

## Appendix B-8

### LAKE TAHOE RESTORATION PROJECTS ESTIMATED DIRECT COSTS & KEY MILESTONE DATES

Project Name:	Chemical Control of Noxious Weeds	Agency:	U.S. Forest Service, LTBMU		
Prepared by:	Cecilia Reed	Phone:	(530) 543-2761	EIP #:	10184

SNPLMA Project #: \_\_\_\_\_

#### Identify estimated costs of eligible reimbursement expenses:

<b>1. Planning, Environmental Assessment and Research Costs</b> : monitoring	\$	5,000	1.7	%
<b>2. FWS Consultation</b> —Endangered Species Act	\$			
<b>3. Direct Labor</b> (Payroll) to Perform the Project	\$	15,000	5	%
<b>4. Project Equipment</b> tools, software, specialized equipment, safety equipment, pesticide application equipment (~\$5000), storage unit for pesticides (~\$10,000), container for transporting pesticides, etc.	\$	20,000	6.7	%
<b>5. Travel</b> (including per diem where official travel status required to carry out project, such as serve as COR, experts to review reports, etc.)	\$	1,500	.5	%
<b>6. Official Vehicle Use</b> (pro rata cost for use of Official Vehicles when required to carry out project)	\$	2,500	.8	%
<b>7. Cost of Contracts, Grants and/or Agreements to Perform the Project</b>	\$	200,000	66.7	%
<b>8. Other Direct and Contracted Labor:</b> Agency payroll for the Contracting Officer to do project procurement, COR, Project Inspector, Sec. 106 Consultation if required, 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 contracts)	\$	20,000	6.7	%
<b>9. Other Necessary Expenses</b> (See Appendix B-11)	\$	36,000	12	%
<b>TOTAL:</b>	\$	300,000	100	%

#### Estimated Key Milestone Dates:

Milestones/Deliverables:	Date:
Start NEPA	April 01, 2008
NEPA completion	April 31, 2009
Herbicide application	June 31, 2009
Public outreach and education	Throughout project
Complete Monitoring	November 31, 2010
Final Report Date	January 31, 2011
Project closeout	April 31, 2011

#### COMMENTS:

**This includes implementation of the herbicide program. Equipment purchase is a one time need.**

**APPENDIX K**

**LAKE TAHOE CAPITAL PROJECT PROPOSAL  
ROUND 9**

**Consistency with Lake Tahoe nomination criteria:**

Project nominations must qualify as an Environmental Improvement Program (EIP) project and be the responsibility of the federal government (federal share responsibility); and have a willing and ready federal sponsor.

Project nominations must be consistent with one of the focus areas in the June 2006 Federal Vision (pp. 8-9) (<http://www.fs.fed.us/r5/lbmu/documents/lbmc/revised-FV-Final.pdf>) and fit into at least one category.

**Capital Focus Area (2006 Federal Vision): \_Watershed and Habitat Improvement\_**

**Circle a minimum of one category:**

Circle is shown with ( )

1. Continued emphasis on fuels reduction in coordination with projects funded under the 2006 SNPLMA amendment (the "White Pine" amendment).
- (2.)** Continued implementation of projects approved in Rounds 5 through 8 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 9.

List project(s): Chemical Control Efforts for Noxious Weeds, Projects (Round 6: F055, Round 7 F082 , Round 8) and EIP 10184

3. Project is consistent with and contributes toward TMDL pollutant reductions within the four source categories (atmospheric, urban & groundwater, forested uplands, and stream channel).

List category(ies): Consistent with all categories and contributes to a reduction in TMDL pollutants within urban & groundwater, forested uplands, and stream channels

- (4.)** Control of aquatic invasive species and prevention of new aquatic invasive species.

<b>Project Name:</b> Chemical Control Efforts for Noxious Weeds	<b>EIP #:</b> 10184
<b>Lead Agency:</b> Lake Tahoe Basin Management Unit	<b>Contact:</b> Cecilia Reed
<b>Threshold:</b> Vegetation	<b>Phone Number:</b> (530) 543-2761
<b>Threshold Standard:</b> v-1 and v-2	<b>Email Address:</b> ccreed@fs.fed.us
<b>Funding Requested in this Round:</b> \$300,000	<b>Total Project Cost:</b> \$868,000 through R12

**Project Summary (maximum 200 words): (applicable ONLY to this Round 9 project):**

Since 2002, the Lake Tahoe Basin Management Unit has been inventorying, monitoring, and treating noxious weed infestations on National Forest System lands. All of the infestations are treated manually, either by clipping, digging, or pulling. Unfortunately, manual control efforts are not effective for all noxious weed species. Some infestations continue to increase in size despite repeated manual control efforts. Chemical control has been shown to be effective for those weeds that do not respond to manual control efforts. Therefore, the Lake Tahoe Basin Management Unit is continuing the NEPA process and

a contract for the development of the Environmental Impact Statement (EIS) will be awarded soon. Once the NEPA process is complete, the Lake Tahoe Basin Management Unit will start herbicide treatment of those infestations that have failed to decrease despite multiple years of manual control efforts. The focus of this round will be on initiating the herbicide treatment program to treat those species that require herbicide as a control measure.

**Detailed Project Description (focuses on what Round 9 is funding; list the number of years or phases the Round 9 requested funding will cover; if phased, briefly describe how this project links into previously phased projects including what remains for Rounds 10 and beyond).**

Invasive species have been identified as the second greatest threat to the health of the nation's forests and grasslands. They pose a serious threat to biological diversity because of their ability to displace native species, alter nutrient and fire cycles, decrease the availability of forage for wildlife, and degrade soil structure.

FY08 represents the sixth year of the invasive weed program on the Lake Tahoe Basin Management Unit (LTBMU). Each year, a full-time employee has coordinated the weed program and two to three seasonal employees have been hired to conduct the "on the ground" work, which consists of treatments and monitoring. To date, all treatments have been mechanical and consisted of pulling, clipping, and digging.

Unfortunately, despite five years of manual treatments, some weed infestations remain at the size they were initially or continue to expand. The following weed species have not been eradicated despite repeated manual control efforts: Canadian thistle (*Cirsium arvense*), tall whitetop (*Lepidium latifolium*), Dalmation toadflax (*Linaria dalmatica*), yellow toadflax (*Linaria vulgaris*), St. Johns wort (*Hypericum perforatum*), scotchbroom (*Cytisus scoparius*), ox-eye daisy (*Leucanthemum vulgare*), sulphur cinquefoil (*Potentilla recta*), Russian knapweed (*Centaurea repens*) and spotted knapweed (*Centaurea maculosa*). **There are a total of 156 sites, 59.06 gross acres, and 3.83 infested acres that required treatment in 2007. The acres at risk (protected by treating the infestations) ultimately are equal to the bulk of the open land acreage in the Basin, since – left untreated – the infestations would eventually affect all open land. The infestations have increased by 98 sites, 45.17 gross acres, and 2.75 infested acres since 2005.** The number of "infested" acres takes into account the percent cover of the weed species within the occurrence boundary (i.e. "gross" area). These noxious weeds occur in many of the LTBMU Management Areas and require a combination of control measures that include the use of chemicals to effectively manage their populations. Due to the long-term viability of noxious weed seeds, multiple treatments may be necessary. The herbicide application will begin upon completion of an environmental document and continue until the weed seed bank has been depleted (when monitoring shows seedlings no longer emerging).

**LTBMU is one of the few land owners in the Basin that has not implemented the use of herbicides to control weed infestations.** The Lake Tahoe Basin Weed Group, under permission from the Lahontan Water Quality Board (WQB), has been utilizing herbicides to control small weed infestations throughout the Basin for many years. Placer County, El Dorado County, and Douglas County have been using chemical herbicides to treat weed infestations. **In order to have a more effective weed control program, it is**

**imperative that the LTBMU include chemical control in an integrated weed management approach to treat expanding weed infestations.**

Round 9 will pay to finalize the environmental planning stage of this process and initiating the herbicide treatment program. As we get closer to awarding a contract for the NEPA portion of this project the cost estimates are much higher than previously expected; an additional \$200,000 has been incorporated into this proposal to pay for the NEPA contracting costs (estimated to be a total of \$300,000 – with \$100,000 coming from funding in previous Rounds). As part of the initiation process for herbicide treatment, a chemical storage unit will need to be purchased, together with a chemical storage attachment for a standard truck, safety equipment, herbicides, and herbicide application equipment. Additionally, the staff will need to be trained and certified in the use of herbicides. With these improvements, our weed control program will henceforth consist of a cohesive program that includes both herbicide use and manual control efforts to treat current and future infestations of noxious weeds. Future funding requests will likely decrease, as the chemical control program gets incorporated into the Noxious Weeds Program and the acres infested decrease.

**Describe the goals and objectives of the project (those applicable ONLY to this Round 9 project):**

- Prepare and finalize the EIS / NEPA document.
- Initiate the use of chemicals as a control measure. Start treating the 59.06 gross acres of noxious weeds that have continued to expand despite manual control efforts.
- Decrease the 72.7 gross acres of noxious weed infestations on National Forest System lands through an integrated treatment approach.
- Monitor infestations to determine changes in size, density, and distribution over time.
- Prevent the establishment of new invasive weed infestations and control the spread of existing infestations using appropriate integrated weed management treatments.
- Adaptively manage weed treatments by varying the treatment approach, timing, or application frequency, based on monitoring data.
- Work cooperatively with agencies and landowners to coordinate weed control efforts. Including members of the LTBWCG, volunteers, Special Use Permittees, and Forest Service staff.
- Increase public and staff awareness of invasive weeds, through training sessions, brochures, weed tours, and similar activities.

**Describe the anticipated project accomplishments (i.e. products or identifiable environmental benefits being produced or implemented under this project):**

Close out the NEPA contract and finalize the EIS / NEPA document. Begin herbicide application on 59.06 gross acres of National Forest System lands. Reduce the infested 3.83 acres of noxious weeds. Public awareness will continue to increase as a result of outreach and education efforts. Weed sites will continue to be inventoried, monitored, and mapped and data will be entered into the appropriate databases.

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

Awarding the contract for the preparation of an Environmental Impact Statement and/or other environmental document will occur in the spring of 2008. The NEPA process will likely take at least a year, after which herbicide application can commence (e.g. spring 2009). With Round 9 funding, we will be ready to move forward with herbicide treatment of noxious weeds.

**Describe partnerships for this project. (if applicable, project should identify partner funding [committed/secured] and how it is integrated into the project)**

In partnership with the Lake Tahoe Basin Weed Coordinating Group, LTBMU botany staff coordinates efforts to control noxious weeds in the Lake Tahoe Basin by meeting quarterly to discuss our programs. These discussions include, but are not limited to, control efforts, new noxious weed sites, progress on containment, interagency site mapping, threshold standards, and action plans. In addition to external partnerships, the Noxious Weed Group partners with the LTBMU Urban Lots Program in efforts to control noxious weeds on National Forest System Lands in the Lake Tahoe Basin.

**Describe the project monitoring that will be implemented as part of this project including:**

**1) The questions the monitoring program is designed to answer**

- Are the chemical treatments effective in controlling noxious weed infestations?
- What is the most effective mix of manual weed control efforts and herbicide use for the various infestations?

**2) The monitoring approach**

The following monitoring program will be used. Weed infestations that have not been effectively reduced in size by manual control will be evaluated for chemical control. Once the appropriate herbicide has been selected, it will be applied to the infestation. All pertinent details of the application process will be recorded. Follow-up monitoring on a monthly basis will take into account changes in the infestation size. Reevaluation of the weed control strategy employed will be necessary if the herbicide does not reduce the infestation size.

**3) Whether this project monitoring fits into a larger monitoring or research program**

This project monitoring is part of the LTBMU 5-year Adaptive Management Monitoring Plan, which outlines efforts to monitor various habitats and restoration efforts. The overriding purpose of this program is to determine the success of restoration projects, which includes herbicide weed treatments, in order to improve upon future projects.

Official monitoring of invasive species on National Forest System lands within the Basin began when the invasive weed program was initiated in 2002. FY08 represents the sixth

year of the invasive weed program. Each year infestations are revisited and monitored for changes in distribution and size. Data are collected and entered into national databases, as well as excel spreadsheets to show changes over time. Then distribution maps are updated and reviewed. Changes in infestation size over time are monitored to determine the success or failure of control efforts.

Additionally, the LTBMU works cooperatively with the LTBWCG in a collective monitoring report that is updated annually. This report includes changes in distribution and size of targeted noxious weeds, as well as a cohesive map of the Lake Tahoe Basin. This monitoring effort helps the group decide how to prioritize treatments and control measures for invasive species in the Basin for all partners in the LTBWCG.

**Describe these two items which will be considered along with the above project monitoring information by the Tahoe Science Consortium related to research and monitoring resource areas and the effectiveness of environmental restoration activities:**

**1) Describe the specific goals and objectives of the project and describe how fulfilling those objectives will contribute to the achievement of one or more environmental thresholds.**

**2) Describe the risk to the environment from failure of the proposed project (i.e. if the project fails what is the environmental consequence).**

The specific goal of this project is to reduce noxious weed infestations within the Basin. By fulfilling this objective we will be contributing to multiple environmental thresholds.

#### Water Quality (W)

Noxious weeds have been shown to increase rates of erosion due to changes in root structure, which affects water quality because of increased rates of sediment input. Controlling noxious weeds will help restore the environment and reduce sediment input.

#### Soil Conservation (SC)

Noxious weeds are known to change the diverse native ecosystem which contributes to a healthy soil structure to a single species system that degrades the natural soil structure. By controlling noxious weeds, the soil structure can return to its natural state.

#### Wildlife (W)

Noxious weeds reduce species diversity within healthy ecosystems which can negatively impact wildlife species that depend on a diverse ecosystem in order to thrive. By controlling noxious weeds, diversity can return to normal levels and support wildlife dependent upon native plants in order thrive.

#### Vegetation (V)

Noxious weeds negatively impact native plants through direct competition for nutrients, light, and water, which can lead to a decrease in species diversity within native plant communities. By controlling noxious weeds and reducing the competition in the environment, species diversity can return to normal levels.

#### Scenic Resources (SR)

Noxious weeds are known to reduce diversity, which can have a negative visual impact.

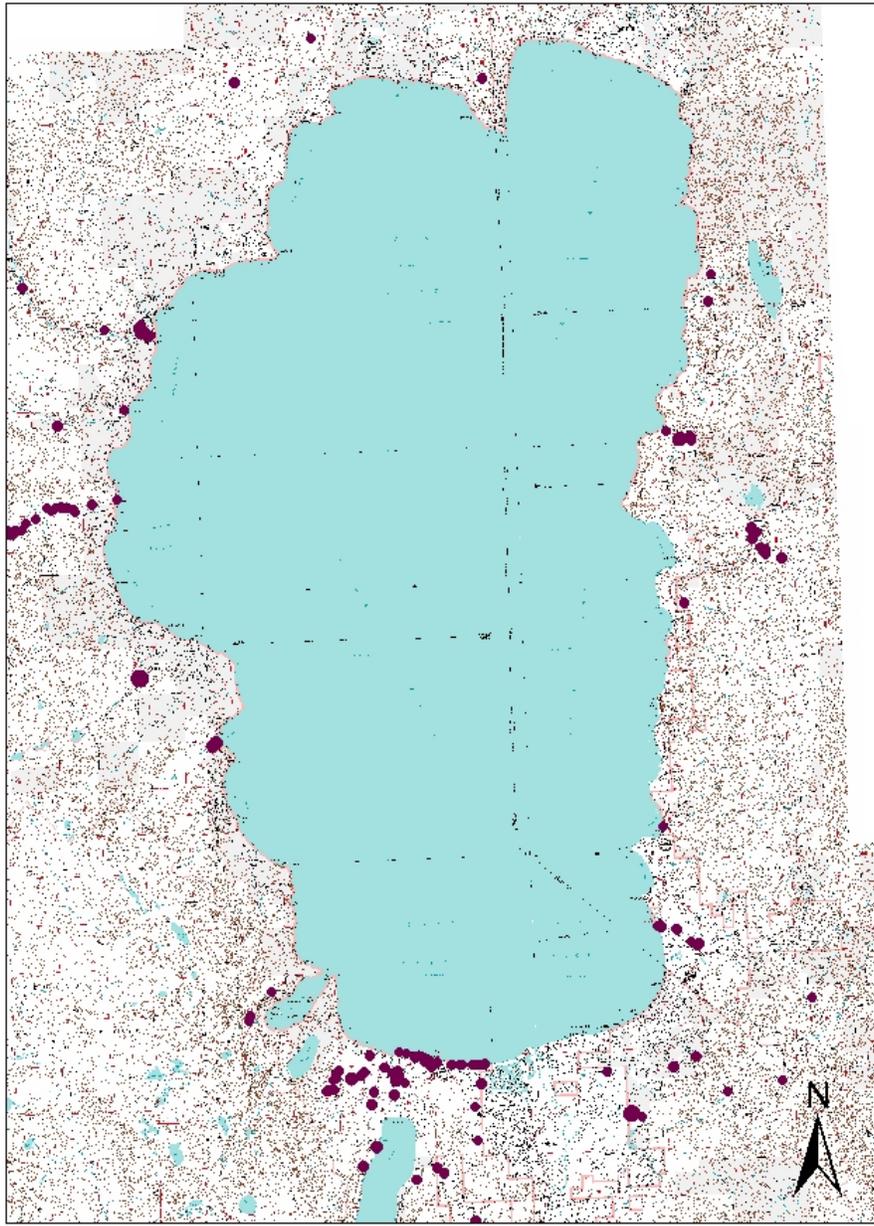
Removal of noxious weeds helps to restore species diversity and can increase the visual quality of the environment.

If the project were to fail, existing invasive weed infestations would spread more rapidly and newly introduced invasive species would form new infestations that could also expand unchecked. These populations would have a significant impact on native vegetation and consequently wildlife, by reducing the amount of native plants available for wildlife consumption and habitat. Water quality/availability, soil composition, and scenic resources would also be negatively impacted by increased weed infestations as described above.

**Describe how the project results will be communicated and made available to the public.**

Educational outreach will continue to occur at Earth Day and other public events. Posters will be submitted to local symposia, complete with monitoring results. An annual LTBMU weed report will continue to be prepared and made available upon request. The LTBMU will continue to work with the Lake Tahoe Basin Weed Group, which develops weed brochures, newspaper articles, and other information to alert the public of the problems that noxious weeds create.

**Noxious Weed Sites for 2007**



0 2,600 5,200 10,400 Meters

Created by Cecilia Reed  
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