

ROUND 12 CAPITAL PROJECT NOMINATION FORM
LAKE TAHOE FEDERAL SHARE EIP CAPITAL PROJECTS
APPENDIX K

Project Name:	Community-Based Watershed Strategy	EIP Number: <i>(Required)</i>	16
Federal Agency Sponsor: <i>(Required)</i>	US EPA	Contact:	Jacques Landy
Threshold:	Water Quality, Vegetation	Phone Number:	(775) 589-5248
Threshold Standard:	WQ4-A, WQ5, V1	Email:	landy.jacques@epa.gov
FUNDING REQUESTED IN THIS ROUND:		\$ 1,184,835	

Federal Share EIP Consideration

Select "yes" or "no" for each question. If you have a "yes" response, briefly describe. *Projects must meet one or more of these 5 items.*

1. Does the project involve federal land? Yes No
 If yes, is the federal land involved important to successful implementation of the project?

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2. Is this project identified in the EIP? If yes, please ensure the EIP number is identified in the above project information box. If no, provide a description of the project's contribution to the EIP program. Yes No

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3. Does the project involve the conservation of a federal or regional threatened, rare, endangered, or special interest species? If yes, identify. Yes No

Depending on location of Area Wide Conservation Planning efforts and species present, species of special interest could be present.

4. Does the project involve an identified federal interest such as the detection and eradication of non-native invasive species (aquatic or terrestrial)? If yes, identify. Yes No

The Area Wide Conservation Plan will identify terrestrial invasive species, and may also identify aquatic invasive species in nearshore areas. Primary terrestrial species are identified and prioritized by the Lake Tahoe Basin Weed Coordinating Group.
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5. Does the project develop knowledge and/or information to develop future capital projects in the EIP? (such projects that fulfill this function would include technical assistance, data management, and/or resource inventories) Yes No

Area Wide plans encompass resource inventories and thus have the potential for guiding development of capital projects in the EIP. In addition, sediment control data will be collected which will provide additional knowledge

Check all Capital Focus Area(s) that apply (as defined in the Federal Vision):

- 1. **Watershed and Habitat Improvement**
- 2. **Forest Health**
- 3. **Air Quality and Transportation**
- 4. **Recreation and Scenic**

Check all that apply (must meet a minimum of one category):

- 1. **Continued emphasis on forest ecosystem health/fuels reduction projects considering the LTBMU Stewardship Fireshed Assessment and Lake Tahoe Basin Multi-Jurisdictional Fuels Reduction and Wildfire Prevention Strategy.**
- 2. **Continued implementation and/or completion of projects approved in Rounds 5 through 11 which implement the EIP. Project proposal should clearly describe the phase/product being produced along with the consequence of not completing the project phase proposed for Round 12.**

List Previously Approved Rounds and funding(provide project titles):

Round 9 (\$150,000) and Round 11 (\$832,353) Area Wide Conservation Planning (under Natural Resources Conservation Service sponsorship)

- 3. **Project is consistent with and contributes toward TMDL pollutant reductions within the four source categories (atmospheric, urban & groundwater, forested uplands, and stream channel). NOTE: If “yes”, then please respond to questions in the Accomplishments section of the nomination proposal.**
- 4. **Control of aquatic invasive species and prevention and/or detection of new aquatic invasive species.**

Project Nomination Proposal Outline

Project Summary (a brief summary which clearly describes the proposed project –maximum 200 words)

- Summarize ONLY the Round 12 project (also summarize scaling of funding to be described in more detail in the “Project Description” section below).

Implement Community-Based Watershed Strategy in key area(s) in California and Nevada to facilitate and provide technical assistance to enhance delivery of Environmental Improvement Program (EIP) projects and implementation of the Lake Tahoe Total Maximum Daily Load (TMDL) within watershed boundaries. Create stakeholder groups in each watershed, develop targets of opportunity in relation to EIP process and provide design and implementation support to the jurisdictions within the watershed. Address inter-related natural resource issues such as soil and water conservation, stormwater runoff, native and invasive species management, fuels reduction through creation of defensible space, water conservation and drinking water protection at a watershed level to enable residents and agencies to collaborate on strategies, solutions, and EIP implementation. This project targets outreach and coordination efforts at the watershed scale, as well as providing, if resources permit, technical assistance to developed single-family residential property owners on the design and installation of retrofit BMP's targeting pollutants in stormwater runoff. Finally, the project continues the commitment to homeowner and private landowners to support their required BMP retrofit program responsibilities through continuation of technical assistance program planning support that the Conservation Districts are currently supplying.

Project Description

Introduction

- Provide project background which explains the situation and state the problem and how it will be addressed.

Note: Focus needs to be the project in Round 12 not a history of an ongoing project or program.

Community-Based Watershed Strategy will facilitate conservation planning in support of EIP and TMDL implementation within key watersheds in California and Nevada. The full range of inter-related resource concerns present in those watersheds will be addressed to gain maximum cumulative environmental benefits and community participation.

Currently, specific Environmental Improvement Program (EIP) projects such as BMP Retrofit, local erosion control projects, and stream channel restoration work are delivered on a basis of land ownership. Each property owner or municipal jurisdiction is responsible for independently delivering their “share” of EIP projects. This approach misses opportunities for collaboration among adjacent interests to work cooperatively to achieve mutually beneficial results. On the other extreme, the broader scale of watershed planning is typically completed for the entire Lake Tahoe Basin, as in the TMDL process. The broad planning approach does not identify opportunities linked to the distinctive nature and composition of individual communities and natural resources found within a watershed. There is a need to conduct planning and facilitate TMDL implementation at a watershed scale to effectively deliver environmental improvements specific to watersheds and their communities.

This watershed-focus approach provides a greater opportunity to foster community (including private) participation in support of EIP/TMDL project implementation. Through targeted outreach efforts, land owners and community members are encouraged to play a central and substantive role in the stewardship of the watershed in which they live, and to take action to complete projects where they are integral to resource management success such as sediment and erosion control, fire defensible space, and controlling the spread of noxious weeds. Watershed scale emphasis will also provide for a greater ability to effectively coordinate among agencies for accelerated attainment of environmental thresholds and strategically contribute to the reduction of source category pollutant loads. Targeted watersheds will be selected based on (but not limited to) the following entities’ priorities: the science

community, the regulatory community, and the implementing jurisdictions, on an appropriate scale to match available resources and permit effective collaboration, community interest, and a mixture of proposed EIP projects and TMDL implementation opportunities that will benefit from enhanced coordination efforts.

- Describe what Round 12 is specifically funding; list the number of years the requested funding will cover; briefly describe how this project links into previous projects/rounds (identify and describe other round projects and funding received). Show scaling of project (reduced funding request and associated reduction in accomplishments).

***NOTE:** Focus should be on finishing current/phased projects. If project is new in Round 12, clearly identify if the project is for planning or implementation and how it will be completed with Round 12 funds. Identify if other funds will be needed to complete the project. Please identify total non-SNPLMA funds that are being contributed/dedicated to the proposed Round 12 project and the source of those funds.*

The Community-Based Watershed Strategy approach has direct linkage to past programmatic activities as developed through the Backyard Conservation Program and Area Wide Planning. The implementation of conservation planning objectives will be an extension of past efforts that have been made to raise environmental awareness and to increase public participation and agency collaboration. Round 12 funding is requested to cover a two year period to complete watershed planning in a minimum of six watersheds with a minimum of two watersheds in California and two in Nevada. Incorporated in the plans will be delivery of conservation objectives including plans for sediment control and resource protection in coordination with fire defensible space, and reporting to demonstrate the value and accomplishments of utilizing area wide conservation planning. Opportunities to treat stormwater in constrained areas will be identified as appropriate. As resources permit, a portion of the project will continue to fund technical support to basin landowners in the area of the backyard conservation program currently implemented by the local conservation districts outside the plan area for natural resource concerns such as sediment control, BMP retrofit and noxious weeds.

Round 9 and 11 funding is for Area Wide Conservation Planning in other identified watersheds.

This project is scalable but would require decreasing the number of watersheds and technical assistance available to homeowners correspondingly, which would decrease the near-term accomplishments in sediment reduction to Lake Tahoe. An estimated 25% scaling would remove the \$100,000 proposed to be used for monitoring support (as described on pp. 8-10) and remove one watershed planning area for an additional \$150,000 and well as a corresponding slight reduction in IDC to EPA. The total project budget would be reduced to \$895,835.

- Describe the “readiness” of this project to move forward (urgency, capacity, capability, environmental documentation, interagency agreements, etc).

This project will continue to build on the Area Wide Conservation Planning efforts conducted through SNPLMA round 9 and 11 and the BMP retrofit program funded thru previous rounds.

- Describe partnerships for this project. (if applicable, project should identify and describe committed/secured partner funding and/or other partner contributions and how it is integrated into the project).

An existing partnership between the Natural Resources Conservation Service (NRCS), the Nevada Tahoe Conservation District and the Tahoe Resource Conservation District currently provides technical assistance on conservation issues to private landowners within the Tahoe Basin through the “Backyard Conservation Program.” An MOU outlines responsibilities among these

agencies and TRPA for the BMP Retrofit Program. If Resource Conservation Districts (RCDs) are selected to implement this project, the U.S. EPA would sign on to the existing partnership between NRCS and the Nevada and California RCDs. The MOU with TRPA could also be revised if necessary.

Cooperative Extension in Nevada and California supports some educational aspects of the program. These partnerships have continued with the initiation of Area Wide Planning as funded in SNPLMA Rd 9. EPA will work with NRCS to continue to develop and expand on partnerships as we move forward with Rounds 11 and 12. As an example, the community orientation of this project would continue and increase partnership efforts between the erosion control partnerships and the local fire districts, the Firesafe Council, public utilities, other Federal and State agencies and active coordination with local jurisdictions to effectively deliver outreach and education programs, effectively utilize resources, and facilitate collaboration in developing specific solutions to water quality problems within the geographic areas of interest. Another example is that Cooperative Extension, and ideally members of the Tahoe science community, could participate in programmatic evaluation and a project Technical Advisory Group to ensure continual improvement of the program.

In addition, the Tahoe Resource Conservation District was recently awarded \$293,000 from the California Department of Conservation to fund a watershed coordinator for the Lake Tahoe Basin. Beginning in spring 2011, the watershed coordinator will work with partnering agencies to address water quality and natural resource issues within the Lake Tahoe watershed through collaborative, community-based watershed management efforts such as the Areawide Conservation Planning program.

Note: The form requests information about project goals, objectives, accomplishments, and questions the program is designed to answer across several different sections. These issues are closely linked and your individual responses should provide a cohesive description.

Goal – Purpose and Need (“larger” statement of future expected outcome – usually not measurable)

The Goal – Purpose and Need of Community-Based Watershed Strategy is multi faceted. The first and perhaps dominant role of Area Wide Conservation Planning in the Tahoe Basin is the BMP retrofit connection, coordination and integration with other threshold related activities within an area. Landowners are faced with satisfying different and sometimes conflicting threshold needs on their property. An example here is fire defensible space and best management practices. Another benefit of Area Wide Planning would be to create a study area for scientists to focus their effort. The benefits of sediment control on a single residential parcel are difficult to measure; however, combining these efforts through a watershed plan would compound the benefit seen on individual parcels and could result in a measurable benefit. This would provide a strong connection to the TMDL and the Pollutant Load Reduction Model. Due to the focused nature, it is hoped that this planning effort will trigger action on the part of other stakeholders in the basin. In the reciprocal, the area chosen will be based on where efforts are being focused.

In summary the Goal – Purpose and Need:

- Complete area wide conservation planning in high priority Lake Tahoe basin watersheds to motivate measurable improvements in specific resource objectives.
- Complete area wide conservation planning in high priority Lake Tahoe basin watersheds to enhance the delivery of Environmental Improvement Program projects, and to enhance implementation of the Lake Tahoe TMDL.

Objectives (specific measurable statements of action – Round 12 only - which when completed will move towards achieving the goal)

Note: Objectives will form the basis for the milestones/deliverables to be identified in Appendix B-8

- Describe how fulfilling objectives will contribute to the achievement of one or more environmental thresholds (air quality, water quality, soil conservation, vegetation, fisheries, wildlife, scenic, noise, recreation). Provide measures if applicable. For example: acres treated, miles of stream restored for each objective.

Goal 1: Complete area wide conservation planning in a minimum of six high priority Lake Tahoe basin watersheds to motivate measurable improvements in specific resource objectives.

Objective 1.1: Measurably increase the total number of private properties receiving a Certificate of Completion for water quality BMP's in the watersheds with area wide conservation plans.

Objective 1.2: Measurably increase the total number of private properties that have completed defensible space work for fire protection in the watersheds with area wide conservation plans.

Objective 1.3: Measurably decrease the total area of invasive plants/noxious weeds on private lands in watersheds with area wide conservation plans.

Objective 1.4: As appropriate, measurably increase the beach-front habitat that contains or is suitable for establishment of Tahoe yellowcress in watersheds with area wide conservation plans.

Goal 2: Complete area wide conservation planning in high priority Lake Tahoe basin watersheds to enhance the delivery of Environmental Improvement Program projects, and to enhance implementation of the Lake Tahoe TMDL.

Objective 2.1: Measurably increase the efficiency (i.e., reduce the time and cost) of implementing EIP projects in watersheds with area wide conservation plans.

Objective 2.2: Create new opportunities for scientific studies to inform the implementation of conservation efforts, and generate technical tools to aid implementation of the Lake Tahoe TMDL.

Objective 2.3: Facilitate agency coordination to streamline implementation of TMDL- and EIP-related activities.

The community-based Area Wide Plans will provide potential strategies for conservation of natural resources with a specific focus on sediment control and noxious weeds. Through the process of Area Wide Planning, strategies for sediment control and identification of noxious weeds will be made available to private parcels within the plan area.

The TMDL pollutant load reduction objectives are primarily focused on reducing fine sediment discharges in the urban upland land use, utilizing a watershed planning approach where appropriate. The urban upland land use is comprised primarily of residences, businesses and secondary roads. The US Army Corps of Engineers and Lahontan Regional Water Quality Control Board Report "*Methodology to Estimate Pollutant Load Reductions in Lake Tahoe*" identified that increased resource protection on private land, increased sanding management oversight and increased storm water treatment are all part of the solution. Furthermore, the adopted TMDL Report

(http://www.swrcb.ca.gov/rwqcb6/water_issues/programs/tmdl/lake_tahoe/docs/tmdl_rpt_no_v2010.pdf) states (pp. 11.14-15): "In highly complex or priority watersheds tributary to Lake

Tahoe, it may be appropriate for resource management agencies to undertake a more focused, watershed approach to TMDL implementation. ... Substantial work toward implementing the watershed approach is already occurring within the basin... The ... Areawide Conservation Planning program supports private landowner and community coordination and participation in the Environmental Improvement Program and other projects at the watershed scale.”

Vegetation thresholds were developed to increase plant diversity in forests, preserve uncommon plant communities, enhance late seral forests and reduce forest fuels, and maintain minimum populations of sensitive plants. The treatment of noxious weed populations achieves vegetation thresholds by increasing native plant communities, reversing habitat degradation and reducing fire hazard.

- Describe the estimated environmental risks from unintended consequences of the proposed project (if applicable).

Failure of the project would result in a status quo situation for EIP / TMDL implementation in the selected watersheds; while there is no anticipated negative impact from project failure, the expected positive net benefit would not be attained.

Accomplishments

- Describe the anticipated project accomplishments (i.e. products or identifiable environmental benefits being produced or implemented under this project), and how the project results/accomplishments will be communicated and made available to the public.

Note: Differentiate between direct and/or primary project effects and secondary and/or overall watershed effects.

Anticipated project accomplishments include an increase in the total number of private properties receiving a Certificate of Completion for water quality BMP's and that have completed defensible space work for fire protection, and a decrease in the total area of invasive plants/noxious weeds on private lands, in the watersheds with area wide conservation plans. If areas chosen for conservation planning are near the Lake Tahoe shoreline, anticipated project accomplishments will include an increase in beach-front habitat that contains or is suitable for establishment of Tahoe yellowcress in those watersheds.

Additional accomplishments include increasing the efficiency (i.e., reducing the time and cost) of implementing EIP projects in watersheds with area wide conservation plans, and facilitating agency coordination to streamline implementation of TMDL- and EIP-related activities. Finally, the project will include a rigorous scientific assessment component to enable adaptive management, and is expected to create new opportunities for studies to inform the implementation of conservation efforts and to generate technical tools to aid implementation of the Lake Tahoe TMDL.

In watersheds with area wide conservation plans, project accomplishments include:

- Provide solutions for sediment control, fire defensible space, water conservation and drinking water protection, invasive and noxious weeds, and other pertinent resource issues within the plan areas (a minimum six with a minimum of two in California and two in Nevada).
- Identify watershed stakeholders and encourage their participation in the identification, location, and design of community scale restoration efforts, targeting EIP and TMDL implementation. Provide the opportunity to scope projects that are planned. Increase

opportunities for partnerships and collective planning for EIP and TMDL implementation. Provide coordinated outreach and education efforts within communities to avoid duplication and conflicting messages, and make the best use of available resources.

- Allow for greater coordination and application of scientific information specific to the watershed areas.

Area Wide Planning on a minimum of six sub-watershed areas will also allow project team to directly transfer practices, methodology, lessons learned, etc to other key watersheds in the Tahoe Basin. Direct project effects/benefits include source control, assisting jurisdictions in meeting environmental standards, enhancement of natural/pre-development hydrologic cycle. Secondary effects/benefits include increased understanding and awareness of local environmental issues amongst community members, ability to transfer technology across sub-watersheds.

Completed watershed plans and associated planning materials and education products will be made available on District websites and through public meetings to discuss findings and alternatives.

- If you checked “yes” for the project being consistent with and contributing to TMDL pollutant reductions, please consider and integrate the following in the project description:
 - a) Describe whether, and how, the project demonstrates advanced, alternative, or innovative practices.

Community-Based Watershed Strategy is intended to provide opportunities for the research and development of improved infiltration systems through the application of knowledge gained over the past 6 years as well as adding the dynamic of the TMDL. This will be accomplished by the coordination with the science community, better coordination across property ownerships, and an increased emphasis on maintenance components of infiltration systems.

- b) If project includes project level monitoring, describe ability of proposed monitoring strategy to contribute to the state of TMDL knowledge. Also describe if purpose of the capital project is to conduct data collection and/or analysis related to Lake Tahoe clarity.

This project does not include direct project level monitoring, however, as described in Goal – Purpose and Need above this project is intended to create monitoring opportunities for the scientific community. The science community has shown significant interest in this project for the opportunities it provides. A portion of the project will focus on the collaboration with the science community.

- c) Describe treatment approach for reducing pollutants and/or measures to address connectivity between pollutant sources and Lake Tahoe or its tributaries. Identify target pollutants, and, to the degree feasible, provide quantitative estimates of project effectiveness at reducing pollutant loads (and/or a commitment to provide post-project estimates).

This project will create potential solutions for individual properties via the “area” plan for the larger area. These plans will identify needs for sediment control, identify infestations of noxious weeds, and provide coordination with other agencies for fire defensible space, wildlife, recreation, transportation and scenic resources. The project will also include a prediction of storm water volume and sediment reduction as a result of the implementation of the individual site plans.

d) If appropriate, describe whether, and how, the project can be combined or coordinated with other TMDL implementation projects.

It is hoped that this project will provide the opportunity to study the ability of best management practices to trap fine sediment and attenuate storm water volumes. This could then inform the TMDL and other tools such as the Pollutant Load Reduction Model.

Monitoring

- Describe the project monitoring that will be implemented as part of this project including:
 - List the questions the monitoring program is designed to answer.

Regarding Objective 1.1: Can the total number of private properties receiving a Certificate of Completion for water quality BMP's in the watersheds with area wide conservation plans be increased?

Regarding Objective 1.2: Can the total number of private properties that have completed defensible space work for fire protection in the watersheds with area wide conservation plans be increased?

Regarding Objective 1.3: Can the total area of invasive plants/noxious weeds on private lands in watersheds with area wide conservation plans be decreased?

Regarding Objective 1.4: Can the amount of beach-front habitat that contains or is suitable for establishment of Tahoe yellowcress in watersheds with area wide conservation plans be increased?

Regarding Objective 2.1: Can the efficiency (i.e., reduction in the time and cost) of implementing EIP projects in watersheds with area wide conservation plans be increased?

Regarding Objective 2.2: Can the number or nature of opportunities for scientific studies to inform the implementation of conservation efforts, and generate technical tools to aid implementation of the Lake Tahoe TMDL, be measured?

Regarding Objective 2.3: Can areawide conservation planning facilitate agency coordination to streamline implementation of TMDL- and EIP-related activities?

- Describe any coordination with, or input from, the science community on monitoring and adaptive management that has occurred on the development of this nomination and what changes (if any) to the project were made as a result of this input.

Meetings have been held with various members of the science community. These meetings have focused on how this project can provide assistance to the scientist and their research needs. As an example, it is difficult to measure the downstream effects of sediment control on a single parcel, but easier to see the effects of sediment control practices in the aggregate in a contiguous area. This project will benefit the research needs of the Tahoe Basin by coordinating efforts and providing a "laboratory" for the science community.

Furthermore, a draft of this nomination was the subject of a programmatic review by the Tahoe Science Consortium (TSC), the results of which are documented in a memorandum entitled: "Science Review of the NRCS Lake Tahoe Basin Area Wide Conservation Planning Program" (TSC, March 1, 2011). Several recommendations of this review were directly incorporated into this revised nomination, and the project budget has been revised to accomplish them.

- Describe the methods and strategies (i.e. monitoring, research, or both) that will be used to verify whether the project goals and objectives have been met? (*Note: A detailed monitoring plan and/or research plan is not required, however, enough detail must be provided to allow someone that is unfamiliar with the project to understand and evaluate the proposed methods and strategies.*)

Four activities will be pursued as the foundation of EPA's program evaluation strategy:

1. On-the-ground sampling within a subset of the watersheds selected for area wide conservation plans to provide quantitative data that will inform objectives 1.1, 1.2, 1.3, 1.4. More or less equivalent effort should be applied in both California and Nevada. Sample sizes should be large enough to support the development of summary statistics (e.g., estimates of means and variability). Sampling will likely need to be repeated over time (e.g., one, two, and five years after completion of the watershed plan) to allow EPA to understand how implementation of the plans perform over time. The EPA, in conjunction with Resource Conservation Districts (if selected to implement this project), may need initial help to develop and document sampling and reporting protocols, but it is expected that Resource Conservation District staff would complete the data collection, analysis, and reporting.
2. Standardized surveys of residents within a subset of the watersheds selected for area wide conservation plans. These surveys would serve to inform objectives 1.1, 1.2, 1.3, 1.4 as to success or failure. Survey results also would inform EPA about its effectiveness in public education and outreach, and could be useful input for identifying strategies to improve future planning efforts in the context of adaptive management. These surveys should be repeated on some recurring basis (e.g., once every three years). Resource Conservation District staff will consider working with CA and NV Cooperative Extension representatives regarding survey design and implementation. Resource Conservation District staff will analyze and report the survey results, or contract out for this work.
3. One-on-one interviews with agency representatives implementing EIP projects could be used to evaluate the Area Wide Conservation Planning Program relative to objectives 2.1 and 2.3.
4. Establish a standing Technical Advisory Group (TAG) to increase interaction between the science and planning communities, help to frame key management questions, provide advice on program direction, and provide advice on emerging issues. The TAG will provide an immediate and cost effective way to make progress on objective 2.2 through identification and framing of specific questions, such as:
 - a. Studies that aim to validate and refine the Pollutant Load Reduction Model (PLRM).
 - b. Studies to understand and quantify infiltration rates and processes.
 - c. Studies to determine if parcel scale water quality BMP's can result in pollutant load reductions at the catchment scale.

- Describe whether the monitoring or research associated with this project fits into or is part of a larger monitoring or research program.

This project fits into a larger monitoring program by providing opportunities for research. One of the current challenges is determining the effectiveness of sediment control structures. This project intends to provide opportunities to answer this question.

This project will also provide information relevant to EIP #'s 10109 (BMP EFFECTIVENESS) and 10111 (LOADING RATES FROM STORMWATER RUNOFF). One objective of program evaluation activity #1 on p.10 above is to assess the effectiveness of treatment applications in select sub-watersheds representative of the various physical constraints associated within the sub-watersheds in relation to flow, sediment capture and volume. This information can be integrated with the scientific, regulatory and local jurisdictional communities for purposes of the TMDL and TMDL implementation strategies such as the Pollutant Load Reduction Model and the Lake Tahoe Clarity Crediting Program. Demonstration sites will be selected within the sub-watersheds that will show the effectiveness of BMP implementation.

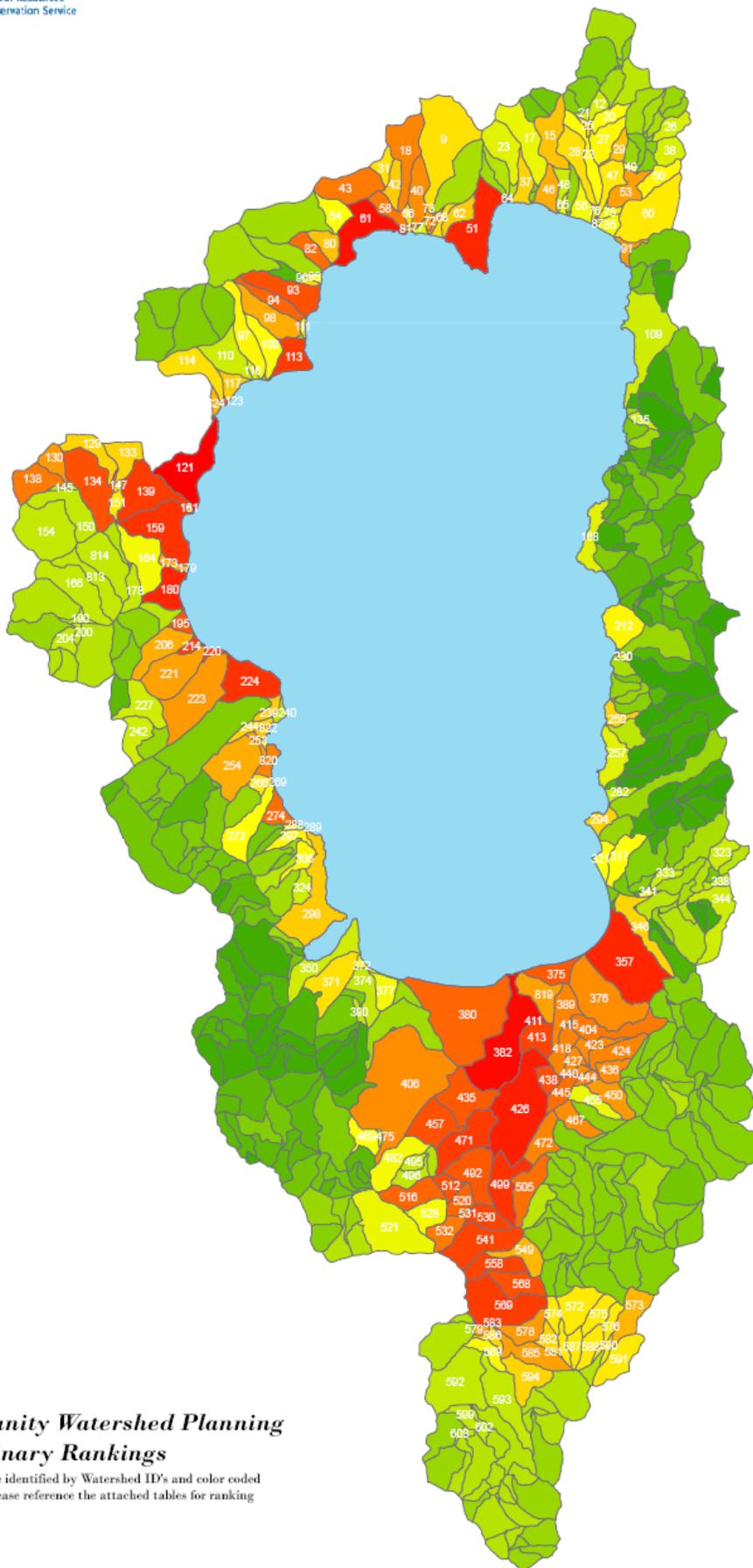
- Describe how information from the monitoring and/or research will be used to improve the continued performance of the proposed project or future similar projects.

Information provided from research will be used to improve the designs of sediment control structures, improve the integration of fire defensible space, noxious weed control, and improve the delivery and implementation of Best Management Practices.

Attachments

- If applicable, include 8 ½ X 11 map depicting the project

The attached map represents a preliminary ranking of Lake Tahoe Basin subwatersheds based on criteria and a process developed as part of the SNPLMA Round 9 Areawide Conservation Planning Project. The preliminary criteria and rankings of the top 50 California and Nevada subwatersheds are provided in the narrative and tables following the map.



**Community Watershed Planning
Preliminary Rankings**

Watersheds are identified by Watershed ID's and color coded by ranking. Please reference the attached tables for ranking scores.

Preliminary Ranking Criteria (*Please review and comment*)

A draft set of ranking criteria has been developed to identify priority sub-watersheds (587 watershed dataset) within the Lake Tahoe Basin. The ranking system once finalized will assist with the selection of project areas for Community Watershed Planning. Metrics were created using readily available data.

The following is a list of the ranking metrics used as well as their associated weight.

MAXIMUM SCORE = 65 PTS

SEDIMENT LOADING (15 PTS)

Sediment loading was determined based on the USGS data for major tributaries from 2000.

- 0 pts = 0.42-50 Tons/Year
- 6 pts = 51-150 Tons/Year
- 9 pts = 151-300 Tons/Year
- 12 pts = 301-500 Tons/Year
- 15 = 501-3568 Tons/Year

EROSION HAZARD (15 PTS)

Erosion hazard is the product of the weighted average of the following variables from the Universal Soil Loss Equation (RKLSCP):

- Kw (whole soil erodibility),
- LS (weighted average Slope with a length of 100')
- R factor (rainfall intensity)

Values are relative and range from 0.42 to 13891. Watersheds with less than 10 private parcels were given a score of 0pts.

- 5 pts = 0 – 1000
- 6 pts = 1001 – 2000
- 7 pts = 2001 – 3000
- 8 pts = 3001 – 4000
- 9 pts = 4001 – 5000
- 10 pts = 5001 – 6000
- 11 pts = 6001 – 7000
- 12 pts = 7001 – 8000
- 13 pts = 8001 – 9000
- 14 pts = 9001 – 10000
- 15 pts = 10000+

PROXIMITY TO EIP PROJECT (10 PTS)

Watershed with EIP projects within them were scored 10 pts, those without were scored 0 pts.

PERCENT BMP COMPLIANCE (10 PTS)

A parcel dataset was created using 2010 TRPA BMP data. Parcels with Certified, Constrained, or Security Released status were considered in compliance for the purposes of this metric.

1 pt = 100%	6 pts = 40 – 50%
2 pts = 80 – 90%	7 pts = 30 – 40%
3 pts = 70 – 80%	8 pts = 20 -30%
4 pts = 60 – 70%	9 pts = 10 – 20%
5 pts = 50 – 60%	10 pts = 0 – 10%

FIRE HAZARD (10 PTS)

Fire Hazard data was obtained from California (2009) and Nevada (2006) in Raster form. Each dataset included four classes of hazard ratings and an unmapped class. Rankings were developed based on the largest percentage of each type within the watershed.

0 pts Unmapped	8 pts Very high
2 pts Moderate	10 pts Extreme
5 pts High	

PRESENCE OF TAHOE YELLOW CRESS (5 PTS)

5 pts were awarded if Tahoe yellow cress has been reported in the watershed.

Community Watershed Planning

Preliminary Rankings for the top 50 California Watersheds

Watershed		Rankings and Metrics							state
		Sediment Loading (15pts)	Tahoe Yellow Cress (5pts)	EIP Proximity (10pts)	BMP Percent Compliance (10 pts)	Erosion Hazard (15 pts)	Fire Hazard (10 pts)	Score (65 Max)	
ID	Tributary Name								
121	WARD CREEK	12	5	10	8	15	10	60	CA
382	UPPER TRUCKEE RIVER	15	5	10	9	9	10	58	CA
61	TAHOE VISTA	12	5	10	8	11	10	56	CA
426	UPPER TRUCKEE RIVER	15	0	10	9	11	10	55	CA
180	EAGLE ROCK	12	5	10	9	8	10	54	CA
357	BIJOU PARK	9	5	10	8	12	10	54	CA
159	WARD CREEK	12	5	10	8	8	10	53	CA
224	GENERAL CREEK	12	5	10	9	7	10	53	CA
499	UPPER TRUCKEE RIVER	15	0	10	9	9	10	53	CA
113	DOLLAR CREEK	12	5	10	8	13	2	50	CA
139	WARD CREEK	15	0	10	8	7	10	50	CA
214	QUAIL LAKE CREEK	12	5	10	8	5	10	50	CA
471	UPPER TRUCKEE RIVER	15	0	10	9	6	10	50	CA
569	UPPER TRUCKEE RIVER	15	0	10	9	6	10	50	CA
220	MKINNEY CREEK	12	5	10	7	5	10	49	CA
413	UPPER TRUCKEE RIVER	15	0	10	9	5	10	49	CA
530	UPPER TRUCKEE RIVER	15	0	10	9	5	10	49	CA
541	UPPER TRUCKEE RIVER	15	0	10	9	5	10	49	CA
558	UPPER TRUCKEE RIVER	15	0	10	9	5	10	49	CA
93	CEDAR FLATS	12	0	10	8	8	10	48	CA
134	WARD CREEK	15	0	10	6	7	10	48	CA
438	UPPER TRUCKEE RIVER	15	0	10	8	5	10	48	CA
457	UPPER TRUCKEE RIVER	15	0	10	7	6	10	48	CA
512	UPPER TRUCKEE RIVER	15	0	10	8	5	10	48	CA
568	UPPER TRUCKEE RIVER	15	0	10	8	5	10	48	CA
195	MADDEN CREEK	12	0	10	10	5	10	47	CA
375	BIJOU CREEK	9	5	10	8	5	10	47	CA
435	UPPER TRUCKEE RIVER	15	0	10	7	5	10	47	CA
492	UPPER TRUCKEE RIVER	15	0	10	9	5	8	47	CA
94	CEDAR FLATS	12	0	10	8	6	10	46	CA
123	TAHOE STATE PARK	12	0	10	9	5	10	46	CA
380	CAMP RICHARDSON	6	5	10	8	7	10	46	CA
516	UPPER TRUCKEE RIVER	15	0	10	6	5	10	46	CA
520	UPPER TRUCKEE RIVER	15	0	10	8	5	8	46	CA
82	CARNELIAN CANYON	12	0	10	8	5	10	45	CA
274	PARADISE FLAT	6	5	10	8	6	10	45	CA
445	TROUT CREEK	9	0	10	9	7	10	45	CA
505	TROUT CREEK	9	0	10	8	8	10	45	CA
43	TAHOE VISTA	9	0	10	9	6	10	44	CA
58	TAHOE VISTA	9	0	10	10	5	10	44	CA
138	WARD CREEK	15	0	10	7	7	5	44	CA
404	TROUT CREEK	9	0	10	10	5	10	44	CA
532	UPPER TRUCKEE RIVER	15	0	10	9	5	5	44	CA
18	TAHOE VISTA	9	0	10	9	5	10	43	CA
389	TROUT CREEK	9	0	10	9	5	10	43	CA
418	TROUT CREEK	9	0	10	8	6	10	43	CA
424	TROUT CREEK	9	0	10	8	6	10	43	CA
444	TROUT CREEK	9	0	10	8	6	10	43	CA
472	TROUT CREEK	9	0	10	8	6	10	43	CA
820	SIERRA CREEK	6	5	10	7	5	10	43	CA

Community Watershed Planning

Preliminary Rankings for the top 50 Nevada Watersheds

Watershed ID	Tributary Name	Rankings and Metrics							Score (65 Max)	state
		Sediment Loading (15pts)	Tahoe Yellow Cress (5pts)	EIP Proximity (10pts)	BMP Percent Compliance (10 pts)	Erosion Hazard (15 pts)	Fire Hazard (10 pts)			
51	EAST STATELINE POINT	12	0	10	7	15	10	54	NV	
53	INCLINE CREEK	12	0	10	3	15	0	40	NV	
91	TUNNEL CREEK	12	5	10	8	5	0	40	NV	
46	BURNT CEDAR CREEK	12	5	10	5	7	0	39	NV	
15	WOOD CREEK	6	0	10	6	5	10	37	NV	
29	INCLINE CREEK	12	0	10	5	5	5	37	NV	
25	THIRD CREEK	9	0	10	3	5	8	35	NV	
37	SECOND CREEK	12	0	10	3	10	0	35	NV	
250	CAVE ROCK	0	0	10	8	7	10	35	NV	
294	MCFAUL CREEK	0	5	10	7	8	5	35	NV	
346	EDGEWOOD CREEK	0	0	10	10	5	10	35	NV	
28	THIRD CREEK	9	0	10	6	9	0	34	NV	
47	INCLINE CREEK	12	0	10	4	7	0	33	NV	
60	MILL CREEK	6	0	10	6	6	5	33	NV	
27	INCLINE CREEK	12	0	10	3	7	0	32	NV	
50	INCLINE CREEK	12	0	10	0	5	5	32	NV	
212	NORTH LOGAN HOUSE CR	0	0	10	6	6	10	32	NV	
20	INCLINE CREEK	12	0	0	4	5	10	31	NV	
22	THIRD CREEK	9	0	10	5	7	0	31	NV	
317	BURKE CREEK	0	5	10	9	7	0	31	NV	
321	BURKE CREEK	0	5	10	6	5	5	31	NV	
49	INCLINE CREEK	12	0	0	5	5	8	30	NV	
56	WOOD CREEK	12	0	10	2	6	0	30	NV	
65	BURNT CEDAR CREEK	12	0	10	3	5	0	30	NV	
75	INCLINE CREEK	12	0	10	3	5	0	30	NV	
85	MILL CREEK	12	0	10	3	5	0	30	NV	
17	SECOND CREEK	0	0	10	5	6	8	29	NV	
230	LOGAN HOUSE CREEK	0	0	10	9	5	5	29	NV	
23	FIRST CREEK	0	0	10	5	5	8	28	NV	
76	THIRD CREEK	12	0	10	1	5	0	28	NV	
87	INCLINE CREEK	12	0	10	1	5	0	28	NV	
168	DEADMAN POINT	6	5	0	7	5	5	28	NV	
257	SKYLAND	0	5	10	7	6	0	28	NV	
341	BURKE CREEK	0	0	10	8	5	5	28	NV	
12	THIRD CREEK	9	0	10	0	0	8	27	NV	
21	THIRD CREEK	9	0	10	0	0	8	27	NV	
26	INCLINE CREEK	12	0	0	0	5	10	27	NV	
38	INCLINE CREEK	12	0	0	0	5	10	27	NV	
48	BURNT CEDAR CREEK	6	0	10	4	6	0	26	NV	
109	SAND HARBOR	6	5	10	0	5	0	26	NV	
135	SECRET HARBOR CREEK	6	0	10	0	0	10	26	NV	
282	ZEPHYR CREEK	0	5	10	1	5	5	26	NV	
323	EDGEWOOD CREEK	0	0	10	9	7	0	26	NV	
333	BURKE CREEK	0	0	10	6	5	5	26	NV	
344	EDGEWOOD CREEK	0	0	10	8	8	0	26	NV	
64	FIRST CREEK	0	0	10	5	5	5	25	NV	
338	EDGEWOOD CREEK	0	0	10	8	7	0	25	NV	
4	THIRD CREEK	9	0	0	0	5	10	24	NV	
57	FIRST CREEK	0	0	10	4	5	5	24	NV	
256	LINCOLN CREEK	0	0	10	4	5	5	24	NV	
328	EDGEWOOD CREEK	0	0	10	9	5	0	24	NV	
347	EDGEWOOD CREEK	0	0	10	8	6	0	24	NV	

Appendix B-8

**LAKE TAHOE RESTORATION PROJECTS
ESTIMATED NECESSARY EXPENSES & KEY MILESTONE DATES**

Project Name:	Area Wide Conservation Planning	Agency:	US EPA
Prepared by:	Jacques Landy	Phone:	(775) 589-5248
SNPLMA Project #:	E___	EIP #:	16

Identify estimated costs of eligible reimbursement expenses:

1. Planning, Environmental Assessment and Research Costs (specialist surveys, reports, monitoring, data collection, analysis, NEPA, etc.)	\$ 100,000	8.4 %
2. FWS Consultation – Endangered Species Act	\$ _____	_____ %
3. Direct Labor (Payroll) to Perform the Project	\$ _____	_____ %
4. Project Equipment (tools, software, specialized equipment, etc.)	\$ _____	_____ %
5. Travel (including per diem where official travel status required to carry out project, such as serve as COR, experts to review reports, etc.)	\$ _____	_____ %
6. Official Vehicle Use (pro rata cost for use of Official Vehicles when required to carry out project)	\$ _____	_____ %
7. Cost of Contracts, Grants and/or Agreements to Perform the Project	\$ 900,000	76.0 %
8. Other Direct and Contracted Labor: Agency payroll for the Contracting Officer to do project procurement, COR, Project Inspector, Sec. 106 Consultation if required, NEPA Lead, Project Manager, Project Supervisor, and subject experts to review contracted surveys, designs/drawings, plans, reports, etc.; Also covered is the cost to contract for a Project Manager and/or Project Supervisor if contracted separately from other project contract(s)	\$ _____	_____ %
9. Other Necessary Expenses (see Appendix B-11): Indirect costs associated with implementing a project, such as support services, budget tracking etc.	\$ 184,835	15.6 %
TOTAL:	\$ 1,184,835	100 %

Estimated Key Milestone Dates:

Milestones/Deliverables:	Date:
A minimum of 6 Area Wide Conservation Plans	12/31/2014
Start Date	12/31/2012
Final Completion Date: 12/31/2014	

COMMENTS: