology along fence line only.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROADS City/County: STATELINE, DOUGLAS CO. Sampling Date: 7-20-11
 Applicant/Owner: _____ State: CA/NV Sampling Point: 10a
 Investigator(s): Mike Trueblood Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MLRA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>	
Remarks: <u>upland detapoint</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Herb Stratum (Plot size: _____)				
1. <u>Lolium hybrid</u>	<u>100%</u>	<u>Yes</u>	<u>Fac</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: <u>Lolium is a hybrid of Lolium multistemum and Lolium perenne.</u>				

SOIL

Sampling Point: 10a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10"	10YR 3/3	100%	—	—	—	—		Sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Depleted Dark Surface (F7)	
	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)
	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
	<input type="checkbox"/> Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): —

Water Table Present? Yes _____ No Depth (inches): > 10"

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): > 10"

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROADS City/County: STATELINE, DOUGLAS CO. Sampling Date: 7-20-11
 Applicant/Owner: _____ State: CA/NV Sampling Point: 11
 Investigator(s): Mike Trueblood Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MLRA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____	
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Herb Stratum (Plot size: _____)				
1. <u>Poa pratensis</u>	<u>10%</u>	<u>NO</u>	<u>FACU</u>	
2. <u>Calitriche marginata</u>	<u>30%</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Cyperus sp.</u>	<u>30%</u>	<u>Yes</u>	<u>FACW</u>	
4. <u>Juncus balticus</u>	<u>20%</u>	<u>Yes</u>	<u>OBL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				

SOIL

Sampling Point: 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	10YR 2/1	100%	—	—	—	—		Sandy clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input checked="" type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Inundates soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>6"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>Surface</u>	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>Surface</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS CO. Sampling Date: 7-20-11
 Applicant/Owner: _____ State: CA/NV Sampling Point: 11a
 Investigator(s): Mike Trueblood Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MLRA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>	
Remarks: <u>Upland datapoint</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
= Total Cover				
Sapling/Shrub Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____				
= Total Cover				
Herb Stratum (Plot size: _____) 1. <u>Lolium hybrid</u> <u>30%</u> <u>Yes</u> <u>FAC</u> 2. <u>(Tropidocarpum sp.)</u> <u>10%</u> <u>NO</u> <u>UPL</u> 3. <u>Bromus diandrus</u> <u>40%</u> <u>Yes</u> <u>UPL</u> 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____				
= Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____				
= Total Cover				
% Bare Ground in Herb Stratum _____ = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>				
Remarks: _____				

SOIL

Sampling Point: 11a

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12"	10YR 3/3	100%	-	-	-	-		Sandy clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

- Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**
- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) | Indicators for Problematic Hydric Soils³: |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) | |
| | | |
| | | |
- 2 cm Muck (A10)
 Red Parent Material (TF2)
 Very Shallow Dark Surface (TF12)
 Other (Explain in Remarks)
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks: _____

HYDROLOGY

- Wetland Hydrology Indicators:**
- | | | |
|---|---|--|
| Primary Indicators (minimum of one required; check all that apply) | | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) | <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Frost-Heave Hummocks (D7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | |

Field Observations:

Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): <u>>12"</u>	
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): <u>>12"</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

▽

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS Co. Sampling Date: 7-20-11
 Applicant/Owner: _____ State: CA/NV Sampling Point: 12
 Investigator(s): Mike Trueblood Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MLRA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix sp.</u>	<u>40%</u>	<u>Yes</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. <u>Alnus Chumbisolia</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>60%</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ 5 - Wetland Non-Vascular Plants ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
_____ = Total Cover				
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Equisetum arvense</u>	<u>50%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				

SOIL

Sampling Point: 12

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12"	10YR2/1	100%						dark sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

Field Observations:

Surface Water Present? Yes No Depth (inches): 3"

Water Table Present? Yes No Depth (inches): surface

Saturation Present? (includes capillary fringe) Yes No Depth (inches): surface

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

S. LAKE TAHOE, EL DORADO CO.

Project/Site: U.S. 50 STATELINE CORE / LOOP ROAD City/County: STATELINE, DOUGLAS CO. Sampling Date: 7-20-11
 Applicant/Owner: _____ State: CA/NV Sampling Point: 12a
 Investigator(s): Mike Trueblood Section, Township, Range: T13N R18E
 Landform (hillslope, terrace, etc.): MURRA 22A Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>	
Remarks: <p style="text-align: center; font-size: 1.2em;">upland datapoint</p>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Pinus jefferyi</u>	<u>30%</u>	<u>Yes</u>	<u>UPL</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____) <u>30%</u> = Total Cover				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Herb Stratum (Plot size: _____) _____ = Total Cover				
1. <u>Poa pratensis</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Unknown grass</u>	<u>30%</u>	<u>Yes</u>	<u>UPL</u>	
3. <u>?</u>	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
Woody Vine Stratum (Plot size: _____) <u>60%</u> = Total Cover				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum _____ = Total Cover				
Remarks:				

SOIL

Sampling Point: 12a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10"	10YR 2/2	100%	—	—	—	—	dark sandy clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): —

Water Table Present? Yes _____ No Depth (inches): >10"

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): >10"

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____