1 INTRODUCTION AND STATEMENT OF PURPOSE AND NEED

This document is a joint draft environmental impact report, environmental impact statement, and environmental impact statement (DEIR/DEIS/DEIS) prepared for the Upper Truckee River and Marsh Restoration Project in compliance with the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), and Tahoe Regional Planning Agency (TRPA) Compact and Code of Ordinances. This DEIR/DEIS/DEIS has been prepared by the California Tahoe Conservancy (Conservancy) as lead agency under CEQA, with assistance from the California Department of General Services, Real Estate Services Division; the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) as federal lead agency under NEPA; and TRPA as lead agency in accordance with the Compact and the Code of Ordinances.

This DEIR/DEIS/DEIS is written to comply with the following relevant statutes, regulations, and ordinances:

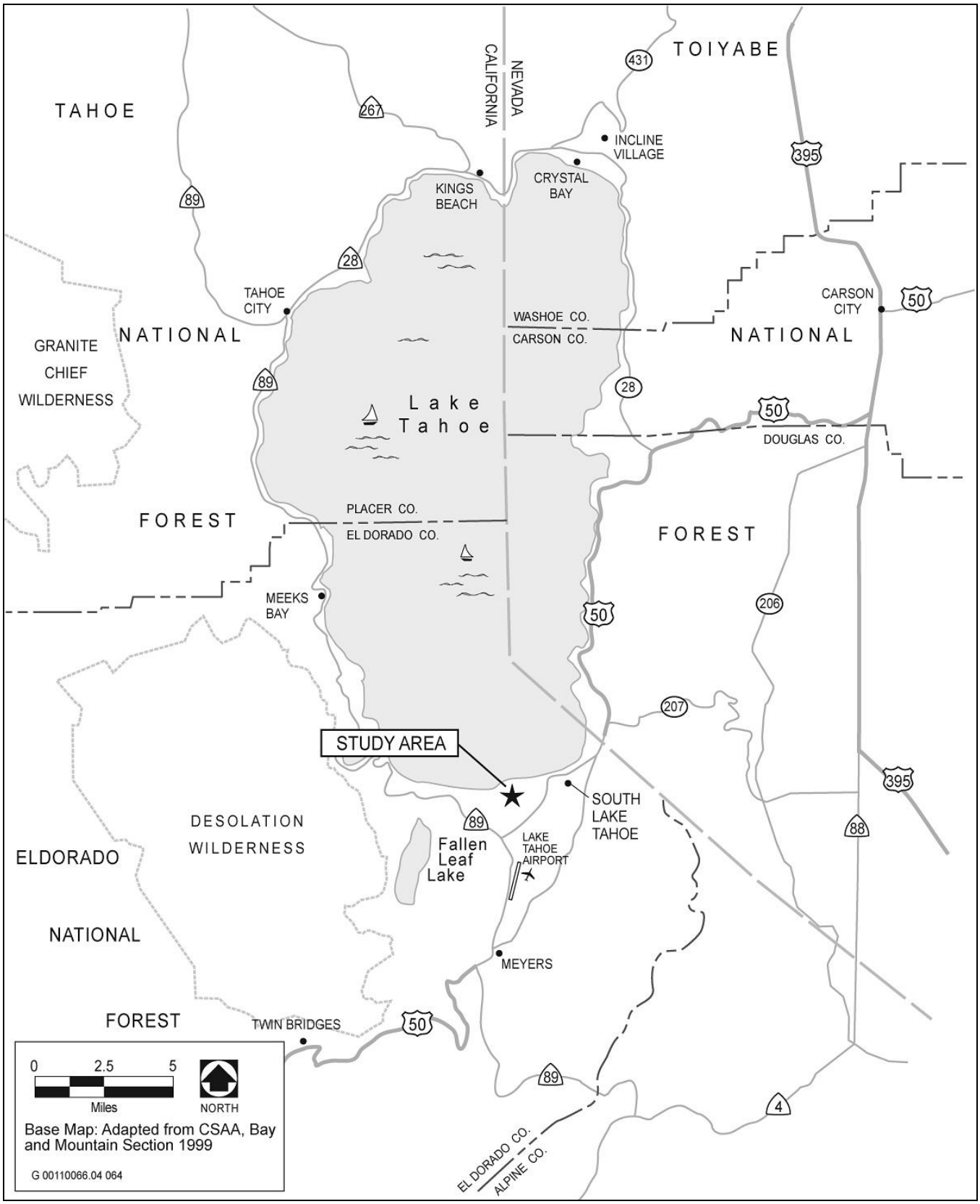
- California Public Resources Code (PRC) Sections 21000 et seq., which is CEQA;
- California Code of Regulations (CCR) Title 14, Division 6, Chapter 3 (State CEQA Guidelines), including Section 15222 ("Preparation of Joint Documents");
- National Environmental Policy Act of 1969, as amended (Public Law [PL] 91-190, 42 United States Code [USC] 4321–4347, January 1, 1970, as amended by PL 94-52 [July 3, 1975], PL 94-83 [August 9, 1975], and PL 97-258, Section 4[b] [September 13, 1982]);
- Council on Environmental Quality's (CEQ) regulations for implementing the procedural provisions of NEPA—Code of Federal Regulations (CFR) Title 40, Sections 1500 et seq., including Sections 1502.25, 1506.2, and 1506.4 (authority for combining federal and state environmental documents);
- The U.S. Department of Interior's Departmental Manual 516, DM 1-7, 14;
- Article VII of the TRPA Compact (PL 96-551, as revised in 1980);
- Chapter 3 of the TRPA Code of Ordinances; and
- Article VI of the TRPA Rules of Procedure.

This DEIR/DEIS/DEIS evaluates the potentially adverse and beneficial impacts on the human and natural environment resulting from implementation of the proposed Upper Truckee River and Marsh Restoration Project, hereinafter referred to as "the project". It also serves as the "proposed action" under NEPA and the "proposed project" under CEQA and the TRPA Code of Ordinances. The DEIR/DEIS/DEIS proposes mitigation measures and alternatives that may reduce or avoid significant adverse impacts. Following public review of the DEIR/DEIS/DEIS, a final EIR/EIS/EIS (FEIR/FEIS/FEIS) will be prepared, in which the joint lead agencies will respond to comments relating to the environmental analysis provided in the DEIR/DEIS/DEIS.

This chapter of the DEIR/DEIS/DEIS provides introductory information to orient the reader to the project and the environmental analysis, which are described in detail in other chapters.

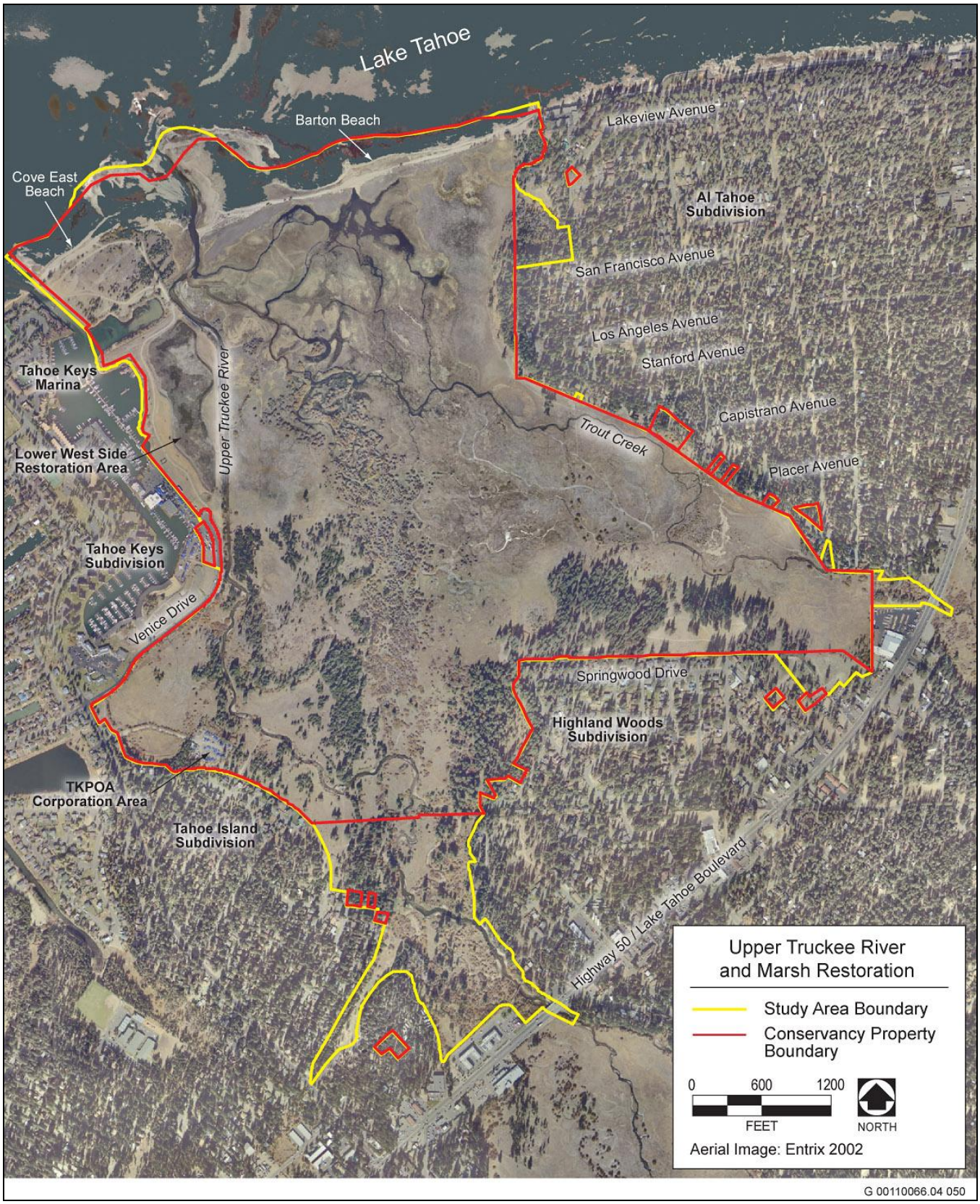
1.1 PROJECT REQUIRING ENVIRONMENTAL ANALYSIS

The Conservancy, Reclamation, and TRPA are pursuing a restoration project along the most downstream reach of the Upper Truckee River, next to Lake Tahoe (Exhibit 1-1). The study area for the project is generally bounded by U.S. Highway 50 and the Highland Woods neighborhood on the south, the Al Tahoe neighborhood on the east, the Tahoe Island/Sky Meadows and Tahoe Keys neighborhoods on the west, and Lake Tahoe to the north (Exhibit 1-2).



Source: Adapted by EDAW (now AECOM) in 2008

Exhibit 1-1 **Regional Location**



Source: Adapted by EDAW (now AECOM) in 2013

Exhibit 1-2 **Study Area Map**

The study area for the project is approximately 592 acres and includes parcels owned by the Conservancy, other public agencies, and private landowners (Exhibit 1-2). It includes the downstream reaches of Trout Creek and the Upper Truckee River, adjacent wetland (Upper Truckee Marsh) and upland habitats, and the Lower West Side Wetlands Restoration Project site (located in the northwest portion of the study area, just east of the Tahoe Keys Marina). The primary purpose of the Upper Truckee River and Marsh Restoration Project is to restore natural geomorphic processes and ecological functions along this reach of river.

The Upper Truckee River and Marsh Restoration Project is identified in TRPA's Environmental Improvement Program (EIP) as a project that is necessary to restore and maintain environmental thresholds for the Tahoe Basin. EIP projects are designed to achieve and maintain environmental threshold carrying capacities that protect the Tahoe Basin's unique and valued resources. An extensive evaluation and restoration planning process has been conducted to identify potentially feasible approaches for restoration of the river and marsh. As a result of that process, the following five alternatives—four action alternatives and a No-Project/No-Action Alternative—have been evaluated at an equal level of detail in this DEIR/DEIS/DEIS:

- Alternative 1. Channel Aggradation and Narrowing (Maximum Recreation Infrastructure)
- Alternative 2. New Channel—West Meadow (Minimum Recreation Infrastructure)
- Alternative 3. Middle Marsh Corridor (Moderate Recreation Infrastructure)
- Alternative 4. Inset Floodplain (Moderate Recreation Infrastructure)
- Alternative 5. No-Project/No-Action

These alternatives are named for their approach to restoring the Upper Truckee River and the associated level of recreation infrastructure. Although the recreation and restoration components have been combined in the alternatives for the analysis, the Conservancy may choose to implement a different combination than presented. Also, restoration and recreation components would be refined during design development after selection of an alternative.It is expected that the analysis in this EIR/EIS/EIS sufficiently addresses the potential environmental effects resulting from implementing these recreational and restoration components, regardless of the ultimate combination, because the alternatives evaluated encompass the reasonable range of potential environmental effects.

For a detailed discussion of these four action alternatives and the No-Project/No-Action Alternative, see Chapter 2, "Project Alternatives."

1.2 PROJECT HISTORY AND PLANNING CONTEXT

Restoration planning for the Upper Truckee Marsh and Restoration Project began in the early 1990s with studies conducted by the University of California. In 1995, the Conservancy commissioned a restoration planning and design study, which identified a tentatively preferred river restoration concept two years later. The study determined that river restoration required using the entire Upper Truckee Marsh east of the Tahoe Keys Marina and subdivision. At that time the center and east side of the marsh were privately owned; therefore, this tentatively selected concept could not be pursued. In 1998, the Conservancy began planning and designing an initial phase of wetland restoration called the Lower West Side Wetland Restoration Project (LWS Project). The LWS Project was located on a 23-acre portion of a study area on the west side of the Upper Truckee River near Lake Tahoe. In this area, the marsh had been filled during the construction of the adjacent Tahoe Keys (Exhibit 1-2). After careful investigations, planning, and design; extensive environmental review; and community outreach, the Conservancy approved restoration of 12 acres of wetland on the 23-acre site through fill removal as the LWS Project in 2001. The removed fill was used to restore a former quarry at Washoe Meadows State Park in Meyers, California. Construction began in Summer 2001 and was completed in Summer 2003.

In 2000, the Conservancy purchased 311 acres of land in the center and east side of the marsh from a private party, bringing nearly the entire Upper Truckee Marsh into public ownership. Currently, the majority of the study area is owned by the Conservancy, including the marsh and meadows surrounding the lower reach of Trout Creek.

Restoration concepts encompassing the marsh and the lower reach of the river have been developed since the acquisition. As part of this process, the Conservancy has planned for public access facilities and recreation use management for the river, marsh, and beach.

Development of the Upper Truckee River and Marsh Restoration Project has proceeded through a sequence of several planning stages. Initially, the Conservancy defined project objectives and desired outcomes to direct the restoration planning process. The Conservancy evaluated and documented the existing natural processes and functions in the study area to begin the formulation and evaluation of alternative plans. This evaluation enabled the identification of potential restoration opportunities and constraints. With detailed information about the river and marsh processes and ecological functions, the Conservancy hosted a design charrette (i.e., interactive workshop) for agencies and other stakeholders to identify the spectrum of potentially feasible restoration ideas to be considered in the development of concept plan alternatives. Four alternative concept plans, all developed to be potentially feasible, were formulated to represent a reasonable range of restoration approaches and levels of public access and recreation facilities. These concepts were refined through hydrologic modeling, regulatory agency review, development of schematic designs, and monitoring. After refinement, the four concepts generated by this extensive planning process became the four action alternatives being evaluated with the No-Project/No-Action Alternative in the DEIR/DEIS/DEIS.

A preferred alternative has not yet been identified. It will be selected after the public has reviewed the five alternatives and provided comments on the DEIR/DEIS/DEIS. The preferred alternative may be one of the five evaluated in the DEIR/DEIS/DEIS, or it may involve a combination of features presented in those alternatives.

To date, key stages of the Upper Truckee River and Marsh Restoration Project have consisted of:

- evaluating existing natural processes and functions of the Upper Truckee River and marsh in 2000 and 2001;
- establishing project objectives and desired outcomes in 2002 and updating them in 2005;
- defining restoration opportunities and constraints in 2002 and 2003;
- conducting a restoration design charrette in 2003 to receive input from stakeholders on project priorities, concerns, and constraints, and design ideas;
- conducting hydraulic modeling studies to support the development and evaluation of alternatives, and initial development and comparative evaluation of four conceptual restoration alternatives in 2004 and 2005;
- regulatory agency review of alternative concepts for key issues and regulatory requirements in 2005;
- further refining and evaluating the alternatives and preparing a concept plan report in 2006;
- developing detailed schematic design drawings in 2007;
- preparing a comprehensive monitoring plan in 2008 that describes a 10-year period of monitoring for the project to characterize baseline conditions, track project performance related to objectives, establish tentative approaches to monitoring for regulatory requirements and construction impacts, and provide information for adaptive management; and
- analyzing environmental impacts of the five alternatives and preparing this DEIR/DEIS/DEIS since 2009.

1.3 PURPOSE AND NEED, AND PROJECT OBJECTIVES

NEPA regulations (40 CFR 1502.13) require that an EIS contain a statement of the purpose and need that "briefly specif[ies] the underlying purpose and need to which the agency is responding in proposing the alternatives,

including the proposed action." State CEQA Guidelines CCR Section 15124(b) requires that the project description contain a clear statement of the project objectives, including the underlying purpose of the project. In the TRPA Compact and Code of Ordinances, there are no requirements specifically addressing the description of a project's purpose and need, or a project's objectives.

1.3.1 PURPOSE AND NEED

Past actions have created a need to restore river and floodplain ecosystems in the Tahoe Basin to improve the clarity of Lake Tahoe and the ecological functions of riparian, wetland, and floodplain ecosystems, including the provision of wildlife habitat. Lake Tahoe is designated as an Outstanding National Resource Water, renowned worldwide for its clarity and purity (Lahontan RWQCB 1995). However, Lake Tahoe's clarity has declined by nearly 20 percent since 1968 (USGS 1997). Studies over the last three decades suggest that the reduction in water clarity of Lake Tahoe is correlated with the delivery of fine sediments from various watersheds in the basin and increased phytoplankton productivity, which in turn has been attributed to an increase in nutrients, especially nitrogen and phosphorus (Goldman 1974, Reuter and Miller 2000, Coats and Goldman 2001, Rowe et al. 2002, Simon et al. 2003, Lahontan RWQCB and UCD 2005, Simon 2006, California Water Boards and NDEP 2007). The increase in sediment and nutrient load is a direct result of increased urbanization in the Tahoe Basin.

The Upper Truckee River, which drains the largest watershed in the Tahoe Basin, has been substantially altered by land practices during the past 150 years. Throughout its watershed, the river has experienced ecological degradation typical of what has occurred elsewhere in the Basin. It has been modified from its original conditions by human activities, such as logging, livestock grazing, roads, gravel mining, fire suppression, golf courses, an airport, and residential, commercial, and industrial developments. In many locations the channel was straightened and enlarged, native vegetation was replaced by turf, and untreated stormwater was directed into the river and its tributaries. The channel has incised and is experiencing accelerated rates of bed and bank erosion. These human influences have resulted in reduced habitat quality for plant, wildlife, and fish species in the watershed and increased sediment and nutrient loads discharging into Lake Tahoe from the river, contributing to the declining clarity of the lake.

Past physical changes to the lower reach of the Upper Truckee River have affected the river's stability, the condition of the wetlands within its floodplain, and the quality of the water it carries into Lake Tahoe. Historical grazing, dredging, log running, and other evidence indicate that the first alterations occurred in the 1800s. With the construction of the Tahoe Keys development beginning in 1959, the river was channelized and relocated west of its original course to its current location, and fill was placed in much of the wetland up to six feet above the natural grade. Over time, the river became deeply incised, effectively eliminating a large portion of the Upper Truckee River's floodplain. These alterations have likely affected water quality by disconnecting the river from its wetlands and floodplains, where sediment and nutrients can be removed from streamflows and runoff. Nutrients, such as nitrogen and phosphorus, can be removed by plant uptake and volatilized by denitrification under certain (anaerobic) conditions found in wetlands. The nutrients are converted to gaseous or organic forms, fixed into the soil, or simply stored within the soil solution. Wetlands and floodplains also remove sediment and other suspended particles by allowing sediment-laden water to pass through densely vegetated floodplains and wetlands. Thus, the water quality of the lake can be protected and improved by restoring the natural functions of wetlands and floodplains in watersheds draining to Lake Tahoe.

The preservation and restoration of riparian areas and wetlands of the Upper Truckee Marsh is important for wildlife. In semiarid regions like the Tahoe Basin, the availability of moisture and cool, shaded microclimates gives wetlands and riparian areas an importance for wildlife that is disproportionate to their areal extent. Unfortunately, in the Tahoe Basin, most wetlands have been filled and developed, which has adversely affected native vegetation, wildlife, and water quality.

The Upper Truckee Marsh is the largest remaining wetland area in the Tahoe Basin. It is one of five marshes in the basin designated as an Ecologically Sensitive Area; the marsh's size, uniqueness, and potential for supporting

high levels of biodiversity are the factors underlying this designation (Murphy and Knopp 2000). Although still ecologically important, wetland habitats in the study area have been degraded by the channelization and subsequent incision of the Upper Truckee River.

Within the study area, there is also the need to provide public access for recreation purposes. The Conservancy acquired the parcels that make up the Upper Truckee Marsh study area to protect the existing ecological values of the site and restore the natural processes and functions of the Upper Truckee River, Trout Creek, and associated wetlands while providing public access for recreation purposes. However, certain parcels that make up the study area were acquired in a litigation settlement (People of the State of California vs. Dillingham Development Company and TRPA, CIV-S-85-0873-EJG [February 25, 1988]). The settlement requires that the Conservancy provide public access to the beach area west of the existing Upper Truckee River mouth. The purpose of this project is to restore natural geomorphic processes and ecological functions in this lowest reach of the Upper Truckee River and the surrounding marsh to improve ecological values of the study area and help reduce the river's discharge of nutrients and sediment that diminish Lake Tahoe's clarity while still providing public access, access to vistas, and environmental education to the public where appropriate. This purpose includes improving habitat values in the study area. Its implementation is an important component of the integrated objectives of the Conservancy, Reclamation, and TRPA to improve environmental quality in the Lake Tahoe region.

1.3.2 PROJECT OBJECTIVES

As discussed in the notice of preparation (NOP) developed by the Conservancy to initiate the CEQA process, the basic objectives of the project are:

- Objective 1: Restore natural and self-sustaining river and floodplain processes and functions.
- Objective 2: Protect, enhance, and restore naturally functioning habitats.
- Objective 3: Restore and enhance fish and wildlife habitat quality.
- Objective 4: Improve water quality through enhancement of natural physical and biological processes.
- Objective 5: Protect and, where feasible, expand Tahoe yellow cress populations.
- Objective 6: Provide public access, access to vistas, and environmental education at the Lower West Side and Cove East Beach consistent with other objectives.
- Objective 7: Avoid increasing flood hazards on adjacent private property.
- Objective 8: Design with sensitivity to the site's historical and cultural heritage.
- Objective 9: Design the wetland/urban interface to help provide habitat value and water quality benefits.
- Objective 10: Implement a public health and safety program, including mosquito monitoring and control.

1.4 INTENDED USES AND TYPE OF EIR/EIS/EIS (CEQA/NEPA/TRPA)

The Conservancy, Reclamation, and TRPA will use this DEIR/DEIS/DEIS to consider the project's environmental effects, mitigation measures, and alternatives. The DEIR/DEIS/DEIS will serve as the State of California's CEQA compliance document, as Reclamation's NEPA compliance document, and as TRPA's compliance document with respect to its Compact and Chapter 3 of the TRPA Code of Ordinances. State responsible and trustee agencies and federal agencies may also use this DEIR/DEIS/DEIS, as needed, for subsequent discretionary actions.

1.4.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

According to the State CEQA Guidelines (14 CCR Section 15064[f][1]), preparation of an EIR is required whenever a project may result in a significant impact on the physical environment. An EIR is an informational document used to inform public agency decision makers and the general public of the significant environmental effects of a project, identify feasible ways to minimize or mitigate the significant effects, and describe reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project while substantially lessening or avoiding any of the significant or potentially significant environmental impacts.

CEQA requires that state and local government agencies consider the environmental effects of projects over which they have discretionary authority before taking action on those projects (PRC Section 21000 et seq.). CEQA also requires that each public agency avoid or fully reduce to less-than-significant levels, wherever feasible, the significant environmental effects of projects it approves or implements. If a project would result in significant and unavoidable environmental impacts that cannot be feasibly reduced to less-than-significant levels, the project can still be approved, but the lead agency must consider and adopt a "statement of overriding considerations" pursuant to CEQA Guidelines Sections 15043 and 15093. Although the primary purpose of CEQA is to fully inform the decision makers and the public about the environmental effects of a proposed project and to identify feasible mitigation measures and alternatives to reduce adverse effects to less-than-significant levels, CEQA nonetheless allows an agency to approve a project even when not all significant adverse impacts can be avoided or reduced to less-than-significant levels. However, that agency must explain and justify its decision to approve such a project through the Statement of Overriding Considerations, setting forth the proposed project's general social, economic, policy, or other public benefits that support the agency's informed decision to approve the proposed project.

1.4.2 NATIONAL ENVIRONMENTAL POLICY ACT

NEPA provides an interdisciplinary framework for federal agencies to develop information that will help them to take environmental factors into account in their decision making (42 USC 4321, 40 CFR 1500.1). According to NEPA, an EIS is required whenever a proposed major federal action (e.g., a proposal for legislation or an activity financed, assisted, conducted, or approved by a federal agency) would significantly affect the human environment.

The project has received federal funding for planning purposes and may receive funding from Reclamation for construction; the project therefore requires the preparation of an EIS. It also requires the preparation of an EIS because its development would require federal permits for one or more of the following activities: discharges of fill material into waters of the United States, which is an activity regulated under Section 404 of the Clean Water Act, and activities affecting plant or animal species protected by the Federal Endangered Species Act (ESA) (16 USC 1531 et seq.).

An EIS is an informational document used by federal agencies in making decisions. An EIS is intended to provide full and open disclosure of environmental consequences before agency action; an interdisciplinary approach to project evaluation; objective consideration of reasonable alternatives; application of measures to avoid or reduce adverse impacts; and an avenue for public and agency participation in decision making (40 CFR 1502.1). NEPA defines mitigation as avoiding, minimizing, rectifying, reducing, or compensating for significant effects of the proposed action (40 CFR 1508.20).

NEPA requires that a lead agency "include (in an EIS) appropriate mitigation measures not already included in the proposed action or alternatives" (40 CFR 1502.14[f]). An EIS shall also include discussions of "means to mitigate adverse environmental impacts (if not fully covered under Section 1502.14[f])." In preparing a record of decision under 40 CFR 1505.2, a lead agency is required to "[s]tate *whether* all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not.

A monitoring and enforcement program shall be adopted and summarized where applicable for *any* mitigation." (Italics added.)

1.4.3 TAHOE REGIONAL PLANNING COMPACT AND THE TRPA CODE OF ORDINANCES

TRPA is the primary permitting agency and the lead agency under the Compact. TRPA is a bi-state regional planning agency created in 1969 by federal law to oversee development on both the California and Nevada sides of Lake Tahoe. Under the Compact, Code of Ordinances, and Rules of Procedure, an EIS is an informational document used in the planning and decision-making process for a proposed project. The purpose of this DEIR/DEIS/DEIS is not to recommend either approval or denial of the project, but to disclose objective information that can be used in the development of a preferred alternative to the project/action for evaluation in the EIR/EIS/EIS.

Article VII of the Compact presents important TRPA policies relevant to the preparation and use of an EIS. Key provisions of the article are presented below:

- Article VII(a)(2) states that when acting upon matters that have a significant effect on the environment, TRPA shall "prepare and consider a detailed environmental impact statement before deciding to approve or carry out any project."

- Article VII(a)(3) states that the EIS shall "study, develop and describe appropriate alternatives to recommended courses of action for any project which involves unresolved conflicts concerning alternative uses of available resources."

- Article VII(a)(4) requires that TRPA "make available to states, counties, municipalities, institutions and individuals, advice and information useful in restoring, maintaining and enhancing the quality of the region's environment."

- Article VII(a)(5) requires TRPA to "initiate and utilize ecological information in the planning and development of resource-oriented projects."

Chapter 3 of the Code of Ordinances provides direction regarding the TRPA environmental documentation. Section 3.7 describes the approach and contents of an EIS. Article VI of the Rules of Procedure, Environmental Impact Statements, provides guidance on the procedural steps necessary for conducting environmental review consistent with Article VII of the Compact and Chapter 3 of the Code.

1.5 SCOPE AND FOCUS OF THE EIR/EIS/EIS

Pursuant to CEQA and NEPA, the discussion of potential effects on the environment is focused on those impacts that the lead agencies have determined may be potentially significant. Pursuant to the TRPA Code of Ordinances, the discussion is focused on any effects on attainment of environmental threshold carrying capacities of the *Lake Tahoe Regional Plan*. (CEQA, NEPA, and TRPA allow a lead agency to limit a discussion of the environmental effects in an EIR/EIS/EIS when the effects are not considered potentially significant.)

On October 3, 2006, the Conservancy and TRPA issued an NOP (Appendix A) to inform agencies and the general public that a joint DEIR/DEIS/DEIS was being prepared. The Conservancy and TRPA invited comments on the scope and content of the document and participation at a public scoping meeting. The NOP was published by the California and Nevada State Clearinghouses and distributed to federal agencies, responsible and trustee agencies, interested parties and organizations, and affected property owners (within 300 feet of the study area boundaries). It was also posted on the internet (at http://edaw.net/site/default/defHome.aspx; currently, project information is available at http://tahoe.ca.gov/upper-truckee-marsh-69.aspx). The NOP was circulated for 30 days as mandated

by CEQA. A specific circulation period is not defined in the TRPA Code of Ordinances, but the 30-day period is a regular practice for TRPA EISs.

Reclamation issued a notice of intent (NOI) (Appendix A) to inform agencies and the general public that a joint DEIR/DEIS/DEIS was being prepared and invited comments on the scope and content of the EIS. The NOI was published in the *Federal Register*, Vol. 71, No. 202, on October 19, 2006. The NOI was also posted on the Upper Truckee River and Marsh Restoration website. At that time Reclamation announced that a public involvement program had been developed allowing opportunities for public participation and involvement in the NEPA process. The NOI also provided information on the dates and times of public scoping meetings. There is no mandated time limit for receiving written comments in response to the NOI under NEPA.

The Conservancy, Reclamation, and TRPA jointly held public scoping meetings on October 24, 2006, at 12:00 and 6:00 p.m. They also jointly presented the project at a TRPA Advisory Planning Commission meeting on October 11, 2006, and a TRPA Governing Board meeting on October 25, 2006, to solicit input from the community and public agencies to be considered in project design, alternatives selection, and on the scope and content of the DEIR/DEIS/DEIS.

Chapter 5, "Compliance, Consultation, and Coordination," summarizes the substantive comments on the NOP and NOI. Copies of the comment letters are provided in the project's Scoping Report (Appendix B).

This DEIR/DEIS/DEIS includes an evaluation of 17 environmental issue areas and other NEPA- and CEQA-mandated topics. The 17 environmental issue areas are:

- air quality and global climate change;
- archaeological and historical resources;
- biological resources: vegetation and wildlife;
- fisheries;
- geology and soils, mineral resources, and land capability and coverage;
- human health/risk of upset;
- hydrology and flooding;
- geomorphology and water quality;
- land use;
- noise;
- public services;
- recreation;
- scenic resources;
- socioeconomics (including population, employment, and housing) and environmental justice;
- Indian trust assets;
- transportation, parking, and circulation; and
- utilities.

The other CEQA- and NEPA-mandated topics included in this DEIR/DEIS/DEIS are:

- cumulative effects;
- growth-inducing effects;
- significant environmental effects that cannot be avoided;
- relationship between short-term uses of the environment and maintenance and enhancement of long-term productivity; and
- environmentally-superior alternative/environmentally-preferred alternative.

The Compact, PL 96-551, as revised in 1980, authorizes TRPA to adopt environmental quality standards, called "environmental threshold carrying capacities" (thresholds), and to enforce ordinances designed to achieve the thresholds, which were adopted by the TRPA Governing Board in 1982. This DEIR/DEIS/DEIS also includes an

evaluation of the project alternatives related to attaining and maintaining TRPA's environmental thresholds to protect the unique values of the Tahoe Basin. The nine resource areas for which thresholds were adopted by TRPA in 1982 are:

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

1.6 AGENCY ROLES AND RESPONSIBILITIES

1.6.1 LEAD AGENCIES

The Conservancy is the project sponsor and lead agency under CEQA. It is an independent agency within the Natural Resources Agency of the State of California. It was established in its present form by state law in 1984 (Chapter 1239, Statutes of 1984). The Conservancy was established to develop and implement programs through acquisitions, grants, and site improvements. The Conservancy's mission is to preserve, protect, restore, enhance, and sustain the unique and significant natural resources and recreational opportunities of the Tahoe Basin. Its primary objectives are:

(1) to protect the natural environment of the basin, with priority placed on preserving the exceptional clarity and quality of the waters of Lake Tahoe;

(2) to preserve and enhance the broad diversity of wildlife habitat in the Tahoe Basin; and

(3) to increase public access and recreation opportunities for visitors to the lake and other natural areas.

CEQA requires lead agencies to consider physical environmental effects that may occur with approval of a project and to avoid or substantially lessen significant effects on the environment when feasible. When a project may have a significant effect on the environment, the agency with primary responsibility for carrying out or approving the project (the lead agency) is required to prepare an EIR.

1.6.2 TAHOE REGIONAL PLANNING AGENCY

TRPA is the primary permitting agency in the Basin and the lead agency under the Compact. The project must comply with the Code of Ordinances to receive permits for construction. TRPA permitting requirements include the EIP Permit, Land Capability and Coverage Verifications, and Historic Determination. TRPA is a bi-state regional planning agency created in 1969 by Federal law to oversee development on both the California and Nevada sides of Lake Tahoe. TRPA's mission is to "lead the cooperative effort to preserve, restore, and enhance the unique natural and human environment of the Lake Tahoe Region." Section 1.4.3 details the key provisions of Article VII of the Compact, which presents important TRPA policies relevant to the use of an EIS.

In addition, in accordance with the Code of Ordinances, TRPA may not approve a project if any of the nine TRPA thresholds would be exceeded. If a project would exceed an identified threshold, mitigation must be imposed to reduce the impact and maintain the threshold. Under Chapter 4 of the TRPA Code of Ordinances, findings must be made in writing regarding all significant environmental impacts and their associated mitigation measures, with substantial evidence provided in the record of review before final project approval.

1.6.3 U.S. DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION

Reclamation is the lead agency under NEPA. This DEIR/DEIS/DEIS has been prepared in accordance with NEPA (42 USC 4321 et seq.), CEQ's Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500–1508), and the Department of Interior's Departmental Manual 516 DM 1-7, 14. Reclamation is a federal agency created in 1902 to provide water for 17 western states. Reclamation's mission is "to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American Public.."

NEPA requires federal agencies to consider environmental effects that include, among others, impacts on social, cultural, and natural resources. When a proposed action may have a significant effect on the environment, the federal agency with primary responsibility for carrying out or approving the action (the lead agency) is required to prepare an EIS.

1.6.4 TRUSTEE, RESPONSIBLE, AND COOPERATING AGENCIES

Under CEQA, a trustee agency is a state agency that has jurisdiction by law over natural resources that are held in trust for the people of the State of California. Two trustee agencies, the California Department of Fish and Game and the California State Lands Commission, meet that definition with respect to resources potentially affected by the project.

Under CEQA, a responsible agency is a public agency other than the lead agency that has legal responsibility for carrying out or approving a project or elements of a project (PRC Section 21069). Under NEPA, a cooperating agency is any other federal agency that has jurisdiction by law, or other federal agency that has special expertise with respect to any environmental impact involved in an action. A federal agency becomes a cooperating agency by agreement with the NEPA lead agency and is involved in helping to develop the EIS. Several agencies other than the Conservancy, Reclamation, and TRPA have jurisdiction over the implementation of the elements of the project, as identified below.

FEDERAL COOPERATING AGENCIES

- None

STATE RESPONSIBLE AGENCIES

- California Air Resources Board
- California Department of Fish and Game
- California Department of Transportation
- Lahontan Regional Water Quality Control Board
- State Historic Preservation Officer
- California State Lands Commission

STATE TRUSTEE AGENCIES

- California Department of Fish and Game
- California State Lands Commission

OTHER INTERESTED AGENCIES

- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- U.S. Department of Transportation, Federal Aviation Administration

1.6.5 REGULATORY REQUIREMENTS, PERMITS, AND APPROVALS

The following list identifies potential permits and other potential approval actions from federal, state, regional, and local agencies for which this DEIR/DEIS/DEIS may be used during these agencies' decision-making processes. The specific required approvals may vary depending on the selection of the preferred alternative. The following may be under the purview of regulatory agencies other than the lead agencies.

FEDERAL ACTIONS/PERMITS

- **U.S. Bureau of Reclamation:** Consultation for impacts on cultural resources pursuant to Section 106 of the National Historic Preservation Act. Potentially, approval of funding for construction.
- **U.S. Army Corps of Engineers:** Department of the Army permit under Section 404 of the Clean Water Act for discharges of dredged or fill material into waters of the United States.
- **U.S. Environmental Protection Agency:** Review of the EIS, and filing and noticing; concurrence with the Section 401 Clean Water Act permit.
- **U.S. Fish and Wildlife Service:** ESA consultation and issuance of incidental-take authorization for the take of federally-listed endangered and threatened species, if take of a species is anticipated.

STATE ACTIONS/PERMITS

- **California Department of Fish and Game, North Central Sierra Region:** Potential California Endangered Species Act consultation and issuance of take authorization (Fish and Game Code Section 2081), streambed alteration agreement (Fish and Game Code Section 1602), and protection of raptors (Fish and Game Code Section 3503.5).
- **California Department of Transportation:** Possible encroachment permits for work involving the U.S. Highway 50 right-of-way.
- **Lahontan Regional Water Quality Control Board (Region 6):** National Pollutant Discharge Elimination System construction stormwater permit (NOI to proceed under general construction permit) for disturbance of more than one acre, discharge permit for stormwater, general order for dewatering, and Section 401 Clean Water Act certification or waste discharge requirements.
- **California Air Resources Board:** Authority to construct (for devices that emit air pollutants), health risk assessment, and determination of consistency with the air quality management plan.

LOCAL ACTIONS/PERMITS

- **El Dorado County Air Pollution Control District:** Oversees Rule 223 for fugitive dust to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions.
- **City of South Lake Tahoe:** Regulates grading on both public and private property within the City of South Lake Tahoe to safeguard life, limb, health, property, and public welfare and avoid pollution of watercourses caused by surface runoff or by aerial deposition of pollutants generated from the permit area on or across the permit area.

1.7 PUBLIC PARTICIPATION AND ADDITIONAL STEPS IN THE CEQA/NEPA/TRPA REVIEW PROCESS

This DEIR/DEIS/DEIS is being distributed to interested agencies, stakeholder organizations, and individuals. This distribution ensures that interested parties have an opportunity to express their views regarding the environmental effects of the project and to ensure that information pertinent to permits and approvals is provided to decision makers for the lead agencies and the CEQA, NEPA, and TRPA responsible agencies. This document is available for review by the public during normal business hours at 1061 Third Street, South Lake Tahoe, California, and is posted electronically on the Conservancy's and Reclamation's websites (at http://tahoe.ca.gov/upper-truckee-marsh-69.aspx and http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=2937)
The DEIR/DEIS/DEIS is being distributed for a 60-day review period that will end on April 8, 2013.

Written comments postmarked no later than April 8, 2013 should be sent to the following address:

State of California
California Tahoe Conservancy
Scott Carroll, Environmental Planner
1061 Third Street
South Lake Tahoe, CA 96150
scarroll@tahoe.ca.gov

If comments are provided via e-mail, please include the project title in the subject line, attach comments in Microsoft Word format, and include the commenter's U.S. Postal Service mailing address.

Public information meetings will be held at the following locations:

February 27, 2013
Inn by the Lake
3300 Lake Tahoe Blvd
South Lake Tahoe, CA, 96150
1:30 – 4:00 PM and 6:00 – 8:30 PM

March 28, 2013
Lake Tahoe Community College Board Room
1 College Drive
South Lake Tahoe, CA, 96150
6:00 – 8:30 PM

Public hearings on the DEIR/DEIS/DEIS will be conducted by the Conservancy, Reclamation, and TRPA at the TRPA office, 128 Market Street, Stateline, Nevada, on March 13 and 27, 2013. It is not necessary to provide testimony during the public hearing; comments on the DEIR/DEIS/DEIS will be accepted throughout the meeting and will be recorded at the public comment table. Comments may also be submitted throughout the comment period as described above.

After all comments have been assembled and reviewed, responses will be prepared to address significant environmental issues that have been raised in the comments. The responses will be included in the FEIR/FEIS/FEIS.

1.8 ORGANIZATION OF THIS EIR/EIS/EIS

The content and format of this DEIR/DEIS/DEIS are designed to meet the requirements of CEQA, the State CEQA Guidelines, NEPA, the NEPA regulations issued by CEQ (including Section 1502, "Environmental Impact

Statement" [43 FR 55994, Nov. 29, 1978]), and the TRPA Compact, Code of Ordinances, and Rules of Procedure. The DEIR/DEIS/DEIS is organized in three volumes with a complete table of contents in each volume. Where subject matter presented in the table of contents are not presented within that volume the information is greyed out to clearly present the location of specific information throughout the document. It is organized into the following chapters so that the reader can easily obtain information about the project and its specific environmental issues.

1.8.1 VOLUME 1

- The cover sheet identifies lead and any other involved agencies; contact information for the lead agencies; contact persons; the title of the project and its location; a brief description of the project; a brief abstract; and comment submission information.

- "Summary" presents an overview of the project and alternatives and associated environmental impacts/consequences; a listing of environmental impacts/consequences and mitigation measures; and impact conclusions regarding known areas of controversy and issues to be resolved.

- Chapter 1, "Introduction and Statement of Purpose and Need," explains the CEQA, NEPA, and TRPA processes; lists the lead, cooperating, responsible, and trustee agencies that may have discretionary authority over the project; specifies the underlying purpose and need, and project objectives to which the lead agencies are responding in considering the alternatives; outlines the organization of the document; and provides information on public participation.

- Chapter 2, "Project Alternatives," presents the alternatives. This chapter constitutes the alternatives description and describes the characteristics, components, supporting on- and off-site infrastructure, and alternatives considered but eliminated from further evaluation.

- Chapter 3, "Affected Environment and Environmental Consequences," is divided into 17 sections by topic. Each section describes the affected environment (i.e., regulatory setting and environmental setting), presents the methodology and assumptions used in the environmental analysis, and defines the types of environmental effects. This information is followed by an analysis of direct and indirect impacts at an equal level of detail for all alternatives, including the No-Project/No-Action Alternative, and feasible mitigation measures that would avoid or eliminate significant adverse impacts or reduce them to less-than-significant levels, where feasible. Sections 3.1 through 3.9 are presented in Volume 1.

1.8.2 VOLUME 2

- Chapter 3, "Affected Environment and Environmental Consequences," Volume 2 continues as described above with Sections 3.10 through 3.18. Section 3.18 identifies the cumulative effects of implementing the alternatives, given the combined effects of past, present, and reasonably foreseeable (related) future projects. The last section provides a summary of impacts associated with each alternative.

- Chapter 4, "Other Required Sections," is divided into six sections providing assessments of environmental effects based on the analysis of environmental consequences presented in Chapter 3: "Significant Environmental Effects That Cannot Be Avoided;" "Significant and Irreversible Environmental Changes;" "Relationship between Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity;" "Growth-Inducing Impacts;" "Environmentally Superior Alternative/Environmentally Preferred Alternative;" and "Consequences for Environmental Threshold Carrying Capacities."

- Chapter 5, "Compliance, Consultation, and Coordination," describes the project's compliance with applicable federal statutes and executive orders and state statutes and regulations additional to NEPA, CEQA, and TRPA environmental review provisions, and describes the consultation and coordination undertaken to involve the

public and agencies related to the development of the Upper Truckee River and Marsh Restoration Project and the EIR/EIS/EIS.

- Chapter 6, "List of EIR/EIS/EIS Preparers," identifies individuals who were involved in preparing this DEIR/DEIS/DEIS.

- Chapter 7, "EIR/EIS/EIS Distribution List," identifies elected officials and representatives; federal, state, and local government agencies; and other agencies, organizations, and individuals to whom notification of availability of this DEIR/DEIS/ DEIS is being distributed.

- Chapter 8, "References Cited," provides a bibliography of sources cited in this DEIR/DEIS/DEIS.

- Chapter 9, "Index," contains the NEPA-required index for easy reference of topics and issues.

1.8.3 VOLUME 3

Technical appendices contain the background information that supports the DEIR/DEIS/DEIS. Volume 3 can be found on the CD located in the back of Volume 1.

Hard copies of Volume 3 are available for review at:

State of California
California Tahoe Conservancy
1061 Third Street
South Lake Tahoe, CA 96150

Tahoe Regional Planning Agency
128 Market Street
Stateline, NV 89449

Reclamation
Mid-Pacific Regional Library,
2800 Cottage Way
Sacramento, CA 95825

South Lake Tahoe Library front desk
1000 Rufus Allen Blvd.
South Lake Tahoe, CA 96150

1.9 ACRONYMS AND ABBREVIATIONS

Table 1-1 lists acronyms and abbreviations that are used in this DEIR/DEIS/DEIS.

Table 1-1 Acronyms and Other Abbreviations	
µg/m^3	micrograms per cubic meter
µin/sec	microinch per second
µm	micrometer
AB	Assembly Bill
AC	Asphalt Cement
ADA	Americans with Disabilities Act
ADT	average daily trips
ALUCs	airport land use commissions
AMWG	adaptive management working group
APC	Advisory Planning Commission
APCD	air pollution control district
AQMD	air quality management district
ARB	Air Resources Board
ATCM	airborne toxics control measure
BA	biological assessment
BACT	best available control technology for toxics
Basin Plan	*Water Quality Control Plan for the Lahontan Region*
Bike/Ped Plan	Bicycle and Pedestrian Master Plan
BMP	best management practice
BO	biological opinion
BP	before present
BPP	*Lake Tahoe Bicycle and Pedestrian Plan*
CAA	Clean Air Act
CAAA	Clean Air Act Amendments of 1990
CAAQS	California ambient air quality standards
CAFE	corporate-average fuel economy
Cal/EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
Cal-IPC	California Invasive Plant Council
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CCR	California Code of Regulations

CCSP	Climate Change Scoping Plan
CDFG	California Department of Fish and Game
CDPH	California Department of Public Health
CEDR	Center for Environmental Design Research
CEQ	Council of Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey
CH_4	methane
CHABA	Committee of Hearing, Bio Acoustics, and Bio Mechanics
City General Plan	City of South Lake Tahoe *2030 General Plan*
CLUP	*Comprehensive Land Use Plan*
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPPA	California Native Plant Protection Act
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
Conservancy	California Tahoe Conservancy
CRHR	California Register of Historical Resources
CSC	State Species of Special Concern
CSLC	California State Lands Commission
CSLT	City of South Lake Tahoe
CTLFC	Carson & Tahoe Lumber & Fluming Company
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibels
dBA/DD	dBA per doubling of distance
dbh	diameter at breast height
DEIR/DEIS/DEIS	draft environmental impact report, draft environmental impact statement, and draft environmental impact statement
DEM	digital elevation model
DG	Decomposed Granite

diesel PM	diesel particulate matter
DN	dissolved nitrogen
DO	dissolved oxygen
DOE	Department of Finance
DP	dissolved phosphorus
DTSC	Department of Toxic Substances Control
DVTE	Daily Vehicle Trip Ends
EA	environmental assessment
EC	Environmental Commitment
ECR	Environmental Commitments Record
EDCAC	El Dorado County Animal Control
EDCAQMD	El Dorado County Air Quality Management District
EDCVCD	El Dorado County Vector Control District
EIP	Environmental Improvement Program
EIR	environmental impact report
EIS	environmental impact statement
EISA	Energy and Independence Security Act of 2007
EO	Executive Order
EPA	Environmental Protection Agency
EPCA	Energy Policy and Conservation Act
ESA	U.S. Endangered Species Act
^{o}F	degrees Fahrenheit
FAA	Federal Aviation Administration
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIP	Federal implementation plan
FIRM	Flood Insurance Rate Map
FONSI	finding of no significant impact
FTA	Federal Transit Administration
GB	Governing Board
GHG	greenhouse gas
GIS	geographic information system
GPS	Global Positioning System
GWP	global warming potential
HAP	hazardous air pollutant

HASP	health and safety plan
HCD	Housing and Community Development
HCP	habitat conservation plan
HEC-RAS	Hydraulic Engineering Center's River Analysis System
HU	Hydrologic Unit
I	Industrial
in/sec	inch per second
IPES	Individual Parcel Evaluation System
IS	Initial Study
ITAs	Indian Trust Assets
km	kilometer
lb/day	pounds per day
LCD	land capability district
LCT	Lahontan cutthroat trout
LED	light emitting diode
L_{dn}	day-night noise level
L_{eq}	equivalent noise level
L_{max}	maximum noise level
L_{min}	minimum noise level
LOMR	Letter of Map Revision
LOS	level of service
LTAB	Lake Tahoe Air Basin
LTBMU	Lake Tahoe Basin Management Unit
LUST	leaking underground storage tank
LWS	Lower West Side
L_X	statistical descriptor
M	magnitude
MAA	may adversely affect
MACT	maximum available control technology
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant level
mg/L	milligram per liter
mg/m^3	milligrams per cubic meter
mL	milliliter
MLD	Most Likely Descendant
MM^{-1}	megameter

MND	mitigated negative declaration
mph	miles per hour
MPN	Most Probable Number
MT	metric ton
MTBA	Migratory Bird Treaty Act
MTBE	methyl tertiary butyl ether
MY	model year
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NAL	numeric action level
NAVD	North American Vertical Datum
NCCP	natural community conservation plan
ND	Negative Declaration
NDOW	Nevada Department of Wildlife
NEHRPA	National Earthquake Hazards Reduction Program Act
NEL	numeric effluent limitation
NEPA	National Environmental Policy Act
NESHAP	national emissions standards for HAPs
NFIP	National Flood Insurance Program
NGVD	National Geodetic Vertical Datum
NHTSA	National Highway Traffic Safety Administration
NLAA	not likely to adversely affect
NMFS	National Marine Fisheries Service
NO	nitric oxide
NO_2	nitrogen dioxide
NOI	notice of intent
NOP	notice of preparation
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historical Places
NTU	nephelometric turbidity units
OPR	Office of Planning and Research
OS	Open Space
OSHA	Occupational Safety and Health Administration
PAH	polycyclic aromatic hydrocarbon
PAOTs	persons at one time

PAS	plan area statement
PCE	passenger car equivalent
POP	Public Outreach Plan
$PM_{2.5}$	fine particulate matter
PM_{10}	respirable particulate matter
ppb	parts per billion
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
project	Upper Truckee River and Marsh Restoration Project
Reclamation	Bureau of Reclamation
Regional Plan	*Regional Plan for the Lake Tahoe Basin*
RMS	root mean square
ROG	reactive organic gas
RS	River Station
RTP	*Lake Tahoe Regional Transportation Plan – Mobility 2030*
RTP-AQP	*Regional Transportation Plan—Air Quality Plan*
RWQCB	regional water quality control board
SA	Special Area
SB	Senate Bill
SDWA	Safe Drinking Water Act
SEL	single-event [impulsive] noise level
SEZ	Stream Environment Zone
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SLTFD	South Lake Tahoe Fire Department
SLTPD	South Lake Tahoe Police Department
SMCL	secondary maximum contaminant level
SO_2	sulfur dioxide
SO_X	oxides of sulfur
SP	State Park
SPP	Spill Prevention Plan
SR	State Route
SRA	State Recreation Area
SRAs	State Responsibility Areas
STPUD	South Tahoe Public Utility District

SWPPP	storm water pollution prevention plan
SWRCB	State Water Resources Control Board
T/year	Tons/year
TAC	toxic air contaminant
TAG	technical advisory group
T-BACT	best available control technology for TACs
Tahoe Keys	Tahoe Keys development
TKM	Tahoe Keys Marina
TKN	total Kjeldahl nitrogen
TKPOA	Tahoe Keys Property Owners Association
TMDL	total maximum daily load
TN	total nitrogen
TP	total phosphorus
TPY	tons per year
TRPA	Tahoe Regional Planning Agency
TSM	Transportation System Management
TSS	total suspended solids
TYC	Tahoe yellow cress
U.S. 50	United States Highway 50
USACE	United States Army Corps of Engineers
USC	United States Code
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UTMLS	Upper Truckee Marsh Land Steward Program
VdB	vibration decibels
VMT	vehicle miles traveled
VOC	volatile organic compound
WY	water year

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