April 5, 2013

Nancy Gibson, Forest Supervisor
USFS Lake Tahoe Basin Management Unit
35 College Drive
South Lake Tahoe, CA 96150

R6T-2013-0027, ORDER FOR CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION FOR UPPER TRUCKEE RIVER REACH FIVE RESTORATION AND UTILITY RELOCATION PROJECT, EL DORADO COUNTY, WDID 6A091212001

The California Regional Water Quality Control Board, Lahontan Region (Water Board) has received a complete Clean Water Act (CWA) Section 401 Water Quality Certification (WQC) application and application filing fee for the Upper Truckee River Reach Five Restoration and Utility Relocation Project (Project). This Order for WQC hereby assigns this Project the following reference number: Waste Discharger Identification (WDID) No. 6A091212001. Please use this reference number in all future Project-related correspondence.

Any person aggrieved by this action of the Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

PROJECT DESCRIPTION

Table of Project Information:

WDID Number	6A091212001
Applicant	Nancy Gibson, U.S. Forest Service-Lake Tahoe Basin Management Unit (LTBMU), 35 College Drive, SLT CA 96150
Agent	none
Project Name	Upper Truckee River Reach Five Restoration and Utility Relocation Project

Table of Project Information continued:

Project Purpose and Description	River and wet meadow restoration, including constructing a new channel that is smaller in size so that it will overbank onto the adjacent meadow floodplain more frequently. The Project will restore natural function to Reach 5 by constructing a geomorphically stable river channel that is hydrologically connected to the adjacent floodplain and exhibits desirable aquatic features. The new channel will have a width, depth, and sinuosity pattern more consistent with the current flow and sediment transport needs of the river. The Project includes 7,420 feet of new river channel, grading 5.6 acres of floodplain, revegetation of disturbed areas, sod harvest and placement, and abandoning, filling, and vegetating the existing eroding and incised channel.
Project Type	Stream restoration
Project County	El Dorado
Project Address or other Locating Information	4 miles south of City of South Lake Tahoe, Sunset Stables entrance off Hwy 50/89; Parcels:033-110-11, 033-191-05, 033-050-18, 033-050-14, and 033-050-19
Location Latitude/Longitude	Latitude: 38.888392 Longitude: -119.993478 (center of Project)
Hydrologic Unit(s)	Hydrologic Unit, 634.10
Overall Project Area	297 acres
Receiving Water(s) Name	Upper Truckee River
Water Body Type(s)	Perennial stream
Designated Beneficial Uses	MUN, AGR, GWR, NAV, REC-1, REC-2, COMM, COLD, WILD, MIGR, SPWN
Potential Water Quality Impacts	Discharge and threatened discharge of solid and liquid earthen wastes to Stream Environment Zone and Upper Truckee River. Violation of narrative water quality objective for turbidity.
Area of Water(s) within the Overall Project Area	21 acres within the 98-acre Reach 5 disturbance area (11 acres of Reach 5 river + 10 acres of wetland in Reach 5 98-acre disturbance area; does not include Reach 6 river or wetland)

Project Impacts (**Fill**) to Waters of the State, including Waters of the U.S.

Waterbody Type	**Permanent**			**Temporary**		
	Acres / Sq. Ft.	Linear Feet	Cubic Yards	Acres / Sq. Ft.	Linear Feet	Cubic Yard
Lake						
Riparian						
Stream	11 acres	7400	54,163			
Wetland						

Project Impacts (**Dredge/ Excavation**) to Waters of the State, including Waters of the U.S.

Waterbody Type	**Permanent**			**Temporary**		
	Acres / Sq. Ft.	Linear Feet	Cubic Yards	Acres / Sq. Ft.	Linear Feet	Cubic Yard
Lake						
Riparian						
Stream						
Wetland	2.14		6400			
Total						

Table of Project Information continued:

Federal Permit(s)	The applicant has applied for U.S. Army Corps of Engineers (USACOE) authorization to proceed under Nationwide Permit No.27, pursuant to CWA section 404.
Non-Compensatory Mitigation	The Project will be implemented during seasonal low water levels. Sediment and erosion control Best Management Practices (BMPs) will be used throughout the construction period and for seasonal winterization. A detailed dewatering and diversion plan has been prepared, and dewatering discharges will be directed to meadow and upland infiltration areas. The Project access and haul road follows an existing utility easement to minimize impacts to the meadow.
Compensatory Mitigation	As this is a restoration project, compensatory mitigation is not required.
Applicable Fees	$944.00
Fees Received	$944.00

CEQA COMPLIANCE

The California Tahoe Conservancy adopted a Negative Declaration (State Clearinghouse No. 2031042069) on December 16, 2011, and filed a Notice of Determination on March 21, 2012 for the Upper Truckee River Sunset Stables Reach Restoration Project, pursuant to the California Environmental Quality Act, (CEQA Public Resources Code 21000, et seq.).

The Water Board, acting as a CEQA Responsible Agency in compliance with California Code of Regulations, Title 14, section 15096, has reviewed and considered the California Tahoe Conservancy's Negative Declaration (ND) and any proposed changes incorporated into the project or required as a condition of approval to avoid significant effects to the environment. The Applicant has designed the Project and incorporated appropriate erosion and storm water runoff controls such that it will not have a significant impact.

Water quality protection measures and monitoring plans are included in the Storm Water Pollution Prevention Plan (SWPPP) prepared by the Applicant. As part of the National Pollutant Discharge Elimination System Construction Storm Water Permit approval process required for this Project, Water Board staff will review the SWPPP to ensure proposed mitigation and monitoring efforts are consistent with those specified by the adopted negative declaration.

WATER QUALITY CONTROL PLAN WASTE DISCHARGE PROHIBITION

To protect beneficial uses and achieve water quality objectives for the waters of Lake Tahoe and its tributaries, the Water Quality Control Plan for the Lahontan Region (Basin Plan) specifies the following discharge prohibitions:

Lake Tahoe Basin:

> *The discharge or threatened discharge, attributable to new development or permanent disturbance in Stream Environment Zones, of solid or liquid waste, including soil, silt, sand, clay, rock, metal, plastic, or other organic, mineral or earthen materials, to Stream Environment Zone in the Lake Tahoe Basin is prohibited.* (Chapter 5, Waste Discharge Prohibitions, page 5.2-4)

Regionwide:

> *The discharge of waste which causes violation of any numeric water quality objective contained in this Plan is prohibited.* (Chapter 5, Waste Discharge Prohibitions, page 5.2-1)

Discharge in SEZs and Violation of Numeric Water Quality Objective

The Project will involve soil disturbance and discharge of earthen materials within the SEZ but is intended to reduce existing sources of soil erosion and water pollution within the SEZ. Releasing flow into newly constructed portions of the Upper Truckee River may result in the temporary violation of Basin Plan turbidity standards.

Prohibition Exception Granted

At its February 14, 2013 meeting, the Water Board adopted Resolution No. R6T-2013-0011 to grant exemptions to the Basin Plan prohibitions described above for the Project. The Water Board found that the Project met all the conditions and eligibility criteria for an exemption to the Basin Plan waste discharge prohibitions. The Applicant has incorporated appropriate Best Management Practices (BMPs) into the Project to ensure that any erosion and surface runoff caused by the Project are minimized to a level of less than significant.

SECTION 401 WATER QUALITY CERTIFICATION

Authority

Section 401 of the CWA (33 U.S.C., paragraph 1341) requires that any applicant for a CWA Section 404 permit, who plans to conduct any activity that may result in discharge of dredged or fill materials to waters of the United States, must provide to the permitting agency a certification that the discharge will be in compliance with applicable water quality standards of the state in which the discharge will originate. No Section 404 permit may be granted (or valid) until such certification is obtained. The LTBMU submitted a complete application and the fees required for WQC under

Section 401 for the Project. The Applicant has applied for USACOE authorization to proceed under Nationwide Permit No. 27 pursuant to CWA section 404.

California Code of Regulations (CCR) title 23, section 3831(e) grants the Water Board Executive Officer the authority to grant or deny WQC for projects in accordance with CWA section 401. The Project qualifies for such WQC.

Standard Conditions

Pursuant to CCR title 23, section 3860, the following standard conditions are requirements of this certification:

1. This Certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to California Water Code section 13330 and CCR title 23, section 3867.

2. This Certification action is not intended and must not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license unless the pertinent certification application was filed pursuant to CCR title 23, section 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

3. The validity of any non-denial certification action must be conditioned upon total payment of the full fee required under CCR title 23, section 3833, unless otherwise stated in writing by the certifying agency.

4. Neither project construction activities nor operation of the project may cause a violation of the Basin Plan, may cause a condition or threatened condition of pollution or nuisance, or cause any other violation of the California Water Code.

5. The project must be constructed and operated in accordance with the project described in the application for WQC that was submitted to the Water Board. Deviation from the project description constitutes a violation of the conditions upon which the Certification was granted. Any significant changes to this project that would have a significant or material effect on the findings, conclusions, or conditions of this certification, including project operation, must be submitted to the Executive Officer for prior review and written approval.

6. This WQC is subject to the acquisition of all local, regional, state, and federal permits and approvals as required by law. Failure to meet any conditions contained herein or any conditions contained in any other permit or approval issued by the State of California or any subdivision thereof may result in the revocation of this Certification and civil or criminal liability.

7. The Lahontan Water Board may add to or modify the conditions of this WQC as appropriate to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or Section 303 of the CWA, or as appropriate to coordinate the operations of this project with other projects where coordination of operations is reasonably necessary to achieve water quality standards or protect the beneficial uses of water. Notwithstanding any more specific conditions in this Certification, the project must be constructed and operated in a manner consistent with all water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or Section 303 of the CWA.

8. This Certification does not authorize any act which results in the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under the California Endangered Species Act (Fish and Game Code section 2050 et seq.) or the federal Endangered Species Act (16 U.S.C. sections 1531 et seq.). If a "take" will result from any act authorized under this Certification, the applicant must obtain authorization for the take prior to construction or operation of the project. The Applicant is responsible for meeting all applicable requirements of the State and Federal Endangered Species Acts for the project authorized under this Certification.

Additional Conditions

Pursuant to CCR title 23, section 3859(a), the following additional conditions are requirements of this certification:

1. Maintain a copy of this Order at the Project site so as to be available at all times to site operating personnel and agencies.

2. Immediately (within two hours) notify Water Board staff by telephone whenever an adverse condition occurs as a result of this Project. Such a condition includes, but is not limited to, a violation of the conditions of this Order, a significant spill of petroleum products or toxic chemicals, or damage to control facilities that would cause noncompliance. A written notification of the adverse condition must be provided to the Water Board within two weeks of occurrence. The written notification must identify the adverse condition, describe the actions necessary to remedy the condition, and specify a timetable, subject to any modifications by Water Board staff, for the remedial actions.

3. No debris, cement, concrete (or wash water therefrom), oil or petroleum products must enter into or be placed where it may be washed from the Project site by rainfall or runoff into waters of the State. When operations are completed, any excess material must be removed from the Project work area, and from any areas adjacent to the work area where such material may be transported into waters of the State.

4. Construction equipment shall be monitored for leaks, and removed from service if necessary to protect water quality.

5. An emergency spill kit shall be at the project site at all times.

6. All temporary BMPs shall be inspected daily during project construction. The Applicant shall maintain and keep daily inspection logs onsite during project construction and provide a copy of inspection logs to Water Board staff upon request.

7. The Basin Plan contains the following numeric water quality objective for turbidity:

   Increases in turbidity shall not exceed natural levels by more than 10 percent. (Chapter 5, Water Quality Objectives, page 5.1-9)

   Unless otherwise approved by the Water Board, turbidity levels downstream of the Project area shall not be increased by more than ten percent above background levels as measured upstream of the Project area.

8. The introduction of flow into the newly constructed channel and installation of temporary crossings and diversions may result in a violation in the numeric water quality objective for turbidity described in Condition 7 above. In adopting Resolution No. R6T-2013-0011 (enclosed), the Water Board made the necessary findings to allow the Applicant to temporarily violate the turbidity water quality objective and set specific limits on the magnitude and duration of allowable turbidity increases.

   Following channel construction and seasoning activities, the Applicant will introduce flow into the improved channel <u>without connecting to the live channel.</u> The Applicant shall pump this introduced flow to approved upland dewatering areas until the turbidity in the last reach of the new channel is less than or equal to 10 NTUs. At that time, the Applicant will notify Water Board staff of its intention to release flows from the improved channel reach to the existing channel.

   The introduction of flow to the newly constructed channel shall not cause turbidity downstream of the Project to be elevated above 15 NTUs or ten percent above background levels measured upstream, whichever is greater. The Applicant shall not cause turbidity levels downstream of Project to be increased by more than ten percent above background levels at any time after 48 hours of reestablishing flow through the Project area.

9. Install and maintain continuous turbidity monitoring equipment in the Upper Truckee River upstream and downstream of the Project to determine if construction activity is affecting receiving water quality and will follow all calibration and maintenance instructions specified by the turbidity probe

manufacturer. Turbidity monitoring equipment must be installed prior to earth disturbing activities each spring or summer but is not required to be maintained during inactive winter periods.

Notify Water Board staff by telephone within 24 hours if collected water quality data indicate that construction activities have caused downstream turbidity to increase by more than 10 percent of that upstream of the Project.

10. The Applicant has prepared and submitted a detailed SWPPP as part of the National Pollutant Discharge Elimination System Construction Storm Water Permit approval process required for this Project. The SWPPP describes detailed temporary BMPs, dewatering methods, and monitoring plans. Follow all terms and conditions of the submitted SWPPP, and any future amendments to the SWPPP accepted by Water Board staff.

11. Complete the enclosed Wetland Tracker Forms prior to commencement of ground disturbing activities and submit the completed forms to the Water Board. Electronic version of the forms and additional information about Wetland Tracker can be found at http://www.californiawetlands.net/tracker/.

12. Perform monitoring and reporting as described in the Effectiveness Monitoring Plan.

13. The following additional monitoring, as described in the 'Additional Monitoring' section and Table 1 of the January 2013 draft Effectiveness Monitoring Plan, is required:

    a. Perform longitudinal profile surveys to measure channel bed elevations throughout the project reach, and to track riffle elevations over time. Monitoring will occur prior to project activities, immediately following construction, and will be repeated approximately every 5 years of after large flow events (defined as a 5 year recurrence interval or longer).
    b. Measure bank height using Rosgen methods at several locations along the existing channel and measured again post-construction and after the first large flow event.
    c. Monitor bank stability using the Rosgen method from estimating Bank Erosion Hazard Index and Near Bank Stress. Monitor this prior to project implementation, the season after construction is complete, and after the first large flow event.

14. Report the results from the above monitoring with other monitoring results as described in the Effectiveness Monitoring Plan.

Enforcement

1. In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation must be subject to any remedies, penalties, process or sanctions as provided for under state law. For purposes of CWA Section 401(d), the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification.

2. In response to a suspected violation of any condition of this Certification, the State Water Resources Control Board (State Water Board) or the Lahontan Water Board may require the holder of any permit or license subject to this Certification to furnish, under penalty of perjury, any technical or monitoring report the State Water Board or Lahontan Water Board deems appropriate, provided that the burden, including costs, of the reports show a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

3. In response to any violation of the conditions of this Certification, the Water Board may add to or modify the conditions of this Certification as appropriate to ensure compliance.

Section 401 Water Quality Certification Requirements Granted

I hereby issue an order certifying that any discharge from the referenced project will comply with the applicable provisions of CWA sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards), and with other applicable requirements of State law. This discharge is also regulated under State Water Resources Control Board Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification" which requires compliance with all conditions of this WQC.

Except insofar as may be modified by any preceding conditions, all WQC certification actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the applicant's project description and the terms specified in this WQC order, and (b) compliance with all applicable requirements of the Basin Plan.

We look forward to working with you in your efforts to protect water quality. If you have questions, please contact staff member Laurie Scribe at (530) 542-5465 or Doug Cushman, Chief, Non-Point Source Unit, at (530) 542-5417.

PATTY Z. KOUYOUMDJIAN
EXECUTIVE OFFICER

Enclosures: 1) R6T-2013-0011
2) Wetland Tracker Form
3) Wetland Tracker Form Instructions

cc: Jason Brush, Wetlands Regulatory Office (WTR-8), US EPA, Region 9
(via email at R9-WTR8-Mailbox@epa.gov)
Kristine Hansen, U.S. Army Corps of Engineers, Sacramento District, Reno
Bill Orme, State Water Resources Control Board, Division of Water Quality
(via email at Stateboard401@waterboards.ca.gov)
Patrick Moeszinger, California Department of Fish and Game

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

RESOLUTION R6T-2013-0011

UNITED STATES FOREST SERVICE–LAKE TAHOE BASIN MANAGEMENT UNIT, UPPER TRUCKEE RIVER REACH 5 RESTORATION – EXEMPTIONS TO WASTE DISCHARGE PROHIBITIONS CONTAINED IN THE WATER QUALITY CONTROL PLAN FOR THE LAHONTAN REGION

El Dorado County

WHEREAS, the California Water Quality Control Board, Lahontan Region (Water Board) finds:

1. On November 30, 2012, the United States Forest Service-Lake Tahoe Basin Management Unit (LTBMU) submitted the following information for the Upper Truckee River Reach 5 Restoration and Utility Relocation Project (hereafter referred to as the "Project") to the Water Board:

    a. The Final Environmental Assessment/Negative Declaration for the Sunset Stables Reach Restoration Project dated February 2012, prepared jointly by the LTBMU and the California Tahoe Conservancy (CTC).
    b. The National Environmental Protection Act (NEPA) Decision Notice and Finding of No Significant Impact for the Project signed by the LTBMU Forest Supervisor on March 20, 2012.
    c. The California Environmental Quality Act (CEQA) Notice of Determination for a Negative Declaration for the Project, filed on March 21, 2012 by the California Tahoe Conservancy.
    d. The Project Design Plans and Technical Specifications for both the Restoration Project component and the Utility Relocation Project component.
    e. A draft Storm Water Pollution Prevention Plan (SWPPP) to comply with Board Order No. R6T-2011-0019, General Waste Discharge Requirements and National Pollutant Discharge Elimination System Permit No. CAG616002 for Storm Water Discharges Associated with Construction Activity in the Lake Tahoe Hydrologic Unit.
    f. A complete application for Clean Water Act 401 Water Quality Certification.

2. The Project area is located within the Upper Truckee River watershed on approximately 300 acres, just south of the City of South Lake Tahoe, CA and adjacent to the airport in El Dorado County. It is part of the larger Sunset Reach Project Boundary evaluated in the joint NEPA/CEQA document that includes restoration of approximately 13,000 feet of channel in Reaches Five and Six. The Project area covered under this Resolution includes approximately 7,400 feet of existing Upper Truckee River channel and the associated meadow floodplain in Reach Five. The Project vicinity is shown on Figure 1.

3. Past activities that have influenced conditions within the Project area include urban development, gravel mining, road building, bridge construction, airport construction, grazing, and sewer and water utility line installation. The resulting conditions include an oversized and incised channel that is not well connected to its adjacent floodplain, poor aquatic habitat conditions, and high bank erosion rates.

4. The purpose of the Project is to improve conditions in the meadow, riparian and aquatic ecosystems by constructing a new meandering channel and improving channel form and function, which will reduce sedimentation and restore and expand wet meadow habitat and function.

5. Implementation of the Project is expected to begin in June of 2013 and planned to be completed in October of 2016.

6. The purpose of this Resolution is to grant exemptions to two waste discharge prohibitions contained in the Water Quality Control Plan for the Lahontan Region (Basin Plan) for activities that will be occurring within Stream Environment Zones (SEZs). The total area of disturbance proposed within the SEZ is approximately 36 acres. This sum includes approximately 10.2 acres of new channel construction, up to 2 acres of sod harvest areas, up to 6 acres of floodplain grading, approximately 13 acres of backfilling the existing channel, and about 5 acres of temporary access road. Project activities located within SEZs include the following:

   a. Constructing approximately 7,420 linear feet of new Upper Truckee River channel in the Project area.
   b. Backfilling approximately 7,400 linear feet of existing Upper Truckee River channel in this reach.
   c. Harvesting meadow sod from the designated sod harvest areas and other locations within the Project area identified during implementation as having good quality sod that can be used for bank treatments.
   d. Installing and decommissioning a temporary access road from the Sunset Stables staging area to the work area.
   e. Installing a temporary bridge at the upstream stream crossing location and a constructed culvert crossing (or a second temporary bridge) at the downstream stream crossing location.
   f. Relocation of the existing public utility buried backup treated effluent export line and water line to accommodate project construction.
   g. Grading and revegetation of up to 6 acres of floodplain.
   h. Installing temporary stream diversions to support construction activities.
   i. Installing and operating a dewatering system to support construction activities that includes application of dewatering waters to the meadow in the Project area.

7. The Basin Plan specifies the following discharge prohibitions:

   (a) Lake Tahoe Basin:

   > *The discharge or threatened discharge, attributable to new development or permanent disturbance in Stream Environment Zones, of solid or liquid waste, including soil, silt, clay, rock, metal, plastic, or other organic mineral or earthen materials, to Stream Environment Zones in the Lake Tahoe Basin is prohibited. (Chapter 5, Waste Discharge Prohibitions, page 5.2-4)*

   (b) Regionwide:

   > *The discharge of waste which causes violation of any numeric water quality objective contained in this Plan is prohibited. (Chapter 5, Waste Discharge Prohibitions, page 5.2-1)*

   The Basin Plan contains a numeric water quality objective for turbidity:

   > *Increases in turbidity shall not exceed natural levels by more than 10 percent. (Chapter 5, Water Quality Objectives, page 5.1-9)*

8. The activities listed in Finding 6 will likely result in a short-term and temporary discharge or threatened discharge of solid or liquid waste, more specifically sediment-laden water, to SEZs. Therefore, these activities require an exemption to the prohibitions stated in Finding 7above.

9. The Basin Plan contains a provision that the prohibition stated in Finding 7(a) above shall not apply to any activity the Water Board approves as reasonably necessary for erosion control projects, habitat restoration projects, wetland rehabilitation projects, SEZ restoration projects, and similar projects, if all of the following findings can be made:

   (a) The project, program, or facility is necessary for environmental protection.

   Historic anthropogenic activities in the watershed have resulted in degraded river and meadow conditions within the Project area. These conditions include an incised river channel, hydrologic disconnection between the channel and the meadow, bank erosion, and poor aquatic habitat within the channel. The Project will restore this river reach and associated meadow floodplain to improve geomorphic and aquatic function and meadow ecosystem function. The Project is expected to result in enhanced conditions of meadow, riparian, and aquatic ecosystems and a long-term water quality improvement by reducing sedimentation and restoring and expanding wet meadow habitat and function.

(b) There is no reasonable alternative, including relocation, which avoids or reduces the extent of encroachment in the Stream Environment Zone (SEZ).

The Project by its very nature must be located in the SEZ, and the purpose is to restore SEZ areas within the Project boundary. There is no reasonable alternative that would reduce the extent of encroachment in the SEZ.

(c) Impacts are fully mitigated.

The LTBMU will implement construction Best Management Practices (BMPs), as described within the Project's Storm Water Pollution Prevention Plan (SWPPP), Environmental Assessment/Negative Declaration, and construction plans and specifications. These BMPs are required to prevent construction activities from discharging sediment and other pollutants into the Upper Truckee River and its surrounding SEZ areas. However, moving the Upper Truckee River into a new channel and related in-channel work may generate a short-term and temporary increase of turbidity into the Upper Truckee River. The Project includes BMPs that are designed to minimize the likelihood of increasing turbidity in the Upper Truckee River from the construction activity. The temporary access road will be rehabilitated following completion of the restoration activities. The temporary access road and stream crossings within the SEZ will be removed with specified BMPs implemented at the end of each construction season. This Project is designed to result in overall water quality and riparian area improvement. The long term benefits from the Project implementation are expected to result in an overall reduction in the amount of erosion and sediment loading to Lake Tahoe and elevated groundwater in the adjacent meadow. Implementation of the Project design and construction specifications, the Water Board's Construction Permit requirements, and Water Quality Certification Order conditions will ensure that the impacts are fully mitigated.

10. The Upper Truckee River's in-stream turbidity levels are naturally very low, generally ranging from less than 1 nephelometric turbidity units (NTU) to 5 NTU during base-flow non-storm conditions. Due to these very low natural levels of turbidity, even a slight increase in sediment inputs to the river during restoration activities could result in a violation of the numeric water quality objective for turbidity stated in Finding 7(b) above.

11. Several activities associated with the Project could result in a short-term violation of the numeric water quality objective for turbidity. These activities include (1) the installation and removal of temporary crossings and temporary stream diversions, and (2) the introduction of flow into the newly constructed channel.

Temporary Crossings and Stream Diversions

For the temporary crossings and stream diversions, the potential for elevated turbidity exists during installation and removal and when water is first introduced back into the channel. The increased turbidity associated with these activities is expected to be limited in magnitude and duration. The anticipated magnitude of elevated turbidity is an increase up to 10 NTUs, with elevated turbidity lasting for no more than one hour during each activity (i.e. up to 10 NTUs for one hour during each culvert crossing installation, crossing removal, and installation and removal of each diversion).

During crossing and diversion activities, water will be pumped from within 20 feet downstream of the work area until turbidity is less than or equal to 10 NTUs. The pumped water will be discharged to nearby meadow areas or temporary upland basins constructed for this purpose. The LTBMU shall perform visual inspections of meadow infiltration areas to assure that no pumped water flows back into the river. The LTBMU shall note the start and finish time for each discrete crossing and diversion activity and record turbidity 50 feet downstream of the activity no less than every 20 minutes during active in-stream work to document compliance with the magnitude and duration of elevated turbidity authorized by this Resolution.

Flow Introduction into the Newly Constructed Channel

Introducing flow into the newly constructed channel may result in a violation of the numeric water quality objective for turbidity, even after the LTBMU allows a minimum of one construction season to rest the new channel to allow for stabilization and growth of planted vegetation. LTBMU will also flood the new channel segments and percolate introduced flow to facilitate the sediment settling. This flooding/percolation technique will be conducted a minimum of three times with the goal of incorporating any loose fine sediments into the new channel. The LTBMU will then introduce river flow into the constructed channel in a controlled manner without discharging or connecting the flow to the live channel. The introduced flow will be pumped and sprayed onto the floodplain and adjacent upland areas until the turbidity in the last fast water reach of the new channel is less than or equal to 10 NTUs. At that time, flows in the new channel can be released and connected to the existing channel. If after three full 10-hour days of introducing flows and pumping to the meadow and dewater basins, the turbidity of the new channel is still greater than 10 NTUs but less than 15 NTUs, flows in the new channel can be released and connected to the existing channel.

The LTBMU shall note the time it initiates channel flushing and document all turbidity measurement and field notes taken during channel flushing to assess compliance with the magnitude and duration of turbidity increases authorized by this Resolution.

Additional Monitoring and Reporting

The sampling sites associated with the above-described activities are shown on Figure 1.

In addition to collecting grab samples for turbidity associated with specific activities as specified above, the LTBMU will install and operate continuous turbidity monitoring instruments near the upstream and downstream ends of the Project area.

Elevated turbidity downstream of the Project shall not exceed 15 NTUs at any time during project construction, and turbidity levels are expected to return to background conditions (as described in Finding 10) within 48 hours of reestablishing flows through the Project area.

Turbidity measurements, associated field notes, and analyses shall be reported in weekly monitoring reports as described in the SWPPP. Should field turbidity measurements exceed the duration or extent indicated above, the LTBMU must notify Water Board staff within 24 hours.

12. The Basin Plan encourages restoration projects that are intended to reduce or mitigate existing sources of soil erosion, water pollution, or impairment of beneficial uses. The Basin Plan contains provisions for the Water Board to grant exemptions to prohibitions including the discharge of waste which causes violation of any narrative water quality objective contained in the Basin Plan, including the Nondegradation Objective, whenever it finds that a specific restoration project meets all the following criteria:

(a) The project will eliminate, reduce, or mitigate existing source of erosion, water pollution, and/or impairment of beneficial uses of water.

The purpose and need for this Project are discussed in several documents including the Upper Truckee River Reclamation Project Environmental Assessment, Feasibility Report and Conceptual Plans (Tahoe Resource Conservation District ,2003), the Sunset Stables Restoration and Resource Management Plan (Entrix, March 2005), and the Agency Draft - Sunset Stables Restoration and Resource Management Plan (Entrix, July 2008). The purpose of the Project is to improve the Upper Truckee River watershed conditions and the function of the aquatic, riparian, meadow, and terrestrial ecosystems by reducing sedimentation, restoring and expanding meadow habitat and improving aquatic habitat within the Project area. Work will include construction of a new river channel in order to restore historic meadow conditions and drainage and flooding patterns. Two of the expected outcomes of the Project will be a restored (elevated) groundwater table and reconnection of flood flows back onto the meadow floodplain. The Project is expected to result in a long term reduction in sediment delivery and turbidity and overall improvement in water quality due to decreased bank erosion and better connectivity to the floodplain.

(b) There is no feasible alternative to the project that would comply with provisions of the Basin Plan, precluding the need for an exemption.

An existing source of erosion and sediment delivery is the result of ongoing incision and bank instability of the existing channel. There is a need to restore this reach of the Upper Truckee River in order to increase the potential for this meadow floodplain to store water and sediment and allow it to function as a wet meadow ecosystem thereby improving water quality.

Any other feasible alternative action that would restore the Upper Truckee River and meadow floodplain would involve similar inherent risk of elevated turbidity either during construction or during the connection of river flows to the constructed channel. The LTBMU and CTC considered design alternatives in planning the Project, including no action. There is no feasible alternative that would fully comply with Basin Plan turbidity requirements.

(c) Land disturbance will be limited to the absolute minimum necessary to correct or mitigate existing sources of soil erosion, water pollution, and/or impairment of beneficial uses of water.

The total area of disturbance proposed within the SEZ is approximately 36 acres. This sum includes approximately 10.2 acres of new channel construction, up to 2 acres of sod harvest areas, up to 6 acres of floodplain grading, approximately 13 acres of backfilling the existing channel and 5 acres of temporary access road. Approximately two-thirds of the access road alignment follows an existing disturbance footprint from the current utility access easement and user created trails.

These disturbances are the minimum necessary to meet Project objectives of improving the function of the aquatic, riparian, meadow and terrestrial ecosystems by reducing existing sources of sedimentation, and restoring and expanding wet meadow habitat and function.

(d) All applicable BMPs and mitigation measures have been incorporated into the project to minimize soil erosion, surface runoff, and other potential adverse environmental impacts.

The LTBMU submitted a draft SWPPP that describes BMPs and mitigation measures designed to avoid, reduce and minimize adverse environmental impacts, particularly during project phases that include new channel activation and seasoning, and dewatering/backfilling of the existing channel. Specific procedures are outlined for the methods, timing, and monitoring of activities listed in Finding 6.

The flow of the Upper Truckee River will remain in the existing channel until the new channel construction is complete, the new channel is seasoned, and turbidity levels within the constructed channel are reduced to the maximum extent practicable in accordance with plans and criteria described in Finding 11, above.

(e) The Project complies with all applicable laws, regulations, plans and policies.

Prior to Project implementation (anticipated June 2013) the LTBMU must obtain the following permits from the Water Board:

a) Water Quality Certification pursuant to Clean Water Act, Section 401.

b) Notice of Applicability of Board Order No. R6T-2011-0019, Updated Waste Discharge Requirements and NPDES General Permit No. CAG616002 for Discharges of Storm Water Runoff Associated with Construction Activity Involving Land Disturbance in the Lake Tahoe Hydrologic Unit.

(f) Additional exemption criteria apply to restoration projects proposed within the Lake Tahoe Basin. To the extent that they are more stringent, the Lake Tahoe Basin criteria supersede the regionwide criteria above.

As described in Findings 8 and 9 above, disturbances within the SEZ resulting from Project activities requires an exemption to a waste discharge prohibition against the discharge or threatened discharge to SEZs attributable to new development or permanent disturbance within an SEZ. This exemption is also part of this resolution.

13. The LTBMU Forest Supervisor signed a Decision Notice and Finding of No Significant Impact (DN/FONSI) for the Project in accordance with the National Environmental Policy Act on March 20, 2012.

    Water Board staff have reviewed the DN/FONSI and noted that the document contains specific design features, BMPs, and construction controls to reduce potentially significant impacts to less than significant levels. These features are further described in the submitted draft SWPPP and technical documents. The Water Board will include implementation of these measures as described in the submitted documents in the required Water Quality Certification Order that must be issued pursuant to Clean Water Act Section 401.

14. In February 2012, the LTBMU and the CTC prepared a Final Environmental Assessment/Negative Declaration for the Sunset Stables Reach Restoration Project. The CTC adopted a negative declaration (SCH No. 2011042069) for the project in order to comply with CEQA, for which a Notice of Determination was filed on March 21, 2012. The Regional Water Board is a responsible agency for this project under CEQA, and has considered the environmental document and any proposed changes

incorporated into the project or required as a condition of approval to avoid significant effects to the environment. The Regional Water Board will file a Notice of Determination within five days from the issuance of this order.

15. The Water Board has notified the Project proponent and interested agencies and persons of interest of its intent to adopt this Resolution. A draft of this Resolution was circulated for a 30-day public comment period.

16. The Water Board, in a public meeting, heard and considered all comments pertaining to the proposed activities and the proposed exemption to two prohibitions in the Basin Plan.

THEREFORE, BE IT RESOLVED THAT:

1. The Project is necessary for stream channel, habitat, and SEZ restoration, and meets the eligibility criteria for an exemption to the Basin Plan waste discharge prohibition as outlined in Findings 7(a) and 9, above.

2. The Water Board hereby grants an exemption to the Basin Plan prohibition stated in Finding 7(a), above.

3. The Project is a restoration project that is intended to reduce or mitigate existing sources of soil erosion, water pollution, or impairment of beneficial uses, and meets the eligibility criteria for an exemption to the Basin Plan waste discharge prohibition as outlined in Findings 7 (b) and 12, above.

4. The Water Board hereby grants an exemption to the Basin Plan prohibition stated in Finding 7(b), above. This exemption is limited to the water quality objective for turbidity and to the specific turbidity limit described in Finding 11, above.

5. Prior to construction commencing, the LTBMU must receive Water Quality Certification (WQC) pursuant to Clean Water Act Section 401 and obtain coverage under Order R6T-2001-0019, General Waste Discharge Requirements and NPDES General Permit No. CAG616002 for Storm Water Discharges Associated with Construction Activity in the Lake Tahoe Hydrologic Unit.

I, Patty Z. Kouyoumdjian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Lahontan Region, on February 14, 2013.

Patty Z. Kouyoumdjian

PATTY Z. KOUYOUMDJIAN
EXECUTIVE OFFICER

Attachment: Figure 1- Project Map (including turbidity sampling locations)

WETLAND AND RIPARIAN PROJECT FORM and HABITAT MAPS

for Mitigation and Restoration Projects in the San Francisco Bay Region of the California Water Board

Two brackets [ ] represent a checkbox; check a checkbox like this: [x]. For text responses, add text after the colon, on the next line if necessary. Provide all dates as mm/dd/yyyy. See the companion *Form Instructions* for more information.

Note: **Maps should be submitted with this form**; see instructions below under "Habitat Maps".

1. Form completed by [ ] Applicant [ ] Other (specify) _____ Name _____ Phone/email _____	**2. Date of submission**:

PROJECT IDENTIFICATION

Complete all that apply. Enter "pending" for pending actions. See instructions for a key to abbreviations.

3. Corps File No: 4. Date of permit:	5. Water Board CIWQS Place No: 6. Certification Letter Site No. AND/OR Board Order No. (WDR): 7. Date of letter/order:	8. BCDC Record No: 9. Date of BCDC action:	10. CA DF&G Notification No: 11. Date of DF&G action:
12. USFWS File No: 13. Date of action:	14. NMFS No: 15. Date of action:	16. SCC Record No: 17. Date of action:	18. State Clearinghouse number:

GENERAL INFORMATION

19. Project name (include any alternative names):

20. Brief project description

21. Project type (see definitions to right) Check one: [ ] Compensatory mitigation [ ] Non-mitigation	Definitions for project type **Compensatory mitigation**: Project includes legally required work to compensate for unavoidable impacts to existing wetland/riparian habitat. **Non-mitigation**: Project does not include any legally required mitigation work.

APPLICANT INFORMATION

22. Applicant name and/or organization:

23. Mailing Address:	24. Email:	25. Phone:

CONTACT FOR TECHNICAL INFORMATION

26. Contact Name:	27. Organization Name:	
28. Mailing Address:	29. Email:	30. Phone:

FUNDERS/CONTRIBUTORS

31. Please indicate project funders or in-kind contributors, other than permitee, if any.

[ ] State Coastal Conservancy
[ ] Regional Water Board
[ ] Wildlife Conservation Board
[ ] National Oceanic and Atmospheric Admin.
[ ] State Parks
[ ] Department of Fish and Game
[ ] CA Resources Agency
[ ] CalTRANS
[ ] US Fish and Wildlife
[ ] US Army Corps
[ ] Natural Resource Conservation Service
[ ] OTHER _____

RESTORATION/MITIGATION SITE INFORMATION
See also "Development or Impact Site Information," below

32. Restoration/mitigation site name (if different than Project name):

33. Restoration/mitigation site county(ies):

34. Restoration/mitigation site location Latitude: Longitude: **Datum** (if known):
Decimal degrees of approximate center of **restoration/mitigation area**; NAD83 datum if possible

35. Mitigation is (check all that apply): [ ] on site [ ] off site [ ] mitigation bank

36. Estimated dates for groundwork and monitoring [If construction [or groundwork] is delayed by more than 3 months, the applicant should notify the Water Board within 30 days.]

Estimated groundwork start date: Estimated groundwork end date:

Estimated monitoring start date: Estimated monitoring end date:

37. Is a wetland delineation planned for the restoration/mitigation area? [ ] Yes [ ] No

38. Is a wetland/riparian assessment planned for the restoration/mitigation area? [ ] Yes [ ] No

39. Water sources for restoration/mitigation site (Check all that apply)

[ ] Tidal [ ] Natural Runoff [ ] Stream or River Overflow [ ] Groundwater [ ] Agricultural Runoff
[ ] Treated Wastewater [ ] Urban Runoff [ ] Raw Water Pipeline

DEVELOPMENT OR IMPACT SITE INFORMATION (if applicable)

40. Development project /impacted site name (if different than Project name):

41. Development project /impacted site county(ies):

42: Impacted site location Latitude: Longitude: **Datum** (if known):
Decimal degrees of approximate center of **Impacted site, IF** separate from mitigation site; NAD83 datum if possible

43: Type of work causing impacts Check all that apply
[ ] New construction [ ] Repair [ ] Maintenance [ ] Replacement [ ] Other (specify):

44. Is a wetland delineation planned for the impacted site? [ ] Yes [ ] No

45. Is a wetland/riparian assessment planned for the impact area? [ ] Yes [ ] No

PERFORMANCE CRITERIA

46. Performance Criteria

Paste into this area the criteria by which the performance and success of the restoration/mitigation project will be judged. Criteria can be extracted from final mitigation plan or permit; table formats are preferred. Attach separate file if necessary; can include time-based criteria such as percent plant cover by year, or duration and extent of soil saturation. See the *Form instructions* document for a full example.

47. Vegetation Planting List Paste from mitigation plan or permit, if available, into this area a list of any plant species that will be planted as part of this project. If no planting will occur, list species by habitat type expected to develop. Note that target vegetation should be native species. Attach a separate file if necessary.

48. List reference sites or reference datasets to be used, if any

49. Other project conditions in permit (Add as necessary)

REPORTING

50. Reporting requirements

Monitoring reports are required every: [ ] year [ ] 2 years [ ] _____ years, over a total required monitoring period of _____ years.
[ ] other schedule: _____

Other reports required:

HABITAT MAPS REQUIREMENT

51. You must submit with this form the following maps of your project:

1) a map indicating **present habitats** at all project locations and
2) a map indicating **planned habitat changes** (gain/improvement/loss) at all project locations

- Maps must use the **habitat list provided on this form** (see "Habitat Definitions" below)
- Submittal must clearly identify the "Present Habitats" and "Planned Habitat Changes" maps respectively.
- For mitigation projects, include both the impacted site and the mitigation site, on separate maps if necessary.
- Include planting details and structural/hydro modifications if appropriate.
- Examples of habitat maps can be found at **http://www.wetlandtracker.org/tracker/map-examples**

Indicate the map format used (listed in order of preference):

[ ] (Recommended) **Google KML files** saved from Google Maps: My Maps (free) or Google Earth Pro (not free). Maps must show the boundaries of all project habitats, using the habitat list provided on this form. See http://www.wetlandtracker.org/tracker/map-examples

[ ] **GIS shapefiles**. The shapefiles must depict the boundaries of all project habitats, using the habitat list provided on this form. Each shape should be attributed with the habitat name. Features and boundaries should be accurate to within 33 feet (10 meters). If possible, provide map in NAD83/WGS84 datum, UTM Zone 10 projection; identify datum/projection used.

[ ] **Other electronic format** (CAD or illustration format) that provides a context for location (inclusion of landmarks, known structures, geographic coordinates, or USGS DRG or DOQQ). Maps must show the boundaries of all habitats, using the habitat list provided on this form.

[ ] Habitats maps marked on paper USGS 7.5 minute **topographic maps** or DOQQ printouts. Maps must show the boundaries of all habitats, using the habitat list provided on this form.

52. If using Google Maps: My Maps or similar, provide URL(s) of habitat maps:

EXISTING HABITAT TOTAL

Consider all areas in both the mitigation/restoration project and the development project/impacted site. Provide the total area of all existing habitats (including riparian) in acres; provide also the total existing riparian habitat in linear feet.

53. Total existing wetland/riparian habitat (including habitat to be lost) acres (all habitats): linear ft (riparian):

PLANNED HABITAT CHANGES

54. Area or length gained, improved and lost, by habitat and project activity

—Consider all areas in both the mitigation/restoration site and the development project/impact site
—Fill out table items to the nearest **0.1 acre**
—For riparian areas, describe the size in **both** acres **and** linear feet
—See definitions below table
—See form instructions for policy & guidance on mitigation projects
—If project maintains or repairs a stream channel or bank, enter the amount of linear feet **and** acres under "Stream and Rivers" (either "channel" or "riparian area") under "Improved—Enhanced".

	Gained				Improved				Lost[4]	
	Created[2]		Restored[2]		Enhanced[2]		Preserved[2]			
Habitat type[1]	acre	linear ft	acre	linear ft	acre	linear ft	acre	linear ft	acre	linear ft
Estuarine—marsh[3]		n/a		n/a		n/a		n/a		n/a
Estuarine—mudflat		n/a		n/a		n/a		n/a		n/a
Estuarine—open water		n/a		n/a		n/a		n/a		n/a
Estuarine—submerged aquatic vegetation		n/a		n/a		n/a		n/a		n/a
Vernal pools & swales[3] (always seasonal; estimate pool size at maximum volume*)		n/a		n/a		n/a		n/a		n/a
Depressional wetlands except vernal pools & swales—marsh and unvegetated flats[3]		n/a		n/a		n/a		n/a		n/a
Depressional wetlands except vernal pools & swales—open water[3]		n/a		n/a		n/a		n/a		n/a
Seeps and springs wetlands[3]		n/a		n/a		n/a		n/a		n/a
Playas—marsh[3]		n/a		n/a		n/a		n/a		n/a
Playas—open water[3]		n/a		n/a		n/a		n/a		n/a
Lakes—marsh		n/a		n/a		n/a		n/a		n/a
Lakes—open water		n/a		n/a		n/a		n/a		n/a
Streams and rivers—channel[3]										
Streams and rivers—riparian area[3]										
Unknown wetland habitat		n/a		n/a		n/a		n/a		n/a
Totals										
Buffer area		n/a		n/a		n/a		n/a	n/a	n/a

[1] Note that open water generally cannot compensate for wetland fill. See form instructions document for more information.

[2] **Created**: Establishment of wetland/riparian where previously none existed. **Restored**: Establishment of wetland/riparian where some did previously exist. **Enhanced**: Improvement of functions of existing wetland/riparian habitat; habitat size and type does not change. **Preserved**: Protection of existing wetland/riparian habitat *without physically changing it*.

[3] this habitat type can contain **seasonal** (ephemeral) wetlands

[4] *lost* includes both **destruction** and **conversion to another habitat**

HABITAT DEFINITIONS

Estuarine wetlands consist of three main parts: the vegetated marsh plain that is above the average high tide (**Estuarine—marsh**), the area of open water that is apparent during an average low tide (**Estuarine—open water**), and the area lacking vegetation that exists below the marsh plain that is exposed during the average low tide (**Estuarine—mudflat**). The open water area includes the pannes and ponds on the vegetated marsh plain. Open water and non-vegetated areas have less than 5% absolute cover of vegetation. In addition to these three main parts, some estuarine wetlands have **submerged aquatic vegetation**, such as eel grass, that is partially exposed during the average low tide. The minimum size of open water areas, non-vegetated areas, vegetated marsh plain, and submerged vegetation is 0.25 acres (0.1 hectares).

Vernal Pools are ephemeral, depressional wetlands that typically support at least 30% relative cover of indicative plant species. The shallow depressions are underlain by bedrock or impervious soil. They fill with rainwater and runoff during the winter and may remain inundated until spring or early summer, sometimes filling and emptying repeatedly during the wet season. Vernal pools often occur together with vernal swales as vernal pool systems that have many pools of various sizes and shapes, varying floral and faunal composition, and various hydroperiods. Water can move between adjacent pools and swales through the thin soils above the underlying impervious substrate.

Depressional Wetlands are places where runoff accumulates in a topographic depression. Water either does not flow through the wetland or the flow is essentially imperceptible. Depressional wetlands are smaller than lakes, lack the indicative plant community of vernal pools, and are neither saline nor alkaline like playas. Stock ponds, irrigation ponds, and treatment ponds that are smaller than lakes are examples of unnatural depressional wetlands. Ponds on fault traces, valley bottoms, and on broad saddles along ridge are examples of natural depressional wetlands. A depressional wetland can have three main parts: an area of open water (**Depressional wetlands—open water**), a non-vegetated area that is exposed when the wetland is not full, and an area of marsh vegetation that borders either the open water area or the non-vegetated area. The open water areas and non-vegetated areas have less than 5% absolute cover of vegetation; count these both as "**Depressional wetlands—marsh and unvegetated flats.**" Some depressional wetlands lack the open water area and/or the non-vegetated area. Depressional wetlands can be perennial or seasonal. Perennial depressional wetlands have some amount of standing water for at least 9 months during most years. Seasonal depressional wetlands have no standing water or it lasts for less than 9 months during most years.

Seeps and springs wetlands are also known as Slope Wetlands. They are formed by groundwater emerging onto the ground surface or into the root zone of wetland vegetation. They naturally occur on hillsides or at the bases of dunes, hills, alluvial fans, etc. In some cases, the emerging groundwater flows downhill through very small channels called rivulets or runnels that lack the banks, beds, and floodplains of larger streams. Many seeps and springs adjoin rivers, streams, lakes, and other kinds of wetlands.

Playas consist of the three main parts: the area of open water that is apparent when the playa is full, the non-vegetated area that is exposed when the playa is not full, and the area of marsh vegetation that borders either the open water or the non-vegetated area (**Playas—marsh vegetation**). Open water and non-vegetated areas have less than 5% absolute cover of vegetation; count these both as "**Playas—open water.**" The central feature of a playa is a seasonal or perennial body of very sodic (i.e., strongly alkaline) or saline water with an average depth less than 6 feet (1.8 meters) during the dry season. The benthic sediments of a playa are mostly very fine-grain clays and silts. The fringing wetlands are characterized by grasses and herbaceous plants tolerant of the soluble salts that accumulate along the shoreline. The shallowness of the open water areas of playas distinguishes them from lakes. Playas differ from vernal pools by having little or no vascular vegetation within the area that is seasonally saturated or inundated.

Lakes are at least 20 acres (8 hectares) large and have an average depth of at least six feet during the dry season. A lake consists of the three main parts: the area of open water that is apparent when the lake is full, the non-vegetated area that is exposed when the lake is not full, and the area of marsh vegetation that borders either the open water or the non-vegetated area (**Lakes—marsh**). Open water and non-vegetated areas have less than 5% absolute cover of vegetation; count these both as "**Lakes—open water.**" The minimum size of open water areas, non-vegetated areas and vegetated areas is 0.25 acres (0.1 hectares).

Streams and rivers can consist of two main parts: the channel (**Streams and rivers—channel**) and its riparian area (or active floodplain); count this as "**Streams and rivers—riparian area.**" The active floodplain is defined as the relatively level area that tends to be flooded every 1.5 to 2.0 years. It can be represented by a contour line on a steep bank, a very narrow flat area, or by broad areas of vegetated and non-vegetated bars, flats, and low benches. The channel consists of its banks and bed below the active floodplain. Channels can be perennial, intermittent, or ephemeral. Perennial channels have surface water flowing through them all year during most years. Ephemeral channels have flowing water only during the wet season. Intermittent channels have flowing water only during rains, or when water is released from upstream reservoirs, treatment ponds, etc. Braided channels have multiple sub-channels that diverge and converge.

Buffer areas protect streams and other wetlands from potential problems or stresses that originate in the uplands. Whether or not an area adjoining a wetland functions as a buffer depends on its extent, width, and the kinds of land uses to which it is subjected. In general, for an area to serve as a buffer, it must be at least 16 feet (5 meters) wide.

55. Habitat types were determined by [ ] aerial/satellite photos [ ] field survey [ ] other (specify)

ADDITIONAL INFORMATION

56. Comments and/or additional information on the project

PROJECT MONITORING

(optional section; check all that apply)

Parameter	Sample Frequency						
	Annual	Seasonal	Quarterly	Monthly	Continuous	Total Time Span	Comments
57. CRAM (California Rapid Assessment Method) or other method							
58. Hydrology							
Tide Levels (select datum) [ ] NAVD 88 [ ] Local MHW [ ] Local MLW [ ] arbitrary							
Frequency & duration of inundation							
Sedimentation Rates							
Flow							
Tidal Prism							
Hydraulic Geometry							
Thalweg Profile							
Channel Length							
Channel Density							
Shoreline or Bank Stability							
Other							
59. Vegetation							
Percent Cover							
Plant Height							
Plant Vigor							
Standing Crop							
Productivity							
Native Species Richness							
Non-native Species Richness							
Survival of Vegetation							
Other							
60. Water Chemistry							
pH							
Conductivity							
Total Suspended Solids							
Turbidity							
Dissolved Oxygen							
Temperature							
Salinity							
Biological Oxygen Demand							
Metals (select) [ ]Hg [ ] MeHg [ ] Pb [ ]Cu [ ] Se [ ] Zn [ ]other (list)							
Organic Contaminants (select) [ ]PCB [ ] OC [ ] PAH [ ]other (list)							
Chlorophyll A							
Ammonia							
TOC							
Other							
61. Sediment Chemistry							
Grain Size							
Nitrogen							
Phosphorus							
Metals (select) [ ]Hg [ ] MeHg [ ] Pb [ ]Cu [ ] Se [ ] Zn [ ]other (list)							

Organic Contaminants (select) [ ]PCB [ ] OC [ ] PAH [ ]other (list)							
Bulk Density							
TOC							
Other							
62. Wildlife							
Mammals (select) [ ] Spp. richness [ ] Pop. size [ ] Survival [ ] Evidence Of Use							
Amphibians/Reptiles (select) [ ] Spp. richness [ ] Pop. size [ ] Survival [ ] Evidence Of Use							
Birds (select) [ ] Spp. richness [ ] Pop. size [ ] Survival [ ] Evidence Of Use							
Fish (select) [ ] Spp. richness [ ] Pop. size [ ] Survival [ ] Evidence Of Use							
Benthic Invertebrates (select) [ ] Spp. richness [ ] Pop. size [ ] Survival [ ] Evidence Of Use							
Aquatic Invertebrates (select) [ ] Spp. richness [ ] Pop. size [ ] Survival [ ] Evidence Of Use							
Terrestrial (select) [ ] Spp. richness [ ] Pop. size [ ] Survival [ ] Evidence Of Use							
Zooplankton							
Phytoplankton							
63. Other Monitoring (identify parameters, frequency and time span of data collection)							

Guidance for filling out the Wetland Tracker form

Tahoe WRAMP Demonstration Project

Contact for Wetland Tracker questions: April Robinson, San Francisco Estuary Institute, april@sfei.org, 510.746.7344

Introduction to Wetland Tracker

Wetland Tracker is an interactive tool that displays information about modern and historical wetland habitat in California. Wetland Tracker catalogues planned, in progress, and completed wetland restoration, preservation, creation, and enhancement projects.

The primary purpose of Wetland Tracker is to give wetland scientists, managers, and the interested public access to authoritative information about where California's wetlands are and how they are doing. Tracker enables interested parties to track the progress of restoration and mitigation projects.

Wetland Tracker is currently available at http://www.californiawetlands.net/tracker. Beginning in the spring of 2013 wetland tracker will be incorporated into the EcoAtlas website.

Tahoe Demonstration Project

Currently there are no projects from the Tahoe Basin in Wetland Tracker. As part of a larger effort to bring the Wetland and Riparian Area Monitoring Program to the region we would like to upload 5 projects from the Tahoe Basin into Wetland Tracker.

Filling out the Wetland Tracker Form

The descriptions below explain the information necessary to upload a project to Wetland Tracker using the WETLAND AND RIPARIAN PROJECT FORM. Required fields are in bold here. On the form itself the required fields are highlighted in yellow and fields that are not required but would make the online information page more complete are highlighted in green.

Project Identification

The project identification section allows agencies to track wetland projects by their individual project numbers, and helps agencies to coordinate with one another. Any project identification numbers that regulators might use to track projects should be included in this section. These fields can be modified to include local agencies relevant to Tahoe.

General Information

This section provides basic information about the project. The **project name** and **project type** (whether the project is mitigation or non-mitigation) are required. The project description should include the type of activity occurring: stream bank stabilization, vegetation management, sediment/debris removal, drainage improvement, or other.

Applicant Information

This section identifies the person and organization providing information about the project. Wetland Tracker forms can be filled out by anyone knowledgeable about a project. Projects are often added to Wetland Tracker as part of the 401 Water Quality Certification application process. In those cases the Applicant is the entity or individual to whom the permit will be issued.

Contact for Technical Information

This section identifies the person who should be contacted to find out more about the technical details of the project.

Funders/Contributors

This section identifies the funders of the project. Check and/or list all organizations, other than the Applicant, that have made or plan to make a financial or in-kind contribution to the project.

Restoration/Mitigation Site Information

Multiple restoration or mitigation sites can be associated with the same project. This section provides information about each of the sites. The **site name** (which may be the same as the project name if the project has only one site) and the **county** where that site is located are required fields.

Development or Impact Site Information

This section ONLY applies to mitigation projects and describes the impact or development site. For mitigation projects the **impact site name** is required.

Performance Criteria

This section lists the performance criteria by which the success of the restoration/mitigation project will be judged. Performance criteria typically include elements such as vegetation (e.g., percent cover, percent survival, species richness), hydrology (e.g., duration and extent of soil saturation or inundation), wildlife populations, water quality improvement, or soil type. For mitigation plans, the performance criteria should be those found in the Final Mitigation Plan or permit for the site. Separate files can be attached if necessary, and table formats are preferred.

Example performance criteria table (the list is not meant to be complete or definitive):

Element	Performance Criteria	Year (or other suitable metric)
Vegetation	25% cover	1
	80% cover	5
	80% survival	10 (for riparian systems)
Hydrology	inundation or saturation	10% of the growing season (for a wetland system)
	water conveyance	annually or less frequently (for a riparian system)
Wildlife	shorebird populations comparable to reference site	1
Etc.	Etc.	Etc.

Reporting

This section identifies how often monitoring reports are written, and whether additional reporting is required.

Habitat Maps Requirement

A project map should be provided, preferably as a GIS or Google Earth file. The map should indicate present habitats at all project locations. A second map indicating planned habitat changes (gain/improvement/loss) at all project locations should also be provided. A list of habitat types is provided in the Wetland Tracker form.

Planned Habitat Changes

This section summarizes the habitat changes that are expected as a result of the project. The form includes a table for listing **the area or length gained, improved and lost, by habitat and project activity.** This information is generally required, however we recognize that for Tahoe projects still in the early planning stages these details may not be available.

Notes about planned habitat changes:

- Both "created" wetlands (establishment where previously none existed) and "restored" wetlands (establishment where previously some did exist) lead to an increase in wetland area.
- An area is tallied as "enhanced" when wetland function will improve through planned physical modifications, but the wetland type and size remain the same.
- An area is tallied as "preserved" when it remains physically unchanged, but its legal status has changed such that it is no longer available for development or other habitat-impacting activity. If an area will be physically modified, it cannot be "preserved."

Use acres for wetlands; use both acres and linear feet for channel and riparian areas.

Project Monitoring

This section identifies the monitoring that is planned or has been completed for the project. Monitoring reports can be uploaded to Wetland Tracker, where they will be made available in the "Files and Links" section.

Files and Links

Each Wetland Tracker project record has a "Files and Links" section associated with it. Documents associated with the project such as permits, plans, monitoring reports, maps, and photos can be stored here. Wetland Tracker can also link to any project websites or other available online data.