



Washoe County
COMMUNITY SERVICES DEPARTMENT
Engineering and Capital Projects Division

February 15, 2013

Nevada Tahoe Resource Team
Nevada Division of State Lands
901 South Stewart Street, Suite 5003
Carson City, Nevada 89701
(Via E-Mail)

ATTN: Elizabeth Harrison, Lake Tahoe Coordinator
eharrison@lands.nv.gov

**SUBJECT: Round 16 Nevada Lake Tahoe EIP Water Quality and Erosion Control Grants Program
Proposal for East Incline Village Phase I Water Quality Improvement Project**

Dear Ms. Harrison:

Washoe County hereby submits the attached grant application and proposal to request funding of the East Incline Village Phase I Water Quality Improvement Project, EIP #01.01.01.46. Washoe County is requesting \$1,500,000 of the project be funded by Round 16 of the Nevada Division of State Lands Lake Tahoe – Environmental Improvement Project Water Quality and Erosion Control Grants Program, which is fifty percent (50%) of the funding needed to complete the project and will match funding approved under the USFS Round 12 Federal Lake Tahoe Erosion Control Grant Funds. We will provide the completed Assurances and Resolution documents once we have received preliminary funding approval and can take those documents to our Board of County Commissioners for signature.

Thank you for your continued support of Washoe County's implementation of water quality improvement projects in the Lake Tahoe Basin. If you have questions or need additional information about our proposal, please contact me at 775-328-2046 or kklein@washoecounty.us.

Sincerely,

Dwayne Smith, P.E.,
Director of Engineering and Capital Projects

A handwritten signature in blue ink, appearing to read "Kristine Klein", written over a horizontal line.

Kristine R. Klein, P.E.
Senior Licensed Engineer

KRK

Enclosures

cc: Dwayne Smith, P.E. Washoe County Community Services Department Engineering and Capital Projects Division
Kimble Corbridge, P.E. Washoe County Community Services Department Engineering and Capital Projects Division
Trish Dyer, Washoe County Community Services Department Finance and Administration Division

GRANT APPLICATION FORM

- A. Project Title East Incline Village Water Quality Improvement Project - Ph I
(Please refer to project name as listed in EIP)
- B. Environmental Improvement Program (EIP Project) # 01.01.01.46
- C. Project Location (Please provide map)
The project is located in Incline Village, Nevada. See Figure 1 in the attached Project Proposal.
- D. Project Description: Please attach separately, and refer to Project Description Requirements (attached).
- E. Applicant's Name and Contact Information
Washoe County through it's Community Services Department Attn:Kris Klein
PO. Box 11130
Reno, Nevada 89520-0027
Phone: 775-328-2046 Fax: 775-328-3699 Email KKlein@washoecounty.us
- F. Estimated Total Project Cost: \$3,000,000

Grant Amount Requested (Grant amounts requested from non-state agencies cannot exceed 75% of total cost of design & construction).

\$1,500,000

Sources and amounts of matching funds:

USFS Round 12 Erosion Control Grant Funds in the amount of \$1,500,000

- G. Owner of Property(ies): Washoe County, Nevada

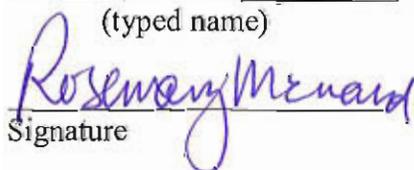
If others hold any outstanding property rights (additional owners, public/private easements, etc.), attach explanation of how they will participate.

As the project planning progresses, parcels owned by the USFS and the State of Nevada may be considered for project improvement. Funding will be provided by both the USFS and the State of Nevada, and both agencies will be represented as funding and regulatory agencies on the project advisory team (TAC).

- H. On behalf of Washoe County, Nevada, I request this Application be considered for financial assistance with the Nevada Division of State Lands, Water Quality and Erosion Control Grants Program.

Rosemary Menard

(typed name)


Signature

Director, Washoe Co. Community
Services Department 2/14/2013
Title Date

**SIXTEENTH ROUND OF FUNDING AVAILABLE FOR
STATE OF NEVADA LAKE TAHHOE WATER QUALITY
AND EROSION CONTROL GRANTS**

**APPLICATION FOR FUNDS AVAILABLE THROUGH
THE NEVADA DIVISION OF STATE LANDS
IN CONJUNCTION WITH MATCHING FUNDS ALREADY APPROVED
FROM THE US FOREST SERVICE**

PROJECT PROPOSAL

*East Incline Village Phase I Water Quality Improvement Project
EIP No. 01.01.01.46*

February 15, 2013

Prepared by:

**Washoe County Community Services Department
Engineering and Capital Projects Division
1001 E. Ninth Street
PO Box 11130
Reno, NV 89520**

1.0 PROJECT SCHEDULE

In August of 2011 Washoe County (County) began scoping for the East Incline Village Phase I Water Quality Improvement Project (East Incline WQIP). The project boundary has morphed through the planning process and is now set. County staff and its consultants have completed site visits to identify project priorities, and initial estimates have been developed to provide planning level scope and budget for the project. The County is now prepared to make application for Nevada Division of State Lands (NDSL) for grant monies to facilitate planning, design, and construction of the project.

The County anticipates completing planning and design phases for this project between May of 2013 and December 2016. Anticipated project construction will take place during the 2015 construction season (May 1st to October 15th). Final project schedule is dependent on fulfillment of 100% grant funding by Nevada Division of State Lands and the US Forest Service, which is currently anticipated during the summer of 2012 and Spring of 2013. Table 1 provides a more detailed preliminary schedule.

Table 1. Proposed Project Schedule

Project Phases and Tasks	Dates
<i>Project Scoping and Grant Applications</i>	<i>January 2012 – May 2013</i>
<i>Planning</i>	<i>May 2013 - December 2015</i>
Surveying & Mapping	May 2013 – July 2013
Technical Advisory Committee (TAC) Kickoff	June 2013
TMDL Existing Conditions Conditions and Report	June 2013 – September 2013
TMDL Existing Conditions TAC Meeting	October 2013
PLRM Alternatives (FEA)	October 2013 – March 2014
NEPA Categorical Exclusion	June 2013 – March 2014
PLRM Alternatives TAC Meeting	April 2014
Regulatory Compliance & Permitting	May 2014 – June 2014
<i>Design</i>	<i>May 2014 – March 2015</i>
Design (30%, 60%, and 90%)	July 2014 – November 2014
Construction Plans, Specifications, & Estimates	December 2014 – February 2015
Advertise and Bid	March 2015 – April 2015
<i>Construction</i>	<i>April 2015 – December 2015</i>
Construction	May 2015 – October 2015
Construction Management	April 2015 – December 2015
<i>Project Management/Coordination</i>	<i>January 2013 – December 2015</i>

2.0 PROJECT PARTICIPANTS

The following list identifies the project partners (individuals and organizations) and their project roles.

Project Partners:

- Kimble Corbridge, P.E., CFM and Kristine Klein, P.E., Washoe County Community Services Department Engineering and Capital Projects Division - Project Proponent
- Rich Thomsen, Washoe County Community Services Department Operations Division - Project Proponent
- Elizabeth Harrison, Nevada Division of State Lands (NDSL) - Funding Partner
- Genevieve Villemarie, United States Forest Service- Lake Tahoe Basin Management Unit (USFS-LTBMU) - Funding Partner
- Ed Skudlarek, Nevada Division of Environmental Protection (NDEP) - TAC Member
- Tyler Thew, Nevada Department of Transportation (NDOT) - TAC Member
- Michael Pook, Nevada Tahoe Conservation District (NTCD) - TAC Member
- Tahoe Regional Planning Agency (TRPA) - TAC Member (EIP Staff to be determined)
- Michael Lefrancois, Incline Village General Improvement District (IVGID) – TAC Member
- Lumos & Associates Inc. (Lumos) - Washoe County Consultant

3.0 PROJECT SUMMARY

3.1 Project Description

Washoe County is requesting funds for the planning, design, and construction of the East Incline WQIP specifically to complete the surveying, mapping, stakeholder facilitation, public participation, regulatory compliance, permitting, environmental documentation, TMDL Existing Condition Analysis, PLRM Alternatives, preferred alternative design, construction plans, specifications, estimates, bidding, construction, construction management, project management/coordination, final design Pollutant Load Reduction Modeling, draft catchment credit schedule, and supporting documentation required to submit the project to the Nevada Department of Environmental Protection for acceptance and registration of Lake Clarity Credits. The project area is depicted in the Project Vicinity Map (*Figure 1*).

Project boundaries for the East Incline WQIP include Lake Tahoe to the south; Village Blvd and Incline Way to the west, Northwood Blvd and Highway 28 to the north; Country Club Drive and Incline Creek is a western boundary of the northeastern portion; Ski Way and the "Tomohawk subdivision are included to the east; and the watershed boundary between Incline Creek and Mill Creek borders to the southeast.

Determination of the project boundary was arrived at from several angles. First comparison of project boundaries of other ongoing EIPs were investigated and areas not currently being studied were considered. Field investigations were conducted to assess these area to identify high priority discharge areas. GIS analysis was used to identify sensitive areas, priority landuse areas, and watershed boundaries. And Washoe County maintenance personnel were consulted to identify and confirm recurring problem areas. A preliminary boundary was developed from this information in GIS. Washoe County also conducted a preliminary PLRM analysis to identify

priority areas.

This preliminary Boundary was used for initial funding requests. Recently the Nevada Tahoe Conservation District (NTCD), conducted a PLRM study of the Nevada side of the Lake Tahoe Basin identified as the. This study is referred to as the Nevada Jurisdictions Stormwater Load Reduction Plans Draft Technical Memorandum No.1 Baseline Conditions Report Commonly referred to the Nevada Baseline Conditions Report. This Study categorized all subwatersheds in 5 to 25 percentile increments relative to their modeled pollutant loading volumes. Draft results of this study verify that the majority of the East Incline WQIP project area is in the 50th percentile or higher for pollutant loading volumes. The project boundary was recently modified in small areas in the eastern portion to add higher percentile loading areas and subtract remove percentile loading areas.

The County has already requested and was approved for funding of \$1,500,000 through the USFS Erosion Control Grant Program (Round 12) as matching funds for this application. The county now seeks \$1,500,000 through the State of Nevada Lake Tahoe Water Quality and Erosion Control Grant Program (Round 16) for a total amount of \$3,000,000 to implement the East Incline WQIP. A *Preliminary Budget Spreadsheet* is attached.

Proposed Improvements for the East Incline WQIP will address source erosion issues, water quality problem areas, impacts to SEZs, drainage, and infrastructure problems. The project will be designed to eliminate sediment production at the source, while providing regional treatment facilities and improvements to regional facilities to provide final treatment prior to discharge to Lake Tahoe. This project will include source control Best Management Practices (BMPs) for eroding cut slopes, unstable road shoulders, compacted/bare parking areas, and eroding drainage ditches throughout the project area. The need for drainage and treatment systems will be addressed through the existing conditions analysis, formulating and evaluating alternatives processes, and by PLRM analysis.

There is a potential for the inclusion of catch basins, stormdrain conveyance facilities, pretreatment vaults, retention/detention facilities, and infiltration basins. Functional and programmatic changes such as addition, elimination, or alteration of parking strategies or project coverage could be considered on a limited basis. New technologies such as porous pavement and Low Impact Development treatments could be considered in limited areas where appropriate (*Figure 2*). The intent of these improvements is to target and treat Total Maximum Daily Load (TMDL) pollutants (fine sediment particles (<16 microns) nitrogen and phosphorus) of concern.

Treatment structures will be subject to a cost benefit analysis so that all alternatives are considered. Road pollutants and storm water runoff will be collected and treated by the most appropriate method. Infiltration opportunities will be used, to the greatest extent practicable, to minimize peak flows and runoff volumes. The design will maintain or create distributed flow and prevent concentrated flow patterns wherever possible. The design will work within the parameters of protecting existing mature vegetation and natural drainage conveyances to the greatest extent practical. The project will reduce impacts to SEZs and improve SEZ and riparian areas as much as practicable.

The East Incline WQIP is composed of all or portions of older TRPA Environmental Improvement Program (EIP) projects *122, 230B, 230C, , 231B, 651, 669A, and 10068 (Figure 3)* and the proposed project has been assigned the current EIP # 01.01.01.46. In an effort to implement the TMDL, the project area boundary has been largely set by urban planning and PLRM

catchment areas defined by adjacent water quality improvement projects and by preliminary PLRM findings. Additional PLRM analysis as well as incorporation of findings made in the field may require modifications to the project boundaries to meet the goals and objectives the Lake Tahoe Total Maximum Daily Load (TMDL), the Lake Clarity Crediting Program and of the project itself.

3.2 Project Need

For previous Washoe County grant-funded projects the County has followed the prioritization of projects stated in the *Washoe County Environmental Improvement Program Project Assessment, Lake Tahoe Basin, Nevada* (Assessment) completed by Nichols Consulting Engineers, February, 2006. With the development and final Environmental Protection Agency (EPA) approval of the Final Lake Tahoe Total Maximum Daily Load (TMDL), prioritization for project implementation has shifted away from widespread source control projects with regional treatments to outfall focused source control projects (within connected areas) with regional treatment protecting these outfalls. As a result Washoe County has identified the East Incline WQIP (a compilation of EIPs defined in the assessment) as the highest priority, currently unfunded project in Washoe County.

As opposed to other, next in priority, projects listed in the assessment, the East Incline WQIP is located closer to Lake Tahoe and has several direct connections to Rosewood, Third and Incline Creeks. The entire project area is located within these three Priority 1 watersheds (*Figures 3 and 4*). Given the steep gradient of these creeks, the outfalls to these creeks are considered directly connected to Lake Tahoe. Contributing areas conveying runoff to these outfalls include several dense commercial, residential/commercial, and multi-family residential areas interspersed with single-family residential and recreational areas (*Figure 4*). These areas contain several Priority 1 problem area sites, based on mapping in the assessment, and numerous Priority 2 and 3 problem area sites. Problem areas located in the project area, as depicted in the Assessment area mapped in *Figure 5*. Existing storm water treatment facilities are shown in *Figure 6*. Photos of some of the problem sites are included in the appendices as well and a photo location map is provided as *Figure 7*.

With the introduction of the TMDL and related tools including the Pollutant Load Reduction Model (PLRM), new standards for identifying and ranking problem areas will facilitate identification and prioritization of additional problem areas within the project area.

Problem Areas within the project area can be generally classified into the following categories:

- Concentrated urban runoff from dense commercial/multi-family residential areas discharging untreated or partially treated runoff through public lands and right-of-ways to outfalls directly connected to Lake Tahoe.
- Unstable and eroding roadside ditches, swales, and shoulders that collect and convey untreated road runoff, additional sediment and pollutants to stream outfalls.
- Substantial parking pressure on unstabilized roadside shoulders.
- Underperforming and non-functioning storm water treatment facilities (based on TMDL requirements) constructed prior to May 2004 which do not qualify for Lake Clarity Credits.

As part of the Lake Clarity Crediting Program Support Services Project, Washoe County

completed an existing conditions PLRM on a portion of the East Incline WQIP area. Results of this PLRM identified additional directly connected outfalls to streams within the project area. Baseline pollutant loads have also been determined for the portion of the project area that has been modeled. Subsequent site visits by Washoe County staff have identified additional outfalls to streams similar in nature, connectivity, and function as the modeled outfalls. Project planning will require further application of the PLRM to establish existing condition pollutant loads for the entire project area and to make determinations on the functionality of existing treatment facilities.

3.3 Project Delivery Process

For the East Incline WQIP Washoe County and its Consultant will use the PLRM, project cost (capital and long term) and the watershed approach concept in their design approach to guide alternative selection that reflects the goals of the TMDL and the Lake Clarity Crediting Program. The project will meet all regulations and design criteria set forth by the Tahoe Regional Planning Agency and Washoe County for drainage conveyance and water quality treatment facilities. The outcome will be the implementation of water quality improvements that benefit water quality and achieve the natural resource objectives of the Lake Tahoe Basin based on the project goals and objectives and the guidance provided by the technical advisory committee (TAC). The County will measure the successful achievement of the project objectives based on initial project goals and objectives and application of Washoe County's TMDL project delivery process goals and objectives.

The County is committed to implementing the project in a timely and efficient manner. The County has a proven 24-year track record of successfully implementing water quality and erosion control projects in the Tahoe Basin in a timely, efficient, and cost effective manner. The County and its Consultant will use a similar approach to that used on previous projects with the addition of new components to better meet the new TMDL requirements and revised guidelines. The project will include scoping and kickoff, TMDL Existing Conditions Analysis, PLRM Alternatives, Selection of a Preferred Alternative, regulatory compliance and permitting (including environmental documentation), stakeholder facilitation, public participation, design, bidding, construction management, construction, and project management and coordination.

4.0 CONCEPTUAL PROJECT GOALS, OBJECTIVES, AND ANTICIPATED RESULTS

The overall goal of the East Incline WQIP is to plan, design, and implement a Water Quality Improvement Project to improve water quality, to aid Washoe County in achieving TMDL load reductions, and to achieve the natural resource objectives of the Lake Tahoe Basin (i.e. TRPA thresholds). These goals will be accomplished using Washoe County's recently developed TMDL project delivery process combined with well planned and executed design and implementation. Preliminary project goals are presented below.

GOAL #1: Improve Water Quality

Improving water quality of storm water discharged from Washoe County right-of-way to Lake Tahoe is the primary goal of the East Incline WQIP. By meeting the objective of reducing and, in some cases, eliminating fine sediments (defined as less than 16 microns in diameter) from

storm water discharge; the quality of storm water discharge and hence, the water quality of Lake Tahoe and its streams will improve. Application of Washoe County's TMDL project delivery process, which includes using the PLRM to assist in alternative selection, will facilitate planning, design and implementation of a WQIP that will meet this goal and objective.

GOAL #2: Cost Effectiveness

In order to meet the TMDL sediment reduction targets, optimizing selection of BMPs to balance water quality benefit, constructability, capital cost, and long term maintenance costs is an important goal. Project alternatives will undergo a cost evaluation that compares capital and maintenance costs with BMP effectiveness to help determine the best alternatives for the project.

GOAL #3: Public Safety

Although the East Incline WQIP is not labeled or defined as a public safety improvement project, ensuring the project does not create adverse impacts to public safety and improving public safety where applicable is a goal of any public improvement project.

GOAL #4: Collaboration and Coordination

Where appropriate, collaborate and coordinate with other public agencies and private property owners on opportunities to improve water quality, increase project implementation efficiency, and minimize traffic delays during construction.

GOAL #5: Completion of TRPA EIP Projects

The TRPA has identified numerous environmental improvement program (EIP) projects throughout the Lake Tahoe Basin primarily defined by areas in need of water quality improvements. Completion of the East Incline WQIP will acknowledge the completion or partial completion of EIP #01.01.01.46.

5.0 OPERATIONS AND MAINTENANCE

Washoe County will develop an Operations and Maintenance Plan in conjunction with the selected design alternative and will include it as a supporting document to the Design Report.

Washoe County will provide project operation and maintenance for a minimum of 20 years after completion of project construction. Operations and Maintenance (O&M) is the financial responsibility of the County and is not included in this grant funds request. For structures which have lifecycles longer than 20 years, the County commits to maintaining these structures for the duration of their lifecycle. An operations and maintenance plan will be developed and implemented in conjunction with the selected design alternative as part of the design process. The Best Management Practices Rapid Assessment Methodology (BMP RAM) and Road RAM will be consulted to guide inspection and maintenance frequencies to ensure treatment BMPs are maintained to a functional condition.

Currently, the County maintains a database of storm water quality facilities under its purview in the Lake Tahoe Basin. The database tracks existing conditions and maintenance frequency for these facilities. Where applicable, the county tracks monitoring results of storm water as well. Improvements constructed for the East Incline WQIP will be added to this database to facilitate reporting on these facilities. Benchmark and threshold values for stormwater treatments will be established and documented. Washoe County will submit yearly Maintenance Reports that, at a minimum, identify the facilities maintained (including maintenance frequency), methods used, volume of material removed, and general breakdown of maintenance costs (including labor).

6.0 COST ESTIMATE

A preliminary cost estimate is provided in Table 2. Quantities for materials and improvements listed were derived by general estimates of locations and extents of the types of improvements required based on locations of outfalls and problem areas indicated on Figure 2. These improvements are preliminary only, and are subject to change as the project is developed. Some of the major improvements that contribute to the quantities listed are described below:

- Back of curb and slope stabilization along with stormdrain improvement along Ski Way above Fairview Blvd.
- Enlarge and re-design Ski Way basin at Ski Way and Country Club Drive.
- Curb and gutter improvements to improve eroding ditches, swales and shoulders along Country Club Drive, Incline Way, Lakeshore Blvd, and Southwood Blvd.
- Improve existing retention/infiltration basins at Incline Way (2), Highway 28 and Northwood Blvd, Lakeshore Blvd near Third Creek and near Incline Creek, and at Northwood and Fairway Blvd.
- New retention/infiltration basin between Incline Way and Highway 28.
- New retention/infiltration basins east of Incline Creek at Incline way and Lakeshore Blvd.

7.0 EASEMENTS/ACQUISITIONS

Washoe County anticipates that all improvements will be constructed within County right-of-way or on publicly owned land where water quality improvements are considered a preferred use. No permanent drainage or utility easements are anticipated to be required for this project. Temporary rights of entry and or construction easements may be required in various areas to facilitate access and construction mobility. Design of the project will consider these impacts and reduce the number of these temporary easements to a minimum, if not zero.

8.0 CONFORMITY

Throughout the planning and design process, Washoe County and its consultants will consider all local and regional land use plans and the requirements and guidelines set within. The East Incline WQIP will conform to these requirements and guidelines as well as to the codes and requirements of local, state, and federal jurisdictions.

East Incline Village Phase I WQIP
EIP's 122, 230B, 230C, , 231B, 651, 669A, and 10068.

TABLE 2. PRELIMINARY BUDGET SPREADSHEET
PRELIMINARY ESTIMATE OF PLANNING, DESIGN, AND CONSTRUCTION COSTS

CONSTRUCTION COST

ITEM NUMBER	QTY	UNIT	DESCRIPTION	BID UNIT PRICE	SUBTOTAL
1	1	LS	MOBILIZATION AND DEMOBILIZATION	\$50,000	\$50,000
2	1	LS	TEMPORARY BMPS & POLLUTION CONTROL	\$40,000	\$40,000
3	1	LS	TRAFFIC CONTROL	\$25,000	\$25,000
4	30,000	SF	AC PAVEMENT	\$8	\$225,000
5	10,000	LF	TYPE 2 ROLLED CURB AND GUTTER	\$45	\$450,000
6	4,000	LF	CORRUGATED HDPE STORM DRAIN PIPE	\$90	\$360,000
7	1,000	LF	ROCK TOE WALL	\$80	\$80,000
8	15	EA	STORM DRAIN MANHOLES	\$5,000	\$75,000
9	1	EA	SEZ RESTORATION (ROSEWOOD CREEK)*	\$200,000	\$200,000
10	2	EA	FILTER TREATMENT VAULTS	\$50,000	\$100,000
11	20	EA	CATCH BASINS W/SUMP (NEW OR RETROFIT)	\$4,000	\$80,000
12	3	EA	RETROFIT INFILTRATION EXISTING BASINS	\$40,000	\$120,000
13	2	EA	NEW WATER QUALITY TREATMENT BASIN	\$50,000	\$100,000
14	2,000	SF	ROCK SLOPE PROTECTION	\$40	\$80,000
15	3,000	SY	REVEGETATION TREATMENT	\$15	\$45,000
				SUBTOTAL	\$2,030,000

15% CONTINGENCY \$304,500

TOTAL \$2,334,500

PLANNING, DESIGN, AND PERMITTING

ITEM NUMBER	TASK	
1	PLANNING TMDL BASELINE ANALYSIS AND PLRM ALTERNATIVES	\$125,000
2	DESIGN	\$275,000
3	REGULATORY COMPLIANCE & PERMITTING	\$50,000
TOTAL		\$450,000

CONSTRUCTION MANAGEMENT

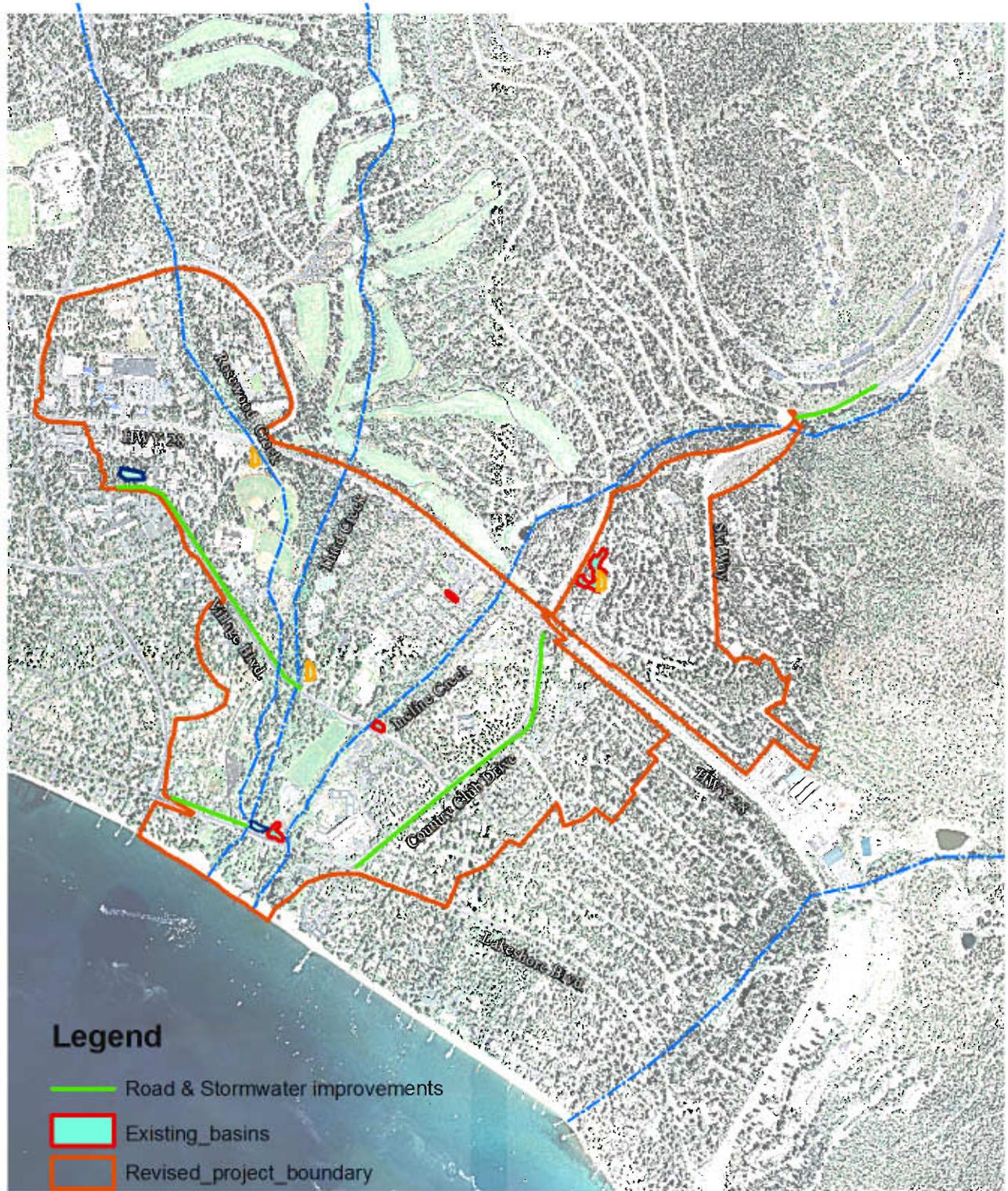
1	INSPECTIONS/TESTING/CM	\$150,000
2	SWPPP/BMP COMPLIANCE	\$25,000
3	AGENCY COORDINATION AND MEETINGS	\$20,000
4	PROJECT ADMINISTRATION	\$20,000
TOTAL		\$215,000

SUMMARY

1	PLANNING, DESIGN, AND PERMITTING	\$450,000
2	CONSTRUCTION COST	\$2,334,500
3	CONSTRUCTION MANAGEMENT	\$215,000

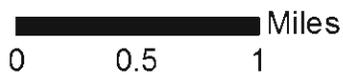
TOTAL \$2,999,500

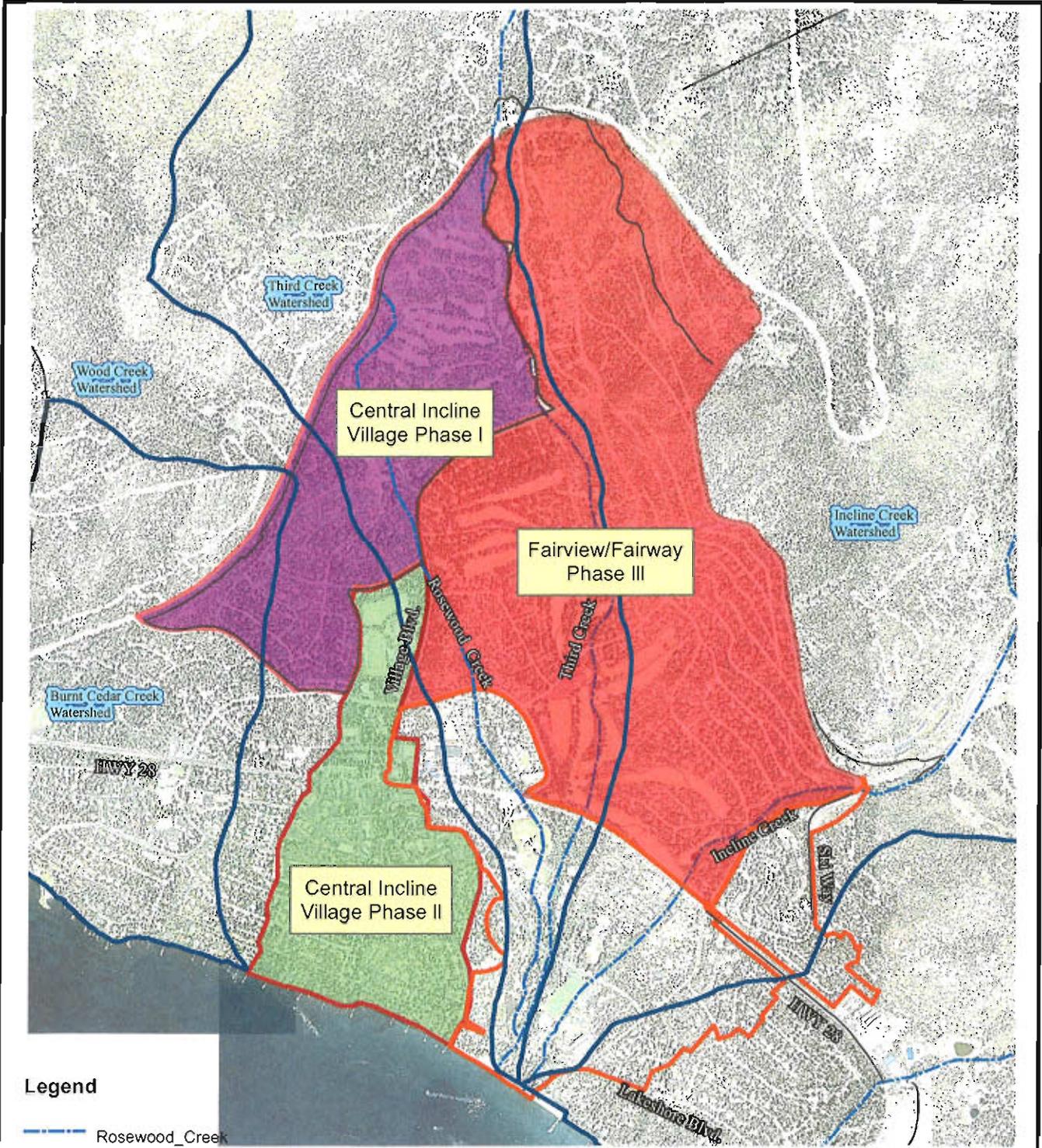
* Reroute of Rosewood Creek Upstream of Incline Way away and down-gradient of existing stormwater basin to prevent creek from routing to basin.



Legend

-  Road & Stormwater improvements
-  Existing_basins
-  Revised_project_boundary
-  Creeks
-  New Stormwater Basins
-  Retrofit Stormwater Basins





Legend

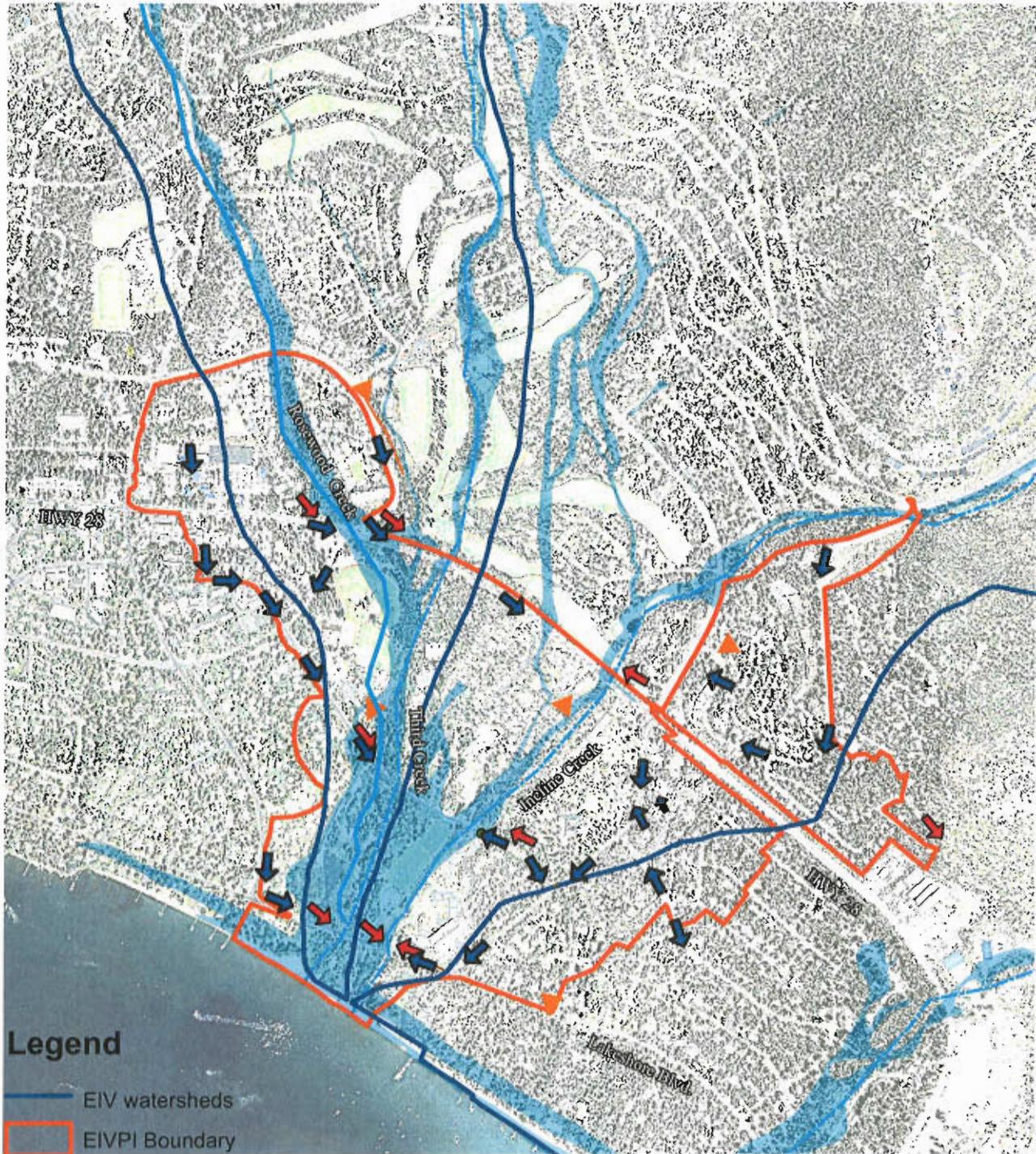
-  Rosewood_Creek
-  EIV watersheds
-  EIVPI_Boundary_modified_Feb_2013
-  Creeks
-  Water Quality Project Boundaries




 225 KINGSBURY GRADE SUITE A, P.O. BOX 3570
 STATELINE, NV 89449
 PH. (775) 588-6400 FAX (775) 588-6479

Washoe County
EAST INCLINE VILLAGE PHASE I
WATERSHED AND CURRENT WATER QUALITY PROJECTS MAP
 Washoe County Nevada

Date:	Jan., 2013
Scale:	NTS
Job No.:	NA
Figure:	3



Legend

-  EIV watersheds
-  EIVPI Boundary
-  Creeks
-  1b SEZ
-  Drainage Outlets
-  Flow Direction
-  Discharge Points



LUMOS
 & ASSOCIATES
 225 KINGSBURY GRADE, SUITE A, P.O. BOX 3570
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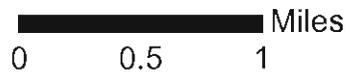
Washoe County
EAST INCLINE VILLAGE PHASE I
DIRECT CONNECTIONS TO LAKE TAHOE AND STREAMS MAP
 Washoe County Nevada

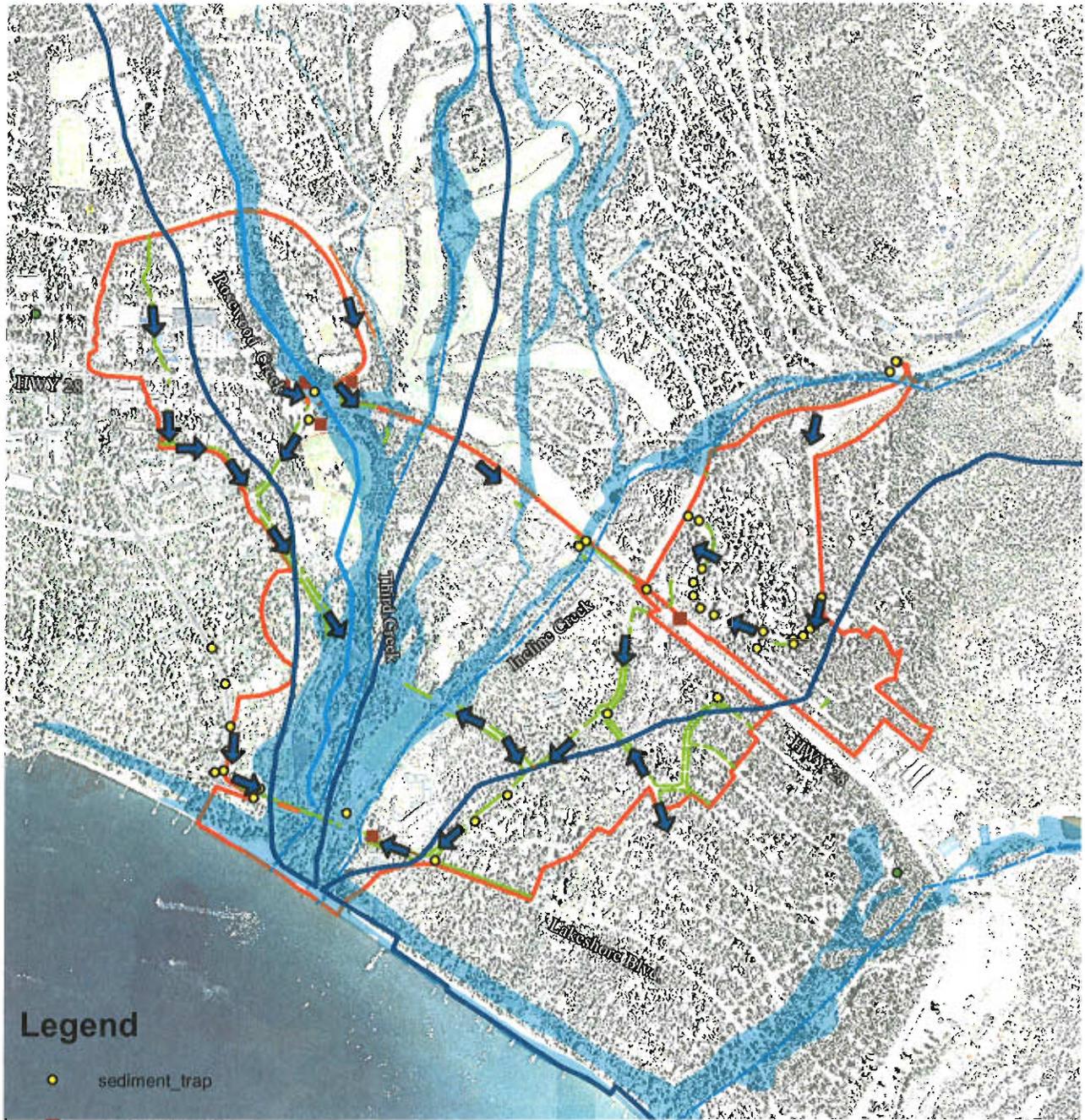
Date: Jan., 2013
 Scale: NTS
 Job No.: NA
 Figure: 4



Legend

- problem_area
- sediment_areas
- EIV watersheds
- Project Boundary
- 1b SEZ area
- - - Creeks





Legend

- sediment_trap
- Treatment Vaults
- EIV watersheds
- Conveyance Ditches
- - - Creeks
- EIVPI Boundary
- 1b_lines
- ➔ Flow Direction



LUMOS & ASSOCIATES
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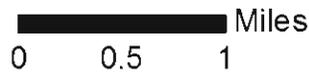
Washoe County
**EAST INCLINE VILLAGE PHASE I
 EXISTING SOURCES CONTROL AND TREATMENT BMP'S MAP**
 Washoe County Nevada

Date: Jan., 2013
 Scale: NTS
 Job No.: NA
 Figure: 6



Legend

-  Project Boundary
-  Existing basins
-  Creeks
-  Photo points



East Incline Village Phase 1 WQIP Project Area Photos



Photo #1: Roadside channel on Incline Way



Photo #2: Substantial Sediment Deposition North of Incline Way



Photo #3: Second roadside channel on Incline Way



Photo #4: Third roadside channel on Incline Way



Photo #5: Roadside Channel on Country Club Drive



Photo #6: Dry basin on Ski Way



Photo #7: Eroded channel on Tirol Drive