Chapter 1 Proposed Project

The California Department of Transportation (Caltrans) is the lead California Environmental Quality Act (CEQA) agency responsible for maintaining and improving the California highway system within the Lake Tahoe Basin. This Water Quality Improvements Project (EA 03-1A8420; ED-89 PM 8.6–13.8) (the Project) would implement water quality improvement measures along a segment of State Route (SR) 89 in El Dorado County to comply with National Pollutant Discharge Elimination System (NPDES) permit requirements and to address planned improvements and changes that are part of the Lake Tahoe Basin Environmental Improvement Program (EIP).

This Project is part of an overall program of proposed improvements on the state highway system in El Dorado County to achieve the objectives for water quality identified in the EIP and is included in a draft program environmental impact report (Draft PEIR) prepared by Caltrans (2007a) that addresses the broad range of improvements to eight segments of state highways in El Dorado County. The Draft PEIR and the technical studies prepared to support it discuss improvements at conceptual and preliminary design levels. This initial study (IS) provides a more detailed environmental review of this specific Project. At the time of publishing of this IS, the Draft PEIR has not been finalized and certified. However, this IS uses data and analyses prepared for the Draft PEIR. Where this is the case, the source is cited.

1.1 Location

This Project is located on SR 89 in El Dorado County between the SR 89/U.S. Highway 50 (U.S. 50) "Y" in South Lake Tahoe and Cascade Road. The Project limits are from Post Mile (PM) 8.6 to PM 13.8. Figure 1-1, Project Location, shows the Project location in a regional context.

1.2 Purpose

The purpose of this Project is to implement NPDES requirements and elements of the EIP that relate to this segment of SR 89.

1.3 Need

The Lake Tahoe Basin has experienced environmental degradation over the past 100 years, most notably in the lake's water clarity and the health of the basin's forestlands. The lake's water clarity, which reflects water quality, has become the primary measure of the basin's environmental health and has declined steadily over the past several decades. The need for this Project is further defined by the requirements and policies of the agencies and orders discussed below.

1.3.1 Tahoe Regional Planning Agency

The Tahoe Regional Planning Agency (TRPA) was created with the authority to plan, oversee, and regulate development within the bi-state Lake Tahoe region, which includes the state highways. TRPA was established by Congress under the Tahoe Regional Planning Compact (Compact) created by Public Law 96-551 (enacted by Congress in 1982). The Compact charges TRPA with developing, attaining, and maintaining environmental threshold carrying capacities to protect the unique values of the basin. The nine categories of environmental thresholds created by TRPA under the Compact are:

- water quality,
- air quality,
- scenic resources,
- soil conservation,
- fisheries,
- vegetation,
- wildlife,
- noise, and
- recreation.

The TRPA's *Regional Plan for the Lake Tahoe Basin: Goals and Policies* (TRPA Regional Plan) establishes the overall approach to meeting the threshold standards. Various elements of the plan address specific environmental and planning topics, and TRPA's plan area statements (PASs) and community plans identify goals for specific land use areas throughout the Lake Tahoe Basin. The plans and policies ultimately are implemented through the TRPA Code of Ordinances, which regulates all proposed projects and activities (California Department of Transportation 2007a).

1.3.2 Executive Order 13057 and State and Regional Commitments

Presidential Executive Order 13057, issued on July 26, 1997, declared the Lake Tahoe region an area of national environmental concern. The order created a federal partnership of five Cabinet-level agency secretaries and called for a memorandum of agreement (MOA) among the federal partnership, the States of California and Nevada, TRPA, and the Washoe tribal government to facilitate coordination and cooperation. The MOA subsequently was signed by the governor of California, and it affirmed a commitment to manage and protect Lake Tahoe's natural resources; achieve and maintain the previous environmental thresholds; and adopt, fund, and implement the EIP. The $908-million EIP was adopted by TRPA in February 1998. Continued state funding for the EIP since 1999 has reaffirmed California's commitment to protect and restore the environmental quality of Lake Tahoe (California Department of Transportation 2007a).

The EIP identifies restoration, capital improvement, and operational modification work in eight of the nine environmental threshold areas. Approximately 83 EIP projects involve California

Figure 1-1
Project Location

highways in the Lake Tahoe Basin. Caltrans provides capital funding involvement for approximately 28 projects and is the lead agency for 20 projects (California Department of Transportation 2007a). This Project incorporates elements of EIP Project 995 intended to install road runoff treatment and erosion control facilities along SR 89 from the "Y" to the Placer County line.

1.3.3 National Pollutant Discharge Elimination System Permit Requirements

In 1987, the federal Clean Water Act (CWA) was amended to include Section 402(p), established a framework for regulating municipal and industrial stormwater discharges under the NPDES. Caltrans was issued a statewide NPDES permit (Statewide Permit) (Order 99-06-DWQ, NPDES CAS000003) from the State Water Resources Control Board (SWRCB) on July 15, 1999. The Statewide Permit incorporates the provisions of the *Water Quality Control Plan for the Lahontan Region* (Basin Plan) (Lahontan Regional Water Quality Control Board 2005), which contains additional requirements that historically have applied to Caltrans permits. The Basin Plan includes numerical effluent limitations for stormwater discharges within the Lake Tahoe Hydrologic Unit (California Department of Transportation 2007a).

The Statewide Permit requires that stormwater and urban runoff collection, treatment, and infiltration disposal facilities be designed, installed, and maintained for the discharge of stormwater runoff from all impervious surfaces generated by the 20-year, 1-hour design storm within the Lake Tahoe Hydrologic Unit. According to the permit, all Caltrans facilities within the hydrologic unit must be retrofitted to comply with this requirement by 2008. If site conditions do not allow for adequate on-site disposal, all site runoff must be treated to meet applicable effluent limits and receiving water limitations specified in the Basin Plan. The Regional Water Quality Control Board (RWQCB) executive officer may approve alternative mitigation measures (California Department of Transportation 2007a).

Caltrans developed, and the SWRCB approved, a statewide stormwater management plan (California Department of Transportation 2007c) that identifies appropriate best management practices (BMPs) to be implemented on projects as site conditions allow. The *Caltrans Storm Water Quality Handbook: Project Planning and Design Guide* (California Department of Transportation 2007b) was developed to give additional guidance to designers in considering and implementing these BMPs on all projects. This Project would improve stormwater quality by implementing source control and treatment BMPs as approved in the handbook to the maximum extent practicable (California Department of Transportation 2007a).

1.4 Proposed Project

This Project proposes only one build (action) alternative, with multiple elements that would provide an opportunity to improve water quality through the use of various treatment BMPs (as identified in the *Caltrans Storm Water Quality Handbook: Project Planning and Design Guide*) and to conform to the TRPA Code of Ordinances. This Project proposes to improve the quality of stormwater runoff by collecting and treating the stormwater runoff from SR 89 by implementing the following improvements where feasible and warranted.

- Rehabilitate existing drainage systems and install new drainage systems, including infiltration basins and water conveyance systems.
- Deploy treatment BMPs.
- Provide rock slope protection.
- Flatten and protect erodible slopes for erosion control.
- Revegetate bare or erodible areas.
- Where permitted by the RWQCB and TRPA, allow sheet flow off of roadways where longitudinal basins are proposed and allow the spreading of runoff water where feasible in stream environment zone (SEZ) areas.
- Pave all existing driveway connections within state right-of-way.
- Pave some existing unsurfaced pullouts and construct new pullouts.
- Place asphalt-concrete overlay (1.8 inches).
- Dig out failed pavement sections before overlay.
- Line or replace culverts in poor condition.

Potential locations for infiltration devices, such as basins, swales, or trenches or other conveyance systems were identified during the development of the project study report for SR 89 (California Department of Transportation 2003a). The Project improvements were developed with input from and through coordination with Caltrans multifunctional units specializing in design, materials, traffic, constructability, safety, and environmental review. Preliminary design review and input were provided by staff from the Lahontan RWQCB; TRPA; El Dorado County; the Caltrans TRPA coordinator; and Caltrans District 3 landscape and design units, which conducted field reviews of the Project area.

The basin and related facility locations and configurations were developed based on whether a site was undeveloped, had flat or gently sloping topography, was downgradient from an existing or potential discharge point, was not in an obvious SEZ or floodplain, and was accessible to maintenance equipment.

To accommodate flexibility in the planning and design of the proposed facilities, a broad Environmental Study Limit (ESL) was defined that encompasses the anticipated improvements. This ESL boundary is shown in the Project layout sheets in Appendix A.

No work would occur outside of the ESL. Also, no structures would be affected by the Project and no work would occur within the bed or bank of Taylor Creek or Tallac Creek.

1.4.1 Construction Phasing, Access, Staging Areas, and Methods

To allow for construction, temporary access to, or use of, lands outside the Caltrans right-of-way would be required. This access or use is typical of most major roadway projects and would allow for temporary staging of equipment and construction, and access to and from the construction

areas. To minimize disruptions in use and for safety of recreational users in the area during construction, temporary detours would be provided for the South Lake Tahoe City Bike Path, for trails that cross SR 89 near the Taylor Creek Visitor Center, and for other recreational areas, as appropriate. Construction easements would be defined during the preparation of plans, specifications, and estimates for the Project. The study area for the Project extends along both sides of SR 89 as shown in the Project layout sheets in Appendix A and was defined to allow room for construction access and activities where easements would ultimately be obtained (California Department of Transportation 2007a).

Construction activities will require the clearing of vegetation where facilities will be installed. Tree removal will be necessary in some locations but will be minimized through further refinement of basin and facility design. State, regional, and local vegetation and tree removal requirements and permitting will be followed. During construction, the contractor will be required to develop and implement erosion control measures and plans, and to follow seasonal restrictions applicable to projects in the Lake Tahoe Basin (California Department of Transportation 2007a).

New vehicle pullouts might require earthwork and disturbance of existing slopes. New cut slopes will be stabilized with rock-slope protection or vegetation. TRPA scenic threshold criteria will be considered in the design of slope protection systems. Excavation and earthwork will be necessary for the installation of pavement, infiltration basins, water collection and control devices, and similar facilities. Excavated earth and materials not reused at the Project site or elsewhere will be disposed of by the contractors at appropriate disposal facilities. Permanent, long-term BMPs, including asphalt dikes and new drainage systems, will be implemented for controlling potential impacts on existing waterways or storm drainage facilities (California Department of Transportation 2007a).

1.4.2 Traffic Management and Public Involvement Plans

The draft *Lake Tahoe Basin Regional Traffic Management Plan* (Regional TMP) that has been developed for the EIP requires a traffic management plan (TMP) to be developed as part of the final design phase of each of Caltrans' eight El Dorado County water quality improvement projects. Therefore, Caltrans will develop a Project-level TMP before construction of the Project. The Project-level TMP will be consistent with the draft Regional TMP. The Project-level TMP will include construction restrictions, requirements, and definitions that would apply to the contractor(s) based on the type of work.

In general, the Project-level TMP will develop strategies for public and motorist information, incident management, construction, demand management, and alternate routes. It may require, restrict, or define elements of the following:

- construction requirements and restrictions to minimize traffic delays and maximize safety;
- lane closure timing and charts;
- master construction schedule;
- traffic operation systems;

- emergency vehicle access;
- bicycle and pedestrian access;
- temporary detours through the construction zone for pedestrian and recreational areas, as necessary;
- limiting construction hours with traffic control;
- standard contract specification for access to a property, driveway, or access road;
- notification before construction affecting property access; and
- coordination with local and state agencies, staging of various worksites, and size of construction efforts.

Based on the draft *Tahoe Basin Public Communications and Outreach Guidelines*, Caltrans would also create a public involvement plan to minimize disruption to local communities and maximize awareness of Project-related activities. The plan would include protocols for coordination with members of the public, other agencies, and all applicable stakeholders; specific outreach activities, such as ongoing information dissemination, public workshops, and media announcements; and coordination with the TMP to disseminate immediate information about road conditions. The goal of the public involvement planning would be to ensure active participation and involvement by community and agency members and minimize effects on stakeholders resulting from the Project.

1.4.3 Additional Project Design Features and Best Management Practices

The following design features and BMPs have been incorporated into the Project.

VIS-01: General Scenic Measures

The following general measures meet TRPA scenic threshold requirements and will be implemented as part of Project design and construction.

- All disturbed areas will use temporary erosion control measures during construction to minimize permanent impacts on visual quality from erosion.
- All areas disturbed during construction will receive permanent erosion control measures to minimize permanent impacts on scenic quality.
- All disturbed areas will be planted with a permanent seed mix composed of native plant species indigenous to the area. In addition, if required, a follow-up revegetation project will install containerized plants to supplement seeding. All removed non-native landscape planting will be replaced in kind. All native vegetation removed will be replaced in ratios determined by Caltrans' Landscape Architecture Branch. The requirements of this revegetation will be incorporated into a restoration and monitoring plan prepared by the Landscape Architecture Branch and will be submitted for approval by the appropriate agencies prior to Project permitting.

- All small trees, tree limbs, shrubs and other woody debris generated during clearing and grubbing operations will be chipped and stockpiled for future use as erosion control and in areas designated for revegetation.
- During clearing and grubbing operations, duff will be stripped and stockpiled as part of earthwork. The duff will be replaced in areas where revegetation work will occur.
- Any water quality improvement ditches required will be earthen or rock lined whenever possible.

VIS-02: Site-Specific Design Measures for Infiltration Basins
The following measures specific to the design and construction of infiltration basins will be implemented and meet TRPA scenic threshold requirements.

- Each basin shape will have a site-specific design to maximize infiltration and minimize tree removal. Where feasible, and where the long-term health of trees can be maintained, the basin will be irregularly shaped around existing trees. Infiltration basins will be designed to eliminate harsh angles that appear human-made, with features integrated into the surroundings through the use of curvilinear forms and contour grading.
- All disturbed areas associated with basin construction will be revegetated using seeding, container planting, pine needle mulch, and temporary irrigation where required. In addition, logs and boulders will be integrated into the basin design where appropriate. This integration will help to blend the newly constructed basins into the surrounding environment.
- Infiltration basins will avoid the use of concrete or rock slope protection lining. By avoiding these two items, the newly constructed basins will better blend into the surrounding environment.

VIS-03: Site Specific Design Measures for Sand Traps and Sand Vaults
The following measures specific to the design and construction of sand traps and sand vaults will be implemented and meet TRPA scenic threshold requirements.

- Sand traps and sand vaults will be installed in the least visible locations possible while still accomplishing their designed function. Their structures will be painted or powder-coated with approved Standard Federal Color Brown #30045 or Green #34108. The specific color will be selected to match the color of any existing elements in the immediate area.
- All disturbed areas associated with sand trap or sand vault installation will be revegetated using seeding, container planting, or pine needle mulch.

VIS-04: Site-Specific Design Measures for End Treatment of Culverts and Pretreatment of Existing Swales
The following measures specific to the design and construction of culvert end treatments and the pretreatment improvements of existing swales will be implemented and meet TRPA scenic threshold requirements.

- The character of the rock of the treatments will have an indigenous feel as to size, shape, material, and color. Edges will have an irregular shape to facilitate a more natural feel to aesthetic composition.
- Environmentally benign stains will be used on treatments to induce a weathered appearance that blends elements into the existing landscape.
- For highly visible treatment areas, containerized native plantings will be used to strategically blend culvert end treatments into the landscape or screen them from view.

SC-01: Purchase of Land Coverage Credits
If needed, Caltrans will transfer land coverage credits pursuant to Chapter 20 of the TRPA Code of Ordinances. Caltrans is not on the TRPA individual parcel system and is creating coverage within state right-of-way or within land on which highway agreements exist. Any land transfer will be performed under the guidance of the California Tahoe Conservancy, a State of California land bank administration agency. Caltrans has existing coverage credits at the conservancy's land bank via a memorandum of understanding dated October 18, 2000.

AV-01: Establish Environmentally Sensitive Areas
Additional direct and indirect impacts on sensitive biological resources, including wetland and SEZ resources, throughout the Project area will be avoided or minimized by designating these features outside the construction impact area as *environmentally sensitive areas* (ESAs) on Project plans and in Project specifications. ESA information will be shown on contract plans and discussed in the Special Provisions. ESA provisions may include the use of temporary orange fencing to delineate the proposed limit of work in areas adjacent sensitive resources or to delineate and exclude sensitive resources from potential construction impacts. Contractor encroachment into ESAs will be restricted (including staging/operation of heavy equipment or casting of excavation materials). ESA provisions will be implemented as a first order of work and remain in place until all construction activities are complete.

WC-01: Weed-Free Construction Equipment
All off-road construction equipment will be cleaned of potential noxious weed sources (e.g., mud and vegetation) before entry into the Project area (preferably before entry into the Lake Tahoe Basin), and after entering a potentially infested area before moving on to another area, to help ensure that noxious weeds are not introduced into the Project area. The contractor will employ whatever cleaning methods (typically with the use of a high-pressure water hose) are necessary to ensure that equipment is free of noxious weeds. Equipment will be considered free of soil, seeds, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools is not required. Equipment washing stations will be placed in areas that afford easy containment and monitoring (preferably outside the Lake Tahoe Basin) and that do not drain into the forest or sensitive areas (riparian, SEZs, wetlands, etc.).

WC-02: Equipment Staging in Weed-Free Areas
Staging of equipment should only be done in weed-free areas. Landings should be placed in forested areas rather than open flats to help prevent the establishment of noxious invaders, such as yellow star thistle, that utilize open sunny areas.

WC-03: Weed-Free Erosion Control Treatments
To further minimize the risk of introducing additional non-native species into the area, only TRPA-approved plant species appropriate for the Project area will be used in any erosion control or revegetation seed mix or stock. No dry-farmed straw will be used, and certified weed-free straw will be required where erosion control straw is to be used. In addition, any hydroseed mulch used for revegetation activities must also be certified weed-free.

WL-03: Restrict Timing of Woody Vegetation Removal
It is recommended that the removal of any woody vegetation (trees and shrubs) required for the Project is completed between August 16 and February 28 prior to Project construction, outside the predicted nesting season for raptors and migratory birds in this area. Vegetation removal outside this time period may not proceed until a survey by a qualified biologist determines that no nests are present or in use (see WL-04 below).

WL-04: Nesting Bird Survey
If woody vegetation removal, construction, grading, or other Project-related improvements are scheduled during the nesting season of protected raptors and migratory birds (March 1 to August 15), a focused survey for active nests of such birds will be conducted by a qualified biologist within 30 days prior to the beginning of Project-related activities. If active nests are found, Caltrans will consult with USFWS regarding appropriate action to comply with the Migratory Bird Treaty Act (MBTA) and consult with the California Department of Fish and Game (CDFG) to comply with provisions of the California Fish and Game Code (CFGC). If a lapse in Project-related work of 30 days or longer occurs, another survey and, if necessary, consultation with USFWS and CDFG will be required before work can be reinitiated. Caltrans will consult USFWS and Forest Service annual survey data for any new occurrences within the study area.

WL-05: Limit Vegetation Removal
Vegetation removal will be limited to the absolute minimum amount required for construction.

WQ-02: Minimize Disturbance to Creek Channels and Adjacent Areas
Disruption of the streambed and adjacent riparian corridor will be minimized. All stream and riparian habitat areas outside the construction limits will be designated as ESAs, as detailed in AV-01.

Disturbed areas within the construction limits, including temporary or permanent access routes, will be graded to minimize surface erosion and siltation into streambeds. Any access routes will be removed after each construction season, and the streambed and bank will be recontoured to the general angle of repose that existed before construction. Streambanks and adjacent areas that are disturbed by construction activities will be stabilized to avoid increased erosion during subsequent storms and runoff. Bare areas will be covered with mulch and revegetated to pre-Project conditions. Construction site BMPs will be used to prevent contamination of streambanks and watercourses from construction material and debris, as detailed in WQ-03.

WQ-03: Containment Measures/Construction Site Best Management Practices
Measures will be employed to prevent any construction material or debris from entering surface waters or their channels. BMPs for erosion control will be implemented and in place prior to, during, and after construction to ensure that no silt or sediment enters surface waters.

Caltrans' Standard Specifications require the contractor to submit a water pollution control plan (WPCP). This plan must meet the standards and objectives to minimize water pollution impacts set forth in section 7-1.01G of Caltrans' Standard Specifications. The WPCP must also be in compliance with the goals and restrictions identified in the Lahontan RWQCB's Basin Plan. Any additional measures included in the CWA Section 401 certification, CDFG Section 1601 agreement, CWA Section 404 permit, or TRPA permit will be complied with. These standards/objectives, at times referred to as BMPs, include the following:

- Where working areas encroach on live or dry streams, lakes, or wetlands, TRPA- and Lahontan RWQCB–approved physical barriers adequate to prevent the flow or discharge of sediment into these systems will be constructed and maintained between working areas and streams, lakes, and wetlands. During construction of the barriers, discharge of sediment into streams will be held to a minimum. Discharge will be contained through the use of TRPA and Lahontan RWQCB–approved measures that will keep sediment from entering protected waters.
- Oily or greasy substances originating from the contractor's operations will not be allowed to enter or be placed where they will later enter a live or dry stream, pond, or wetland.
- Asphalt concrete will not be allowed to enter a live or dry stream, pond, or wetland.

WQ-05: Restore Riparian and Stream Habitat Disturbed by Construction
Prior to vegetation removal, the area will be surveyed by a qualified biologist for a complete accounting of species and their quantities present within the construction limits. Upon completion of construction for the Project, streambanks will be permanently stabilized and the riparian areas will be replanted with appropriate native species. Tree and shrub species that will be used for the restoration will include willow, alder, and cottonwood. Stream channels will be regraded to preconstruction conditions.

A restoration and monitoring plan will be prepared by Caltrans' Landscape Architecture Branch and submitted for approval by the appropriate agencies prior to Project permitting. The restoration plan will outline and detail all planting and erosion control activities, as well as all associated proposed monitoring activities (including length and timing of monitoring, success criteria, remedial actions, and documentation).

1.5 No-Build Alternative (No Action)

Under the No-Build Alternative (No Action), Caltrans would construct none of the improvements listed in Section 1.4. Caltrans is required to comply with the Statewide Permit issued by the SWRCB; therefore, it would be in violation of the requirements of this permit if the Project were not constructed. Further, because this alternative would not address the environmental problems facing the Lake Tahoe Basin, it is not considered a viable alternative

with respect to the Project purpose and need. This alternative would not directly affect the resources discussed in this report.

1.6 Permits and Approvals Needed

The permits, reviews, and approvals in Table 1-1 may be required for Project construction.

Table 1-1. Required Permits and Approvals

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Service	Section 7 consultation for threatened and endangered species	Not yet initiated
U.S. Army Corps of Engineers	Section 404 authorization for fill of waters of the United States	Not yet initiated
USDA Forest Service	Encroachment permit; threatened and endangered species consultation; Section 4(f) concurrence; tree removal permit	Not yet initiated
California Department of Fish and Game	Section 1602 streambed alteration agreement	Not yet initiated
Lahontan Regional Water Quality Control Board	Section 401 Water Quality Certification	Preliminary coordination and consultation
Tahoe Regional Planning Agency	Concurrence; construction-related permits	Preliminary coordination and consultation, land capability verification ongoing
State Historic Preservation Officer	Concurrence	Not yet initiated
El Dorado County	Encroachment permit	Preliminary coordination and consultation
City of South Lake Tahoe	Encroachment permit	Preliminary coordination and consultation