Brockway Summit Water Quality Improvement Project
SR-267 Chemically-Enhanced Detention Basin Pilot Study

Subsequent Negative Declaration

THE STATE OF CALIFORNIA
Department of Transportation (Caltrans)-District 3
Tahoe Regional Planning Agency (TRPA)

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Table 1. List of Abbreviated Terms

§	Section
USACE	United States Army Corps Of Engineers
APCD	Air Pollution Control District
AQ	Air Quality
ASR	Archaeological Survey Report
BMPs	Best Management Practices
Caltrans	California Department of Transportation
CCC	California Conservation Corps
CDFG	California Department of Fish and Game
CEDB	Chemically-Enhanced Detention Basin
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Levels
CO	Carbon Monoxide
CWA	Clean Water Act of 1972
DBH	Diameter Breast Height
DIN	Dissolved Inorganic Nitrogen
DVTE	Daily vehicle trip ends
EIP	Environmental Improvement Program
FHWA	Federal Highway Administration
ft	feet
HCP	Habitat Conservation Plan
HPSR	Historic Properties Survey Report
I	Interstate
IPES	Individual Parcel Evaluation System
km	kilometer(s)
KP	kilometer post
LTBMU	Lake Tahoe Basin Management Unit
m	meter(s)
mg/l	milligrams/liter
mi	mile(s)
MMP	Mitigation Monitoring Program
MND	Mitigated Negative Declaration
MS4	Municipal storm sewer system serving a population of 100,000 or more.
MYLF	Mountain Yellow Legged Frog
ND/IS	Negative Declaration/Initial Study
NO_x	Nitrous Oxides
NPDES	National Pollutant Discharge Elimination System
NTU	Nephlometric Turbidity Unit
PM	post mile
PM_{10}	Particulate Matter greater than 10 microns in size
ppm	parts per million
RE	Resident Engineer
ROG	Reactive Organic Gas
ROW	Right-of-way
RWQCB	Regional Water Quality Control Board
SEZ	Stream Environment Zone
SHPO	State Historic Preservation Office
SND	Subsequent Negative Declaration
SPPC	Sierra Pacific Power Company
SR	State Route

SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TMP	Caltrans Traffic Management Plan
TOS	Thresholds Of Significance
TRPA	Tahoe Regional Planning Agency
TRT	Tahoe Rim Trail
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service, Department of Agriculture
VMT	Vehicle Miles Traveled
WPCP	Water Pollution Control Program

Chapter 1 Project Description

Introduction

This Subsequent Negative Declaration (SND) was prepared to augment the 2002 Final Mitigated Negative Declaration/Initial Study ("FMND/IS") adopted by the State of California, Department of Transportation ("Caltrans") as lead agency for the Brockway Summit Water Quality Improvement Project ("the Original Project"). The purpose of this SND is to evaluate potential environmental impacts of the State Route 267 Chemically-Enhanced Detention Basin (CEDB) Pilot Study ("the Proposed Project"), as summarized in the project description. The use of coagulants to enhance settling was not an aspect of the original FMND/IS, and therefore, it will be evaluated in this SND. Consequently, this SND describes only the Proposed Project modifications, and analyzes any potential significant environmental impacts they may have. The rest of the Original Project as reviewed in the FMND/IS and approved by Caltrans in 2002 remains unchanged. In short, this is not a new project, but rather a modification of the previously approved Original Project. Therefore, this SND is limited in scope to the review and analysis of the incremental differences between the Original Project approved in 2002 and Caltrans' proposed modifications to the approved project for the purpose of determining whether the modifications would require preparation of subsequent environmental documentation under Section 21166 of California Environmental Quality Act (CEQA), Public Resources Code Section 21166, and Section 15162 of the CEQA Guidelines.

Once an FMND/IS has been approved for a project, CEQA Section 21166 and Section 15162 of the CEQA Guidelines prohibit the lead agency from preparing a subsequent negative declaration unless it finds, on the basis of substantial evidence, that all of the following three triggering conditions are present:

1. Substantial changes are proposed in the approved project;
2. The changes will require major revision to the original FMND/IS; and
3. The changes will result in a new significant environmental effect or a substantial increase in the severity of a significant effect identified in the original FMND/IS.

Although Caltrans has also determined that an addendum, which does not require public review, would be sufficient to address the minor technical changes to the FMND/IS necessitated by the Proposed Project modifications, a Subsequent Negative Declaration was prepared to afford an opportunity for public comment.

On August 16, 2002, Caltrans certified the FMND/IS pursuant to the CEQA and adopted a Mitigation Monitoring Program (MMP), thereby imposing a comprehensive set of mitigation measures on the Original Project. Immediately following its certification of the FMND/IS, Caltrans approved the Original Project and subsequently filed a Notice of Determination of project approval. The FMND/IS (State Clearing House #2002062111) is available for review at Caltrans District 3, Office of Environmental Services at 2389 Gateway Oaks Drive, Suite 100, Sacramento, CA 95833.

The Original Project analyzed in the FMND/IS and approved by Caltrans included the collection of settleable solids (mostly traction sand) that drained off the roadway during storm events and spring snowmelt though the use of 14 storm water infiltration basins located along State Route 267 (SR-267) just south of Brockway Summit in the Lake Tahoe area. For a complete description of the Brockway Summit Water Quality Improvement project, as approved in 2002, refer to FMND/IS, page 1, Appendix D.

Project Location

The Original Project is located along a 3.4-kilometer (2-mile) section of SR-267 near Brockway Summit in Placer County, California, as shown in Figure 1, Vicinity Map. The project limits extend from Brockway Summit (KP 10.7/PM 6.7) to Stewart Way just north of the city of Kings Beach, California (KP 14.1/PM 8.7). From Brockway Summit, the route descends 945 feet into the Tahoe Basin ending at State Route 28 near Kings Beach.

The limits of the Proposed Project begin just south of Brockway Summit (KP 11.9/PM 7.4) on SR-267 and extend a mile and a half southeast to KP 13.8/PM 8.6, as shown in Figure 2 - Site Map.

Environmental Setting

State Route 267 is a north-south undivided two-lane conventional highway 20.42 km (12.69 mi) long that traverses from Interstate 80 (I-80) near Truckee in Nevada County to SR-28 near Kings Beach. From Truckee, SR-267 travels southeasterly through rolling terrain progressing into mountainous terrain to a elevation of 2,194 meters (m) (7,199 feet (ft)) at Brockway Summit (near the beginning of the Proposed Project limits). From Brockway Summit, the route descends 945 feet into the Tahoe Basin ending at SR-28 near Kings Beach. The route is of local and regional significance providing access to residential, industrial, commercial, and recreational land uses and serves inter-regional, local commuter, and recreational traffic traveling between the Tahoe Basin, Martis Valley, Truckee, and I-80. SR-267 provides access to the Truckee-

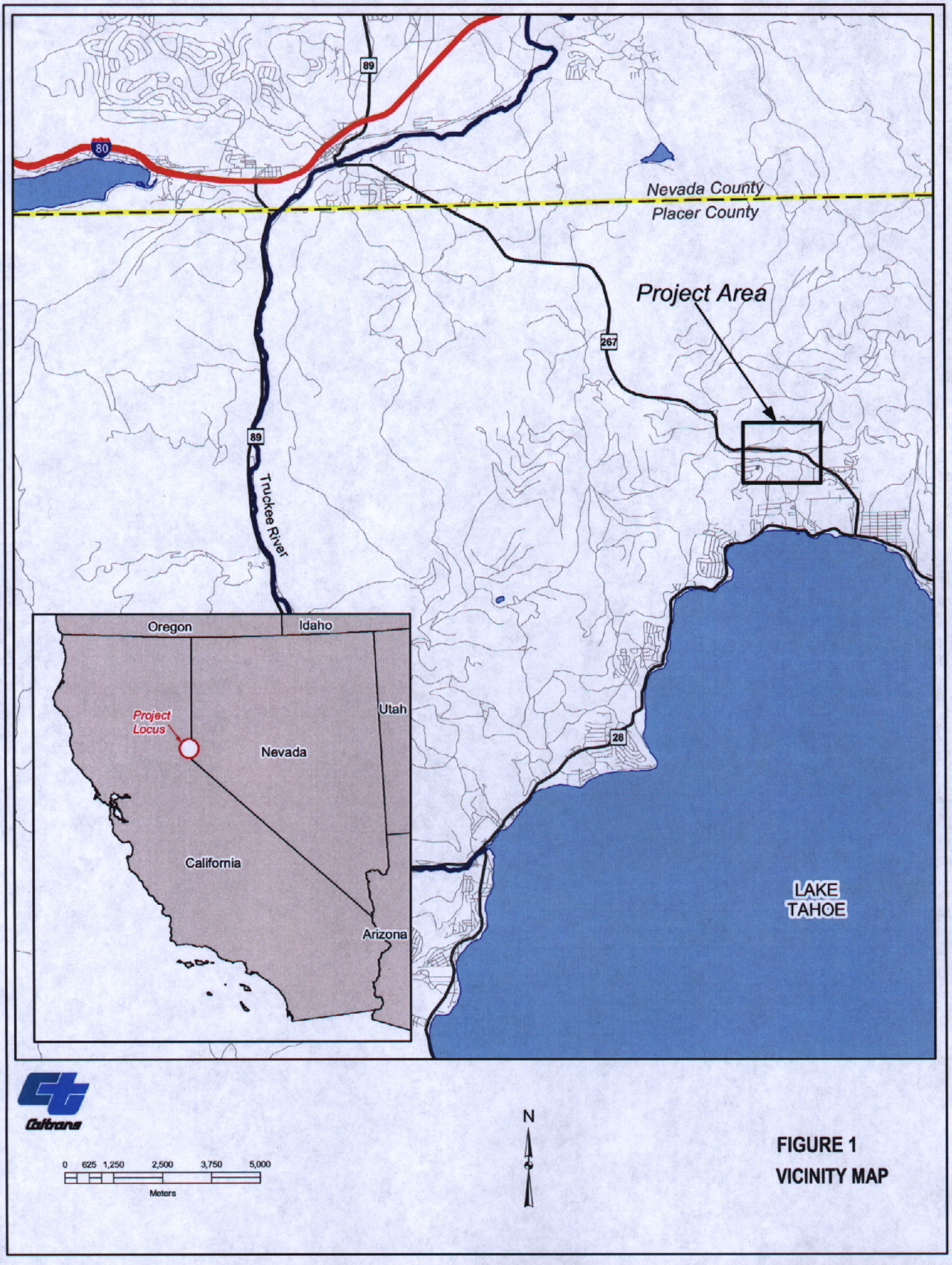

FIGURE 1
VICINITY MAP

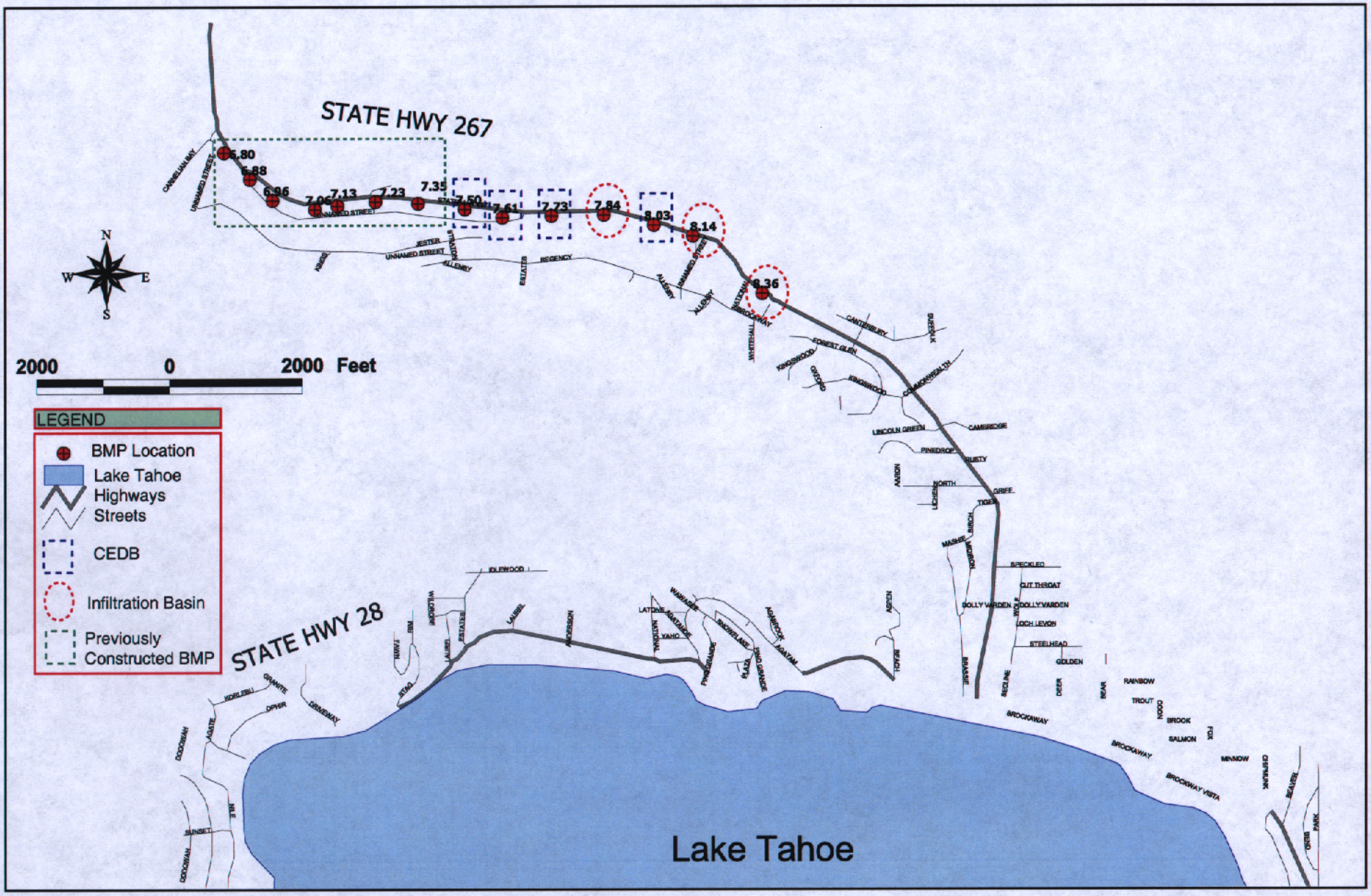

FIGURE 2
SITE MAP

Tahoe Airport and is a main connecting link between I-80 and the Tahoe Basin. This segment of highway is also known as the "Resort Triangle" along with Highway 89. Both highways run south out of Truckee and connect with Highway 28, that travels along the north shore of Lake Tahoe which is lined with resorts on both sides of the State line.

The project region is rural in character with Sierran coniferous forests, mountainous granite-rock topography, alpine streams, and other natural resources including nearby Lake Tahoe. Lake Tahoe with its unique clear blue and environmentally-sensitive fresh water is within view from portions of the project area and is the prominent natural and scenic resource near the project site.

The climate fluctuates with the seasons with warm dry summers and cold wet winters. Average annual precipitation is approximately 81.28 centimeters (32 inches), and primarily falls in the form of snow. Elevations in the project area range from 1,950 - 2,194 m (6,400 – 7,200 ft). The project area is a combination of light commercial, urban, and forest setting and the location is within a transitional vegetation zone with three dominant vegetation types. The three vegetation types identified within or adjacent to the project area are Jeffery pine, eastside pine, and urban.

Project Details

The purpose of the Original Project, adopted as the FMND/IS for the Brockway Summit Water Quality Improvement Project, was to use 14 infiltration basins to collect settleable solids (mostly traction sand) that drain off the roadway during storm events and spring snowmelt. The infiltrations basins were to be located along approximately 3.4 kilometers (2 miles) of SR-267 just south of Brockway Summit in the Lake Tahoe area, as shown in Figure 2.

To address storm water quality issues, Caltrans is required to comply with the Lahontan Regional Water Quality Control Board National Pollutant Discharge Elimination System (NPDES) permit (Order No. 99 06-DWQ). The NPDES permit mandates that specific constituents in storm water discharges from Caltrans facilities in the Lake Tahoe Hydrologic Unit be reduced to specified levels by 2008.

As part of its compliance, Caltrans is conducting a full-scale best management practices (BMP) pilot program in the Lake Tahoe basin. One objective of this program is to implement full-scale BMP pilot projects to evaluate the effectiveness of chemically-enhanced detention basin (CEDB) technology for treating storm water runoff from Caltrans facilities. Based on the results of the CEDB Siting Study (CTSW-TM-05-138-09.1), four sites were selected at Caltrans outfalls along SR-267 to implement these BMPs. The four selected sites are sites that were initially planned as infiltration basins as part of the Original Project. The four CEDB pilots will use coagulants to enhance nutrient and solids removal from storm water runoff along SR-267 in the Lake Tahoe

basin. Based on the results of Caltrans coagulant pilot testing (CTSW-RT-03-042 and CTSW-RT-03-079.31.37), polyaluminum chlorides have been selected as the coagulant to be used in the CEDB pilot study. To assess the effectiveness of coagulant addition, a monitoring study will be conducted over approximately a three-year period. The two primary differences between these new CEDB pilots of the Proposed Project and the previous infiltration basins of the Original Project are: 1) the addition of chemical coagulants, and 2) the incorporation of electric power to operate the chemical dosing and monitoring systems.

Chemical Addition

Prior to advancing this technology to actual field testing, the potential aquatic toxicity associated with the chemicals was examined. The toxicity study (Final Report for Acute Toxicity Testing of Chemically Dosed Storm Water prepared by Caltrans, May 2005) involved the measurement of toxicity to rainbow trout (using the 96-hour rainbow trout acute bioassay) of four common drinking water treatment chemicals in storm water samples prepared at the Caltrans Small-Scale Storm Water Pilot Facility, Meyers, California. According to the Final Report, there are minimal toxicity risks associated with the use of polyaluminum chloride as a chemical coagulant.

Electric Power

Electric power will be provided at all four CEDB pilot sites to operate the chemical dosing and water quality monitoring systems. To provide power to the sites, transformers will be installed on two power poles on the north side of SR-267, as shown in the mapping in Appendix E.

Overhead power lines will be used to bring power from the transformers to the existing guy poles located at CEDB-3 and CEDB-6 on the south side of SR-267. Underground electrical conduits will be installed on the south side of SR-267 to bring power from the guy pole at CEDB-6 to CEDB-5 and CEDB-7. All of the modifications required to supply electric power will be located inside the Area of Potential of Effect (APE) for the Original Project, as shown in Appendix E.

Area of Potential Effect for the Project

The APE for the Proposed Project will not extend beyond the APE for the Original Project. Maps in Appendix E also show Stream Environment Zones (SEZ) located within the project area. The potential exists for runoff to extend beyond project infiltration basins or the boundaries of the APE during a major storm event. Hydrology impacts resulting from the project will be analyzed in Chapter 2, Analysis of Potential Environmental Impacts Associated with Proposed Modifications.

Need and Purpose

Traction sand that is spread on SR-267 during the winter and other pollutants that collect on the highway may not have a chance to settle out before entering Lake Tahoe. The purpose of the proposed project is to test chemical coagulants to more effectively remove solids and other pollutants that drain off the roadway during storm events and snowmelt. The coagulants will be added to infiltration basin sites that were previously approved as a component of the FMND/IS for the Brockway Summit Water Quality Improvement Project. These storm water BMPs will minimize runoff pollution that could potentially enter Lake Tahoe.

This is a follow-up development to the Brockway Summit Erosion Control project, Environmental Improvement Program (EIP) Project Number 14, as well as the Brockway Summit Water Quality Improvement Project. Successful completion of this CEDB pilot study may lead to the development of storm water treatment solutions that can meet the water quality objectives specified in the Caltrans NPDES Permit.

Description of Water Quality Requirements

The Proposed Project is designed to collect storm water discharge from the 20-year return period, 1-hour duration storm, known as the "water quality storm," within this 2.5 km (1.5 mi) stretch of highway and divert this flow into the CEDB pilots. The detention basins will slow the flowrate of the storm water, allowing traction sand and other solids to settle within the basin. In addition, coagulants will be added to the influent storm water to destabilize dissolved and suspended particles, thereby promoting the formation of larger aggregate particles (flocs), which are more readily removed by sedimentation.

The Proposed Project will involve compliance with the following programs:

National Pollution Discharge Elimination Systems (NPDES) Program: The State Water Resources Control Board has issued Caltrans a Statewide NPDES Storm Water Permit (Order No. 99-06-DWQ), adopted July 15, 1999, which covers all Caltrans facilities in the State. In compliance with this permit, Caltrans developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout the State of California. The SWMP describes the minimum procedures and practices that Caltrans uses to reduce the pollutants it discharges from storm drainage systems owned or operated by Caltrans. It outlines procedures and responsibilities for protecting water quality at Caltrans facilities,

including the selection and implementation of BMPs. The Proposed Project will be expected to follow the guidelines and procedures outlined in the SWMP.

Municipal Separate Storm Sewer System (MS4) Program: The United States Environmental Protection Agency (USEPA) defines MS4 to include a conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over disposal of storm water and designed or used for collecting or conveying storm water. USEPA's Phase II Final Rule includes permit requirements for designated small municipalities that maintain control of a separate storm sewer system. The objectives of the Phase II regulations are to: (1) reduce the discharge of pollutants to the maximum extent practicable, and (2) protect water quality. Caltrans is the owner of an MS4 permit that includes conveyances at SR-28 and meets or exceeds the requirements of the small municipalities within the project area.

Construction Activity Permitting: Caltrans construction activity is covered by the NPDES permit (Order No. 99-06-DWQ). In addition, construction activity is subject to Tahoe Basin NPDES general construction permit (Board Order R6T 2005-0007). A notification of construction is required for enrollment for projects that have 0.4 hectare (one acre) of soil disturbance. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least one acre of total land area must comply with the provisions of this NPDES Permit and develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). Implementation of the plan starts with the commencement of construction and continues through the completion of the project. Upon completion of the project, the applicant must submit a Notice of Termination to the RWQCB to indicate that construction is completed.

Agency Actions

Permit Requirements

The following permits will be required for construction of this project:

- Caltrans must send the Lahontan Regional Water Quality Control Board a Notice of Construction at least 30 days prior to construction. In addition, a Water Pollution Control Program (WPCP) or a Storm Water Pollution Prevention Plan (SWPPP) also has to be prepared and those conditions to protect water quality must be incorporated into the plan before the Lahontan RWQCB approves the Notice of Construction.

- Any work involving tree removal from U.S. Department of Agriculture land may require a permit from the U.S. Forest Service (USFS), Lake Tahoe Basin Management Unit.
- Any work that is not exempt or qualified exempt under the 1990 TRPA/Caltrans Memorandum of Agreement requires a TRPA permit prior to construction.

Chapter 2 Analysis of Potential Environmental Impacts Associated with Proposed Modifications

The Proposed Project modifications will not result in any new adverse significant impacts or substantial increase in the severity of any impacts identified in the original project without incorporation of mitigation measures, consistent with the adopted Brockway Summit Water Quality Improvement FMND/IS.

The analysis contained in this Chapter is organized to contain a discussion of existing resources (Existing Resources Potentially Affected) including a summary of the conclusions made in the adopted Brockway Summit Water Quality Improvement FMND/IS, the thresholds used to determine environmental impact including the Tahoe Regional Planning Agency (TRPA) thresholds used in the Original Project, an analysis of impact resulting from implemenation of the Proposed Project (Potential New Impacts to Resources) and any potential mitigation measures proposed to minimize potential impact (Proposed Mitigation/Minimization/Avoidance Measures) for each environmental parameter within the CEQA Environmental Checklist. The analysis is described in the following sections:

Aesthetics

Existing Resources Potentially Affected

The Original Project concluded that the Project site is surrounded by natural and scenic resources including Lake Tahoe, Sierran evergreen forests, mountainous and granite-rock topography, and alpine streams. According to a Visual Impact Analysis performed by a Caltrans landscape architect in August of 2001, the native vegetation is fundamental to the visual quality, biological habitat, and rural character of this segment of SR-267.

Potential New Impacts to Resources

The Proposed Project is not anticipated to have an adverse negative impacts on the current visual quality of SR-267. No additional existing trees or vegetation, beyond those approved in the Original Project, will be removed along the roadside within the project limits and the existing roadside topography and grades will not be affected visually to accommodate the proposed modifications. Side slopes of the detention basin will be revegetated in accordance

with the revegetation plan developed by the Caltrans Landscape Office. In addition, the basin sites will not be visible from the Tahoe Rim Trail (TRT).

Chemical storage tanks and pumps will be placed in underground vaults. Monitoring and control panels located above ground will be painted brown or dark green to blend in with the surrounding background, as shown in the mitigation measures listed below.

Proposed Mitigation/Minimization/Avoidance Measures

The following measures shall be implemented to ensure that there are not any significant effects to visual or scenic resources due to the construction of the Proposed Project:

- All above ground features, including all power source facilities shall require some form of screening or treatment per TRPA code. The utility boxes located above ground shall require the metal boxes to be painted a dark green or brown color to blend into surroundings.
- The basins shall have their side slopes revegetated per the revegetation plan prepared by the Caltrans Landscape Office.
- Many of the project elements shall be placed below ground in order to minimize visual impacts.

Air Quality

Existing Resources Potentially Affected

The Original Project concluded that the Lake Tahoe Air Basin is in attainment for Carbon Monoxide (CO) and Particulate Matter (PM_{10}) levels. The Federal Standard for CO has not been violated since 1992. The State of California's and the Tahoe Regional Planning Agency's (TRPA) 8-hour standard (6 ppm) was not exceeded from 1995-2001, although a few exceedances occurred in 2002 and 2003. Ozone data for 1996-2002 show that the California ozone standard was met at the Lake Tahoe Boulevard monitoring site every year, with the exception of 1997 and 1999. The TRPA standard of .08 ppm has been exceeded on at least one occasion per year since its adoption.

While the air quality at Lake Tahoe is generally good, the local bowl-shaped geography makes the Basin more sensitive to air pollutants than in other areas. Winter weather conditions often cause smoke and other air pollution to accumulate close to the ground

overnight. This is due to temperature inversions that trap air at the surface. Historical measurements indicate that the main sources of winter air pollution in the Basin are local vehicle use, from both exhaust and road dust, and wood smoke emissions from fireplaces and wood-burning stoves. In the summer, air pollution in the Basin originates from both local and out-of-area sources. Air pollution from nearby cities, such as Sacramento and San Francisco, is carried into the Basin by the wind. Vehicle use is the main cause of the locally generated air pollution in the summer.

The Placer County Air Pollution Control District (APCD) currently enforces air quality regulations for construction activities. TRPA states that construction air quality effects are temporary and the TRPA code of regulations does not cover construction effects. The following thresholds, which were used in the Original Project, were extracted from the TRPA air quality threshold program.

- AQ1-Carbon Monoxide levels shall not exceed the TRPA 8-hour 6.0 ppm standard.
- AQ2-Ozone levels shall not exceed the TRPA 1-hour standard of 0.08 ppm.
- AQ3-Particulate Matter concentrations shall not exceed the California and Federal standards for 24-hour concentrations and the annual average.
- AQ4-TRPA's regional and sub-regional visibility standards shall not be violated. In addition, for regional and sub-regional visibility, wood smoke concentrations shall be reduced 15% below 1981 levels and for sub-regional visibility, suspended soil particles shall be reduced 30% below 1981 levels.
- AQ5-There shall be a 7% reduction in traffic volume on the US 50 corridor from the 1981 values.
- AQ6-Annual emmissions from wood smoke shall be reduced 15% from 1981 levels.
- AQ7-Vehicle Miles Traveled (VMT) shall be reduced 10% below the 1981 levels.
- AQ8-Dissolved Inorganic Nitrogen (DIN) load on Lake Tahoe from atmospheric sources shall be reduced by approximately 20% of the 1973-1981 annual average.

Potential New Impacts to Resources

The Placer County APCD enforces air quality regulations for construction activities. The Proposed Project will involve earth-changing modifications to the project site. The air quality will not be affected permanently by the Proposed Project. The only effect on air quality will be temporary, during the construction phase of the Proposed Project. However, these grading activities will be minor and are anticipated to fall below the construction permit criteria established by the Placer County APCD. Additionally, the use of chemical coagulants to improve water quality entering Lake Tahoe will not impact air quality in the region. Therefore, the Proposed Project will not significantly impact the air quality of the surrounding area.

Proposed Mitigation/Minimization/Avoidance Measures

There are no potentially adverse significant impacts to air quality as a result of the Proposed Project; therefore, no mitigation measures are necessary. Nevertheless, below is a list of avoidance and minimization measures to reduce the emissions of fugitive dust. The dust control practices used will be in compliance with Caltrans Standard Construction Specifications. These may include but not be limited to:

- Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust.
- The use of water or chemicals for control of dust in the construction process and the grading of roads or the clearing of land.
- Water disturbed areas to form a compact surface after grading and earth work.
- Watering disturbed (graded or excavated) surfaces as necessary, increasing frequency when weather conditions require.
- The prompt removal of earth or other material from paved roadways onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

Biological Resources

Existing Resources Potentially Affected

The Original Project concluded that no listed endangered or threatened species or critical habitat were present in the project area. The California native vegetation within the project region is classified in the Yellow Pine Forest Conifer plant community. Typical tree species include: Ponderosa Pine, Jeffrey Pine, Black Oak, Canyon Live Oak, Maple, Willow, Manzanita, Sagebrush, Ceanothus, and Rabbitbrush, etc. (Natural Environmental Study

Report, California Department of Transportation, 2001). No aquatic or riparian habitat were located on-site.

The project site is located in the Martis Peak USGS 7.5-minute quadrangle, T 16N R 17E Sections 2, 3, 11, 12. The Proposed Project site is in the High Sierra Nevada floristic subregion, Placer County, California. The project site is a combination of light commercial, urban, and forest setting and the location is within a transitional vegetation zone with the major habitat types in the project area being a combination of Jeffery pine (JPN), eastside pine (EPN), and urban (URB) (Mayer and Laudenslayer, 1988).

The following thresholds, which were used in the Original Project, were extracted from the TRPA Fisheries, Vegetation, and Wildlife threshold program.

Fisheries

- F1-Maintain 75 miles of habitat rated excellent, 105 miles of good, and 38 miles of marginal stream habitat.
- F2-A nondegradation standard shall apply to fish habitat in Lake Tahoe.
- F3-Achieve the equivalent of 5,948 total acres of excellent habitat in Lake Tahoe.
- F4-Until instream flow standards are established in the Regional Plan to protect fishery values, a nondegredation standard shall apply to instream flows.
- F5-It shall be a policy of the TRPA governing board to seek transfers of existing points of water diversion from streams to Lake Tahoe.
- F6-It shall be the policy of the TRPA governing board to support, in response to justifiable evidence, State and Federal efforts to reintroduce Lahontan cutthroat trout.

Vegetation

- V1-Increase plant and structural diversity of forest communities through appropriate management practices as measured by diversity indices of species richness, relative abundance, and pattern. Provide for promotion and perpetuation of late successional/old growth forests. The goal is to increase late successional/old growth conditions across elevational ranges of the Lake Tahoe Basin forest cover types. Individual trees greater than 30-inches dbh shall also be favored for retention because of their late seral attributes.

- V2-Provide for the nondegradation of the natural qualities of any plant community that is uncommon to the region or of exceptional scientific, ecological, or scenic values. This threshold shall apply but not be limited to 1) deep-water plants of Lake Tahoe; 2) Grass Lake (sphagnum bog); 3) Osgood swamp; and 4) the Freel Peak Cushion Plant community.

- V3- Maintain a minimum number of population sites for each of five sensitive plant species: 1) *Carex paucifructus*; 2) *Lewisia pygmaea logipetala*; 3) *Draba asterophora v. macrocarpa*; 4) *Draba asterophora v. asterophora*; and 5) *Rorippa subumbellata.*

Wildlife

- W1-Wildlife protection and maintenance of special interest species viability in the Lake Tahoe region. Provide a minimum number of population sites and disturbance zones for the following species: 1) Northern Goshawk (*Accipiter gentilis*); 2) Osprey (*Pandion Haliaetus*); 3) Bald Eagle (*Haliaeetus leucocephalus*); 4) Golden Eagle (*Aquila chrysaetos*); 5) Peregrine Falcon (*Falco peregrinus anatum*); 6) Waterfowl (all open water associated species); and 7) Deer (*Odocoileus hemionus*).

- W2-A non-degradation standard shall apply to wildlife habitat consisting of deciduous trees, wetlands, and meadows while providing for opportunities to increase the acreage of such riparian associations.

Potential New Impacts to Resources

Impacts that may significantly affect sensitive biological resources are not expected to occur during the course of the Proposed Project. No aquatic or riparian habitat is available within the immediate work zones, and no aquatic species or riparian-dependent species are expected to be directly impacted. No new impacts to biological resources are anticipated.

New construction activities related to the chemical dosing project elements are not anticipated to disrupt biological resources. Removal of vegetation is necessary for the Proposed Project and was discussed in the Original Project. No sensitive plant species or vegetation communities are expected to be adversely impacted during construction activities. Any new impacts to plant species and vegetation communities, with the addition of the chemical coagulant, would be considered less than significant. As stated in the Acute Toxicity Testing of Chemically Dosed Storm Water report prepared by Caltrans (May 2005), the addition of chemical coagulants would not result in toxicity to rainbow trout in

representative Lake Tahoe storm water. Therefore, the Proposed Project will not have an adverse negative impact on biological resources.

Proposed Mitigation/Minimization/Avoidance Measures

There are no new potentially adverse significant impacts to the biologic resources as a result of the Proposed Project; therefore, no mitigation measures are necessary. However, the basin side slopes will be revegetated per the Caltrans revegetation plan, as shown in the mitigation measures listed in the Aesthetics section of this document.

Cultural Resources

Existing Resources Potentially Affected

The Original Project concluded that the site does not have any historic properties or archaeological resources identified within the project limits, nor were there any human remains or cemeteries within the project area (Historic Property Survey Report (HPSR), December 2001).

Potential New Impacts to Resources

Since cultural resources are not likely to be present within the project limits, it is likely that this development will not affect cultural resources. However, the mitigation measures in the Original Project in Appendix D shall be adhered to in order to ensure that there will not be a significant effect on cultural resources. The Proposed Project will not significantly impact any cultural resources, or result in an exceedance of thresholds listed previously.

Proposed Mitigation/Minimization/Avoidance Measures

The mitigation measures approved in the Original Project shall be followed to adequately mitigate any potential effects to cultural resources during construction activities.

Geology and Soils

Existing Resources Potentially Affected

It was concluded that the Original Project would result in reduced soil erosion with implementation of the 14 sedimentation and infiltration basins. The Proposed Project site is not located on unstable land or in an area of known landslides or liquefaction. Impacts to

existing geology and soil will be considered significant if the Proposed Project would result in any of the following impacts:

- Subject people or structures to injury or death from: 1.) earthquake; 2.) strong seismic groundshaking; 3.) and seismic-related ground failure, including liquefaction or landslides.
- Result in substantial soil erosion or loss of topsoil.
- Be located on unstable soil or on expansive soil.

The following thresholds, which were used in the Original Project, were extracted from the TRPA Soil Conservation threshold program:

- SC1-The TRPA threshold for soil conservation requires that impervious coverage be in compliance with the coverage coefficients defined in the Land Capability Classification of the Lake Tahoe Basin California-Nevada, a guide for planning (Bailey 1974). Additional land coverage is monitored on a project basis and recorded in square feet. Coverage may be utilized directly or by coverage transfers within a related project area. An excess coverage mitigation program is in place to gradually reduce existing land coverage.

- SC2-TRPA policy requires the preservation of existing naturally functioning Stream Environment Zone (SEZ) land in their natural hydrologic condition, the restoration of all disturbed SEZ lands in undeveloped, un-subdivided lands and the restoration of the SEZ lands that have been identified as disturbed, developed or subdivided to obtain a 5% total increase in the area of naturally functioning SEZ lands.

Potential New Impacts to Resources

The Proposed Project will minimize run-off pollution that could enter Lake Tahoe and will therefore have an overall beneficial effect on the existing geology and soils.

Construction of the four CEDB pilot study sites are expected to result in the disturbance of soil in excess of five feet below ground in limited areas of the basin excavation and underground storage vaults. During construction, there may be some temporary soil disturbance for the construction of the Proposed Project elements. However these effects are temporary in nature and occur in areas of previous soil disturbance related to highway construction. After the Proposed Project is implemented, soil loss/erosion is expected to decrease.

Proposed Mitigation/Minimization/Avoidance Measures

The BMP measures approved in the Original Project shall be followed to adequately mitigate any potential soil erosion effects during the Proposed Project. The construction BMPs are listed in detail in Appendix D of the Original Project, as shown in Section 2.8.3 of the FMND/IS.

Hazards and Hazardous Materials

Existing Resources Potentially Affected

The Original Project concluded that no potential sources of hazardous waste exist along this segment of SR-267.

Potential New Impacts to Resources

According to the Final Report for Acute Toxicity Testing of Chemically Dosed Storm Water prepared by Caltrans (May 2005), the chemical coagulants are not expected to be toxic to fish species, or as dry chemicals, to the earth or in the air. Also, chemical storage tanks will be located in a water-tight, below-ground vaults. The tanks will be set within containment pallets in the vault designed to contain any leakage from the tanks. Any hauling or removal of hazardous chemicals/materials in the area for the construction of the Proposed Project will be minimal. In addition, safety procedures used to decrease the likelihood of an accidental hazardous chemical/material spill are also outlined in the BMPs described in the Original Project. The Proposed Project will not significantly impact any existing environment through the release of hazards or hazardous materials resources, or result in an exceedance of thresholds listed previously.

Chronic toxicity testing is being conducted and will be completed prior to monitoring of the pilots. The CEDB pilot sites are detention basins and are therefore designed to discharge to surface waters rather than infiltrate. Minimization and avoidance measures to reduce or eliminate risk associated with discharge to surface water are an integral part of the pilot study. Measures to minimize toxicity are also included as mitigation measures listed below.

Proposed Mitigation/Minimization/Avoidance Measures

There are no potentially adverse significant impacts to hazards and hazardous materials as a result of the Proposed Project; therefore, no mitigation measures are necessary. Nevertheless, below is a list of avoidance and minimization measures to reduce the hazards of chemical use. These may include but not be limited to:

- The polyaluminum chloride coagulants used for the Proposed Project are commonly used in water treatment applications. These chemicals shall be handled according to the requirements specified in the material safety data sheets (MSDS). Additionally, these chemicals shall be contained in tanks and stored within water-tight underground vaults. The chemical tanks shall be placed on containment pallets that will contain any potential chemical leaks. Absorbent mats and a sump area shall also be provided to ensure the vault floor remains dry.
- The chemical dosing system designs shall incorporate additional safety measures including real-time monitoring systems. These monitoring systems allow for the remote monitoring of pH, turbidity and other water quality parameters of the basin effluent. Any potential overdosing of chemical will signal the dosing control system to immediately halt the further release of chemical.

Additionally, to avoid the potential release of hazardous materials during construction of this project, construction BMPs will be implemented. The construction BMPs are listed in detail in Appendix D of the Original Project.

Hydrology and Water Quality

Existing Resources Potentially Affected

The Original Project concluded that the project area is not located within a 100-year floodplain, according to the floodplain maps provided in the Placer County General Plan (1994). It is likely that the quality of two intermittent streams that convey the storm water runoff from the project area on SR-267 to Snow Creek (Snow Creek flows into Lake Tahoe after flowing through Tahoe Vista), which are derived from snowmelt, is good or excellent.

Rain or snowmelt that drains off the highway can contain several different pollutants (hydrocarbons, metals, nutrients, microbes, volatile and semivolatile organic materials) that are listed as detrimental to the clarity of Lake Tahoe. However, due to the rural character of SR-267, amount of traffic, and its elevation, the most detrimental pollutant that can potentially drain off the highway right-of-way (ROW) during a storm event or snowmelt is traction sand that is laid down on the road during and after snowfall events. This sand can become mobile in storm water runoff and can potentially increase the turbidity of Lake Tahoe.

Federal water quality objectives are dictated by section 303(d) of the Clean Water Act and USEPA water quality planning and management regulations, which require states to identify waters that do not meet, or are not expected to meet water quality standards even after technology-based or other controls are in place. These water bodies are considered water quality limited and are reported by States in their section 303(d) list. Lake Tahoe is a section 303(d) listed body of water and the pollutants of concern are nutrients and sedimentation/siltation. The known sources of nutrients include: silviculture, construction/land development, urban runoff/storm sewers, wastewater, drainage/filling of wetlands, marinas, atmospheric deposition, highway maintenance and runoff, and other non point sources. Some of the sources of sedimentation/siltation are unknown at this time. However, it can be concluded that traction sand from highways is a source..

The following thresholds, which were used in the Original Project, were extracted from the TRPA water quality threshold program:

- WQ1-Decrease sediment load as required to attain turbidity values not to exceed 3 Nephlometric Turbidity Units (NTU) in littoral Lake Tahoe. In addition, turbidity shall not exceed 1 NTU in shallow waters of Lake Tahoe not directly influenced by stream discharges.

- WQ2-Average Secchi depth, December-March, shall not be less than 33.4 meters.

- WQ3-Annual mean phytoplankton primary productivity shall not exceed 52 $gC/m^2/yr$. California: algal productivity shall not be increased beyond levels recorded in 1967-1971, based on a statistical comparison of seasonal and annual mean values.

- WQ4-attain a 90^{th} percentile value for suspended sediment of 60mg/L.

- WQ5-Dissolved inorganic nitrogen, 0.5 mg/L; dissolved phosphorous, 0.1 mg/L; dissolved iron, 0.5 mg/L; suspended sediment, 250 mg/L.

- WQ6-Surface water infiltration into the groundwater shall comply with the Uniform Regional Runoff guidelines. For total nitrogen, 5 mg/L; total phosphorous, 1 mg/L; total iron, 4 mg/L; turbidity, 200 NTU; and grease and oil, 40 mg/L.

- WQ7-For other lakes in California-Nevada, the standards are the same as the tributary standards.

Potential New Impacts to Resources

Areas within the final ROW or easement where construction will occur will be cleared of vegetation. Erosion and increased turbidity and sedimentation may occur during and immediately following the construction phase of the project. However, these effects can be decreased through the implementation of appropriate management practices listed in the Original Project in Appendix D.

The Proposed Project will not increase the amount of impervious surface for highway use (impervious maintenance driveways to the forebays will be constructed); therefore, it does not seem probable that any water quality parameters administered by Federal, State, or local agencies will be adversely affected by the Proposed Project.

Existing drainage patterns will be modified only to the extent that highway runoff from each storm drain outfall will be diverted into a treatment BMP (either infiltration basin or CEDB pilot). The potential does exist for outflow from the CEDB pilots to extend beyond the original APE. However, because of the storage capacity of each basin, this would only occur during large storm events. Based on results from small scale studies, any treated outflow from the CEDB pilots discharging beyond the original APE is expected to have lower pollutant levels than untreated runoff. Also, because of the incorporation of safety measures discussed in the previous section, the potential of any chemical overdosing beyond the original APE is very minimal.

It is anticipated that the disturbance of soils to construct the Proposed Project will have a negligible effect on groundwater within the project vicinity. In order to sufficiently remove soluble constituents or pollutants in storm water by adsorption to soil particles prior to constituents/pollutants reaching the groundwater table, a minimum invert to groundwater separation of at least 1.22 m (4 ft) is recommended. Impermeable liners will be provided below the inverts of all four basins and therefore pollutants will not adversely impact groundwater.

Proposed Mitigation/Minimization/Avoidance Measures

The mitigation measures approved in the Original Project shall be followed to adequately mitigate any potential effects that uncontrolled erosion from snowmelt and storm water runoff could have on the project site during construction.

Recreation

Existing Resources Potentially Affected

The Original Project concluded that the project area includes a variety of recreational opportunities associated with the natural landscape and the Lake Tahoe Basin. The Tahoe Rim Trail (TRT) is a recreational resource located around Lake Tahoe. The TRT is 241 km (150 mi) long and has trailheads on either side of SR-267 (as well as many others in the Tahoe Basin).

The following thresholds, which were used in the Original Project, were extracted from the TRPA Recreation threshold program:

- R1-It shall be the policy of the TRPA governing body in development of the regional plan to preserve and enhance the high quality recreational experience, including preservation of high quality undeveloped shorezone and other natural areas. In developing the regional plan, the staff and governing body shall consider provisions for additional access, where lawful and feasible, to the shorezone and high quality undeveloped areas for low density recreational uses.

- R2-It shall be the policy of the TRPA governing body in development of the regional plan to establish and ensure a fair share of the total basin capacity for outdoor recreation is available to the general public.

Potential New Impacts to Resources

The Proposed Project is expected to decrease erosion along the TRT and the four CEDB sites will not be visible from the trail. Similarly, the addition of the chemical dosing systems, including the incorporation of power supply to the sites, is not expected to change the visual character of the sites to impact recreational trail users. Therefore, the visual quality of this section of the trail will not be significantly affected by the Proposed Project.

Proposed Mitigation/Minimization/Avoidance Measures

In order to decrease the potential effects to the scenic resources along the TRT due to construction of the Proposed Project, the mitigation measures listed in the Aesthetics section of this document shall be implemented.

Utilities and Service Systems

Existing Resources Potentially Affected

It was concluded that the Original Project would have a beneficial effect to the existing drainage systems in which the infiltration basins were to be constructed.

Potential New Impacts to Resources

The Proposed Project is not an industrial, commercial, or residential development that could alter the type of public utility or service system facility, including water, sewer, and solid waste. Therefore, there will not be any effect on these types of public service systems. In addition, the storm water runoff enhancements to the existing highway drainage system will likely improve the water quality of the runoff, and thus have a beneficial effect on the existing drainage system.

The Proposed Project will require electric power supply from the existing electrical system owned and maintained by the Sierra Pacific Power Company (SPPC). All system modifications necessary to supply power to the CEDB pilots are located within the existing project APE, as shown in Appendix E. Transformers will be installed on two SPPC power poles (pole number 258487 at CEDB-6 and pole number 258497 at CEDB-3) and power will be brought to the project site using overhead power lines to the existing guy poles located directly across SR-267. New underground electrical conduits will be installed to bring power from the guy pole at CEDB-6 to CEDB-5 and CEDB-7. The construction of these power supply systems will result in indirect impacts to the environment, as described previously. However, the Proposed Project will have a negligible impact on existing electrical utilities as the power requirements to operate the dosing systems are minimal. Caltrans will coordinate with SPPC to minimize disturbance to the electrical system.

Proposed Mitigation/Minimization/Avoidance Measures

The Proposed Project will not result in any potentially adverse impacts to the existing utilities and service systems. However, the following mitigation measure will ensure that power will be supplied to the four CEDB sites and in compliance with SPPC, the utility company.

- Caltrans shall coordinate with SPPC to provide electrical service.

Mandatory Findings of Significance

The Proposed Project modifications to four detention basins along this segment of SR-267 will have a less than significant impact on the overall quality of the environment.

Chapter 3 Environmental Determination

Based on the data and analyses contained in the Initial Study, the project will not result in significant environmental impacts as a result of implementation of the Proposed Project. These impacts are described in Chapter 2.0 of this Subsequent Negative Declaration to the Brockway Summit Water Quality Improvement Project Final Mitigated Negative Declaration adopted in 2002. A Subsequent Negative Declaration is hereby proposed.

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