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MITIGATED NEGATIVE DECLARATION

FINDINGS

In accordance with El Dorado County (County) ordinances regarding implementation of the California Environmental Quality Act, El Dorado County has prepared an Initial Study to assess the project’s potential effects on the environment and the significance of those effects, and on the basis of that study hereby finds:

- The proposed project will not have a significant adverse effect on the environment; therefore, it does not require the preparation of an Environmental Impact Report and this **Negative Declaration** has been prepared.
- Although the proposed project could have a significant adverse effect on the environment, there will not be a significant adverse effect in this case because El Dorado County will adopt the Mitigation Monitoring and Reporting Program (Appendix B) that contains the mitigation measures necessary for the project to have a less than significant impact. A **Mitigated Negative Declaration** has thus been prepared.

Per Section 21082.1 of the CEQA Guidelines, El Dorado County has independently reviewed and analyzed the Initial Study and Proposed Mitigated Negative Declaration for the proposed project and finds that they reflect the independent judgment of El Dorado County. The environmental documents, which constitute the Initial Study and provide the basis and reasons for this determination are attached and/or referenced herein and are hereby made a part of this document.

Per Section 15072 (f) (5) of the CEQA Guidelines, the project site is not on any list compiled pursuant to Government Code section 65962.5 as a hazardous waste facilities, land designated as a hazardous waste property, or a hazardous waste disposal site.

PROJECT INFORMATION

| | |
|---|----------------------------|
| Title: Echo View Estates 2 Erosion Control Project (JN 95169) | |
| Description: Construction of erosion control and water quality improvement facilities. | |
| Location: The project area is located in eastern El Dorado County, California within the Lake Tahoe Basin. The site is located in South Lake Tahoe just west of Highway 50, off of Sawmill Road. The project area encompasses the entire Echo View subdivision north of Sawmill Road. The project encompasses Echo View Drive, Mountain Canary Drive, East Court, Lamor Court, and Summit Drive. | |
| Owner/Applicant: El Dorado County Department of Transportation – Tahoe Engineering Division | |
| Lead Agency: El Dorado County Department of Transportation – Tahoe Engineering Division | |
| County Contact: Brendan Ferry, Senior Planner | Phone: 530-573-7900 |
| Address: 924 B Emerald Bay Road, South Lake Tahoe, CA 96150 | |

AVAILABILITY OF DOCUMENTS

The Initial Study for this Mitigated Negative Declaration is available for review at the El Dorado County Department of Transportation – Tahoe Engineering Division 924 B Emerald Bay Road, South Lake Tahoe, CA. The document is also available for review at the El Dorado County’s South Lake Tahoe Branch Library at 1000 Rufus Allen Blvd., South Lake Tahoe, CA. The library’s hours of operation are from 10:00 am – 8:00 pm on Tuesday and Wednesday; 10:00 am – 5:00 pm on Thursday, Friday, and Saturday. The library is closed on Sunday and Monday. In addition to the South Lake Tahoe locations, the document is available at the California State Clearinghouse located at 1400 Tenth St., Sacramento, CA.

PROJECT DESCRIPTION

In 1997, the Tahoe Regional Planning Agency (TRPA) developed a Basin-wide Environmental Improvement Program (EIP) that defined various projects which, once implemented, would assist in attaining and maintaining TRPA Environmental Threshold Carrying Capacities (ETCC) as well as meet other federal and state environmental goals. TRPA has established thresholds for air quality, water quality, soil conservation, vegetation, noise, scenic resources, recreation, fisheries, and wildlife to address public health and safety of residents and visitors as well as the scenic, recreation, education, scientific, and natural values of the Lake Tahoe Basin. The Echo View Estates 2 Erosion Control Project (ECP) is defined in the TRPA EIP as Project #706. El Dorado County Department of Transportation (EDOT) proposes to initiate implementation of the Echo View Estates 2 ECP (Project) during the 2010/2011 construction seasons to assist with meeting the goals of the EIP. This project is being designed and constructed with financial assistance from the California Tahoe Conservancy (CTC), United States Forest Service - Lake Tahoe Basin Management Unit (USFS-LTBMU), and TRPA mitigation funds.

The Echo View Estates 2 Erosion Control Project (ECP) site is an existing residential development bounded by Sawmill Road to the south (See Figure A). The overall goal of the project is to design and implement erosion control and water quality improvement measures that will reduce the discharge of sediment and pollutants to Lake Tahoe from County administered rights of way in the Echo View Estates area. The proposed project will not change the use of the site or surrounding area. The project will provide benefits to the natural environment through the improvements proposed as part of the project. After project completion, less sediment will enter the Angora Creek from the project area, thereby improving water quality in Lake Tahoe. Many of the proposed solutions are enhancements of the facilities installed as part of the 1987 Erosion Control Project that was constructed within the subdivision.

PROPOSED PROJECT

The Preferred Alternative selected by the Project Development Team (PDT) is described below. The thought process and justification for selecting certain improvements in problem areas is included. The Preferred Alternative is a compilation of the most comprehensive design ideas for each street within the Project area which meets the goals of the Project.

Proposed Solutions - Lamor Ct.

EDOT discussed removing pavement from the center of the circle at the top of Lamor Ct. to create a vegetated island, however after consideration of snow removal activities, decided against it. In looking at the hydrologic routing on the street, EDOT noticed during a field visit that the spillway from the eastern swale was clogged with pine needles due to how flat the swale becomes. In order to prevent this, EDOT proposes installing a sediment trap uphill from the spillway where the swale is steeper to collect road cinders and pine needles. The sediment trap would connect to a new pipe spanning across the road that will connect to a newly installed drop inlet within the western swale, as was designed in the 1987 erosion control project. The pipe outlet will flow to a rock bowl that will slow runoff prior to it entering the natural drainage feature below. The existing pipe beneath the road cannot be used due to its poor location, thus it will be abandoned. EDOT considered just installing a new spillway instead of a sediment trap within the eastern swale, but decided that due to the sanding operations on the road and the length of the a/c swale above, that the area warranted a sediment trap. EDOT considered allowing runoff to flow down the western swale to Mountain Canary Dr. instead of installing a new DI and pipe, but decided that the distance was too great.

Due to the relatively small subwatershed size below the proposed drop inlet and sediment trap described above, EDOT feels that the area around the corner of Summit Dr. and Lamor Ct. requires only a newly installed 25' section of armored channel around the downhill side of the radius of the turn. A rock lined channel exists in this location, however it has failed due to lack of maintenance. EDOT considered installing a sediment trap at the culvert outlet of the pipe beneath Summit Dr., but decided against it due to the small size of the subwatershed. EDOT also considered installing an a/c swale in lieu of the armored channel, but decided that an armored channel was warranted due to the topography to help slow runoff velocities. As runoff continues down Lamor Ct., no other feasible options exist for capturing and treating runoff before it conflues with Mountain Canary Dr.

Proposed Solutions - Summit Dr.

EDOT hoped to remove the existing cul-de-sac at the end of Summit Dr. due to the lack of homes and presence of public land at the end of the street. EDOT hoped to install a hammerhead further to the east of the cul-de-sac; thus reducing a considerable amount of pavement. However, after looking at the sloped topography, too much disturbance would occur to install the hammerhead in a new location. Thus, EDOT proposes to lessen the size of the cul-de-sac by removing the western half of the cul-de-sac, which is roughly 240 square feet of pavement (40'x60'), and installing a hammerhead turn

around on the eastern front portion of the cul-de-sac. By doing this, the amount of impervious coverage will be reduced, thus reducing the peak flow and runoff volume. Also, a pervious area will be opened up to store snow to help infiltrate runoff. Parking barriers and a gate will be installed to prevent vehicular access to the area. Finally, the steepness of the road cut along the western portion of the cul-de-sac can be reduced by adding fill to the toe to create a more gently sloping area that can be revegetated. Rock slope protection will also be strategically placed on the slope to provide additional source control.

The hammerhead design will still allow emergency vehicles to turn around, but the excessive pavement will be gone. Parking barriers will be installed to prevent disturbance to the newly revegetated areas and the soil will receive a full revegetation prescription. The area will be slightly depressed to create a snow storage area and the outflow will continue to flow to the existing rock lined channel at the far western end. The existing rock lined channel appears to be in adequate condition to remain. From the end of the a/c swale on the north side of the street, a new armored or vegetated channel will be constructed to connect runoff to the shallow depressed area, which will eventually tie into the existing rock lined channel. EDOT considered installing a sediment trap upslope of the existing rock lined channel, but decided against it after seeing that the runoff does not travel far into the forest before it spreads and dissipates, causing no visual erosion. The eroding slope will be further stabilized with key rock placements performed by the California Conservation Corps (CCC).

Proposed Solutions - Mountain Canary Dr. west of Lamor Ct.

EDOT proposes extending the a/c swale along the northern portion of the road to the end of the street in lieu of installing armored channel, which is more expensive. At the end of the a/c swale, EDOT proposes installing a sediment trap to capture road cinders and help to slow down runoff. This sediment trap would flow to an armored forebay energy dissipater that would connect to a bio-retention basin on USFS property. If access is still required for the dirt road, the basin can be shaped accordingly. EDOT feels that the basin size can be roughly 40' long by 10' wide, at a minimum. The basin will have a berm constructed on the downhill side and a flat bottom. It will be vegetated with native dry site plant species. The vegetated basin will help dissipate energy, attenuate flows, and encourage infiltration. The overflow of the basin will be diverted to the southwest, down an existing well vegetated drainage feature, rather than down the dirt road. The runoff will eventually end up in roughly the same location below, if it makes it that far. EDOT considered proposing a sub-surface infiltration system in this location to continue to provide access down the dirt road; however EDOT believes that an infiltration basin can fit in the area while still providing access and is the best, most cost effective solution for infiltrating runoff.

EDOT also proposes installing a gate at the end of the pavement and parking bollards or a fence along the public property line to prevent unlawful access to the area and to prevent further soil compaction. EDOT will coordinate with South Tahoe Public Utility District (STPUD) and the United States Forest Service (USFS) to encourage them to provide a temporary construction easement to EDOT to work with their crews or the CCCs to install water bars along the road to help divert runoff into the wooded area adjacent to the dirt road.

Proposed Solutions - Mountain Canary Dr. east of Lamor Ct. to East Ct.

EDOT proposes installing a new a/c swale around the corner of Lamor Ct. onto Mountain Canary Dr. to the driveway on the north side of the street. A new culvert is needed beneath the driveway. Due to the relatively small subwatershed above this location, EDOT decided that this improvement was the only necessary fix for the area. It will allow runoff to flow down to the existing well vegetated basin below. At this location, EDOT considered installing a sediment trap in the flow line with a new culvert to carry flows across the street, down to the CTC lot south of the road. EDOT also considered just improving the existing spillway and not installing the new culvert. However, due to the small subwatershed size above, EDOT decided there was not enough benefit to justify installing the improvements.

As runoff continues down the northern a/c swale, EDOT proposes installing a sediment trap above the existing a/c spillway that flows to the detention basin. The sediment trap will help slow down the runoff and provide an area to collect sediment that can be easily maintained. The eastern portion of the basin above the road will also need to be reconstructed with compacted soil, rock, and vegetation to prevent future failure and to increase detention times. EDOT considered digging out the existing basin to make it bigger, but decided against it due to the very well established vegetation and already existing adequate detention area.

A sediment trap is also proposed in the flow line on the south side of the street above the existing rock lined channel to capture road cinders prior to the runoff entering the detention basin below Mountain Canary Dr. The rock lined channel is in good enough condition to remain. The culvert that outlets into the basin requires a rock bowl beneath it to dissipate the energy of the runoff, but the rest of the basin is in great shape.

The first spillway below the basin on the southern side of the road will have no improvements due to the small subwatershed above it. However, the next spillway down the street will be improved by paving a steeper a/c swale to carry the runoff to a new rock dissipater above the basin. The last spillway at the sharp corner on Mountain Canary Dr. will have no improvements, again due to the small subwatershed size above. EDOT considered installing sediment traps at all the spillways, but decided that was it was not warranted.

Proposed Solutions - East Ct.

EDOT is not proposing any improvements on East Ct. other than cleaning the existing culvert beneath the driveway at the end of the street.

Proposed Solutions - Mountain Canary Dr. west of East Ct. to Echo View Dr.

EDOT considered further excavation of the basin north of Mountain Canary Dr. to attempt to gain more storage volume, but decided against it due to how well the vegetation is established and the already present large detention capacity. EDOT proposes cutting off a portion of the end of the shotgun culvert on the downhill side to prevent the waterfall affect. There is no visible erosion in the channel below, so EDOT proposes doing nothing there.

EDOT proposes stabilizing the bare eroding roadside slopes with full revegetation treatment. Where runoff flows down from the natural drainage above the road, EDOT proposes installing some rock slope protection in a small area to help stabilize the soil. This will allow the runoff to flow into the curb line. There are not many other options that exist for improvements within this portion of the Project area.

More detail is contained in next section on proposed improvements at the end of Echo View Dr.

Proposed Solutions - Echo View Dr.

EDOT proposes removing pavement beyond the last house on Echo View Dr. where it is not needed. There are no homes and only public properties exist. With less impervious coverage, less runoff will be generated in this area, plus the area can become an infiltration area. EDOT will continue to consent to access by Nv. Energy to their power poles along the dirt road by keeping an 11' wide swath open along the southern side of the old pavement area. This swath will be covered with an alternative paving material such as grasspave if it is determined that vegetation can be supported in the area, or gravel if it is deemed that vegetation cannot be well established in the area. The area can also be used as a snow storage area. A gate will be installed at the end of the pavement to prevent access to the area and to allow the revegetation efforts to be successful. The northern portion of the old pavement area will have a detention basin constructed on it. More detail on this follows below.

EDOT proposes extending the a/c swale around the corner from Mountain Canary Dr. onto Echo View Dr. to where the pavement will end. At this location a sediment trap will be installed to collect road cinders and slow down the runoff. The sediment trap will flow out to an energy dissipater that will connect to a shallow, linear vegetated detention basin along the northern portion of the old pavement area. The basin size could be as large as 100' by 10' and it will be as shallow and as flat as possible. The basin will over flow to a flow spreader and rock checks will be installed in the flow line on the northern side of the dirt road. EDOT will work with the private land owner and SPPC to attempt to gain a temporary construction easement to install rock checks or water bars on the dirt road to break the flow up and divert it into the vegetated areas adjacent to the roadway. Also, EDOT will work with SPPC to install a culvert beneath the dirt road in the area where the large failure has occurred. This should help with drainage and prevent further mass failures in the area. However, there still exists a significant area of rock outcrop above the dirt road that generates large quantities of runoff during precipitation events that will be uncontrollable. It is possible that some of the work along the dirt can be performed with EDOT maintenance crews or the CCC to save on costs.

As runoff continues down the hill on Echo View Dr. in existing a/c swales on both sides of the street, it comes to an existing curb cut and rock spillway on the south side of the street that is clogged with pine needles. Because of the small subwatershed area above, EDOT proposes doing nothing in this area other than cleaning the spillway. EDOT considered installing a sediment trap within the northern a/c swale and installing a new pipe to divert runoff across the street to tie in with the spillway and natural drainage feature below, but decided against it due to the relatively small subwatershed above.

The next existing pipe crossing and existing spillway are in good enough condition to remain as they are. No visible sign of erosion is present. As runoff flows around the corner on Echo View Dr., EDOT proposes installing a sediment trap just above the rock lined channel after the northern a/c swale terminates. This would collect cinders prior to runoff being discharged into the rock lined channel, which requires slight enhancement. As the rock lined channel connects with the existing natural drainage, EDOT will armor the entire confluence area so that it is stable and can be maintained. In EDOT's opinion not much else can be done with the natural drainage feature without causing significant disturbance. As runoff

continues down beneath the driveway culvert, EDOT proposes armoring the entire channel all the way to Sawmill Rd. As was witnessed in the 2005 event, significant velocities do occur in this location during large events and the only option that EDOT sees to adequately stabilize the area is by armoring it. The existing a/c swale along the eastern side of the road is in good enough condition to remain, however EDOT proposes installing a sediment trap in place of the existing drop inlet; which is outdated. The sediment trap will connect with the existing culvert beneath the road and will flow out into the rock lined channel described above.

SUMMARY OF ENVIRONMENTAL ANALYSIS

An Initial Study has been prepared to assess the project's potential effects on the environment and the significance of those effects. Based on the Initial Study, it has been determined that the proposed project will not have any significant environmental impacts with the implementation of the mitigation measures outlined in the Initial Study. El Dorado County (EDOT) will adopt the mitigation measures which are located in the Mitigation Monitoring and Reporting Program. This conclusion is supported by the following findings:

- The proposed project will have no adverse impacts in the areas of agricultural resources, cultural resources, land use and planning, mineral resources, population and housing, public services and recreation.
- The proposed project will have a less than significant impact in the areas of aesthetics, air quality, biological resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, transportation and traffic, and utilities and service systems. Discussion on each of these findings is provided below.

Biological Resources: Field surveys and assessments were conducted within the project survey area for special status botanical and wildlife species. No special status botanical or wildlife species were observed during the surveys. A noxious weed survey was conducted within the project/survey area, in which four noxious weed species were identified: bull thistle (*Cirsium vulgare*), oxeye daisy (*Leucanthemum vulgare*), cheatgrass (*Bromus tectorum*) and woolly mullein (*Verbascum thapsus*). A Noxious Weed Mitigation/Eradication Plan (Plan) will be adopted by the County as a part of the proposed project. The Plan should decrease habitat vulnerability to or below pre-construction levels. The Plan includes pre-construction elements, such as treatment of existing noxious weed populations identified in the project area, as well as during- and post-construction elements. Additionally, the County will specify weed-free seed mix and require all construction equipment be certified steam cleaned prior to accessing the site.

Cultural Resources: A cultural resource study, which included an archaeological survey/inventory of the project survey area, was completed. Previous inventories were performed adjacent to the study area. Review of those inventories revealed that no prehistoric or historic period archaeological resources were recorded within the immediate project/study area. No prehistoric or historic period archaeological resources were identified within the proposed project's Area of Potential Effect during the current inventory. The proposed project will not impact properties listed on or eligible for the National Register of Historic Places nor will it impact historic resources that meet criteria outlined in Section 5024.1 of the California Public Resources Code or Section 29 of the Tahoe Regional Planning Agency's (TRPA) Code of Ordinances.

Air Quality: The project will have no long term impacts to air quality. Construction equipment may impact air quality for the short term during construction, but impacts are only temporary and will not result in a cumulative increase of criteria pollutants for which the project region is in non-attainment nor will it expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors affecting a substantial number of people.

Aesthetics: The project area is not visible from any designated Scenic Highways. The intent of the project is to improve the quality of the area by stabilizing bare soil areas with vegetation and by enhancing drainage features and installing infiltration systems that will benefit the environment. While there will be temporary aesthetic impacts due to construction, there will be no long term degradation of aesthetic quality in the project area and therefore the project has a less than significant impact.

Hazards/Hazardous Materials: The project will have no long term impacts from hazards or hazardous materials in the project area. During construction there is a risk of accidental fuel spills from construction equipment. The contractor will be required to prepare a Spill Contingency Plan as part of the Storm Water Pollution Prevention Plan (SWPPP) and have spill prevention kits available to contain any accidental spills.

Hydrology/Water Quality: The goal of the project is to benefit water quality by improving the existing stormwater conveyance system and associated facilities in the project area thereby reducing the amount of pollutants entering Angora Creek and ultimately, Lake Tahoe. The project will have no long term negative impacts on hydrology/water quality. Project construction related activities may pose short term water quality impacts during storm events or accidental fuel spills from construction equipment. The County will prepare a Temporary Erosion Control Plan, Revegetation Plan and a Dust Suppression Plan to address short term impacts associated with water quality and soil disturbance. At a minimum,

this will include containment of the site, protection of existing storm water facilities, staging and storage of materials, and daily sweeping. To ensure all mitigation measures are addressed and monitored, the contractor will prepare a SWPPP in accordance with TRPA and the Lahontan Regional Water Quality Control Board (Lahontan) requirements for storm water pollution prevention.

Geology/Soils: The proposed project involves earth-moving activities estimated at approximately 1,000 cubic yards, which may cause temporary soil erosion in the project area. El Dorado County will prepare a Revegetation Plan and perform two years of irrigation/vegetation establishment to ensure that the site is restored to pre-project conditions, at a minimum. Additionally, the SWPPP will include appropriate measures to minimize soil erosion during construction to a less than significant level.

Noise: Project construction will result in a temporary increase in ambient noise levels due to equipment noise and construction activities. Operation shall be restricted to the hours of 8:00 am to 6:30 pm. All equipment and vehicles used for project construction will have proper muffler devices and be tuned to the manufacturer's specification. El Dorado County will advise potentially affected residents of the proposed construction activities including duration, schedule of activities, and contacts for filing noise complaints. The County or contractor will attempt to respond to all noise complaints received within one working day and resolve the issue as soon as possible.

Transportation/Traffic: There will be short term construction impacts on traffic from truck and daily work trips to the project area. Traffic controls will only be implemented during work hours and when it is necessary to perform work, which will be outlined in a Traffic Control Plan prepared by the contractor. At no time will access for local residents, emergency vehicles, school buses, pedestrians, or bicyclists be prohibited.

Utilities and Service Systems: During project construction, portions of the site may have exposed soil areas that, during a rain or high wind event or utility line breach, could cause minor erosion. Once construction is complete and the erosion control and water quality improvement measures are in place, surface runoff and erosion will be reduced and water quality will be improved. The contractor will prepare and follow a SWPPP which will include appropriate measures to minimize soil erosion during construction to a less than significant level.

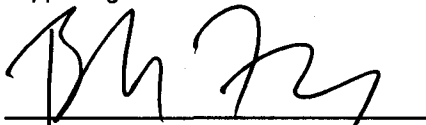
Greenhouse Gas Emissions: During Project construction, greenhouse gas emissions will increase temporarily from construction related machinery, however, the Project will not result in a cumulative increase of criteria greenhouse gas pollutants for which the project region is in non-attainment nor will it expose sensitive receptors to substantial pollutant concentrations.

PUBLIC NOTICE

The comment period for this document closes on June 12, 2009. A copy of the Initial Study/Proposed Mitigated Negative Declaration is available for public review at the El Dorado County Department of Transportation – Tahoe Engineering Unit at 924 B Emerald Bay Road, South Lake Tahoe, CA 96150 between the hours of 8:00 am and 5:00 pm. The document is also available for review at the El Dorado County Library – South Lake Tahoe Branch at 1000 Rufus Allen Blvd., South Lake Tahoe, CA 96150 between the hours of 10:00 am and 8:00 pm Tuesday and Wednesday and 10:00 am and 5:00 pm Thursday through Saturday. The Library is closed on Sunday and Monday.

All parties providing written comments during this timeframe will be notified of the upcoming hearing before the Board of Supervisors. Additional information may be obtained by contacting the El Dorado County Department of Transportation – Tahoe Engineering Division at 530-573-7900 or 924 B Emerald Bay Road, South Lake Tahoe, CA 96150.

If you wish to appeal the appropriateness or adequacy of this document, address your written comments to our finding that the project will not have a significant adverse effect on the environment: (1) identify the environmental effect(s), why they would occur, and why they would be significant, and (2) suggest any mitigation measures which you believe would eliminate or reduce the effect to an acceptable level. Regarding item (1) above, explain the basis for your comments and submit any supporting data or references.



Brendan Ferry, Senior Planner
El Dorado County—Lead Agency

Recorder's Certification

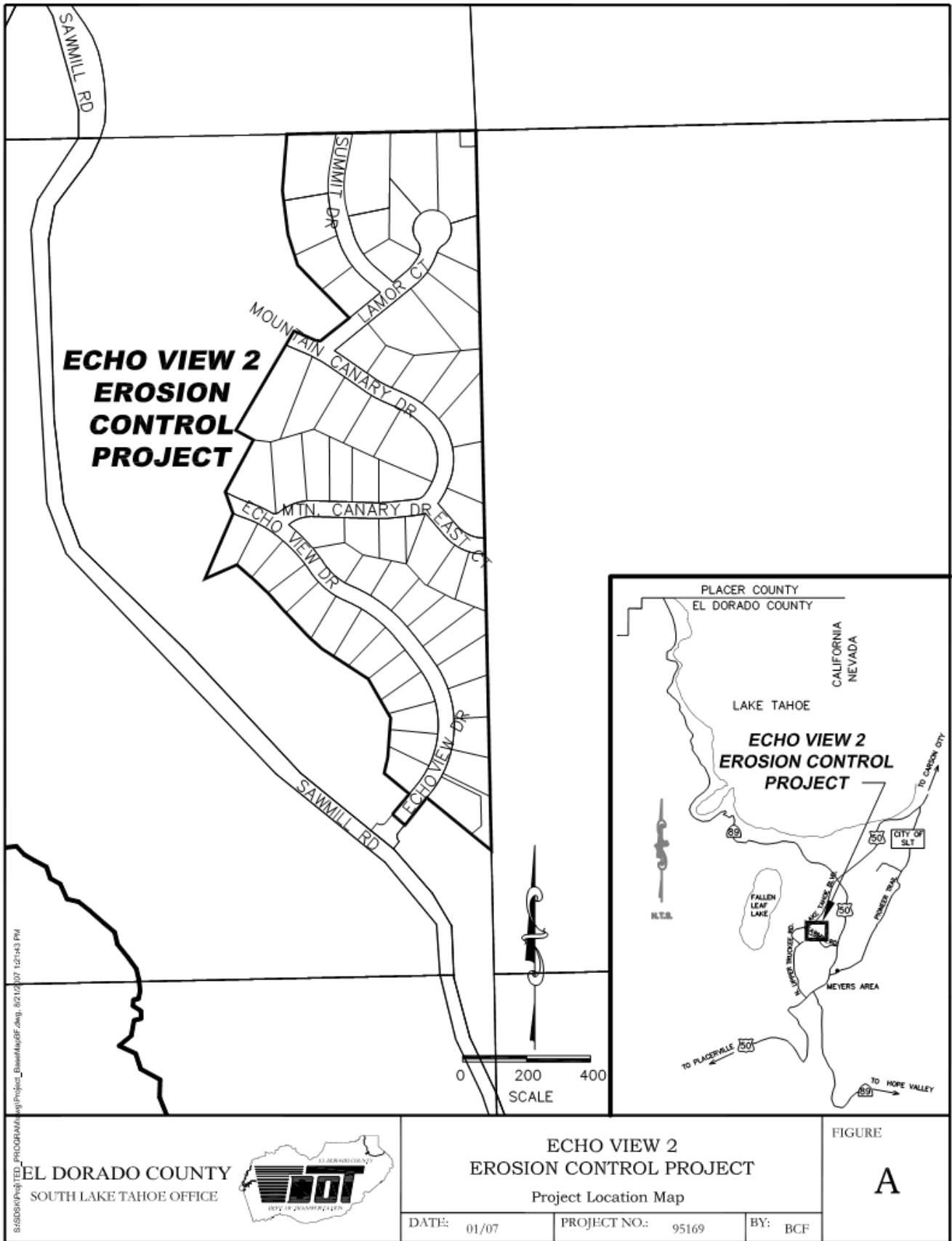


FIGURE A

**CEQA
FINAL INITIAL STUDY/
PROPOSED MITIGATED NEGATIVE DECLARATION**

**ECHO VIEW ESTATES 2
EROSION CONTROL PROJECT
EIP PROJECT #706
JN 95169**



STATE CLEARINGHOUSE # 2009052052

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El Dorado County
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**FINAL
July 2009**



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FIGURES

Alternative 1/Existing Conditions & Problem Areas

Figure 2.19

Project Watersheds

Figure 2.17B

Preferred Project Alternative

Figures 1A & 1B

APPENDICES

Appendix A: CEQA Checklist

Appendix B: Mitigation Monitoring and Reporting Program

Appendix C: Tables

1.0 INTRODUCTION

This Final Initial Study has been prepared to identify and assess the anticipated environmental impacts of the following described project. The document may rely on previous environmental documents and site-specific studies prepared to address in detail the effects or impacts associated with the project. This document has been prepared to satisfy the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.), the State CEQA Guidelines (14 CCR 15000 et seq.), and the California Tahoe Conservancy (CTC) grant funding requirements. CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects.

The Final Initial Study is a public document used by the decision making lead agency to determine whether a project may have a significant effect on the environment. If the lead agency finds substantial evidence that any aspect of the project, either individually or cumulatively, may have a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial, the lead agency is required to prepare an Environmental Impact Report (EIR), use a previously-prepared EIR and supplement that EIR, or prepare a Subsequent EIR to analyze the project at hand. If the agency finds no substantial evidence that the project or any of its aspects may cause a significant effect on the environment, a Negative Declaration shall be prepared. If in the course of analysis, the agency recognizes that the project may have a significant impact on the environment, but that by incorporating specific mitigation measures the impact will be reduced to a less than significant effect, a Mitigated Negative Declaration shall be prepared.

El Dorado County Department of Transportation-Tahoe Engineering Division (EDOT) has reviewed the proposed project and determined that the project, with mitigation measures, as identified in this document, will not have a significant effect on the environment. Therefore, a Mitigated Negative Declaration will meet the requirements of CEQA and the CTC.

A CEQA Checklist (Appendix A) has been completed based on the Project Alternatives Evaluation Report; however, should significant impacts or new mitigation measures result from the CEQA review process, the County will recirculate the document for public review. The public review period for the Final Initial Study/Proposed Mitigated Negative Declaration shall begin on May 15, 2009 and end on June 12, 2009. Comments received after 5:00 pm on June 12, 2009 will not be considered. Written responses should be sent to Brendan Ferry, Senior Planner, at the following address:

El Dorado County Department of Transportation
CEQA Compliance
924 B Emerald Bay Road
South Lake Tahoe, CA 96150
(530) 573-7900
bferry@edcgov.us

2.0 PROJECT DESCRIPTION AND LOCATION

In 1997, the Tahoe Regional Planning Agency (TRPA) developed a Basin-wide Environmental Improvement Program (EIP) that defined various projects which, once implemented, would assist in attaining and maintaining TRPA Environmental Threshold Carrying Capacities (ETCC) as well as meet other federal and state environmental goals. TRPA has established thresholds for air quality, water quality, soil conservation, vegetation, noise, scenic resources, recreation, fisheries, and wildlife to address public health and safety of residents and visitors as well as the scenic, recreation, education, scientific, and natural values of the Lake Tahoe Basin. The Echo View Estates 2 Erosion Control Project (ECP) (Project) is defined in the TRPA EIP as Project #706. El Dorado County Department of Transportation (EDOT) proposes to initiate implementation of the Echo View Estates 2 ECP during the 2010/2011 construction seasons to assist with meeting the goals of the EIP. This project is being designed and constructed with financial assistance from the CTC, United States Forest Service - Lake Tahoe Basin Management Unit (USFS-LTBMU), and TRPA mitigation funds.

The project area is located in eastern El Dorado County, California within the Lake Tahoe Basin. The site is located in South Lake Tahoe just west of Highway 50, off of Sawmill Road. The project area encompasses the entire Echo View subdivision north of Sawmill Road. The project encompasses Echo View Drive, Mountain Canary Drive, East Court, Lamor Court, and Summit Drive. (Figure A)



Figure A

The purpose of this project is to improve the quality of stormwater runoff entering Angora Creek and ultimately Lake Tahoe by reducing the discharge of sediment and pollutants from the project area through source control, hydrologic design, and treatment. The project will reduce the discharge of sediment and pollutants to Lake Tahoe through the design and implementation of erosion control and water quality improvement measures. Addressing identified erosion and water quality problems is anticipated to have a direct benefit to the quality of nearby waterways and ultimately that of Lake Tahoe. In 1987 an erosion control project was constructed in the Project area which has held up relatively well through the years. The intent of this Project is to enhance and improve upon that project, and is therefore, relatively straightforward. Figures 1A & 1B, which outline the preferred Project alternative, can be found at the end of this Initial Study.

2.1 Project Need

Pursuant to the requirements of Section 208 of the Clean Water Act, the TRPA prepared a Water Quality Management Plan for the Lake Tahoe Basin (208 Plan). This plan identified erosion, runoff and disturbance resulting from developments, such as subdivision roads, in the Lake Tahoe Basin as major causes of the decline of Lake Tahoe's water quality and clarity. The 208 Plan also mandates that capital improvement projects such as the Echo View Estates 2 ECP be implemented to bring all El Dorado County roads into compliance with Best Management Practices (BMP) requirements. Additionally, the TRPA developed the EIP to assist in attaining and maintaining TRPA's Environmental Thresholds. The EIP identified the need to improve the quality of water entering Lake Tahoe by controlling upstream pollutant sources. Pollutant sources primarily include fine sediment and nutrients like nitrogen and phosphorus.

Source erosion, water quality, and drainage/infrastructure problems have been identified within the project area. The problems within the project area are typical of those found within older residential subdivisions and commercially developed areas in the Tahoe Basin. The problems were evaluated during site inspections by EDOT, TRPA, USFS-LTBMU and CTC staff. The problem areas the Project intends to address are listed below.

Source Erosion

- Eroding Slopes
- Eroding Roadside Shoulders
- Compacted Parking Areas

Water Quality

- Road Sand and Cinder Accumulation
- Sediment Deposition and Tracking
- Concentration of Stormwater Flows
- Discharge of Untreated Stormwater

Drainage and Infrastructure

- Eroding Drainage Ditches and Channels
- Undersized and Damaged Culverts
- Undersized or Nonexistent Roadside Ditches
- Undersized or Inadequate Basins

2.2 Project Approach

The project utilized the Lake Tahoe Basin Stormwater Quality Improvement Committee's (SWQIC) Formulating and Evaluating Alternatives for Water Quality Improvement Projects document for guidance in moving towards the selection of a preferred alternative. The Project Development Team (PDT) investigated a range of possibilities for water quality improvement in the project area. The process of evaluating and selecting a preferred alternative for this project included the production and analysis of the following documents:

- Existing Conditions/Feasibility Report (Stantec/EDOT 2007)
- Final Preferred Alternative Report (EDOT 2008)
- Final Preferred Alternative Report (EDOT 2009)

In September 2007, EDOT completed the Existing Conditions/Feasibility Report (ECFR) which investigated and described the physical and environmental characteristics of the project area and vicinity that were relevant to the design of the project. The information collected and analyzed as part of the existing conditions analysis provided the PDT and other stakeholders with a clear representation and analysis of existing conditions and their relationship to or impact on water quality (Figure 2.19). The feasibility and analysis of conceptual alternatives to help correct existing problem areas was also presented in the document. The information presented in the ECFR directly informed the development of project strategies and alternatives. In December 2008, EDOT completed a Final Preferred Alternative Report (DPAR) which compiled conceptual BMP alternatives and field analysis for mitigating specific problem areas within the project area. The DPAR utilized the opportunities and constraints, as well as the goals and objectives, identified in the ECFR to investigate a range of alternatives for erosion control and water quality improvement in the field and ultimately arrive at a Final Project alternative to be reviewed and commented on by the PDT. In January 2009, EDOT completed the Final Preferred Alternative Report (FPAR) which presented the preferred Project alternative per the PDT's feedback and direction. The above documents

are available through EDOT. Below is a synopsis of BMP alternatives that were evaluated as part of the planning process.

2.3 Concept Alternatives Process

EDOT utilized a comprehensive watershed-based approach to develop the BMP alternatives for the Project. However, since the Project primarily focuses on treating sediment from EDOT's right-of-way (ROW), the preferred Project alternative is outlined by street (Section 2.5). This strategy helps identify the existing storm water flow paths, sources of sediment and hydrologic and hydraulic characteristics in a very practical fashion and assists in identifying how to properly address the erosion and water quality issues.

Various BMP alternatives were formulated for each problem area. These ideas were then analyzed in the field at the Project site for effectiveness at solving the water quality issue in a cost effective, easily maintainable manner. Ultimately, EDOT outlined the alternatives and the thought process that went into analyzing and selecting the preferred BMP to mitigate the Project specific erosion and storm water quality problems at each problem area within the Project boundary. The BMP alternatives were developed using proven erosion source control, hydraulic design, and treatment of runoff strategies. As mentioned above, due to the relatively straightforward nature of the Project - essentially an enhancement of the 1987 ECP - instead of outlining a number of Project alternatives, EDOT chose to describe the existing conditions of each street within each subwatershed and outline the thought process that was used to analyze BMP alternatives for each problem area, and then selected the preferred BMP alternatives for each area. The source control, hydrologic design, and treatment of existing conditions are discussed for each problem area below. Figure 2.17B presents the configuration of each sub-watershed and the street locations described below and can be referenced to in that figure. Figures 1A and 1B identify the locations and extent of the proposed improvements for the preferred Project alternative. The proposed Project is described in more detail below.

2.4 Project Overview

Opportunities exist within the Echo View Estates development to improve water quality and reduce erosion by revegetating bare soils, stabilizing eroding slopes and channels, reducing impervious coverage, capturing and pre-treating storm water prior to infiltration, and creating storm water detention facilities. Alternatives to improve drainage problems and reduce peak flows include disconnecting impervious areas, creating shallow vegetated detention areas, installing sediment traps, vegetating or rock lining bare conveyance channels and increasing culvert sizes. In general, vegetating eroding slopes will reduce sediment in runoff and contribute to infiltration, thus lowering peak flows.

Echo View Estates currently has a limited storm drain system comprised primarily of culverts conveying runoff from roadways and natural areas under roadways. The existing erosion control project, constructed in 1987, is performing fairly well at conveying runoff and provides for some treatment of storm water, however many opportunities exist for source control, improved hydrologic design, and treatment. Source control opportunities exist along some eroding road cut areas, particularly along Mountain Canary Drive, Lamor Court, and Summit Drive. (See Figure 2.19) Also, areas of excessive pavement exist on Echo View Drive and Summit Drive. These areas cause increased volumes of storm water during precipitation events and are unnecessary.

The natural channels within the subdivision are fairly stable; however there are areas where improvements can be made to drainage ways. Pretreatment devices are also required in existing drainage ways to increase effectiveness and enhance maintenance practices. The primary eroding channel in Echo View Estates is a major drainage way along the lower portion of Echo View Drive that eroded during a storm event that occurred in December 2005. Stabilizing the channel with rock and vegetation will protect native soils, increase infiltration, and reduce peak flows. Opportunities also exist for treating untreated storm water by installing detention basins at the end of two roads to reduce peak flows and sediment in the runoff. Ideally, making use of flat topography for a detention pond is a preferred option, and there are opportunities for their installation. Two other problem areas that exist are the old Mountain Canary and Echo View Drives, which once provided another access point to Sawmill Road that have since been removed. The dirt paths that remain are not protected thus present an area of erosion.

The primary focus for erosion control will be to provide source control on eroding roadside slopes and dirt roads. Rock slope protection will be utilized on two overly steep slopes; revegetation treatments will be used on moderately steep eroding slopes and on other bare eroding areas. Minor eroding areas adjacent to culvert

openings will be armored to slow and infiltrate runoff and help filter soil particles. Finally, pavement areas that are no longer required at the end of two of the roads within the Project area will be minimized and revegetated.

EDOT's goal with respect to hydrologic routing is to break up the runoff on the impervious roadway as much as possible. Hydrologic conveyance will primarily be enhanced by replacing failing sections of roadside a/c swale. Additionally, enhancement of existing curb cuts, installation of a new cross culvert, and a new driveway culvert will enhance conveyance and help spread of flows to minimize road damage or flooding.

Treatment options for storm water include flow spreaders, rock bowls, detention basins, armored channels, water bars, and sediment traps. Depending on site conditions, depth to groundwater, easements and cost, treatment options were weighed and selected.

2.5 Detailed Site Conditions, BMP Selection Methodology and Proposed Project

The following Alternatives (outlined on Figures 1A & 1B) have been determined by EDOT to be the most comprehensive alternative which meets the goals of the project. EDOT found it easiest to present the existing conditions and proposed solutions on a street by street basis rather than by watershed due to the watersheds being stacked on top of one another. The following sections outline the existing problems and proposed solutions for the proposed Project, along with EDOT's thought process and field justification on why certain BMPs were selected in lieu of other BMPs.

2.5.1 Existing Conditions - Lamor Ct.

During precipitation events, runoff flows down from the cul-de-sac on Lamor Ct. in existing a/c swales on the east and west side of the street. Runoff in the eastern swale flows down to a spillway that connects to a rock lined channel and into the natural drainage feature below the road. Runoff in the western swale flows down and through a culvert beneath Summit Dr. The drop inlet that is noted on the 1987 project plans no longer exists in the western swale. There is an existing pipe that crosses the road and spills into the existing natural swale east of Lamor Ct. Runoff then continues down Lamor Ct. within the a/c swales and splits to the east and the west where Lamor Ct. connects with Mountain Canary Dr. Western runoff heads down to the dirt road that extends from the end of Mountain Canary Dr. and eastern runoff flows down Mountain Canary Dr.

2.5.2 Proposed Solutions - Lamor Ct.

EDOT discussed removing pavement from the center of the circle at the top of Lamor Ct. to create a vegetated island, however after consideration of snow removal activities, decided against it. In looking at the hydrologic routing on the street, EDOT noticed during a field visit that the spillway from the eastern swale was clogged with pine needles due to how flat the swale becomes. In order to prevent this, EDOT proposes installing a sediment trap uphill from the spillway where the swale is steeper to collect road cinders and pine needles. The sediment trap would connect to a new pipe spanning across the road that will connect to a newly installed drop inlet within the western swale, as was designed in the 1987 project. The pipe outlet will flow to a rock bowl that will slow runoff prior to it entering the natural drainage feature below. The existing pipe beneath the road cannot be used due to its poor location, thus it will be abandoned. EDOT considered just installing a new spillway instead of a sediment trap within the eastern swale, but decided that due to the sanding operations on the road and the length of the a/c swale above, that the area warranted a sediment trap. EDOT considered allowing runoff to flow down the western swale to Mountain Canary Dr. instead of installing a new DI and pipe, but decided that the distance was too great.

Due to the relatively small subwatershed size below the proposed drop inlet and sediment trap described above, EDOT feels that the area around the corner of Summit Dr. and Lamor Ct. requires only a newly installed 25' section of armored channel around the downhill side of the radius of the turn. A rock lined channel exists in this location, however it has failed due to lack of maintenance. EDOT considered installing a sediment trap at the culvert outlet of the pipe beneath Summit Dr., but decided against it due to the small size of the subwatershed. EDOT also considered installing an a/c swale in lieu of the armored channel, but decided that an armored channel was warranted due to the topography to help slow runoff velocities. As runoff continues down Lamor Ct., no other feasible options exist for capturing and treating runoff before it confluences with Mountain Canary Dr.

2.5.3 Existing Conditions - Summit Dr.

There is a grade break on Summit Dr. roughly 50' from the intersection with Lamor Ct. From the grade break heading east, runoff flows to Lamor Ct., which was described above. From the grade break heading west, runoff flows along a/c dike on the north side of the road down to the cul-de-sac at the end of the street. There is a/c dike

along portions of the southern side of the street, although it does not carry much flow. Along the northern portion of the street, considerable exposed soil exists adjacent to the street due to the activities of the homeowner there. EDOT will coordinate with the homeowner to attempt to stabilize the bare soil areas that exist there, as most of the exposed soil is on private property. EDOT will also refer the homeowner to the Tahoe Resource Conservation District (TRCD) for a site evaluation. Runoff then flows down the a/c dike, around the cul-de-sac, to a rock lined channel at the end of the street; which flows out to United States Forest Service (USFS) land. Runoff flows from the rock lined channel to a heavily forested area where visual evidence of flow quickly disappears. The steep slope above the cul-de-sac is eroding in several places, however rock slope protection remains in several places.

2.5.4 Proposed Solutions - Summit Dr.

EDOT hoped to remove the existing cul-de-sac at the end of Summit Dr. due to the lack of homes and presence of public land at the end of the street. EDOT hoped to install a hammerhead further to the east of the cul-de-sac; thus reducing a considerable amount of pavement. However, after looking at the sloped topography, too much disturbance would occur to install the hammerhead in a new location. Thus, EDOT proposes to lessen the size of the cul-de-sac by removing the western half of the cul-de-sac, which is roughly 240 square feet of pavement (40'x60'), and installing a hammerhead turn around on the eastern front portion of the cul-de-sac. By doing this, the amount of impervious coverage will be reduced, thus reducing the peak flow and runoff volume. Also, a pervious area will be opened up to store snow to help infiltrate runoff. Parking barriers and a gate will be installed to prevent vehicular access to the area. Finally, the steepness of the road cut along the western portion of the cul-de-sac can be reduced by adding fill to the toe to create a more gently sloping area that can be revegetated. Rock slope protection will also be strategically placed on the slope to provide additional source control.

The hammerhead design will still allow emergency vehicles to turn around, but the excessive pavement will be gone. Parking barriers will be installed to prevent disturbance to the newly revegetated areas and the soil will receive a full revegetation prescription. The area will be slightly depressed to create a snow storage area and the outflow will continue to flow to the existing rock lined channel at the far western end. The existing rock lined channel appears to be in adequate condition to remain. From the end of the a/c swale on the north side of the street, a new armored or vegetated channel will be constructed to connect runoff to the shallow depressed area, which will eventually tie into the existing rock lined channel. EDOT considered installing a sediment trap upslope of the existing rock lined channel, but decided against it after seeing that the runoff does not travel far into the forest before it spreads and dissipates, causing no visual erosion. The eroding slope will be further stabilized with key rock placements performed by the California Conservation Corps (CCC).

2.5.5 Existing Conditions - Mountain Canary Dr. west of Lamor Ct.

Runoff flows from Lamor Ct. in the roadside swale to the west down Mountain Canary Dr. where it enters an old rock lined channel on the north side of the street. The runoff then flows onto the large compacted dirt area at the end of Mountain Canary Dr.; which in turn flows down the dirt road that extends from the paved area. This dirt road is on USFS property; however it appears that a South Tahoe Public Utility District (STPUD) easement may exist along the dirt road. Runoff flowing down this road eventually concentrates enough to form a gully which cuts down the slope toward Sawmill Road. There also exists a relatively large amount of bare soil north of Mountain Canary Dr., which is on both private property and USFS property. There appears to be no problems on the south side of the road.

2.5.6 Proposed Solutions - Mountain Canary Dr. west of Lamor Ct.

EDOT proposes extending the a/c swale along the northern portion of the road to the end of the street in lieu of installing armored channel, which is more expensive. At the end of the a/c swale, EDOT proposes installing a sediment trap to capture road cinders and help to slow down runoff. This sediment trap would flow to an armored forebay energy dissipater that would connect to a bio-retention basin on USFS property. If access is still required for the dirt road, the basin can be shaped accordingly. EDOT feels that the basin size can be roughly 40' long by 10' wide, at a minimum. The basin will have a berm constructed on the downhill side and a flat bottom. It will be vegetated with native dry site plant species. The vegetated basin will help dissipate energy, attenuate flows, and encourage infiltration. The overflow of the basin will be diverted to the southwest, down an existing well vegetated drainage feature, rather than down the dirt road. The runoff will eventually end up in roughly the same location below, if it makes it that far. EDOT considered proposing a sub-surface infiltration system in this location to continue to provide access down the dirt road; however EDOT believes that an infiltration basin can fit in the area while still providing access and is the best, most cost effective solution for infiltrating runoff.

EDOT also proposes installing a gate at the end of the pavement and parking bollards or a fence along the public property line to prevent unlawful access to the area and to prevent further soil compaction. EDOT will coordinate

with STPUD and the USFS to encourage them to provide a temporary construction easement to EDOT to work with their crews or the CCCs to install water bars along the road to help divert runoff into the wooded area adjacent to the dirt road.

2.5.7 Existing Conditions - Mountain Canary Dr. east of Lamor Ct. to East Ct.

Runoff flows around the corner of Lamor Ct. within the roadside a/c swale to the east down Mountain Canary Dr. The roadside swale is missing along roughly a 100' section on the north side of Mountain Canary Dr. Runoff continues flowing down the a/c swale along the north side of the street, beneath a fairly clogged driveway culvert and to the a/c spillway at the bend in the road. Runoff then enters an existing well vegetated detention basin that is located within in a natural drainage feature. A riser pipe exists, that appears to be in good shape, that backs runoff up and allow for greater detention times. The eastern portion of the basin has failed at some point in the past and currently a wall of sand bags are in place to prevent runoff from flowing to the east, out of the basin. The riser pipe flows into an existing 18" pipe that flows beneath Mountain Canary Dr. to the natural drainage feature south of the road. The drainage feature is very well vegetated. Runoff continues in the northern a/c swale after the bend in the road and flows down across a driveway and around the corner onto East Ct. There is a slope that requires revegetation above the a/c swale on the north side of the street.

Runoff on the southern portion of the road flows down Mountain Canary Dr. to an a/c spillway not far down the street that is clogged with pine needles. The watershed above is very small and as a result not much runoff flows down the spillway. The a/c dike is missing in a few places along the southern portion of the road. Runoff then flows roughly 100' down the road to another spillway that connects to a steep rock lined channel that leads to the existing natural drainage feature south of Mountain Canary Dr. This natural drainage feature has been improved with a riser pipe at the southern end and appears to be in very good shape and is well vegetated. Runoff continues in the southern a/c swale after the bend in the road where three more rock lined spillways exist to carry runoff down to the same detention basin. These spillways are currently clogged with pine needles.

2.5.8 Proposed Solutions - Mountain Canary Dr. east of Lamor Ct. to East Ct.

EDOT proposes installing a new a/c swale around the corner of Lamor Ct. onto Mountain Canary Dr. to the driveway on the north side of the street. A new culvert is needed beneath the driveway. Due to the relatively small subwatershed above this location, EDOT decided that this improvement was the only necessary fix for the area. It will allow runoff to flow down to the existing well vegetated basin below. At this location, EDOT considered installing a sediment trap in the flow line with a new culvert to carry flows across the street, down to the CTC lot south of the road. EDOT also considered just improving the existing spillway and not installing the new culvert. However, due to the small subwatershed size above, EDOT decided there was not enough benefit to justify installing the improvements.

As runoff continues down the northern a/c swale, EDOT proposes installing a sediment trap above the existing a/c spillway that flows to the detention basin. The sediment trap will help slow down the runoff and provide an area to collect sediment that can be easily maintained. The eastern portion of the basin above the road will also need to be reconstructed with compacted soil, rock, and vegetation to prevent future failure and to increase detention times. EDOT considered digging out the existing basin to make it bigger, but decided against it due to the very well established vegetation and already existing adequate detention area.

A sediment trap is also proposed in the flow line on the south side of the street above the existing rock lined channel to capture road cinders prior to the runoff entering the detention basin below Mountain Canary Dr. The rock lined channel is in good enough condition to remain. The culvert that outlets into the basin requires a rock bowl beneath it to dissipate the energy of the runoff, but the rest of the basin is in great shape.

The first spillway below the basin on the southern side of the road will have no improvements due to the small subwatershed above it. However, the next spillway down the street will be improved by paving a steeper a/c swale to carry the runoff to a new rock dissipater above the basin. The last spillway at the sharp corner on Mountain Canary Dr. will have no improvements, again due to the small subwatershed size above. EDOT considered installing sediment traps at all the spillways, but decided that was not warranted.

2.5.9 Existing Conditions - East Ct.

Runoff flows from Mountain Canary Dr. around the corner onto East Ct. A/C dike exists along both sides of the street, although it is slightly damaged along the southern portion of the street. Runoff continues to flow in the

northern a/c swale, through a culvert beneath the driveway and into a rock lined channel that flows out to USFS land where the flows spread and evidence of erosion quickly fades.

Runoff ponds slightly in the street along the southern portion of a/c dike, before it flows down to the culvert that is located beneath the driveway of the home at the southern end of the street. Runoff flows from this culvert out to the adjacent USFS land where it quickly dissipates. The culvert appears to require cleaning.

2.5.10 Proposed Solutions - East Ct.

EDOT is not proposing any improvements on East Ct. other than cleaning the existing culvert beneath the driveway at the end of the street.

2.5.11 Existing Conditions - Mountain Canary Dr. west of East Ct. to Echo View Dr.

The basin north of Mountain Canary Dr. is in very good shape and is well vegetated. It contains a riser pipe that helps detain runoff for treatment. The riser pipe flows to an existing culvert that carries runoff beneath Mountain Canary Dr. The culvert shotguns out and spills runoff down a very well vegetated natural drainage path. There is no visible erosion within the drainage channel.

Runoff continues to flow along the north side of Mountain Canary Dr. within the existing a/c swale. Runoff sheets off here and there along the south side of the street with no sign of erosion, however the majority of the runoff flows along the north side of the street. There are bare areas along portions of the slope above the north side of the street that require revegetation. In one location, a very small amount of runoff flows from the drainage above and there is slight evidence of erosion above the road. The northern a/c swale conveys runoff around the corner onto Echo View Dr.

2.5.12 Proposed Solutions - Mountain Canary Dr. west of East Ct. to Echo View Dr.

EDOT considered further excavation of the basin north of Mountain Canary Dr. to attempt to gain more storage volume, but decided against it due to how well the vegetation is established and the already present large detention capacity. EDOT proposes cutting off a portion of the end of the shotgun culvert on the downhill side to prevent the waterfall affect. There is no visible erosion in the channel below, so EDOT proposes doing nothing there.

EDOT proposes stabilizing the bare eroding roadside slopes with full revegetation treatment. Where runoff flows down from the natural drainage above the road, EDOT proposes installing some rock slope protection in a small area to help stabilize the soil. This will allow the runoff to flow into the curb line. There are not many other options that exist for improvements within this portion of the Project area.

More detail is contained in next section on proposed improvements at the end of Echo View Dr.

2.5.13 Existing Conditions - Echo View Dr.

Runoff flows down from Mountain Canary Dr. to an unmaintained rock lined channel that flows out onto the dirt road that extends from Echo View Dr. onto private property (Lampson). There is a NV Energy easement along the dirt road. Visible gullies form and blow out a fairly large area along the dirt road which carries sediment down toward Sawmill Road. At the top end of Echo View Dr. there exists pavement beyond the last house that is of no use. The pavement area is roughly 100' by 22'. The pavement ends at a dirt road that is eroding where the NV Energy easement exists over the Lampson property.

The southern a/c swale picks up again before the intersection and carries runoff around the corner from Mountain Canary Dr. onto Echo View Dr. Runoff continues to flow east down the hill on Echo View Dr. Runoff flows along the northern a/c swale beneath some driveway culverts that require cleaning. Runoff on the south side of the street flows down an existing rock spillway that is clogged with pine needles. The subwatershed above the spillway is relatively small. Runoff continues to flow down both sides of the street within the a/c swales until it reaches the culvert crossing below. Runoff from the northern swale enters a depression and flows through the 18" culvert beneath the road and into the natural drainage feature below the road. The culvert appears to be in good shape. Runoff in the southern swale flows down a rock spillway that connects to the same natural drainage feature. There is very little evidence of erosion in the drainage feature.

Runoff continues to flow down a/c swales along both sides of the road for quite some distance. There is a wood chip turnout along the southern portion of the road. As runoff flows around the bend in the road, runoff along the

western swale flows to an old drop inlet, which connects to a pipe that conveys runoff beneath the road to the rock lined channel on the east side of the street. Runoff in the eastern a/c swale flows to an old rock lined channel that continues down to connect with a natural drainage feature that comes in from the northeast. This combined flow continues down beneath the large driveway culvert and flows through an open channel down to Sawmill Road.

2.5.14 Proposed Solutions - Echo View Dr.

EDOT proposes removing pavement beyond the last house on Echo View Dr. where it is not needed. There are no homes and only public properties exist. With less impervious coverage, less runoff will be generated in this area, plus the area can become an infiltration area. EDOT will continue to consent to access by Nv. Energy to their power poles along the dirt road by keeping an 11' wide swath open along the southern side of the old pavement area. This swath will be covered with an alternative paving material such as grasspave if it is determined that vegetation can be supported in the area, or gravel if it is deemed that vegetation cannot be well established in the area. The area can also be used as a snow storage area. A gate will be installed at the end of the pavement to prevent access to the area and to allow the revegetation efforts to be successful. The northern portion of the old pavement area will have a detention basin constructed on it. More detail on this follows below.

EDOT proposes extending the a/c swale around the corner from Mountain Canary Dr. onto Echo View Dr. to where the pavement will end. At this location a sediment trap will be installed to collect road cinders and slow down the runoff. The sediment trap will flow out to an energy dissipater that will connect to a shallow, linear vegetated detention basin along the northern portion of the old pavement area. The basin size could be as large as 100' by 10' and it will be as shallow and as flat as possible. The basin will over flow to a flow spreader and rock checks will be installed in the flow line on the northern side of the dirt road. EDOT will work with the private land owner and SPPC to attempt to gain a temporary construction easement to install rock checks or water bars on the dirt road to break the flow up and divert it into the vegetated areas adjacent to the roadway. Also, EDOT will work with SPPC to install a culvert beneath the dirt road in the area where the large failure has occurred. This should help with drainage and prevent further mass failures in the area. However, there still exists a significant area of rock outcrop above the dirt road that generates large quantities of runoff during precipitation events that will be uncontrollable. It is possible that some of the work along the dirt can be performed with EDOT maintenance crews or the CCC to save on costs.

As runoff continues down the hill on Echo View Dr. in existing a/c swales on both sides of the street, it comes to an existing curb cut and rock spillway on the south side of the street that is clogged with pine needles. Because of the small subwatershed area above, EDOT proposes doing nothing in this area other than cleaning the spillway. EDOT considered installing a sediment trap within the northern a/c swale and installing a new pipe to divert runoff across the street to tie in with the spillway and natural drainage feature below, but decided against it due to the relatively small subwatershed above.

The next existing pipe crossing and existing spillway are in good enough condition to remain as they are. No visible sign of erosion is present. As runoff flows around the corner on Echo View Dr., EDOT proposes installing a sediment trap just above the rock lined channel after the northern a/c swale terminates. This would collect cinders prior to runoff being discharged into the rock lined channel, which requires slight enhancement. As the rock lined channel connects with the existing natural drainage, EDOT will armor the entire confluence area so that it is stable and can be maintained. In EDOT's opinion not much else can be done with the natural drainage feature without causing significant disturbance. As runoff continues down beneath the driveway culvert, EDOT proposes armoring the entire channel all the way to Sawmill Rd. As was witnessed in the 2005 event, significant velocities do occur in this location during large events and the only option that EDOT sees to adequately stabilize the area is by armoring it. The existing a/c swale along the eastern side of the road is in good enough condition to remain, however EDOT proposes installing a sediment trap in place of the existing drop inlet; which is outdated. The sediment trap will connect with the existing culvert beneath the road and will flow out into the rock lined channel described above.

2.6 Project Benefits

The main goals of this Project are related to improving the water quality of runoff to Lake Tahoe by reducing erosion and sediment flow originating in the Project area. The Project goals are as follows:

1. Remove/reduce fine sediment originating from the Project area prior to reaching Angora Creek to the maximum extent practicable.

2. Remove/reduce coarse sediment originating from the Project area prior to reaching the Angora Creek to the maximum extent practicable.
3. Reduce the storm water runoff volume from the 25-year, 1-hour storm event for the Project area prior to reaching the Angora Creek to the maximum extent practicable.
4. Reduce the storm water peak flow from the 25-year, 1-hour storm event for the Project area prior to reaching the Angora Creek to the maximum extent practicable.

Goals #1 & #2 Objectives

- Stabilize eroding areas and turnout areas through revegetation or rock protection BMPs.
- Stabilize roadside drainage ditches using channel protection or improved road conveyance BMPs.
- Capture road sand/cinders prior to discharge to the Angora Creek using sediment trapping BMPs.
- Capture de-icing abrasives to prevent discharge to watercourses.

Goal #3 Objectives

- Lengthen watershed flow paths from upper elevations to Angora Creek.
- Store runoff in sediment traps and detention basins.
- Reduce runoff by spreading and infiltrating flows.

Goal #4 Objectives

- Spread flows to slow runoff and lengthen flow paths.
- Improve conveyance facilities.

3.0 ENVIRONMENTAL SETTING AND SITE CHARACTERISTICS

The Echo View Estates 2 project area is located in eastern El Dorado County, California within the Lake Tahoe Basin. The site is located in South Lake Tahoe just west of Highway 50, off of Sawmill Road. The project area encompasses the entire Echo View subdivision north of Sawmill Road. The project encompasses Echo View Drive, Mountain Canary Drive, East Court, Lamor Court, and Summit Drive. (Figure A)

The project area encompasses El Dorado County right of way; CTC, USFS-LTBMU, and privately owned parcels. The project area is located in portions of Sections 17 and 18, Township 12 North, Range 18 East as shown on the Emerald Bay U.S. Geological Survey 7.5-minute quadrangle within the Upper Truckee River Watershed.

Topography: The Project area is bounded by Angora Creek floodplain to the south, Twin Peaks to the north and sloping mountainous terrain to the east and west. The approximate elevation range of the project area is 6,100 to 6,600 feet. Project area topography consists mostly of sloping terrain averaging 14%, with isolated slopes exceeding 30%.

Hydrology: The USGS has divided the Lake Tahoe Basin into 63 watersheds, all of which feed into Lake Tahoe. The Project area lies within the Upper Truckee River Watershed, which is the largest watershed in the Tahoe Basin. The Upper Truckee River Watershed is comprised of 80 individually numbered subwatersheds, 1 of which encompasses the Project site. The Project area was further subdivided into 16 smaller watersheds for planning and design purposes. Numerous ephemeral drainages flow through the Project area. Conveyance systems throughout the subdivision help direct storm water runoff through the Project area. Existing facilities are in place for capturing and treating this runoff, however they are somewhat limited and require enhancement.

The Federal Emergency Management Agency (FEMA) has determined floodplain limits associated with Angora Creek as Zones A, B, and C. Zone A designates areas within the 100-year flood limit. Zone B designates areas between the 100-year and 500-year flood limits. Zone C designates areas of minimal flooding. The entire Project area is within Zone C.

Groundwater: Soils in the Project area are very well drained and due to the sloping topography, for the majority of the year, groundwater is not near the ground surface in the entire Project area.

Geology/Soils: The Echo View Estates subdivision is predominantly Echo Lake granodiorite (Kelg) composed of very light gray, medium to coarse-grained, weakly porphyritic hornblende-biotite granodiorite; locally includes quartz monzonite. Commonly weathers to pale-orange-gray grus. Characterized by small microcline phenocrysts 0.5 to 1.5 cm long and abundant flattened mafic inclusions. Mafic inclusions are common and are locally abundant near contacts.

The Project encompasses 5 soil types (SCS 1974): Cagwin-Rock outcrop complex, 5 to 15 percent slopes, extremely stony (7411), Cagwin-Rock outcrop complex, 15 to 30 percent slopes, extremely stony (7412), Jabu coarse sandy loam, 0 to 9 percent slopes (7461), Jabu coarse sandy loam, 9 to 30 percent slopes (7462), and Toem-Rock outcrop complex, 9 to 30 percent slopes (7531). All of the soils within the project area have high to moderate infiltration and transmission rates and are categorized as Hydrologic Group B.

Land Use: The Project area is located in an unincorporated area of El Dorado County within the Tahoe Basin. Land use policies for the Project area are discussed in the El Dorado County General Plan and the TRPA Plan Area Statements (PAS). The Project lies within portions of the Twin Peaks Peak PAS-118, Country Club Meadow, PAS-119 and Echo View, PAS-134.

PAS-118 has a land use classification of "Conservation" and is managed by the USFS-LTBMU for low level recreation. PAS-119 has a land use classification of "Recreation" and is managed by CA State Parks. PAS-134 has a land use classification of "Residential", with a maximum density of one single family dwelling per parcel. Public agencies with lands in the project area include the LTBMU, CA State Parks, STPUD, CTC, and El Dorado County.

Cultural Resources: Zeier & Associates, LLC conducted an inventory of approximately 3,935 linear feet of road right of way were inventoried for cultural resources with the Project area. Given the right of way width in the project area (approximately 40 feet), the overall inventoried area was 3.61 acres. In addition, 24 publically owned parcels have been identified as potential treatment locations. Eighteen parcels were inventoried as part of the present study, 6 additional parcels were inventoried as part of a past study, which account for an additional 7.83 acres. When combined, a total of 11.41 acres were examined as part of the present inventory effort. These rights of way and the 24 parcels constitute the Area of Potential Effect associated with the proposed action.

The current inventory resulted in the following observations:

- No prehistoric or historic period archaeological resources were identified within the Echo View Estates 2 ECP area of effect.
- Individual examples of Comstock era high-cut stumps were observed but not recorded.
- Recent (less than 50 years in age) items (roadside debris) and architectural resources were observed but not recorded.

It is recommended that significant archaeological resources are not present within the Echo View Estates 2 ECP area of potential effect. Thus, the erosion control project proposed by El Dorado County in that area will not impact properties listed on or eligible to the National Register of Historic Places. Nor will it impact historic resources that meet criteria outlined in Section 5024.1 of the California Public Resources Code or Section 29 of the Tahoe Regional Planning Agency's Code of Ordinances. Therefore, it is recommended that further consideration of the project's effect on historic properties is not necessary. It is recommended that "no historic properties will be affected," as that phrase is viewed within the context of compliance with the Advisory Council on Historic Preservation regulations (36 CFR part 800).

Botanical Resources: Botanical surveys were conducted by Nichols Consulting Engineers, Chtd. Engineer's Botanist, Megan Scheeline, on May 21, 2008 and May 29, 2008. It was determined that the phenology of vegetation on site during the May surveys was not appropriate for full identification of all species. Therefore, a follow-up survey was conducted on July 8, 2008, during which all species were properly identified. Survey parcels were identified by El Dorado County staff as areas that could potentially incur impacts due to Project improvements, staging areas, and areas of disturbance. The survey methods include conducting surveys on foot and identifying plant communities and habitat types on the site that may support special status species. In

addition, rare natural communities such as wetlands and riparian areas were identified for the purposes of impact assessments. No USFS-LTBMU sensitive species were found during field surveys. USFS modeled habitat for 14 sensitive species exists within the Project area.

The Project area is composed mainly of Jeffrey Pine and Upper Montane Mixed Chaparral vegetation types, with some Lodgepole Pine and a very small area mapped Basin Sagebrush. Plant communities were initially identified through the use of CALVEG (Classification and Assessment with Landsat of Visible Ecological Groupings) data searches and then verified during ground level field surveys. Plant communities found in and adjacent to the project area are typical of those found in the Lake Tahoe Basin. See Table 1 in Appendix C.

Wildlife Resources: Field investigations and assessments were conducted for presence of populations, habitat, and range by Nichols Consulting Engineers, Chtd. Engineer's Biologist, Madelyn Comer, on May 21 and 28, 2008. The focus of this investigation was to evaluate the habitat located on specified parcels, and determine the likelihood that special status wildlife species would occur within, or be impacted by, the Echo View Estates 2 ECP. Survey parcels were identified by El Dorado County staff as areas that could potentially incur impacts due to Project improvements, staging areas, and areas of disturbance. The survey area includes 14 parcels owned by the CTC, 6 parcels owned by the USFS, 2 sections of private property, and a 50 ft. setback along an additional 4 public parcels. Additionally, a literature and database review was conducted to identify existing wildlife information within and adjacent to the project area. This review assisted with the determinations contained in this document regarding potential impacts to threatened, endangered, sensitive, management indicator, and TRPA special interest species.

No significant wildlife features were found within the survey area. Therefore, there will be no cumulative effects to federally listed threatened or endangered species. The American Marten (TRPA focal species, USFS-LTBMU sensitive species and US Fish & Wildlife Species of concern) was detected within the Twin peaks area, which is approximately three miles from the Project area; however the Project will not affect the American Marten due to it being outside of the Project area. In relation to the total amount of habitat in the analysis area, the scale of improvements proposed by the Echo View Estates 2 ECP will not result in a net decrease of habitat for MIS animals. Furthermore, design goals aimed at improving water quality will decrease sedimentation, nutrient deposition, and pollution in adjacent habitat, thereby reducing the ecological problems associated storm water runoff. This will have a cumulative positive effect to habitat and enhance wildlife opportunity in the Upper Truckee River Watershed. See Table 2 in Appendix C.

Greenhouse Gas Emissions: During Project construction, greenhouse gas emissions will increase temporarily from construction related machinery, however, the Project will not result in a cumulative increase of criteria greenhouse gas pollutants for which the project region is in non-attainment nor will it expose sensitive receptors to substantial greenhouse gas pollutant concentrations. The Project will have no long term impact on greenhouse gas emissions.

4.0 PUBLIC INPUT AND PDT COORDINATION

The public involvement process for the Project included two public meetings, which were combined with the larger adjacent project, the Sawmill 2 Bike Path & Erosion Control Project, which were held on August 23, 2007 and August 27, 2008. At the first public meeting, EDOT provided the public with information on the existing conditions, existing problem areas and Final conceptual alternatives and asked the public to express their concerns on the Project related to environmental impacts. The public was also invited to identify opportunities and constraints in the Project area, which included visual documentation from area residents. Public notices for the August 2007 meeting were mailed to all property owners within a 300 foot radius of the Project boundary. A second public meeting on the Project was held on August 28, 2008 to discuss the proposed Project/preferred alternative. Invitations to the August 2008 meeting were also mailed to all property owners within a 300 foot radius of the Project boundary.

EDOT met with the Project Development Team (PDT) during the project development process to identify problems and to develop and refine project alternatives. The PDT consists of resource agency representatives in the Lake Tahoe Basin, including, but not limited to, the Tahoe Regional Planning Agency, USFS-Lake Tahoe Basin Management Unit, California Tahoe Conservancy, Tahoe Resource Conservation District, and Lahontan Regional Water Quality Control Board. The initial PDT meeting on the Project was held in November 2005. At this meeting the PDT reviewed and endorsed the Project. After the development of the project goals and

objectives, a Feasibility/Existing Conditions Report was produced which was provided to the PDT and the public in October 2007. EDOT then produced a Final Project Alternatives Report based on comments received from the PDT and public at the scoping meeting. This document was provided to the PDT in November 2008. A Final Preferred Alternative Report was then developed based on those recommendations and was provided to the PDT in January 2009.

5.0 RIGHT OF WAY REQUIREMENTS

Every effort has been made to locate proposed improvements within the County right of way or on publicly owned parcels. EDOT will potentially require easements, permits, or agreements on the following list of public or private parcels for either permanent improvements or for construction access.

USFS Parcels (Special Use Permits):

- 033-622-06
- 033-622-02
- 033-623-03
- 033-623-21
- 033-010-19
- 033-090-01

CTC Parcels (License Agreements):

- 033-332-17
- 033-621-01
- 033-623-02
- 033-623-09

South Tahoe Public Utility District (Drainage Easement)

- 033-332-19

Private Parcels (Drainage Easements):

- 033-020-12 (Lampson Trust)
- 033-332-18 (Heinzerling)
- 033-322-16 (Skipworth)

6.0 COVERAGE AND PERMIT ISSUES

Clean Water Act Section 404

The fieldwork was conducted for the delineation of Waters of the U.S., including wetlands, as defined by Section 404 of the Clean Water Act. Data collected in the field will be analyzed to determine if jurisdictional waters, including wetlands, exist in the project area. If necessary, a delineation report will be prepared that includes maps that identify the type, location, and size of all Waters of the U.S. within the project boundary.

Clean Water Act Section 401

If the proposed Project involves the discharge to surface waters, which includes Waters of the U.S., Waters of the State, and all other surface waters, a 401 Water Quality Certification will be required from the Lahontan Regional Water Quality Control Board (RWQCB). A 401 Water Quality Certification application will be prepared and submitted to the Lahontan RWQCB based on the final project design and its potential to discharge to surface waters.

Lahontan RWQCB NPDES Permit and Basin Plan

Any disturbance of a Stream Environmental Zone (SEZ) requires consultation with and potentially a permit from Lahontan RWQCB. If one acre or more of overall disturbance is slated to occur during construction, compliance with the NPDES General Construction Permit will be required.

Tahoe Regional Planning Agency General Permit and Stream Environment Zones (SEZ)

A TRPA General Permit will be obtained prior to construction. A Land Capability Verification application was prepared and submitted to the TRPA. If the proposed project requires disturbance within Land Capability District 1b lands (SEZ), EDOT will work with TRPA to develop and implement appropriate mitigation measures through the TRPA permitting process.

7.0 MITIGATION AND MONITORING

Mitigation measures are described in the attached Mitigation Monitoring and Reporting Program (Appendix B). EDOT staff and/or their contractor will conduct on-site monitoring to ensure that mitigation measures are implemented as proposed. A full time construction inspector provided by EDOT and/or contractor will monitor proposed mitigation measures for potential temporary impacts associated with construction. The inspector will ensure that the contractor strictly adheres to all temporary erosion control requirements and other environmental protection requirements. In addition to County inspections, regulatory agencies will review project plans and specifications to ensure compliance with local, state, and federal requirements. Any additional mitigation measures required by regulatory agencies as a condition of approval will be monitored in the same manner. Throughout the construction of the project, the agencies will be invited to weekly "tailgate" meetings and will conduct periodic visits to the project site to enforce the implementation of BMPs and ensure compliance with all other mitigation measures.

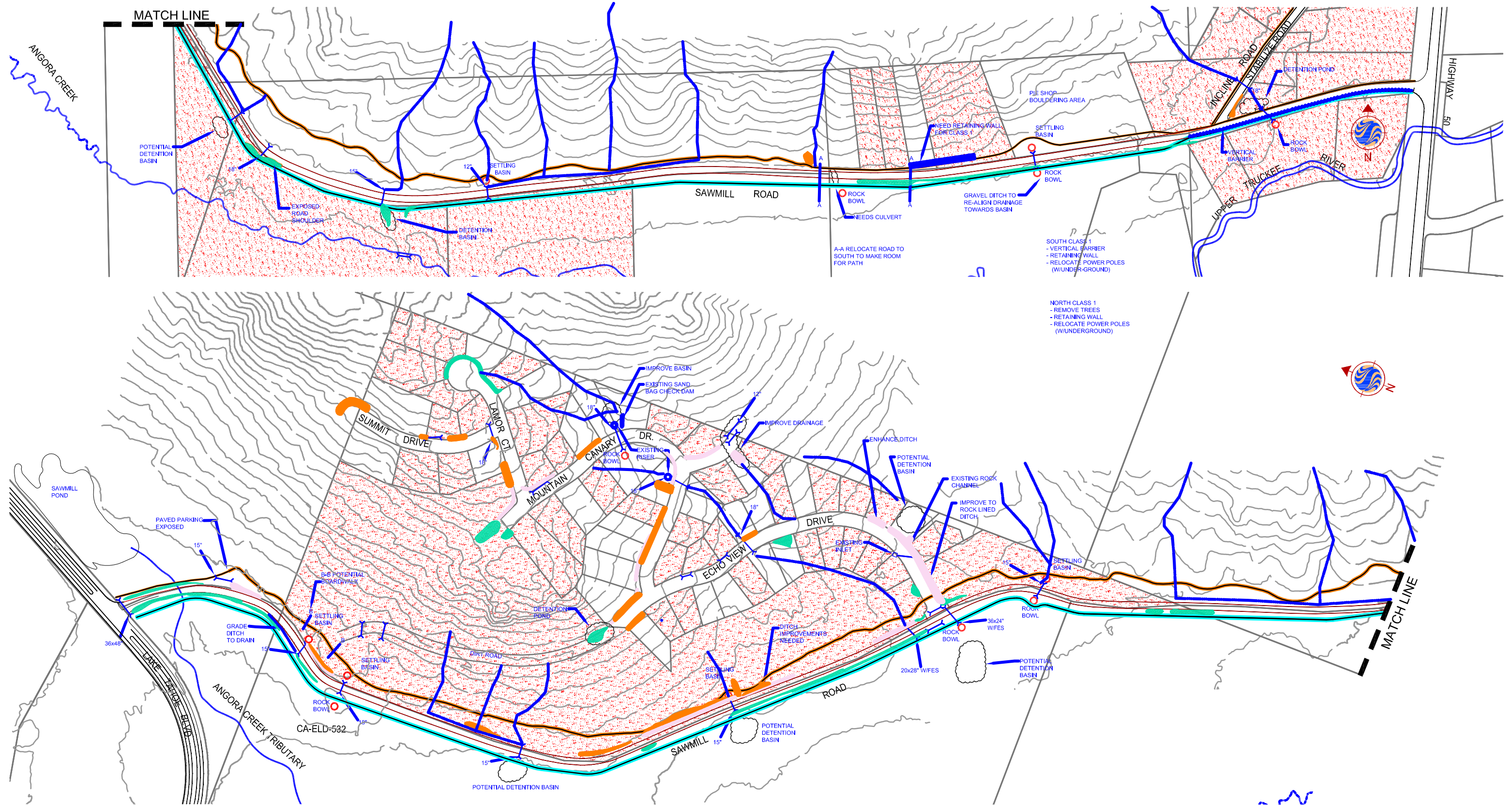
The maintenance and monitoring of the project improvements will continue well after construction completion. Revegetation monitoring and establishment will continue for a minimum of two years following construction. Plant establishment will include irrigation and replanting, if necessary. EDOT will inspect all project improvements during the spring and fall of each year during the twenty-year maintenance period as required by CTC Erosion Control Grant Guidelines. EDOT engineering staff will direct maintenance staff to provide maintenance of new facilities based on results of the inspections. Photographs will be taken before and after construction for a period of two years, and following significant storm events to monitor project improvement performance.

8.0 REFERENCES

- El Dorado County Department of Transportation (EDOT). 2008. Echo View Estates 2 Erosion Control Project Final Preferred Alternatives Report.
- El Dorado County Department of Transportation (EDOT). 2009. Echo View Estates 2 Erosion Control Project Final Preferred Alternative Report.
- El Dorado County Department of Transportation (EDOT). 2004. El Dorado County General Plan: A Plan for Managed Growth and Open Roads; A Plan for Quality Neighborhoods and Traffic Relief. Internet Website: http://www.co.el-dorado.ca.us/generalplan/Exhibits/59_5.pdf. Accessed November 16, 2004.
- Stantec Consulting Inc. 2007. Sawmill 2 Bike Path and Eco View 2 Erosion Control Projects Feasibility Report.
- Natural Resources Conservation Service (NRCS). 1974. Soil Survey, Tahoe Basin Area, California and Nevada. U.S. Department of Agriculture, Soil Conservation Service and U.S. Forest Service in cooperation with UC Agricultural Experiment Station and NV Agricultural Experiment Station.
- Nichols Consulting Engineers, Chtd. 2008. Echo View Estates Phase 2 Erosion Control Project Biological Assessment and Biological Evaluation for Threatened, Endangered, Sensitive and Tahoe Regional Planning Agency Special Interest Species.
- Nichols Consulting Engineers, Chtd. 2008. Echo View Estates Phase 2 Erosion Control Project Wildlife and Aquatic Species Low-Level Biological Evaluation and Biological Assessment.
- State Water Resources Control Board (SWRCB). 1994. State Water Resources Control Board, Stream Environment Zones.
- Tahoe Regional Planning Agency (TRPA). 2002. TRPA Plan Area Statements (PAS).

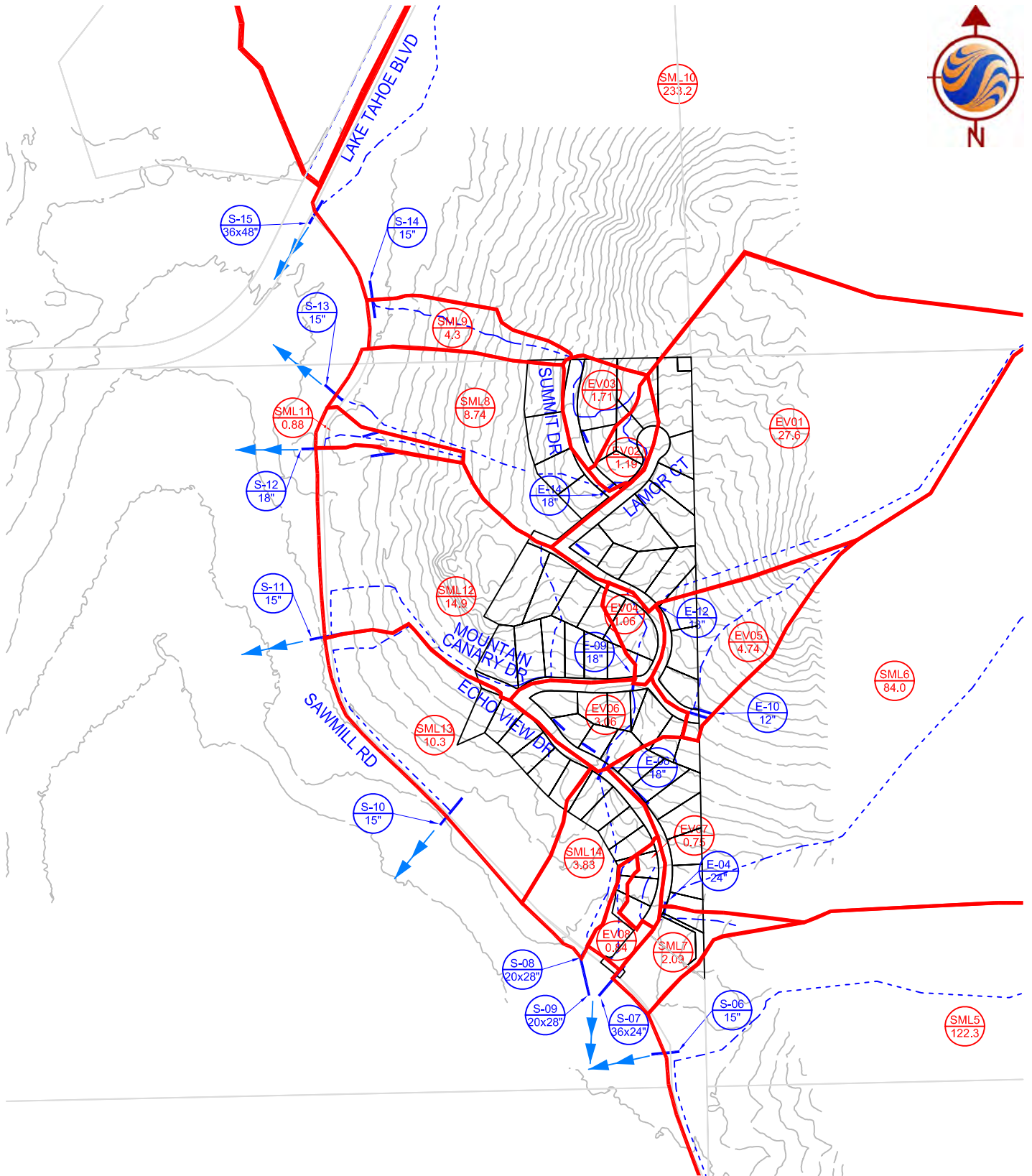
Zeier, Charles. 2008. Echo View Estates Phase 2 Erosion Control Project Heritage Resource Inventory Report, Project Number 95169. Prepared by Zeier & Associates, LLC and El Dorado County DOT-Tahoe Engineering Division for the United States Forest Service.

FIGURES



LEGEND

- North Alignment
- Class II Bike Path
- Exposed Road Shoulder (Open Space)
- Eroding Drain Ditch
- Eroding Slope
- Potential Solutions (BMPs) (See Notes)
- Existing Culverts
- Private Property
- Drainage Path
- Settling Basin / Rock Bowl



LEGEND

- WATERSHED BOUNDARY
- - - FLOW PATH
- S-06
15" AREA AND CULVERT NUMBER
PIPE DIAMETER (UNLESS OTHERWISE NOTED)
- EV01
27.6 SUBBASIN
SUBBASIN AREA (ACRES)
- ↙ OUTFALL

Client/Project

**EL DORADO COUNTY DOT
SAWMILL 2 BIKE PATH AND ECHO VIEW ESTATES
EROSION CONTROL PROJECT**

Figure No.

2.17B

Title

**FEASIBILITY REPORT
ECHO VIEW HYDROLOGY MAP**

AUGUST 2007
184151600
Scale 1" = 500'

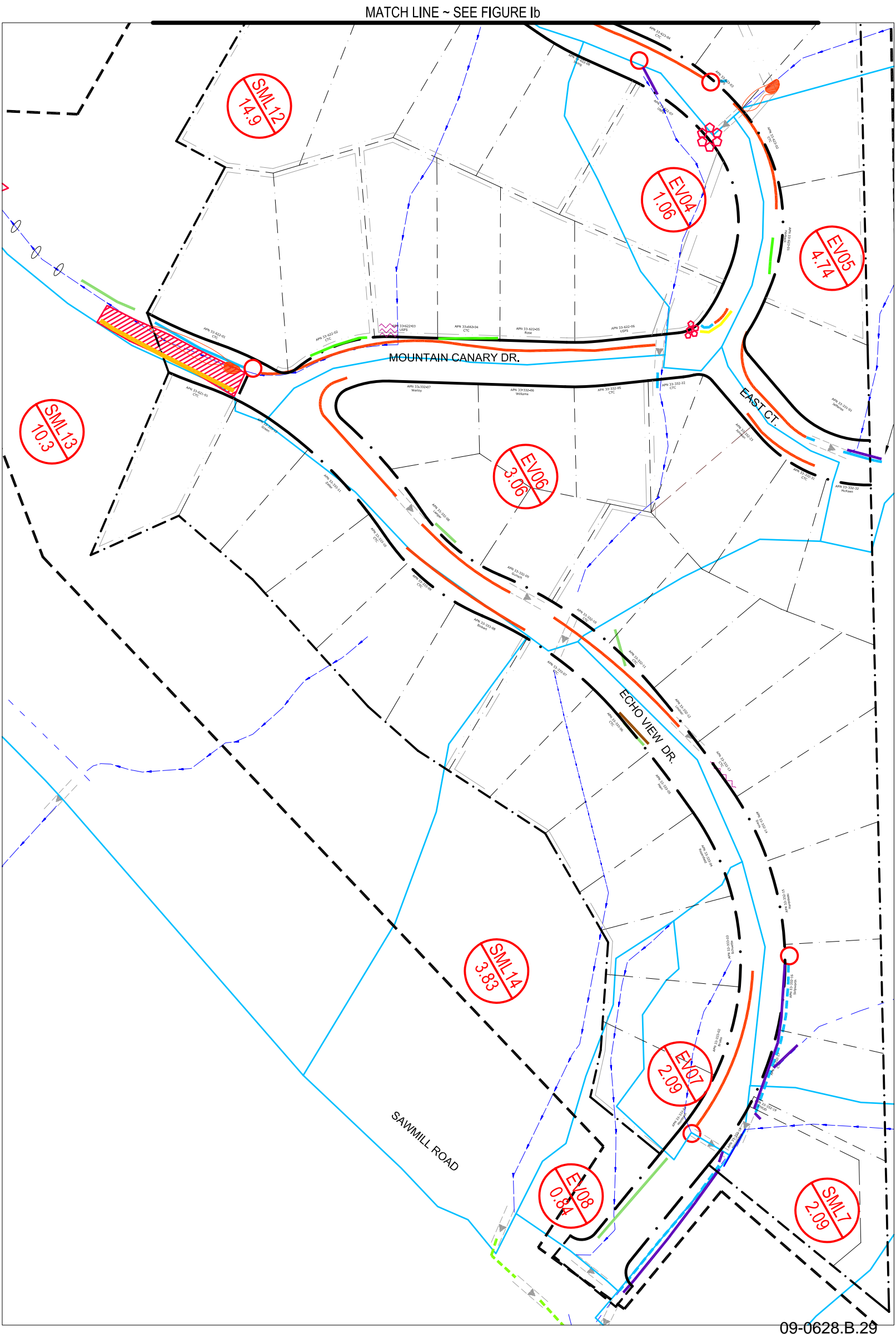
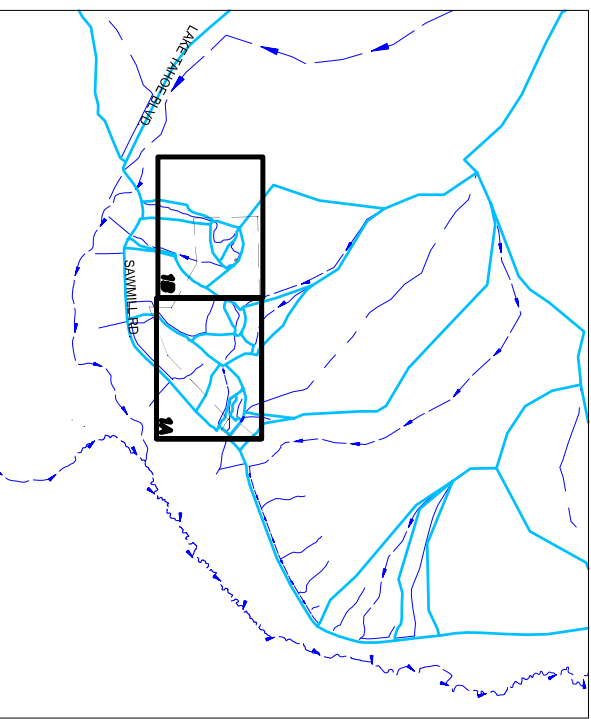
09-0628.B.28



Stantec

LEGEND

| | |
|---|--|
| <p>EXISTING CONDITIONS</p> <ul style="list-style-type: none"> EXISTING ERODING CHANNEL EXISTING ROCK LINED CHANNEL EXISTING SEDIMENT ACCUMULATION EXISTING ERODING SHOULDER SLOPE EXISTING CULVERT & FLOW DIRECTION EXISTING VEGETATED CHANNEL PROJECT BOUNDARY EXISTING AC SWALE EXISTING CONTOUR USFS PARCEL/ CTC PARCEL/ CA STATE PARKS EXISTING SUBDIVISION EXISTING PROPERTY LINE EXISTING DRAINAGE OR PUBLIC UTILITY EASEMENT EXISTING EDGE OF PAVEMENT EXISTING DRAIN INLET EXISTING PIPE DIS/IZE/PEAK Q.25-YEAR EXISTING WATERSHED BOUNDARY EXISTING WATERSHED DRAINAGE FLOWPATH | <p>PROPOSED ALTERNATIVES</p> <ul style="list-style-type: none"> PROPOSED ARMORED CHANNEL PROPOSED REVEGETATION PROPOSED GATE PROPOSED ALT PAVING PROPOSED SEDIMENT TRAP PROPOSED ROCK CHECK PROPOSED DITCH REGRADE PROPOSED CULVERT PROPOSED BASIN PROPOSED FLARED END SECTION PROPOSED CULVERT REMOVAL PROPOSED CULVERT HEADWALL PROPOSED ROCK SLOPE PROTECTION PROPOSED ROCK BOWL PROPOSED AC REMOVAL PROPOSED AC SWALE PROPOSED WATER BARS PROPOSED ROCK CHECK PROPOSED AC PAVING |
|---|--|



ECHOVIEW ESTATES 2
EROSION CONTROL PROJECT
FINAL PREFERRED ALTERNATIVE REPORT
ALTERNATIVE 1

DATE: 1/16/09 PROJECT NO.: 95169 BY: JTC

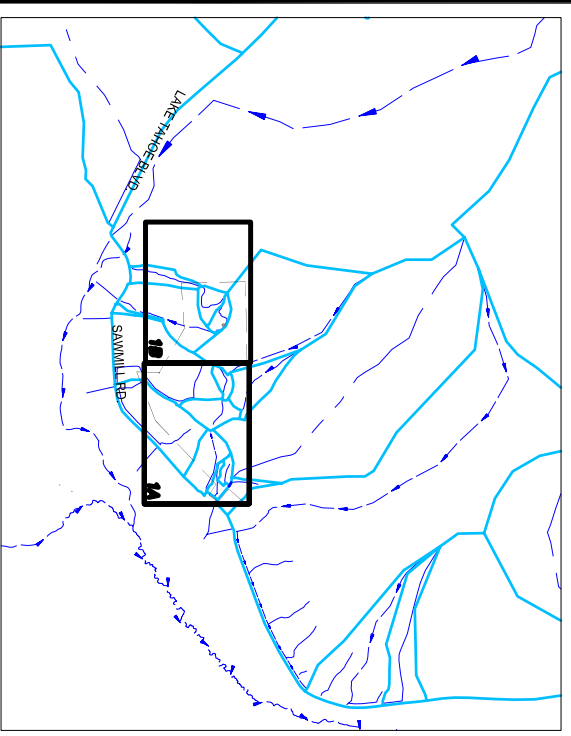
FIGURE
1A

EL DORADO COUNTY
 SOUTH LAKE TAHOE OFFICE

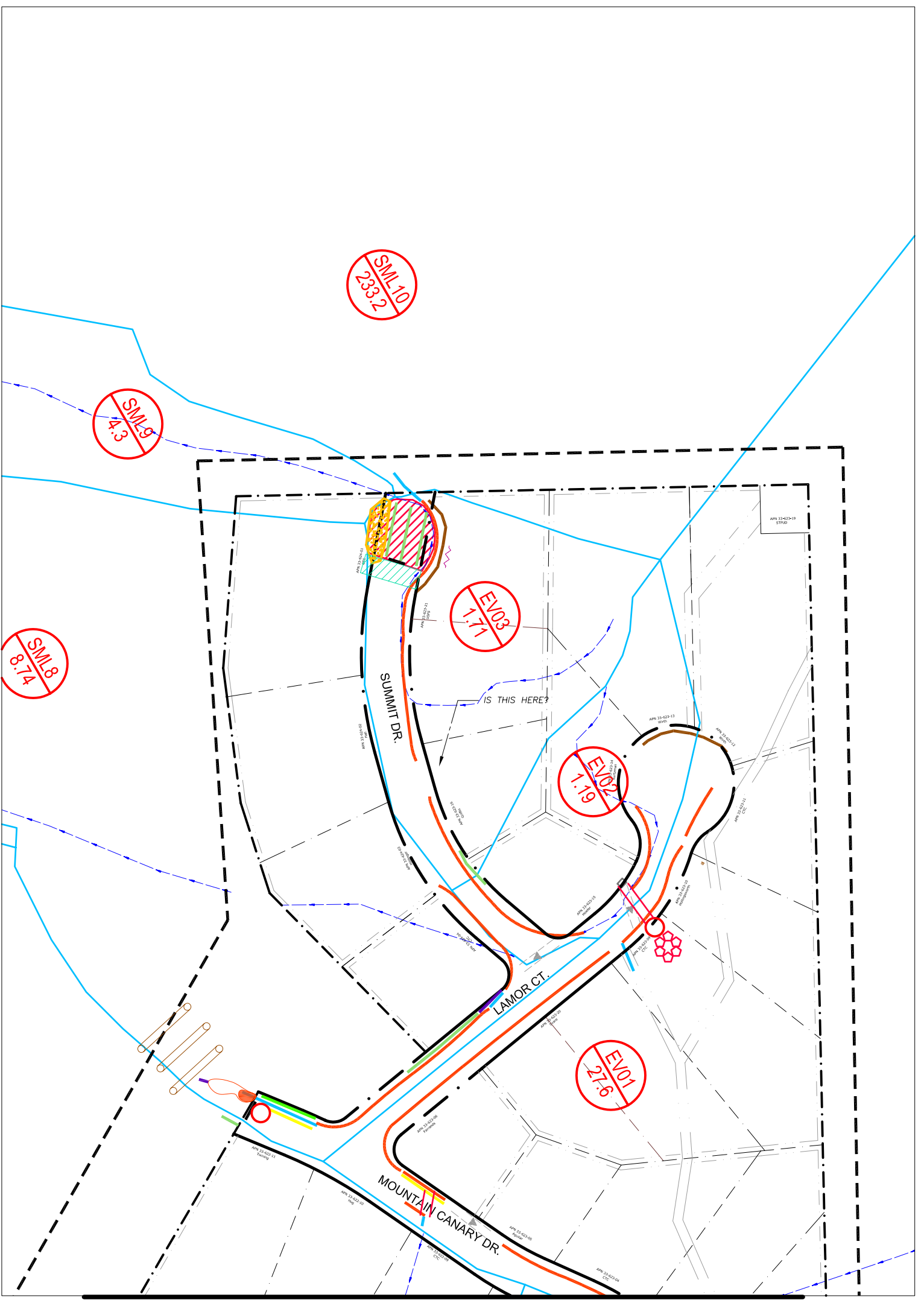
EL DORADO COUNTY
 DEPT. OF TRANSPORTATION

LEGEND

- EXISTING CONDITIONS**
- EXISTING ERODING CHANNEL
 - EXISTING ROCK LINED CHANNEL
 - EXISTING SEDIMENT ACCUMULATION
 - EXISTING ERODING SHOULDER/SLOPE
 - EXISTING CULVERT & FLOW DIRECTION
 - EXISTING VEGETATED CHANNEL
 - PROJECT BOUNDARY
 - EXISTING AC SWALE
 - EXISTING CONTOUR
 - USFS PARCEL/ CTC PARCEL/ CA STATE PARKS
 - EXISTING SUBDIVISION
 - EXISTING DRAINAGE OR PUBLIC UTILITY EASEMENT
 - EXISTING EDGE OF PAVEMENT
 - EXISTING DRAIN INLET
 - EXISTING PIPE ID/SIZE/PEAK Q 25-YEAR
 - EXISTING WATERSHED BOUNDARY
 - EXISTING WATERSHED DRAINAGE FLOWPATH
- PROPOSED ALTERNATIVES**
- PROPOSED ARMORED CHANNEL
 - PROPOSED REVEGETATION
 - PROPOSED GATE
 - PROPOSED ALT PAVING
 - PROPOSED SEDIMENT TRAP
 - PROPOSED ROCK CHECK
 - PROPOSED DITCH REGRADE
 - PROPOSED CULVERT
 - PROPOSED BASIN
 - PROPOSED FLARED END SECTION
 - PROPOSED CULVERT REMOVAL
 - PROPOSED CULVERT HEADWALL
 - PROPOSED ROCK SLOPE PROTECTION
 - PROPOSED ROCK BOWL
 - PROPOSED AC REMOVAL
 - PROPOSED AC SWALE
 - PROPOSED WATER BARS
 - PROPOSED ROCK CHECK
 - PROPOSED AC PAVING



PROJECT WATERSHED INDEX
SCALE: 1" = 1000'



SCALE: 1" = 60'

MATCH LINE ~ SEE FIGURE 1a

EL DORADO COUNTY
SOUTH LAKE TAHOE OFFICE

ECHOVIEW ESTATES 2
EROSION CONTROL PROJECT
FINAL PREFERRED ALTERNATIVE REPORT
ALTERNATIVE 1

DATE: 1/16/09 PROJECT NO.: 95169 BY: JTC

FIGURE
1B

**APPENDIX A:
CEQA CHECKLIST**



TAHOE ENGINEERING
 924b Emerald Bay Road
 South Lake Tahoe, CA 96150
 Phone: (530) 573-7900
 Fax: (530) 541-7049

JAMES WARE, P. E.
 Director of Transportation
 Internet Web Site:
<http://co.el-dorado.ca.us/dot>

MAIN OFFICE
 2850 Fairlane Court
 Placerville CA 95667
 Phone: (530) 621-5900
 Fax: (530) 626-0387



CEQA Checklist

| | |
|---|----------------------------|
| Title: Echo View Estates 2 Erosion Control Project (JN 95169) | |
| Description: Construction of erosion control and water quality improvement measures. | |
| Location: The project area is located in eastern El Dorado County, California within the Lake Tahoe Basin. The site is located in South Lake Tahoe just west of Highway 50, off of Sawmill Road. The project area encompasses the entire Echo View subdivision north of Sawmill Road. The project encompasses Echo View Drive, Mountain Canary Drive, East Court, Lamor Court, and Summit Drive. | |
| Owner/Applicant: El Dorado County Department of Transportation – Tahoe Engineering Division | |
| Lead Agency: El Dorado County Department of Transportation – Tahoe Engineering Division | |
| County Contact: Brendan Ferry, Senior Planner | Phone: 530-573-7900 |
| Address: 924 B Emerald Bay Road, South Lake Tahoe, CA 96150 | |

The CEQA Checklist recommended by the State of California Environmental Quality Act (CEQA) Guidelines is used to determine potential impacts of the proposed project on the physical environment. The checklist provides a list of questions concerning a comprehensive array of environmental issue areas potentially affected by the project. An evaluation of impacts for each resource follows:

- a) A brief explanation is required for all answers except No Impact answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A No Impact answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A No Impact answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- b) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- c) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. A potentially significant impact is appropriate if there is substantial evidence that an effect may be significant. If there are one or more potentially significant impact entries when the determination is made, an EIR is required.
- d) Negative Declaration: Less than significant with mitigation incorporated applies where the incorporation of mitigation measures has reduced an effect from a potentially significant impact to a less than significant impact. The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, Earlier Analyses, may be cross-referenced).
- e) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or Negative Declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:
 - i. **Earlier Analysis Used.** Identify and state where they are available for review.

-
- ii. **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - iii. **Mitigation Measures.** For effects that are less than significant with mitigation measures incorporated, describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- f) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
 - g) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
 - h) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
 - i) The explanation of each issue should identify:
 - i. The significance criteria or threshold, if any, used to evaluate each question.
 - ii. The mitigation measure identified, if any, to reduce the impact to less than significant.

I. AESTHETICS – Would the project:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| a) Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Item I-C Discussion: The proposed Project will restore degraded channels and bare soil areas within the County right of way and specified parcels. These erosion control and water quality improvement measures will increase the visual character and quality of the site. While construction activities may affect the scenic resources during construction, it will be temporary. The proposed Project will not substantially degrade the existing visual character or quality of the site or its surroundings; therefore, the Project will have a less than significant impact.

II. AGRICULTURAL RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Category II Discussion: The Project area does not contain any lands used for agriculture nor do the plan area statements that encompass the Project area allow for agriculture. Therefore, the proposed Project will have no impact on agriculture.

III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Item III-B Discussion: The proposed Project will involve excavation and earth moving. The El Dorado County Air Quality Management District (EDCAQMD) Rule 223 Fugitive Dust General Requirements states that “visible emissions shall not exceed 20% opacity at point-of-origin and shall not extend more than 50 feet from point-of-origin, or cross the Project boundary line, whichever is less.” The contractor will comply with the Air Quality Plan and EDCAQMD regulations by implementing the Best Management Practices (BMPs) related to air quality from the TRPA Handbook of Best Management Practices and practices as outlined in the EDCAQMD Rule 223 to address fugitive dust.

Compliance with the TRPA Air Quality Plan will lead to the attainment of the TRPA threshold standards and, therefore, federal and state air quality standards. The contractor will comply with the TRPA Air Quality Plan by implementing dust control BMPs from the TRPA Handbook of Best Management Practices.

The Project will have no long term impacts to air quality. Compliance with EDCAQMD and TRPA regulations through the permitting process will ensure that the Project will not conflict with or obstruct implementation of the air quality plans, will not violate any air quality standard or contribute substantially to an existing or projected air quality violation, and will not result in a cumulatively considerable net increase of any criteria for which the Project region is in non-attainment. With the implementation of the mitigation measures outlined below in *Item III-B Mitigation Measures*, the proposed Project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation; therefore, the Project will have a less than significant impact.

Item III-B Mitigation Measures:

Mitigation Measure AQ-1: The construction contractor shall implement Best Management Practices as they relate to air quality from the TRPA Code of Ordinances and Handbook of Best Management Practices.

Mitigation Measures AQ-2: The construction contractor shall water exposed soil twice daily, or as needed, to control wind borne dust. All haul/dump truckloads shall be covered securely.

Mitigation Measure AQ-3: The contractor shall sweep the Project site a minimum of once daily to remove all dirt and mud which has been generated from or deposited on roadways by construction equipment going to and from the construction site.

Mitigation Measure AQ-4: On-site vehicle speed shall be limited to 15 miles per hour on unpaved surfaces.

Mitigation Measure AQ-5: Construction activities shall comply with EDCAQMD Rule 223-Fugitive Dust, so that emissions do not exceed hourly levels. The contractor will use approved BMP practices as outlined in the TRPA Handbook of Best Management Practices and the EDCAQMD Rule 223 to address fugitive dust. Dust mitigation measures and dust control BMPs will include, but are not limited to, stabilization of unpaved areas subject to vehicular traffic, stabilization of storage piles and disturbed areas, dust suppression through watering of areas to be disturbed, cleaning of all construction vehicles leaving the site, mulching of bare soil areas, and suspension of grading and earth moving activities when wind speeds are high enough to result in dust emissions crossing the Project boundary.

Mitigation Measure AQ-6: Construction equipment idling shall be restricted to 5 minutes when not in use.

Mitigation Measure AQ-7: The construction contractor shall post a publicly visible sign on the Project site during construction operations that specify the telephone number and person/agency to contact for complaints and/or inquiries on dust generation and other air quality problems resulting from Project construction.

Item III-C Discussion: Construction activities may impact air quality, but the impacts are expected to be well below established significance levels since the activity is temporary and there will not be any long-term impacts. The proposed Project will not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment; therefore, the Project will have a less than significant impact.

Item III-D Discussion: Construction activities may impact air quality, but the impacts are expected to be well below established significance levels since the activity is temporary and there will not be any long-term impacts. The proposed Project will not expose sensitive receptors to substantial pollutant concentrations; therefore, the project will have a less than significant impact.

Item III-E Discussion: Construction activities may impact air quality, but the impacts are expected to be well below established significance levels since the activity is temporary and there will not be any long-term impacts. The proposed Project will not create objectionable odors affecting a substantial number of people; therefore, the Project will have a less than significant impact.

IV. BIOLOGICAL RESOURCES – Would the project:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | | | | |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Item IV-A Discussion: A *Wildlife Biological Assessment and Biological Evaluation (BABE)* was performed for the proposed Project. This study did not locate or identify any special status wildlife species in or near the proposed Project. This determination was based on a data review and a survey of the Project area. The primary purpose of the field survey was to identify and determine the occurrence of, or the suitability of, habitat for special status wildlife species within the Project site.

A *Botanical Biological Assessment and Biological Evaluation (BABE)* was performed for the proposed Project. This determination was based on a data review and a survey of the Project area. The primary purpose of the field survey was to identify and determine the occurrence of or the suitability of habitat for special status botanical species within the Project site. No special status plant species were found in the Project area during field surveys. Modeled habitat for 14 sensitive species exists within the Project area, however none of those species were found.

A *Noxious Weed Risk Assessment (NWRA)* was performed for the proposed Project. This study identified four (4) noxious weed species located within the proposed Project area. This determination was based on a survey of the Project area. The primary purpose of the field survey was to identify and determine the occurrence of noxious weed species within the Project site. The findings are summarized below.

- Bull thistle (*Cirsium vulgare*). Bull thistle was found at two (2) locations throughout the project area. The area totaled roughly five (5) square feet. These locations are documented in the NWRA.
- Oxeye daisy (*Leucanthemum vulgare*). Oxeye daisy was found at three (3) locations in the project area. The area totaled roughly 120 square feet. This location is documented in the NWRA.
- Woolly mullein (*Verbascum thapsus*). Woolly mullein was found at five (5) locations in the project area. The area totaled roughly 45 square feet. These locations are documented in the NWRA.
- Cheat grass (*Bromus Tectorum*). Cheat grass was found at fourteen (14) locations in the project area. The area totaled roughly 2,800 square feet. These locations are documented in the NWRA.

With the implementation of the mitigation measures outlined below in *Item IV-A Mitigation Measures*, the proposed Project will not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish & Game (CDFG) or U.S. Fish & Wildlife Service (USFWS); therefore, the project will have a less than significant impact.

Item IV-A Mitigation Measures:

Mitigation Measure B-1: Prior to construction, the County will confirm if any new special status species have been identified by the USFS or the CDFG (via the California Natural Diversity Database - *CNDDDB*) within, or immediately adjacent to, the Project area. If new activity or occurrences have been identified, appropriate limited operating periods (LOP) will be observed.

Mitigation Measure B-2: If special status plant species are found prior to or during construction, these populations will be identified and protected with appropriate measures per TRPA and the USFS.

Mitigation Measure B-3: The County will adopt and implement a Noxious Weed Mitigation Plan (Plan) to decrease habitat vulnerability to or below pre-construction levels. The Plan includes pre-construction elements such as treatment of existing noxious weed populations identified in the Project area, as well as during and post-construction elements. Recommended BMPs will include, but are not limited to, the hand removal of existing weeds prior to going to seed, cleaning equipment prior to use, minimizing the areas of disturbance, covering the disturbed ground as quickly as possible with mulch or other means, utilizing certified weed-free mulch and other materials, and revegetating disturbed areas with native plants as soon as construction is completed.

Item IV-C Discussion: A Land Capability Verification, which delineated 1B (SEZ) lands within the Project area, was completed by the TRPA. Additionally, fieldwork has been completed to delineate Waters of the U.S., including wetlands. The data will be analyzed to determine if jurisdictional waters, including wetlands, exist within the Project area. A delineation report will be prepared and submitted as part of the Section 404 permit application to the U.S. Army Corps of Engineers (USACE) to make a formal determination. With the implementation of the mitigation measures outlined below in *Item IV-C Mitigation Measures*, the proposed Project will not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act; therefore, the project will have a less than significant impact.

Item IV-C Mitigation Measures:

Mitigation Measure B-4: The amount of construction disturbance will be minimized by restricting the Contractor's equipment access through the use of construction limit fencing. All disturbed areas will be stabilized and revegetated with compost, native seed and mulch. All revegetated areas will be irrigated for a minimum of two years following construction.

Mitigation Measure B-5: Upon completion of the wetland delineation, Project design will be modified, as needed, to avoid or minimize impacts to wetlands and/or other WOUS. The County will determine if it needs to obtain a 404 Permit and/or 401 Water Quality Certification and will implement the required mitigation measures. The County will obtain a TRPA EIP Project Permit and will implement the required mitigation measures related to the disturbance of SEZs (if applicable).

Where it is not possible to avoid impacts, the County will mitigate impacts through the enhancement of hydrology, soils, vegetation, and/or ecological function at a minimum of 1:1.5 for disturbed features. Mitigation measures will include, but are not limited to, the use of hand or low impact equipment and the implementation of temporary BMPs such as filter fencing, coir logs, gravel bags, and tree protection and construction limit fencing to minimize disturbance. Although groundwater is not expected to be encountered during construction, if groundwater is encountered and the excavated area requires dewatering to complete the work, TRPA shall be notified immediately. The SWPPP will include a Dewatering Contingency Plan (Item VI-B Mitigation Measures).

Mitigation Measure B-6: Should any construction work be required in or adjacent to wetlands, it shall be conducted from existing pavement and/or confined to the smallest area possible to complete the work by restricting the contractor's access with equipment through the use of construction limit fencing. Post construction mitigation measures may include restoration, revegetation, enhancement of SEZ vegetation, removal of fill material, and removal of noxious weeds.

Mitigation Measure B-7: All excavated material not required to complete the work shall be removed from the wetland areas and contained by appropriate BMP measures.

V. CULTURAL RESOURCES – Would the project:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Directly or indirectly destroy a unique Paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Category V Discussion: A cultural resources study, which included an archaeological survey/inventory of the Project survey area, was completed. Intensive inventory of proposed improvement locations associated with Echo View Estates 2 ECP did not result in the identification of prehistoric or historic resources. Proposed drainage improvements would be located along the road margin in previously disturbed areas, or in selected parcels. Archival research indicated that no prehistoric or historic period archaeological resources have been recorded previously within the Echo View Estates 2 ECP area of potential effect. Archaeological inventory efforts conducted as part of previous studies did not identify prehistoric or historic period archaeological resources within the Echo View Estates 2 ECP area. Finally, archaeological inventory efforts conducted as part of the present study did not identify prehistoric or historic period archaeological resources within the Echo View Estates 2 ECP area.

Given that significant heritage resources are not present in the road rights of way or parcels identified by El Dorado County as part of the proposed Project area, the Project will have no effect on properties listed on or eligible for listing on the National Register of Historic Places, or the California Register of Historic Places. Similarly, the proposed Project would have no potential to impact properties eligible as a historic resource as that term is defined in Chapter 29 of the Tahoe Regional Planning Agency's Code of Ordinances.

Should human remains be disturbed inadvertently while engaged in construction activities, El Dorado County must cease work in the immediate area, and must immediately report the finding to the California State Historic Preservation Office, the El Dorado County Coroner, and other designated officials. Every reasonable effort was made to identify cultural resources in the study area. If, however, prehistoric or historic period resources are subsequently discovered that could be adversely affected by project-related activities, all such activities should cease and El Dorado County and the California State Historic Preservation Office (SHPO) should be informed immediately. The SHPO will contact the appropriate tribal representatives and consult on disposition of the remains and any associated artifacts.

VI. GEOLOGY & SOILS – Would the project:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i. Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ii. Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iii. Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Item VI-B Discussion: The proposed Project is an erosion control and water quality improvement project that will assist in stabilizing bare soils and improving water quality in the surrounding area. During construction, portions of the site will have exposed soil areas that may, during a rain storm, high wind event or utility line breach, cause minor erosion. Once the construction of the Project is completed, there will be an overall decrease of erosion in the Project area. With the implementation of the mitigation measures outlined below in *Item VI-B Mitigation Measures*, the proposed Project will not result in any significant increase in wind or water erosion of soils, either on or off the site; therefore, the Project will have a less than significant impact.

Item VI-B Mitigation Measures:

Mitigation Measure G-1: The contractor will be required to prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) to the County, Lahontan Regional Water Quality Control Board (Lahontan), and TRPA prior to construction. The SWPPP will be in accordance with the TRPA and Lahontan requirements for storm water pollution prevention. As part of the SWPPP, the contractor will be required to prepare a Temporary BMP Plan, Spill Contingency Plan, and Dewatering Contingency Plan.

The Temporary BMP Plan will include design and specifications that detail the required construction BMPs that shall be installed prior to and during construction to prevent any erosion that may occur during a rain or wind event. Temporary BMPs will include, but are not limited to, gravel bags, silt fencing, tree protection fencing, construction limit fencing, coir logs, and gravel construction access. Prior to construction, all storage, access, and staging areas are to be secured by the contractor and approved by the County and TRPA. No staging or storage will occur in Stream Environment Zones (SEZs). The contractor shall be responsible for maintenance of

mobilization sites, including placement and maintenance of BMPs. All equipment, vehicles, and materials shall be stored on paved or disturbed surfaces only, in locations approved by EDOT and TRPA. The contractor shall limit the areas to be disturbed to the minimum size required to construct proposed improvements. All disturbed areas shall have temporary BMPs in place before and during construction and the disturbed areas will be restored to a better than pre-construction condition. The contractor shall meet the permit requirements for BMPs, staging areas, revegetation, grading season restrictions, and all other agency approval conditions. Construction will take place within the Lake Tahoe construction season (between May 1st and October 15th).

The Spill Contingency Plan will state the plan for dealing with accidental spills and must include the requirement for spill prevention kits to be available on site to contain any accidental spills. The Spill Contingency Plan will minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction activities. The Spill Prevention Kit will contain, but is not limited to, sorbent pads, plastic bags, containment devices, drain seals, and drip pans. This plan will also outline who to call if utility lines are damaged during construction.

The Dewatering Contingency Plan will outline the steps that will be required if groundwater is intercepted. Although groundwater is not expected to be encountered during construction, if groundwater is encountered and the excavated area requires dewatering to complete the work, TRPA shall be notified immediately and a Dewatering Plan will be prepared and submitted for approval by the County and TRPA prior to its implementation. Based on the results of the Soils/Hydrology Analysis, TRPA may require that a full Dewatering Plan be prepared and submitted as part of the SWPPP prior to permit acknowledgement.

Mitigation Measure G-2: The contractor will be required to attend the TRPA pre-grade inspection meeting onsite to ensure that proper BMPs are in place per the SWPPP before work commences.

Mitigation Measure G-3: EDOT will conduct daily inspections of BMP measures to ensure they are properly placed and maintained for maximum benefit. As part of this process, EDOT and/or the contractor will complete formal inspection forms for submittal to regulatory agencies to demonstrate deficiencies and that corrective action has been taken.

VII. HAZARDS & HAZARDOUS MATERIALS – Would the project:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Item VII-A Discussion: During Project construction, there exists a risk of accidental fuel spills from construction equipment. With the implementation of the mitigation measures outlined in *Item VI-B Mitigation Measures*, the proposed Project will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; therefore, the project will have a less than significant impact.

Item VII-B Discussion: During project construction, there exists a risk of accidental fuel spills from construction equipment. With the implementation of the mitigation measures outlined below in *Item VI-B Mitigation Measures*, the proposed Project will not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; therefore, the Project will have a less than significant impact.

VIII. HYDROLOGY & WATER QUALITY – Would the project:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| a) Violate any water quality standards or waste discharge requirements? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

| | | | | |
|--|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| systems or provide substantial additional sources of polluted runoff? | | | | |
| f) Otherwise substantially degrade water quality? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Item VIII-A Discussion: During construction, grading and excavation will take place that may have the potential to cause erosion. During project construction, there exists a risk of accidental fuel spills from construction equipment. Once construction is complete and the erosion control and water quality improvement measures are in place, water quality in the area will be improved. With the implementation of the mitigation measures outlined below in *Item VI-B Mitigation Measures*, the proposed Project will not violate any water quality standards; therefore, the proposed Project will have a less than significant impact.

Item VIII-C Discussion: One of the goals of the Project is to reduce peak flows and volumes while providing treatment for the pollutants of primary concern. The Project may slightly alter existing drainage patterns in order to improve hydraulic connectivity of the site and move storm water to where it can be infiltrated. As a result, flow rates and volumes at the project outflow locations will likely be decreased due to the infiltration components of this project. The proposed Project will not substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation on- or off-site; therefore, the proposed Project will have a less than significant impact.

Item VIII-D Discussion: One of the goals of the Project is to reduce peak flows and volumes while providing treatment for the pollutants of primary concern. The Project may slightly alter existing drainage patterns in order to improve hydraulic connectivity of the site and move storm water to where it can be infiltrated. As a result, flow rates and volumes at the Project outflow locations will likely be decreased due to the infiltration components of this project. The proposed Project will not substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation on- or off-site; therefore, the proposed Project will have a less than significant impact.

Item VIII-E Discussion: During construction of the Project, grading and excavation will take place that may have a potential to cause increased surface runoff. Once construction is complete and the erosion control and water quality improvement measures are in place, surface flows and volumes will likely be reduced from their existing condition and an improved stormwater system will be in place. With the implementation of the mitigation measures outlined below in *Item VI-B Mitigation Measures*, the proposed Project will not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; therefore, the Project will have a less than significant impact.

Item VIII-F Discussion: During construction of the Project, grading and excavation will take place that may have a potential to cause increased surface runoff and minor erosion. Once construction is complete and the erosion control and water quality improvement measures are in place, surface runoff and erosion will be reduced and water quality will be improved. With the implementation of the mitigation measures outlined below in *Item VI-B Mitigation Measures*, the proposed Project will not otherwise substantially degrade water quality; therefore, the Project will have a less than significant impact.

IX. LAND USE & PLANNING – Would the project:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Category IX Discussion: The proposed Project will not physically divide an established community; conflict with any applicable land use plan, policy, or regulation; or conflict with any applicable habitat conservation plan or natural community conservation plan. The Project area is located in an unincorporated area of El Dorado County within the Tahoe Basin. Land use policies for the Project area are discussed in the El Dorado County General Plan and the TRPA Plan Area Statements (PAS). The Project lies within portions of the Twin Peaks Peak PAS-118, Country Club Meadow, PAS-119 and Echo View, PAS-134. PAS-118 has a land use classification of “Conservation” and is managed by the USFS-LTBMU for low level recreation. PAS-119 has a land use classification of “Recreation” and is managed by CA State Parks. PAS-134 has a land use classification of “Residential”, with a maximum density of one single family dwelling per parcel. The proposed Project will be consistent with such allowed uses; therefore, the proposed Project will have no impact on land use or planning.

X. MINERAL RESOURCES – Would the project result in:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Category X Discussion: There are no known mineral resources that would be of value to the region or the state in the project area. Therefore, the proposed Project will have no impact on mineral resources.

XI. NOISE – Would the project result in:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Item XI-A Discussion: Standard construction equipment is anticipated to be used to construct the proposed improvements. The equipment will increase noise levels over that of regular levels in the neighborhood, but the noise levels will be within acceptable noise decibel standards imposed by El Dorado County and the TRPA. The TRPA Code of Ordinances (Chapter 23.8) states that TRPA-approved construction projects are exempt from the quantitative limits contained in the Noise Ordinance and Community Plan if construction activities take place between the hours of 8:00 a.m. and 6:30 p.m. With the implementation of the mitigation measures outlined below in *Item XI-A Mitigation Measures*, the proposed Project may result in a temporary or periodic exposure to or generation of noise levels in excess of standards established in the local General Plan, Community Plan, or Noise Ordinance, but it will be temporary and is allowable under local ordinances. Therefore, the Project will have a less than significant impact.

Item XI-A Mitigation Measures:

Mitigation Measure N-1: In order to mitigate the impacts of increased ambient noise levels, construction noise emanating from all construction activities shall only occur between the hours of 8:00 a.m. and 6:30 p.m. per TRPA Code, unless other hours are approved by TRPA.

Mitigation Measure N-2: All construction equipment and vehicles used for Project construction will be fitted with the factory installed muffling devices and will be maintained in good working order. EDOT will advise potentially affected residents of the proposed construction activities including duration, schedule of activities, and contacts for filing noise complaints. EDOT staff and/or contractor will attempt to respond to all noise complaints received within one working day and resolve the issue as soon as possible.

Item XI-B Discussion: Standard construction equipment is anticipated to be used to construct the proposed improvements. The equipment will create groundborne vibrations and noise levels over that of regular levels in the neighborhood, but the groundborne vibrations and noise levels will be within acceptable noise decibel standards imposed by El Dorado County and the TRPA. The proposed Project will not result in exposure of persons to or generation of groundborne vibration or noise levels in excess of standards established in the local

General Plan, Community Plan, or Noise Ordinance, or applicable standards of other agencies; therefore, the Project will have a less than significant impact.

Item XI-D Discussion: Refer to the information stated in the *Item XI-A Discussion*. With the implementation of the mitigation measures outlined in *Item XI-A Mitigation Measures*, the proposed Project may result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project, but it will be temporary and is allowable under local ordinances. Therefore, the Project will have a less than significant impact.

XII. POPULATION & HOUSING – Would the project:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Category XII Discussion: The proposed Project will not directly or indirectly induce or displace existing or future housing. Therefore, the proposed Project will have no impact on population and housing.

XIII. PUBLIC SERVICES – Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental services and/or facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services, including:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|-----------------------------|--------------------------------|--|------------------------------|-------------------------------------|
| a) Fire protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Category XIII Discussion: The proposed Project will have no impact on fire protection, police protection, schools, parks, or other public facilities. The Project will positively improve existing storm water facilities in the Project area. Improvements are designed and located to ensure that regular access and maintenance can take place. The proposed Project will not result in substantial adverse physical impacts associated with the new or altered facilities; therefore, the Project will have no impact on public services.

XIV. RECREATION – Would the project:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Category XIV Discussion: The proposed Project will not increase the use of existing parks or other recreational facilities nor require the expansion of such facilities. Therefore, the proposed Project will have no impact on recreation.

XV. TRANSPORTATION & TRAFFIC – Would the project result in:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f) Result in inadequate parking capacity? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Item XV-A Discussion: At some locations, temporary lane closures may be necessary to facilitate construction; however, at no time would access for local residents, school buses, or emergency vehicles be prohibited. Increased vehicle trips are only expected during construction as a result of construction vehicles mobilizing to and from the project site. Traffic controls will only be implemented during work hours and when it is necessary to

perform work. With the implementation of the mitigation measures outlined below in *Item XV-A Mitigation Measures*, the proposed Project will not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system; therefore, the Project will have a less than significant impact.

Item XV-A Mitigation Measures:

Mitigation Measure T-1: The contractor will be required to prepare a Traffic Control Plan for TRPA and El Dorado County for review and approval. Elements of the plan will include appropriate use of signage, flaggers, traffic calming, and alternative routes to accommodate local and through traffic. In addition, EDOT will advise local residents regarding schedules for construction traffic detours through press releases and distribution of flyers in area neighborhoods well in advance of construction initiation. Access will not be prohibited, at any time, for local residents, school buses or emergency vehicles.

Item XV-E Discussion: At some locations, temporary lane closures may be necessary to facilitate construction; however, at no time would access for local residents, school buses, or emergency vehicles be prohibited. With the implementation of the mitigation measures outlined below in *Item XV-A Mitigation Measures*, the proposed Project will not result in inadequate emergency access; therefore, the Project will have a less than significant impact.

XVI. UTILITIES & SERVICE SYSTEMS – Would the project:

| Environmental Issue | Potentially Significant Impact | Less Than Significant with Mitigation Measures | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Item XVI-C Discussion: The overall goal of the Project is to design and implement erosion control and water quality improvement measures that will reduce the discharge of sediment and pollutants to Lake Tahoe from County rights of way located in Echo View Estates. The proposed Project will install new drainage and treatment facilities to supplement and improve the existing storm water infrastructure. This Project is identified in the Lake Tahoe Environmental Improvement Program and is intended to improve the environment by addressing storm

water deficiencies, erosion, and water quality problems. The proposed Project will require or result in the construction of new storm water drainage facilities or expansion of existing facilities, but the construction will not cause significant environmental effects; therefore, the Project will have a less than significant impact.

MANDATORY FINDINGS OF SIGNIFICANCE

| Environmental Issue | Yes | No |
|--|--------------------------|-------------------------------------|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? (Cumulatively considerable means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

OTHER RESPONSIBLE AND TRUSTEE AGENCIES (whose approval is required)

| | |
|---|--|
| <input type="checkbox"/> California Department of Fish and Game | <input type="checkbox"/> Local Agency Formation Commission (LAFCO) |
| <input type="checkbox"/> California Department of Forestry | <input type="checkbox"/> National Marine Fisheries Service |
| <input type="checkbox"/> California Department of Health Services | <input checked="" type="checkbox"/> Tahoe Regional Planning Agency |
| <input type="checkbox"/> California Department of Toxic Substances | <input checked="" type="checkbox"/> U.S. Army Corps of Engineers |
| <input type="checkbox"/> California Department of Transportation (Caltrans) | <input type="checkbox"/> U.S. Fish and Wildlife Service |
| <input type="checkbox"/> California Integrated Waste Management Board | <input checked="" type="checkbox"/> USFS - LTBMU |
| <input checked="" type="checkbox"/> California Regional Water Quality Control Board | <input checked="" type="checkbox"/> California Tahoe Conservancy |

LIST OF PREPARERS**Principal Authors**

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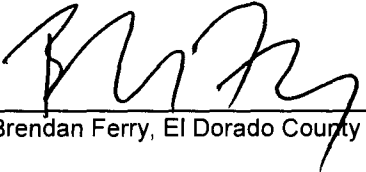
Jason Drew, Scientist, Nichols Consulting Engineers, Chtd.

Charles Zeier, Registered Professional Archaeologist, Zeier & Associates, LLC

DETERMINATION – The Environmental Review Committee finds that (choose one):

| | |
|-------------------------------------|---|
| <input type="checkbox"/> | I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. |
| <input checked="" type="checkbox"/> | I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. |
| <input type="checkbox"/> | I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. |
| <input type="checkbox"/> | I find that the proposed project MAY have a potentially significant impact or potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. |
| <input type="checkbox"/> | I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required . |

Signature



Brendan Ferry, El Dorado County

Date

7/29/09

APPENDIX B:
MITIGATION MONITORING AND REPORTING PROGRAM



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MITIGATION MONITORING AND REPORTING PROGRAM

PROJECT NAME: ECHO VIEW ESTATES 2 EROSION CONTROL PROJECT

MITIGATED NEGATIVE DECLARATION #: 2009052052

REGULATORY BACKGROUND

This Mitigation Monitoring and Reporting Plan (MMRP) was prepared to comply with Section 21081.6 of the Public Resources Code, which requires the following:

“The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation.”

This MMRP is intended to ensure the effective implementation of mitigation measures that are within the authority of El Dorado County to implement (including monitoring where identified) throughout all phases of the development and operation of the Echo View Estates 2 Erosion Control Project (proposed project). Monitoring of such mitigation measures may extend through project permitting, construction, and project operations, as necessary.

The required monitoring and reporting shall be accomplished through the County’s Standard Mitigation Monitoring Program and/or the Project Specific Mitigation Monitoring and Reporting Program as defined in the El Dorado County Code.

PROGRAM IMPLEMENTATION

The MMRP Checklist (Table C-1) lists all mitigation measures identified in the *CEQA Checklist* for the proposed project. In general, monitoring becomes effective at the time the action is taken on the project. Timing of monitoring is organized as follows:

- Prior to Construction: The monitoring activity consists of ensuring that a particular mitigation action has taken place prior to the beginning of any construction or grading activities.
- During Construction: The monitoring activity consists of active monitoring while grading or construction is occurring on the project site.
- Prior to Operation: The monitoring activity consists of active monitoring after initial site grading and facility construction has occurred, but prior to the initiation of project operations.
- Ongoing: The monitoring activity consists of monitoring after the grading and construction phase of the project has been completed, and relates to ongoing operation of the project.

The mitigation measures listed in Table C-1 are numbered as they are described in the *CEQA Checklist*. El Dorado County staff will be responsible for implementing and/or ensuring that the mitigation measures listed in the MMRP are undertaken for this project, to the extent such mitigation measures apply to the project within El Dorado County. Implementation includes ensuring that any required actions are included in bid documents and contracts as part of the design/build process for the project, and ensuring that the contractor(s) include specified mitigation activities in plans and specifications for construction. El Dorado County staff responsibility includes designation of certain mitigation measure responsibility to, and continued oversight of, the contractor(s) and consultant(s).

APPENDIX C:
TABLES

TABLE C-1. MITIGATION MONITORING AND REPORTING PROGRAM FOR THE ECHO VIEW ESTATES 2 ECP

| MITIGATION MEASURE | IMPLEMENTING RESPONSIBILITY ^{1,3} | MONITORING RESPONSIBILITY ^{2,3} | TIMING AND FREQUENCY | VERIFICATION OF COMPLIANCE (INITIALS/DATE) |
|--|--|--|--|--|
| AESTHETICS | | | | |
| <i>No mitigation measures required.</i> | | | | |
| AGRICULTURAL RESOURCES | | | | |
| <i>No mitigation measures required.</i> | | | | |
| AIR QUALITY- Item III-B Mitigation Measures: | | | | |
| Mitigation Measure AQ-1: The construction contractor shall implement Best Management Practices as they related to air quality from the TRPA Code of Ordinances and Handbook of Best Management Practices. | DOT or its Contractor | DOT | Prior to and During Construction | |
| Mitigation Measures AQ-2: The construction contractor shall water exposed soil twice daily, or as needed, to control wind borne dust. All haul/dump truckloads shall be covered securely. | DOT or its Contractor | DOT | Prior to and During Construction | |
| Mitigation Measure AQ-3: The contractor shall sweep the project site a minimum of once daily to remove all dirt and mud which has been generated from or deposited on roadways by construction equipment going to and from the construction site. | DOT or its Contractor | DOT | Prior to and During Construction | |
| Mitigation Measure AQ-4: On-site vehicle speed shall be limited to 15 miles per hour on unpaved surfaces. | DOT or its Contractor | DOT | Prior to and During Construction | |

| MITIGATION MEASURE | IMPLEMENTING RESPONSIBILITY ^{1,3} | MONITORING RESPONSIBILITY ^{2,3} | TIMING AND FREQUENCY | VERIFICATION OF COMPLIANCE (INITIALS/DATE) |
|--|--|--|----------------------------------|--|
| <p>Mitigation Measure AQ-5: Construction activities shall comply with EDCAQMD Rule 223-Fugitive Dust, so that emissions do not exceed hourly levels. The contractor will use approved BMP practices as outlined in the TRPA Handbook of Best Management Practices and the EDCAQMD Rule 223 to address fugitive dust. Dust mitigation measures and dust control BMPs will include, but are not limited to, stabilization of unpaved areas subject to vehicular traffic, stabilization of storage piles and disturbed areas, dust suppression through watering of areas to be disturbed, cleaning of all construction vehicles leaving the site, mulching of bare soil areas, and suspension of grading and earth moving activities when wind speeds are high enough to result in dust emissions crossing the Project boundary.</p> | DOT or its Contractor | DOT | Prior to and During Construction | |
| <p>Mitigation Measure AQ-6: Construction equipment idling shall be restricted to 5 minutes when not in use.</p> | DOT or its Contractor | DOT | Prior to and During Construction | |
| <p>Mitigation Measure AQ-7: The construction contractor shall post a publicly visible sign on the Project site during construction operations that specify the telephone number and person/agency to contact for complaints and/or inquiries on dust generation and other air quality problems resulting from Project construction.</p> | DOT or its Contractor | DOT | Prior to and During Construction | |
| BIOLOGICAL RESOURCES- Item IV-A Mitigation Measure | | | | |
| <p>Mitigation Measure B-1: Prior to construction, the County will confirm if any new special status species have been identified by the USFS or the CDFG (via the California Natural Diversity Database - <i>CNDDB</i>) within, or immediately adjacent to, the project area. If new activity or occurrences have been identified, appropriate limited operating periods (LOP) will be observed.</p> | DOT or its Consultant | DOT | Prior to Construction | |
| <p>Mitigation Measure B-2: If special status plant species are found prior to or during construction, these populations will be identified and protected with appropriate measures per TRPA and the USFS.</p> | DOT or its Consultant | DOT | Prior to Construction | |

| MITIGATION MEASURE | IMPLEMENTING RESPONSIBILITY ^{1,3} | MONITORING RESPONSIBILITY ^{2,3} | TIMING AND FREQUENCY | VERIFICATION OF COMPLIANCE (INITIALS/DATE) |
|---|--|--|---|--|
| <p>Mitigation Measure B-3: The County will adopt and implement a Noxious Weed Mitigation Plan to decrease habitat vulnerability to or below pre-construction levels. The Plan includes pre-construction elements such as treatment of existing noxious weed populations identified in the Project area, as well as during and post-construction elements. Recommended BMPs will include, but are not limited to, the hand removal of existing weeds prior to going to seed, cleaning equipment prior to use, minimizing the areas of disturbance, covering the disturbed ground as quickly as possible with mulch or other means, utilizing certified weed-free mulch and other materials, and revegetating disturbed areas with native plants as soon as construction is completed.</p> | <p>DOT or its Consultant</p> | <p>DOT</p> | <p>Prior to Construction</p> | |
| <p>BIOLOGICAL RESOURCES - Item IV-C</p> | | | | |
| <p>Mitigation Measure B-4: The amount of construction disturbance will be minimized by restricting the Contractor's equipment access through the use of construction limit fencing. All disturbed areas will be stabilized and revegetated with compost, native seed and mulch. All revegetated areas will be irrigated for a minimum of two years following construction.</p> | <p>DOT or its Consultant</p> | <p>DOT</p> | <p>Prior to and During Construction</p> | |

| MITIGATION MEASURE | IMPLEMENTING RESPONSIBILITY ^{1,3} | MONITORING RESPONSIBILITY ^{2,3} | TIMING AND FREQUENCY | VERIFICATION OF COMPLIANCE (INITIALS/DATE) |
|--|--|--|---|--|
| <p>Mitigation Measure B-5: Upon completion of the wetland delineation, Project design will be modified, as needed, to avoid or minimize impacts to wetlands and/or other WOUS. The County will determine if it needs to obtain a 404 Permit and/or 401 Water Quality Certification and will implement the required mitigation measures. The County will obtain a TRPA EIP Project Permit and will implement the required mitigation measures related to the disturbance of SEZs (if applicable).</p> <p>Where it is not possible to avoid impacts, the County will mitigate impacts through the enhancement of hydrology, soils, vegetation, and/or ecological function at a minimum of 1:1.5 for disturbed features. Mitigation measures will include, but are not limited to, the use of hand or low impact equipment and the implementation of temporary BMPs such as filter fencing, coir logs, gravel bags, and tree protection and construction limit fencing to minimize disturbance. Although groundwater is not expected to be encountered during construction, if groundwater is encountered and the excavated area requires dewatering to complete the work, TRPA shall be notified immediately. The SWPPP will include a Dewatering Contingency Plan (Item VI-B Mitigation Measures).</p> | <p>DOT or its Consultant</p> | <p>DOT</p> | <p>Prior to Construction</p> | |
| <p>Mitigation Measure B-6: Should any construction work be required in or adjacent to wetlands, it shall be conducted from existing pavement and/or confined to the smallest area possible to complete the work by restricting the Contractor's access with equipment through the use of construction limit fencing.</p> | <p>DOT or its Consultant</p> | <p>DOT</p> | <p>Prior to and During Construction</p> | |
| <p>Mitigation Measure B-7: All excavated material not required to complete the work shall be removed from the wetland areas and contained by appropriate BMP measures.</p> | <p>DOT or its Consultant</p> | <p>DOT</p> | <p>Prior to and During Construction</p> | |
| CULTURAL RESOURCES | | | | |
| <i>No mitigation measures required.</i> | | | | |

| MITIGATION MEASURE | IMPLEMENTING RESPONSIBILITY ^{1,3} | MONITORING RESPONSIBILITY ^{2,3} | TIMING AND FREQUENCY | VERIFICATION OF COMPLIANCE (INITIALS/DATE) |
|---|--|--|---|--|
| GEOLOGY AND SOILS - Item VI-B | | | | |
| <p>Mitigation Measure G-1: The contractor will be required to prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) to the County, Lahontan Regional Water Quality Control Board (Lahontan), and TRPA prior to construction. The SWPPP will be in accordance with the TRPA and Lahontan requirements for storm water pollution prevention. As part of the SWPPP, the contractor will be required to prepare a Temporary BMP Plan, Spill Contingency Plan, and Dewatering Contingency Plan.</p> <p>The Temporary BMP Plan will include design and specifications that detail the required construction BMPs that shall be installed prior to and during construction to prevent any erosion that may occur during a rain or wind event. Temporary BMPs will include, but are not limited to, gravel bags, silt fencing, tree protection fencing, construction limit fencing, coir logs, and gravel construction access. Prior to construction, all storage, access, and staging areas are to be secured by the contractor and approved by the County and TRPA. No staging or storage will occur in Stream Environment Zones (SEZs). The contractor shall be responsible for maintenance of mobilization sites, including placement and maintenance of BMPs. All equipment, vehicles, and materials shall be stored on paved or disturbed surfaces only, in locations approved by EDOT and TRPA. The contractor shall limit the areas to be disturbed to the minimum size required to construct proposed improvements. All disturbed areas shall have temporary BMPs in place before and during construction and the disturbed areas will be restored to a better than pre-construction condition. The contractor shall meet the permit requirements for BMPs, staging areas, revegetation, grading season restrictions, and all other agency approval conditions. Construction will take place within the Lake Tahoe construction season (between May 1st and October 15th).</p> | <p>DOT and its Contractor</p> | <p>DOT</p> | <p>Prior to and During Construction</p> | |

| MITIGATION MEASURE | IMPLEMENTING RESPONSIBILITY ^{1,3} | MONITORING RESPONSIBILITY ^{2,3} | TIMING AND FREQUENCY | VERIFICATION OF COMPLIANCE (INITIALS/DATE) |
|---|--|--|---|--|
| <p>Mitigation Measure G-1 (Continued): The Spill Contingency Plan will state the plan for dealing with accidental spills and must include the requirement for spill prevention kits to be available on site to contain any accidental spills. The Spill Contingency Plan will minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction activities. The Spill Prevention Kit will contain, but is not limited to, sorbent pads, plastic bags, containment devices, drain seals, and drip pans. This plan will also outline who to call if utility lines are damaged during construction.</p> <p>The Dewatering Contingency Plan will outline the steps that will be required if groundwater is intercepted. Although groundwater is not expected to be encountered during construction, if groundwater is encountered and the excavated area requires dewatering to complete the work, TRPA shall be notified immediately and a Dewatering Plan will be prepared and submitted for approval by the County and TRPA prior to its implementation. Based on the results of the Soils/Hydrology Analysis, TRPA may require that a full Dewatering Plan be prepared and submitted as part of the SWPPP prior to permit acknowledgement.</p> | <p>DOT and its Contractor</p> | <p>DOT</p> | <p>Prior to And During Construction</p> | |
| <p>Mitigation Measure G-2: The contractor will be required to attend the TRPA pre-grade inspection meeting onsite to ensure that proper BMPs are in place per the SWPPP before work commences.</p> | <p>DOT and its Contractor</p> | <p>DOT</p> | <p>Prior to and During Construction</p> | |
| <p>Mitigation Measure G-3: EDOT will conduct daily inspections of BMP measures to ensure they are properly placed and maintained for maximum benefit. As part of this process, EDOT and/or the contractor will complete formal inspection forms for submittal to regulatory agencies to demonstrate deficiencies and that corrective action has been taken.</p> | <p>DOT and its Contractor</p> | <p>DOT</p> | <p>Prior to and During Construction</p> | |
| <p>HAZARDS AND HAZARDOUS MATERIALS - Item VII-A and Item VII-B</p> | | | | |

| MITIGATION MEASURE | IMPLEMENTING RESPONSIBILITY ^{1,3} | MONITORING RESPONSIBILITY ^{2,3} | TIMING AND FREQUENCY | VERIFICATION OF COMPLIANCE (INITIALS/DATE) |
|---|--|--|--|--|
| Mitigation Measure: Implement Mitigation Measures identified under Item VI-B Mitigation Measures. | DOT or its Contractor | DOT | Prior to and During Construction | |
| HYDROLOGY AND WATER QUALITY - Item VIII-A and Item VIII-F | | | | |
| Mitigation Measure: Implement Mitigation Measures identified under Item VI-B Mitigation Measures. | DOT or its Contractor | DOT | Prior to and During Construction | |
| LAND USE AND PLANNING | | | | |
| <i>No mitigation measures required.</i> | | | | |
| MINERAL RESOURCES | | | | |
| <i>No mitigation measures required.</i> | | | | |
| NOISE - Item XI-D | | | | |
| Mitigation Measure N-1: In order to mitigate the impacts of increased ambient noise levels, construction noise emanating from all construction activities shall only occur between the hours of 8:00 am and 6:30 pm per TRPA Code, unless other hours are approved by TRPA. | DOT or its Contractor | DOT | During Construction | |
| Mitigation Measure N-2: All construction equipment and vehicles used for Project construction will be fitted with the factory installed muffling devices and will be maintained in good working order. EDOT will advise potentially affected residents of the proposed construction activities including duration, schedule of activities, and contacts for filing noise complaints. EDOT staff and/or contractor will attempt to respond to all noise complaints received within one working day and resolve the issue as soon as possible. | DOT or its Contractor | DOT | Prior to and During Construction | |
| POPULATION AND HOUSING | | | | |
| <i>No mitigation measures required.</i> | | | | |
| PUBLIC SERVICES | | | | |
| <i>No mitigation measures required.</i> | | | | |
| RECREATION | | | | |
| <i>No mitigation measures required.</i> | | | | |

| MITIGATION MEASURE | IMPLEMENTING RESPONSIBILITY ^{1,3} | MONITORING RESPONSIBILITY ^{2,3} | TIMING AND FREQUENCY | VERIFICATION OF COMPLIANCE (INITIALS/DATE) |
|---|--|--|----------------------------------|--|
| TRANSPORTATION AND TRAFFIC - Item XV-A | | | | |
| I Mitigation Measure T-1: The contractor will be required to prepare a Traffic Control Plan for TRPA and El Dorado County for review and approval. Elements of the plan will include appropriate use of signage, flaggers, traffic calming, and alternative routes to accommodate local and through traffic. In addition, EDOT will advise local residents regarding schedules for construction traffic detours through press releases and distribution of flyers in area neighborhoods well in advance of construction initiation. Access will not be prohibited, at any time, for local residents, school buses or emergency vehicles. | DOT | DOT | Prior to and During Construction | |
| TRANSPORTATION AND TRAFFIC - Item XV-E | | | | |
| Mitigation Measure: Implement Mitigation Measures identified under Item XV-A Mitigation Measures. | DOT or its Contractor | DOT | During Construction | |
| UTILITIES AND SERVICE SYSTEMS | | | | |
| <i>No mitigation measures required.</i> | | | | |

¹ The department listed in the Implementing Responsibility column is the department responsible for conducting the mitigation measure.

² The department listed in the Monitoring Responsibility column is responsible for verifying that compliance with the mitigation measure occurs and that all monitoring and reporting is completed.

³ Responsible Entity: DOT-Department of Transportation

Table 1. Echo View Estates 2 - Special Status Plant Species List and Habitat Analysis

| Species | Regulatory Status (Federal; State; TRPA; CNPS) | Habitat Requirements | Identification Period | Potential for Occurrence in the Project Area and Results of Survey |
|--|--|---|----------------------------------|---|
| <i>Arabis rigidissima</i> var. <i>demota</i> Galena Creek rockcress | S, SI, 1B | Broad-leaved upland forests, upper montane coniferous forests on rocky substrates. Known in CA from only two occurrences near Martis Peak and in NV from eleven occurrences in the Carson Range. Elevation range 7,398 to 8,398 feet. | Identifiable in August | Unlikely; site lacks suitable habitat and is not within the known elevation range of this species. Not encountered. Documented in LTBMU. |
| <i>Arabis tiehmii</i> Tiehm's rockcress | S, 1B | High elevation metavolcanic or decomposed granite ridges and steep slopes. Elevation range 9,745 to 11,775 feet. | Identifiable from July to August | Unlikely; site lacks suitable habitat and is not within the known elevation range of this species. Not encountered. |
| <i>Botrychium ascendens</i> Upswept moonwort | S, 2 | Lower montane coniferous forests. Elevation range 4,950 to 6,039 feet. | Fertile July through August | Not encountered. May occur. Modeled habitat exists in project area. |
| <i>Botrychium crenulatum</i> Scalloped moonwort | S, 2 | Lower montane coniferous forests, meadows and seeps, marshes and swamps. Elevation range 4,950 to 10,800 feet. | Fronds mature June to September | Not encountered. May occur. Modeled habitat exists in project area. |
| <i>Botrychium lineare</i> Slender moonwort | S, 1B | Upper montane coniferous forests. Elevation range from sea level to 10,640 feet. | Fronds mature June to September | Not encountered. May occur. Modeled habitat exists in project area. |
| <i>Botrychium lunaria</i> Common moonwort | S, 2 | Montane coniferous forests, meadows and seeps. Elevation range 7,524 to 11,220 feet. | Fertile in August | Not encountered. May occur. Modeled habitat exists in project area, though the project is not within the known elevation range of this species. |
| <i>Botrychium minganense</i> Mingan moonwort | S, 2 | Lower montane coniferous forests. Elevation range 4,950 to 6,039 feet. | Fronds mature June to September | Not encountered. May occur. Modeled habitat exists in project area. |
| <i>Botrychium montanum</i> Western goblin | S, 2 | Lower montane coniferous forests. Elevation range 4,950 to 6,039 feet. | Fronds mature July to August | Not encountered. May occur. Modeled habitat exists in project area. |

Table 1. Special Status Plant Species List and Habitat Analysis (cont.)

| Species | Regulatory Status (Federal; State; TRPA; CNPS) | Habitat Requirements | Identification Period | Potential for Occurrence in the Project Area and Results of Survey |
|---|--|--|---------------------------------------|---|
| <i>Bruchia bolanderi</i> Bolander's candle moss | S, 2 | Meadows in mixed conifer and subalpine communities, streams and wet meadows, from 5,577 to 9,186 feet. | Moss | Not encountered. May occur. Modeled habitat exists in project area, although this species is not known to occur in the LTBMU. |
| <i>Carex limosa</i> Shore sedge | 2 | Bog and fens, meadows and seeps, marshes and swamps in lower montane coniferous forests. Elevation range 3,960 to 8,910 feet. | Perennial herb, blooms June to August | Not encountered. May occur. Documented in LTBMU. |
| <i>Carex mariposana</i> (also known as <i>Carex paucifructus</i>) Mariposa sedge | SI | Meadows and slopes in coniferous forests. Elevation range 4,000 and 11,400 feet. | Identifiable June to August | Not encountered. May occur. Documented in LTBMU. |
| <i>Chaenactis douglasii</i> var. <i>alpina</i> Alpine dusty maidens | 2 | Alpine boulders and rock fields. Open subalpine to alpine gravel and crevices, granitic substrate, from 8,900 to 11,200 feet. | July to September | Unlikely; outside of elevation range. Not encountered. Documented in LTBMU. |
| <i>Cryptantha crymophila</i> Subalpine cryptantha | 1B | Subalpine forests (volcanic, rocky). Elevation range 8,500 to 10,500 feet. | Identifiable from July to August | Unlikely; outside of elevation range. Not encountered. |
| <i>Dendrocollybia racemosa</i> Branched collybia | S | Grows on decayed, blackened mushrooms or coniferous duff, usually within old growth stands. | Fall and Winter | Unlikely; site lacks suitable habitat. Not encountered. Documented in LTBMU. |
| <i>Draba asterophora</i> var. <i>asterophora</i> Tahoe draba | S, SI, 1B | Alpine boulder and rock fields in crevices, and open talus slopes of decomposed granite in subalpine coniferous forests. Elevation range 8,325 to 11,670 feet. | Identifiable from July to August | Unlikely; outside of elevation range. Not encountered. Documented in LTBMU. |
| <i>Draba asterophora</i> var. <i>macrocarpa</i> Cup Lake draba | S, SI, 1B | Alpine boulder and rock fields in shade of granitic rocks in subalpine coniferous forest. Elevation range 8,202 to 9,235 feet. | Identifiable from July to August | Unlikely; outside of elevation range. Not encountered. Documented in LTBMU. |

Table 1. Special Status Plant Species List and Habitat Analysis (cont.)

| Species | Regulatory Status (Federal; State; TRPA; CNPS) | Habitat Requirements | Identification Period | Potential for Occurrence in the Project Area and Results of Survey |
|--|---|---|---|---|
| <i>Epilobium howellii</i> Subalpine fireweed | S, 1B | Meadows and seeps in montane coniferous forests. Elevation range 6,600 to 8,910 feet. | Blooms July to August | Not encountered. May occur. Modeled habitat exists in project area, though the project is not within the known elevation range of this species. |
| <i>Epilobium oreganum</i> Oregon fireweed | 1B | Bogs and fens, montane coniferous forests. Elevation range 1,650 to 7,392 feet. | Blooms June to September | Not encountered. May occur. Documented in LTBMU. |
| <i>Epilobium palustre</i> Marsh willowherb | 2 | Bogs and fens, meadows and seeps. Known in California only from Grass Lake, in El Dorado County at 7,200 feet elevation. | Blooms July to August | Not encountered. May occur. Documented in LTBMU. |
| <i>Erigeron miser</i> Starved daisy | S, 1B | Rocky places in upper montane coniferous forests. Elevation range 6,072 to 8,646 feet. | Identifiable during blooming phase which extends from June to October | Unlikely; site lacks suitable habitat. Not encountered. |
| <i>Eriogonum umbellatum</i> var. <i>torreyanum</i> Torrey's buckwheat | S, 1B | Meadows and seeps, upper montane coniferous forests; volcanic, rocky soils. Elevation range 6,121 to 8,646 feet. | Identifiable from July to September | Not encountered. May occur. |
| <i>Helodium blandowii</i> Blandow's bog-moss | S, 2 | Bogs and fens that are not too rich in iron. Elevation range 6,562 to 8,859 feet. | Moss | Not encountered. May occur. Modeled habitat exists in project area. |
| <i>Hulsea brevifolia</i> Short-leaved hulsea | S, 1B | Lower and upper montane coniferous forests. Granitic or volcanic, sandy, or gravelly substrate. Elevation range 4,950 to 10,560 feet. | Blooms May to August | Not encountered. May occur. |
| <i>Lewisia kelloggii</i> ssp. <i>hutchisonii</i> Kellogg's lewisia | S, 3 | Ridge tops or flat open spaces with widely spaced trees and sandy granitic to erosive volcanic soil. Elevation range 5,000 to 7,000 feet. | June to July | Not encountered. May occur. Modeled habitat exists in project area. |

Table 1. Special Status Plant Species List and Habitat Analysis (cont.)

| Species | Regulatory Status (Federal; State; TRPA; CNPS) | Habitat Requirements | Identification Period | Potential for Occurrence in the Project Area and Results of Survey |
|--|---|---|---|--|
| <i>Lewisia kelloggii</i> ssp. <i>kelloggii</i> Kellogg's lewisia | S | Ridge tops or flat open spaces with widely spaced trees and sandy granitic to erosive volcanic soil. Elevation range 5,000 to 7,000 feet. | June to July | Not encountered. May occur. Modeled habitat exists in project area. |
| <i>Lewisia longipetala</i> Long-petaled lewisia | S, SI, 1B | Alpine boulder and rock fields in subalpine coniferous forests. Elevation range 8,325 to 9,740 feet. | Identifiable June to August | Unlikely; site lacks suitable habitat and is not within the known elevation range of this species. Not encountered. Documented in LTBMU. |
| <i>Meesia triquetra</i> Three-ranked hump-moss | S, 2 | Bogs and fens, meadows and seeps, montane coniferous forests. Elevation range 4,290 to 8,250 feet. | Moss | Not encountered. May occur. Modeled habitat exists in project area. Documented in LTBMU. |
| <i>Meesia uliginosa</i> Broad-nerved hump-moss | S, 2 | Bogs and fens, meadows and seeps, montane coniferous forests. Elevation range 4,290 to 8,250 feet. | Moss | Not encountered. May occur. Modeled habitat exists in project area. Known to exist within 3 miles of the project. |
| <i>Peltigera hydrothyria</i> Veined water lichen | S | Mixed coniferous forests, bogs, fens, wet meadows, seeps, and clear, cold streams. Elevation range 4,000 to 8,000 feet. | Lichen | Not encountered. May occur. Modeled habitat exists in project area. No documented occurrences in LTBMU. |
| <i>Potamogeton epihydrus</i> ssp. <i>nuttallii</i> Nuttall's pondweed | 2 | Marshes and swamps, associated freshwater habitats. Elevation range 1,320 to 6,270 feet. | Blooms July to August | Unlikely; site is not within the known elevation range of this species. Not encountered. |
| <i>Potamogeton filiformis</i> Slender-leaved pondweed | 2 | Marshes and swamps, associated freshwater habitats. Elevation range 990 to 7,095 feet. | Blooms May to July | Not encountered. May occur. Documented in LTBMU. |
| <i>Rorippa subumbellata</i> Tahoe yellow cress | FC, S, SE, SI, 1B | Shoreline supporting decomposed granitic soils; known only from the shoreline of Lake Tahoe. Elevation range 6,210 to 6,230 feet. | Identifiable during bloom phase which extends from May to September | Unlikely; site lacks suitable habitat and is not within the known elevation range of this species. Not encountered. Documented in LTBMU. |

Table 1. Special Status Plant Species List and Habitat Analysis (cont.)

| Species | Regulatory Status (Federal; State; TRPA; CNPS) | Habitat Requirements | Identification Period | Potential for Occurrence in the Project Area and Results of Survey | | | | | |
|---|--|---|--|---|---|--|---|--|---|
| <i>Scirpus subterminalis</i> Water bulrush | 2 | Marshes and swamps, montane lake margins, in shallow water. Elevation range 2,460 to 7,660 feet. | Blooms from July to August | Not encountered. May occur. Known to exist within 3 miles of the project. | | | | | |
| <i>Scutellaria galericulata</i> Marsh skullcap | 2 | Lower montane coniferous forests, meadows and seeps, marshes and swamps. Elevation range from sea level to 6,900 feet. | Blooms June to September | Not encountered. May occur. Known to exist within 3 miles of the project. | | | | | |
| <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top; width: 25%;"> Federally Listed Species: FE = federally endangered FT = federally threatened S = USFS sensitive Note: Federal Species of Concern no longer exist as a category. </td> <td style="vertical-align: top; width: 25%;"> California State Listed Species: FC = candidate PT = proposed threatened FPD = proposed for delisting FD = delisted </td> <td style="vertical-align: top; width: 25%;"> California State Listed Species: SE = California state endangered ST = California state threatened SR = California state rare SC = Candidate for listing in California </td> <td style="vertical-align: top; width: 25%;"> Tahoe Regional Planning Agency: SI = TRPA special interest species </td> <td style="vertical-align: top; width: 25%;"> CNPS List Categories: 1A = plants presumed extinct in California 1B = plants rare, threatened, or endangered in California and elsewhere 2 = plants rare, threatened, or endangered in California, but common elsewhere 3 = plants about which we need more information 4 = plants of limited distribution Other Special-Status Listing: SLC = species of local or regional concern or conservation significance </td> </tr> </table> | | | | | Federally Listed Species: FE = federally endangered FT = federally threatened S = USFS sensitive Note: Federal Species of Concern no longer exist as a category. | California State Listed Species: FC = candidate PT = proposed threatened FPD = proposed for delisting FD = delisted | California State Listed Species: SE = California state endangered ST = California state threatened SR = California state rare SC = Candidate for listing in California | Tahoe Regional Planning Agency: SI = TRPA special interest species | CNPS List Categories: 1A = plants presumed extinct in California 1B = plants rare, threatened, or endangered in California and elsewhere 2 = plants rare, threatened, or endangered in California, but common elsewhere 3 = plants about which we need more information 4 = plants of limited distribution Other Special-Status Listing: SLC = species of local or regional concern or conservation significance |
| Federally Listed Species: FE = federally endangered FT = federally threatened S = USFS sensitive Note: Federal Species of Concern no longer exist as a category. | California State Listed Species: FC = candidate PT = proposed threatened FPD = proposed for delisting FD = delisted | California State Listed Species: SE = California state endangered ST = California state threatened SR = California state rare SC = Candidate for listing in California | Tahoe Regional Planning Agency: SI = TRPA special interest species | CNPS List Categories: 1A = plants presumed extinct in California 1B = plants rare, threatened, or endangered in California and elsewhere 2 = plants rare, threatened, or endangered in California, but common elsewhere 3 = plants about which we need more information 4 = plants of limited distribution Other Special-Status Listing: SLC = species of local or regional concern or conservation significance | | | | | |

Sources: USDA 2008, NCE, TRPA 2007, CNPS 2001, CNDDDB 2008.

Notes: No special status species were found within the project area.

The LTBMU does not currently support any plant species listed as threatened or endangered under the ESA.

Table 2. Echo View Estates 2 - Federally Threatened and Endangered Species List and Habitat Analysis

| Wildlife Species | Legal Status ¹ | Known to Occur Within 0.5 Miles of Project Area | Suitable Habitat Within 0.5 Miles of Project Area | Reason Why Habitat Not Considered Suitable |
|--|---------------------------|---|---|---|
| Mammals | | | | |
| Fisher (<i>Martes pennanti</i>) | FC, SSC | No | No | The limited riparian habitat available does not meet the breeding or foraging requirements. |
| Amphibians | | | | |
| Mountain yellow-legged frog (<i>Rana muscosa</i>) | FC, FSS, SSC | No | No | No riverine habitat present. |
| Yosemite toad (<i>Bufo canorus</i>) | FC | No | No | No riverine habitat present. |
| Fish | | | | |
| Central Valley steelhead (<i>Oncorhynchus mykiss</i>) | FT | No | No | Does not occur in the LTBMU. |
| Delta smelt (<i>Hypomesus transpacificus</i>) | FT | No | No | The LTBMU is outside of the range of the Delta smelt. |
| Lahontan cutthroat trout (<i>Oncorhynchus clarkii henshawi</i>) | FT | No | Yes | |

Note: A more detailed discussion of Federally Threatened and Endangered Species is found in Section 6.0.

¹Status Explanations:

Note: No species in the Lake Tahoe Basin are currently listed as “Endangered” by the USFWS under the ESA.

FT = USFWS listed as “Threatened” under the ESA

FC = USFWS “Candidate species” for listing as threatened or endangered under the ESA

DL = USFWS De-listed, species will be monitored for 5 years

CE = California Endangered

CT = California Threatened

SSC = California DFG Species of Special Concern

FP = California DFG Fully Protected

FSS = USFS LTBMU Sensitive Species, Regional Forester’s Sensitive Species List (Region 5), Revised Oct. 2007

MIS = USFS LTBMU Management Indicator Species

TRPA = TRPA Special Interest Species, Regional Plan for the Lake Tahoe Basin: Goals and Policies (1986) and Code of Ordinances (1987)

Table 2. USFS Sensitive Wildlife Species List and Habitat Analysis

| Wildlife Species | Legal Status ¹ | Known to Occur Within 0.5 Miles of Project Area | Suitable Habitat Within 0.5 Miles of Project Area | Reason Why Habitat Not Considered Suitable |
|--|---------------------------|---|---|--|
| Birds | | | | |
| Bald eagle (<i>Haliaeetus leucocephalus</i>) | FSS, TRPA, SE, FP | No | No | Large bodies of water and/or large river courses not present. |
| California spotted owl (<i>Strix occidentalis occidentalis</i>) | FSS, MIS, SSC | No | No | Mature forests with high, dense canopy not present. |
| Great gray owl (<i>Strix nebulosa</i>) | FSS, CE | No | No | Mature red fir or mixed conifer forests not present. |
| Northern goshawk (<i>Accipiter gentiles</i>) | FSS, TRPA, SSC | Yes | Yes | |
| Willow flycatcher (<i>Empidonax traillii adastus</i>) | FSS, CE | No | No | No riparian areas or meadows with appropriate willow requirements present. |
| Mammals | | | | |
| American marten (<i>Martes Americana</i>) | FSS, MIS | No | Yes | |
| California wolverine (<i>Gulo gulo luteus</i>) | FSS, CT, FP | No | No | Rock outcrops and alpine environment not present. |
| Sierra Nevada red fox (<i>Vulpes vulpes necator</i>) | FSS, CT | No | Yes | |
| Townsend's big-eared bat (<i>Corynorhinus townsendii</i>) | FSS, SSC | No | Yes | |
| Amphibians | | | | |
| Mountain yellow-legged frog (<i>Rana muscosa</i>) | FC FSS, SSC | No | No | No riverine habitat present. |
| Northern leopard frog (<i>Rana pipiens</i>) | FSS, SSC | No | No | No riverine habitat or wet meadows present. |
| Fish | | | | |
| Lahontan Lake tui chub (<i>Gila bicolor pectiniifer</i>) | FSS, SSC | No | No | Lake habitat not present. |
| Invertebrates | | | | |
| Great Basin rams-horn (<i>Helisoma (Carnifex) newberryi</i>) | FSS | No | No | Lake habitat not present. |

Note: A more detailed discussion of USFS Sensitive Wildlife Species is found in Section 7.0.

¹Status Explanations:

Note: No species in the Lake Tahoe Basin are currently listed as “Endangered” by the USFWS under the E.S.A.

FT = USFWS listed as “Threatened” under the ESA

FC = USFWS “Candidate species” for listing as threatened or endangered under the ESA

DL = USFWS De-listed, species will be monitored for 5 years

CE = California Endangered

CT = California Threatened

SSC = California DFG Species of Special Concern

FP = California DFG Fully Protected

FSS = USFS LTBMU Sensitive Species, Regional Forester’s Sensitive Species List (Region5), Revised Oct. 2007

MIS = USFS LTBMU Management Indicator Species

TRPA= TRPA Special Interest Species, Regional Plan for the Lake Tahoe Basin: Goals and Policies (1986) and Code of Ordinances (1987)

Table 3. LTBMU Management Indicator Species and Habitat Analysis

| Habitat or Ecosystem Component | CWHR Type(s) defining the habitat or ecosystem component ¹ | CWHR Size Class & Canopy Closure ² | Wildlife and Aquatic MIS <i>Scientific Name</i> | Category for Project Analysis ³ |
|--|--|--|---|--|
| Riverine & Lacustrine | <ul style="list-style-type: none"> Lacustrine (LAC) Riverine (RIV) | All | Aquatic macroinvertebrates | 1 |
| Riparian | <ul style="list-style-type: none"> Montane riparian (MRI) Valley foothill riparian (VRI) | All | Yellow warbler <i>Dendroica petechia</i> | 1 |
| Wet Meadow | <ul style="list-style-type: none"> Wet meadow (WTM) Freshwater emergent wetland (FEW) | All | Pacific tree frog <i>Pseudacris regilla</i> | 1 |
| Coniferous Forest, early seral | <ul style="list-style-type: none"> Ponderosa pine (PPN) Sierran mixed conifer (SMC) White fir (WFR) Red fir (RFR) Eastside pine (EPN) | 1 (<1" dbh) 2 (1"-5.9" dbh) 3 (6"-10.9" dbh) Canopy Closures: S,P,M,D | Mountain quail <i>Oreortyx pictus</i> | 1 |
| Coniferous Forest, mid seral | <ul style="list-style-type: none"> Ponderosa pine (PPN) Sierran mixed conifer (SMC) White fir (WFR) Red fir (RFR) Eastside pine (EPN) | 4 (11"-23.9" dbh); Canopy Closures: S,P,M,D | Mountain quail <i>Oreortyx pictus</i> | 1 |
| Coniferous Forest, late seral, open canopy | <ul style="list-style-type: none"> Ponderosa pine (PPN) Sierran mixed conifer (SMC) White fir (WFR) Red fir (RFR) Eastside pine (EPN) | 5 (>24" dbh) Canopy Closures: S, P | Sooty (blue) grouse <i>Dendragapus obscurus</i> | 1 |
| Coniferous Forest, late seral, closed canopy | <ul style="list-style-type: none"> Ponderosa pine (PPN) Sierran mixed conifer (SMC) White fir (WFR) Red fir (RFR) | 5 (>24" dbh) Canopy Closures: M, D 6 (Multi-layered tree) in PPN and SMC | California spotted owl <i>Strix occidentalis occidentalis</i> American marten <i>Martes americana</i> Northern flying squirrel <i>Glaucomys sabrinus</i> | 1 |
| Snags in green forest | Medium and large snags (both sound and rotten) in green forest | | Hairy woodpecker <i>Picoides villosus</i> | 2 |
| Snags in burned forest | Medium and large snags (both sound and rotten) in burned forest (stand-replacing fire) | | Black-backed woodpecker <i>Picoides arcticus</i> | 1 |

Note: A more detailed discussion of Management Indicator Species is found in Section 8.0.

¹**CWHR habitat types:** A detailed description of the CWHR types can be found in Appendix C

²**CWHR Size Class & Canopy Closure:**

dbh = diameter at breast height

S = Sparse cover (10-24% canopy closure)

P = Open cover (25-39% canopy closure)

M = Moderate cover (40-59% canopy closure)

D = Dense cover (60-100% canopy closure)

Snags are standing dead or mostly dead trees (Mayer and Laudenslayer 1988)

³**Category 1:** MIS whose habitat is not in or adjacent to the project area and would not be affected by the project.

Category 2: MIS whose habitat is in or adjacent to project area, but would not be either directly or indirectly affected by the project.

Category 3: MIS whose habitat would be either directly or indirectly affected by the project.

Table 4. W-1 Standard Threshold for TRPA Special Interest Species

| Species | Population Sites ¹ | Disturbance Zone (mi.) | Potential to Impact Threshold Standard? |
|---|-------------------------------|--|---|
| Northern goshawk (<i>Accipiter gentilis</i>) | 12 | 0.50 | No |
| Osprey (<i>Pandion haliaetus</i>) | 4 | 0.25 | No |
| Bald eagle (winter) (<i>Haliaeetus leucocephalus</i>) | 2 | Mapped | No |
| Bald eagle (nesting) (<i>Haliaeetus leucocephalus</i>) | 1 | 0.50 | No |
| Golden eagle (<i>Aquila chrysaetos</i>) | 4 | 0.25 | No |
| American peregrine falcon (<i>Falco peregrinus anatum</i>) | 2 | 0.25 | No |
| Waterfowl | 18 | Mapped | No |
| Mule deer (<i>Odocoileus hemionus</i>) | Critical fawning habitat | Meadows-Critical fawning habitat is mapped | No |

Note: A more detailed discussion of Management Indicator Species is found in Section 9.0

¹Based on the TRPA Threshold Evaluation (TRPA 2002), many of the population site goals have not been attained and may never be realized for species like the golden eagle and peregrine falcon considering the Lake Tahoe Basin has historically been considered sub-optimal nesting habitat for both of these species. The northern goshawk threshold standard has a low likelihood of attainment due to habitat fragmentation attributed to recreational encroachment of nesting areas. The mule deer threshold is not likely to be realized due to recreational encroachment into meadows during fawning season.

Table 5. Northern Goshawk TRPA Buffers within 3 miles of Echo View 2 ECP

| Area | Year | Distance from Project (miles) | Most Recent Activity |
|-----------------|-----------|-------------------------------|---|
| Angora 1 | 1981 | 0.7 | Nest activity not recorded. |
| | 1991 | 1.4 | Nest failed. |
| | 1992 | 1.4 | Nest activity not recorded. |
| | 1993 | 0.7 | Nest failed. |
| | 2001 | 1.1 | 2 fledglings confirmed but 3 suspected. |
| | 2003 | 1.2 | Active nest, but no fledglings detected. |
| | 2004 | 1.1 | Inactive, dilapidated nest. |
| Angora 2 | 2004 | 0.5 | Nest activity not recorded. |
| | 2005 | 0.5 | Nest active in 2004 and 2005. |
| Cold Creek | 1992 | 2.8 | Nest failed during incubation. |
| | 2003 | 2.8 | Nest failed. |
| Floating Island | 1997 | 2.5 | Nest activity not recorded. |
| | 1999 | 2.6 | Nest activity not recorded. |
| | 2000 | 2.8 | Nest activity not recorded. |
| Hellhole | 1998 | 3 | Uncertain nest outcome. |
| | 1999 | 2.6 | Nest activity not recorded. |
| | 2001 | 3 | Nest activity not recorded. |
| | 2003 | 2.6 | Nest failed. |
| Trout Creek | 1992 | 2.3 | Nest failed. |
| Tahoe Mountain | 2003 | 0.75 | Possibly produced fledglings that were undetected by surveyors, but recorded as a nest failure. |
| Tahoe Valley | 1981 | 1.6 | Nest activity not recorded. |
| Saxon Creek | 1991 | 2.85 | Nest found late in season, but had evidence of recent activity. |
| | 1992 | 2 | Nest failed. |
| | 1993 | 2 | Nest failed during incubation. |
| | 1998 | 2.85 | Nest activity not recorded. |
| | 2001 | 2.85 | Nest activity not recorded. |
| | 2005 | 2.85 | An inactive alternate nest that fell in the fall of 2005. |
| Spring Creek | 2001 | 2.8 | Nest probably failed. |
| | 2003 | 2.8 | Nest activity not recorded. |
| | 2004 | 2.8 | Nest fell in 2005. |
| | 2005 | 2.8 | Nest failed during incubation. |
| TOTAL | 31 | | |

Source: TRPA northern goshawk buffer data (TRPA 2007)

Table 6. USFS 2006 Survey Efforts for Northern Goshawks within 3 miles of Echo View 2 ECP

| Area | Distance from Project (miles) | Historic Detections | Survey Method ¹ | Detections | Nesting Activity |
|----------------|-------------------------------|---------------------|----------------------------|------------|---|
| Cold Creek | * | Yes | DA | Yes | No nest found. |
| Hellhole | * | Yes | B | No | No nest found. |
| Osgood Swamp | * | Yes | B | No | No nest found. |
| Saxon Creek | * | Yes | DA | Yes | Nest failed. |
| Spring Creek | * | Yes | None ² | N/A | Nest not found, but 2 fledglings were detected. |
| Tahoe Mountain | * | Yes | B | No | No nest found. |
| Tahoe Valley | * | Yes | B | No | No nest found. |
| Trout Creek | * | Yes | B | No | No nest found. |

Source: LTBMU 2006 Annual Wildlife Report (USFS 2006)

¹DA = dawn acoustic survey; B = broadcast survey

²Dawn acoustic survey conducted near recent nest only.

Table 7. Special Status Wildlife Species Occurrences within 3 miles of Echo View 2 ECP

| Species and Special Status | Date | Location | Distance from Project (miles) | Details |
|--|------------|------------------|-------------------------------|--|
| Northern goshawk <i>Accipiter gentilis</i> FSS, TRPA, SSC | 1981 | Angora Creek | 0.25 | Two fledglings recorded. |
| | 1981 | Trout Creek | 1 | Nest abandoned. |
| | 1981 | Tahoe Valley | 1.7 | Three fledglings recorded. |
| Willow flycatcher <i>Empidonax traillii</i> FSS, CE | 1935 | Trout Creek | 3 | Specimens collected in 1910, 1912, and 1935. |
| Osprey <i>Pandion haliaetus</i> TRPA | 1993 | Fallen Leaf Lake | 1.5 | Nest site active in 1993. |
| Sierra Nevada snowshoe hare <i>Lepus americanus taboensis</i> SSC | 1968 | Echo Lake | 2.4 | One male collected in 1968. |
| Sierra marten <i>Martes americana sierrae</i> FSS, MIS | 1993 | Camp Richardson | 2.5 | One adult observed, possibly foraging. |
| | 1993 | Camp Richardson | 2.8 | One adult observed, possibly foraging. |
| Lahontan Cutthroat Trout <i>Oncorhynchus clarkii henshawi</i> FT | 1939 | Taylor Creek | 2.8 | Spawn were taken from creek and raised in Sisson Hatchery. |
| Sierra Nevada yellow-legged frog <i>Rana sierrae</i> SSC | 1913 | Fallen Leaf Lake | 1.75 | 258 specimens collected in 1913. |
| Bank swallow <i>Riparia riparia</i> CT | 1976 | Fallen Leaf Lake | 2.2 | One bird observed in 1976, and 10 birds observed in 1962. |
| American badger <i>Taxidea taxus</i> SSC | Not Listed | Tahoe Keys | 2.4 | Two specimens collected. |

Source: California Natural Diversity Database (CNDDB 2008)

†Status Explanations:

Note: No species in the Lake Tahoe Basin are currently listed as “Endangered” by the USFWS under the ESA.

FT = USFWS listed as “Threatened” under the ESA

FC = USFWS “Candidate species” for listing as threatened or endangered under the ESA

DL = USFWS De-listed, species will be monitored for 5 years

CE = California Endangered

CT = California Threatened

SSC = California DFG Species of Special Concern

FP = California DFG Fully Protected

FSS = USFS LTBMU Sensitive Species, Regional Forester’s Sensitive Species List (Region 5), Revised Oct. 2007

MIS = USFS LTBMU Management Indicator Species

TRPA = TRPA Special Interest Species, Regional Plan for the Lake Tahoe Basin: Goals and Policies (1986) and Code of Ordinances (1987)

Table 8. Osprey TRPA Buffers within 3 miles of Echo View 2 ECP

| Year Found | Distance from Project (miles) | Status |
|-------------------|--------------------------------------|-----------------------------|
| 1990 | 1.4 | Present: active nest |
| 1995 | 1.4 | Inactive: nest gone |
| 1995 | 1 | Inactive: nesting tree gone |
| 1996 | 1.7 | Inactive: nest gone |
| 1997 | 2.75 | Inactive: nesting tree gone |
| 1998 | 1.9 | Inactive: nesting tree gone |
| 2000 | 1.7 | Inactive: nesting tree gone |
| 2002 | 1.3 | Inactive: nest gone |
| 2002 | 2.25 | Inactive: nesting tree gone |
| 2002 | 2.75 | Inactive: nesting tree gone |
| 2002 | 1.6 | Inactive: nest gone |
| 2002 | 1.7 | Inactive: nesting tree gone |
| Total | 12 | |

Source: TRPA osprey buffer data (TRPA 2007)

Table 9. Point Count Results and Statistics Summary

| Station | Species | Number of Detections | Total Abundance ¹ | Species Richness ² | Species Diversity ³ | Evenness ⁴ |
|-----------------|-----------------------|-------------------------|---------------------------------|----------------------------------|-----------------------------------|-----------------------|
| EV1 | Brewer's blackbird | 2 | 20 | 11 | 8.84 | 0.92 |
| | Clark's nutcracker | 1 | | | | |
| | Dusky flycatcher | 1 | | | | |
| | Green-tailed towhee | 3 | | | | |
| | House wren | 1 | | | | |
| | Mountain chickadee | 5 | | | | |
| | Mountain quail | 1 | | | | |
| | Northern flicker | 1 | | | | |
| | Red-breasted nuthatch | 1 | | | | |
| | Red-winged blackbird | 1 | | | | |
| | Steller's jay | 3 | | | | |
| EV2 | American robin | 2 | 20 | 7 | 6.54 | 0.97 |
| | Dark-eyed junco | 3 | | | | |
| | Dusky flycatcher | 2 | | | | |
| | Green-tailed towhee | 3 | | | | |
| | Mountain chickadee | 5 | | | | |
| | Pygmy nuthatch | 2 | | | | |
| | Steller's jay | 3 | | | | |
| EV3 | Brewer's blackbird | 2 | 17 | 7 | 6.12 | 0.94 |
| | Dark-eyed junco | 3 | | | | |
| | Mountain chickadee | 4 | | | | |
| | Red-winged blackbird | 1 | | | | |
| | Steller's jay | 4 | | | | |
| | Western tanager | 2 | | | | |
| | Wilson's snipe | 1 | | | | |
| Averages | | | 19 | 8.33 | 7.17 | 0.94 |

Source: A statistical handbook and guide to data analysis of standardized avian population monitoring programs (Nur et al. 1999)

Terms Defined

¹ Total Abundance is a measure of the number of individuals in a given community.

² Species Richness (S) is the total number of species in a given community.

³ Shannon-Wiener Diversity Index is an index used to measure species diversity. It is derived from both species richness and evenness of distribution among species present (Nur et al. 1999). It measures the rarity and commonness of species in a community. Table 9 uses the following formula to calculate the Shannon-Wiener diversity index:

$$H = -\sum p_i \ln (p_i)$$

p_i is the proportion of all individuals belonging to the *i*th species.

In Table 9, Shannon's-Wiener Index is expressed as N_1 . N_1 expresses diversity in terms of species instead of bits and is therefore easier to interpret. Species are most evenly distributed in a community when $S = N_1$. Table 9 uses the following formula to calculate N_1 :

$$N_1 = e^H$$

⁴ Evenness (E) is the ratio of observed diversity to the maximum diversity present in a given community, and quantifies how equal the community is numerically. E is constrained between 0 and 1. Values close to 1 indicate that the community has little variation between species. Table 9 uses the following formula to calculate E:

$$E = H / \ln (S)$$

Table 10. Wildlife Species Observed in Echo View 2 ECP

| Common Name | Scientific Name |
|-----------------------|-------------------------------|
| Mammals | |
| Black bear | <i>Ursus americanus</i> |
| Coyote | <i>Canis latrans</i> |
| Chipmunk species | <i>Tamias</i> spp. |
| Douglas' squirrel | <i>Tamiasciurus douglasii</i> |
| Birds | |
| American robin | <i>Turdus migratorius</i> |
| Brewer's blackbird | <i>Euphagus cyanocephalus</i> |
| Canada goose | <i>Branta canadensis</i> |
| Clark's nutcracker | <i>Nucifraga columbiana</i> |
| Common merganser | <i>Mergus merganser</i> |
| Dark-eyed junco | <i>Junco hyemalis</i> |
| Dusky flycatcher | <i>Empidonax oberholseri</i> |
| Green-tailed towhee | <i>Pipilo chlorurus</i> |
| House wren | <i>Troglodytes aedon</i> |
| Lincoln sparrow | <i>Melospiza lincolnii</i> |
| Mallard | <i>Anas Platyrhynchos</i> |
| Mountain bluebird | <i>Sialia currucoides</i> |
| Mountain chickadee | <i>Poecile gambeli</i> |
| Mountain quail | <i>Oreortyx pictus</i> |
| Mourning dove | <i>Zenaida macroura</i> |
| Northern flicker | <i>Colaptes auratus</i> |
| Pygmy nuthatch | <i>Sitta pygmaea</i> |
| Red-breasted nuthatch | <i>Sitta canadensis</i> |
| Red-winged blackbird | <i>Agelaius phoeniceus</i> |
| Steller's jay | <i>Cyanocitta stelleri</i> |
| Western tanager | <i>Piranga ludoviciana</i> |
| Wilson's snipe | <i>Gallinago gallinago</i> |
| Yellow-rumped warbler | <i>Dendroica coronata</i> |