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 #:_____

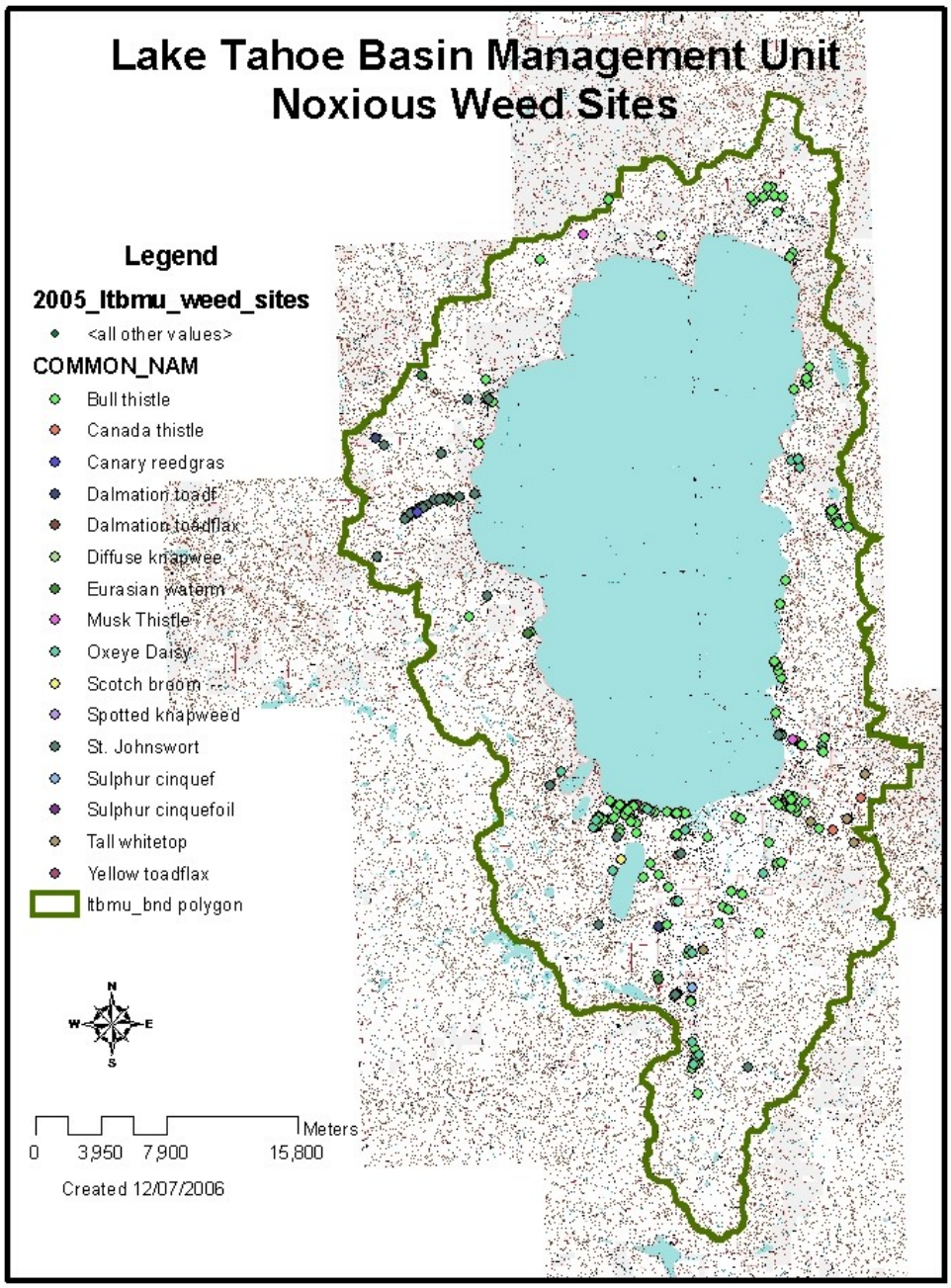
Identify estimated costs of eligible reimbursement expenses:

1.	**Planning, Environmental Assessment and Research Costs** (specialist surveys, reports, monitoring, data collection, analysis, NEPA, etc.)	$	2,500	4	%
2.	**Direct Labor (Payroll) to Perform the Project**	$	2,000	4	%
3.	**Project Equipment** (tools, software, specialized equipment, etc.)	$			%
4.	**Travel** (including per diem where official travel status required to carry out project, such as serve as COR, experts to review reports, etc.)	$	1,000	2	%
5.	**Official Vehicle Use** (pro rata cost for use of Official Vehicles when required to carry out project)	$	1,000	2	%
6.	**Cost of Contracts, Grants and/or Agreements to Perform the Project**	$	27,000	45	%
7.	**Other Direct Costs** (direct labor for agency personnel to do project procurements; COR; PI; personnel assigned as NEPA lead; personnel assigned to review contracted surveys, designs/drawings, reports, etc.; project manager and/or project supervisor; and contracted costs for project manager and/or project supervisor if contracted separately) These costs also include 2% for education and outreach.	$	21,000	35	%
8.	**Indirect Costs (10% of lines 1 to 6)**	$	5,500	9	%
	TOTAL:	$	60,000	100	%

Estimated Key Milestone Dates:

Milestones/Deliverables:	Date:
Prepare and award of NEPA contract	Winter 2007
NEPA completion	Winter 2008
Prepare and award herbicide application contract	Spring 2009
Begin herbicide application	Summer 2009
Public outreach and education	Throughout project
Final Completion Date:	Spring 2010

COMMENTS: Font in Bold highlights milestones accomplished with Round 8 funding.


Lake Tahoe Basin Management Unit
Noxious Weed Sites
Legend
2005_ltbmu_weed_sites
<all other values>
COMMON_NAM
Bull thistle
Canada thistle
Canary reedgras
Dalmation toadf
Dalmation toadflax
Diffuse knapwee
Eurasian waterm
Musk Thistle
Oxeye Daisy
Scotch broom
Spotted knapweed
St. Johnswort
Sulphur cinquef
Sulphur cinquefoil
Tall whitetop
Yellow toadflax
ltbmu_bnd polygon
N
W
E
S
Meters
0 3,950 7,900 15,800
Created 12/07/2006

APPENDIX I

LAKE TAHOE CAPITAL PROJECT PROPOSAL

Project Name: Chemical Control Efforts for Noxious Weeds	**Capital Focus Area:** WR/HI-15 WR/HI-16	**EIP #:** 10184
Lead Agency: Lake Tahoe Basin Management Unit	**Contact:**	Cecilia Reed
Threshold: Vegetation	**Phone Number:**	(530) 543-2761
Threshold Standard: v-1 and v-2	**Email Address:**	ccreed@fs.fed.us
Is this a multi-year Project? Yes	**Total Project Cost:**	$210,000
	Funding Request in this Round:	$60,000

Project Summary (maximum 200 words):

Since 2002, the Lake Tahoe Basin Management Unit has been inventorying, monitoring, and treating noxious weed infestations on Forest Service land. 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 planning to continue the NEPA process and award a contract for the development of an environmental document. Once the NEPA process is complete, the Lake Tahoe Basin Management Unit will award a contract for herbicide treatment of those infestations that have failed to decrease despite multiple years of manual control efforts.

Detailed Project Description:

Noxious weeds have recently been identified as the second greatest threat to the conservation of Forest Service lands. 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. Noxious weeds spread rapidly because they are often unchecked by natural predators that control native plant populations. They 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, as well as the wildlife species that depend on them. Noxious weeds have also been shown to increase rates of erosion due to changes in root structure, which affects the water quality of Lake Tahoe because of increased rates of sediment input.

Unfortunately, <u>despite four years (2003 thru 2006) of manual treatments, some weed infestations remain at the size they were initially or continue to expand</u>. Each year, a full-time employee has coordinated the weed program and two 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. Chemical control has been shown to be effective for those weeds that do not respond to manual control efforts. The 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. Placer, El Dorado, and Douglas counties have been using chemical controls to treat weed infestations on county lands. 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.

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*), and spotted knapweed (*Centaurea maculosa*). Successful control of these weeds will require a variety of integrated pest management methods. Herbicide use would provide another control option in combination with the manual methods currently being utilized.

The funding requested in this Round will be used to cover any costs needed to complete the NEPA process and implement the first year of chemical treatment of weeds in the Basin following completion of the NEPA process. The plan is to use the following herbicides: chlorosulfuron for tall whitetop and toadflax; clopyralid for spotted knapweed; glyphosate or clopyralid for Canadian thistle; and glyphosate for St. Johnswort. These herbicides are all appropriate for use in California and the Lahontan WQB agreed with a proposal submitted by the Lake Tahoe Basin Weed Group in 2003 to allow use of these herbicides on small infestations in the Basin. Because of 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). Both the writing of the environmental document and the herbicide application will be awarded as contracts.

Describe the goals and objectives of the project:

- 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 other agencies and landowners to coordinate weed control efforts.
- Increase public and staff awareness of invasive weeds.

Describe the anticipated project accomplishments:

An integrated weed management approach will increase the effectiveness of weed treatments, causing a decrease in the size and number of invasive weed infestations. Public awareness will continue to increase as a result of public education efforts. Weed sites will continue to be inventoried, monitored, and adaptively managed.

Describe the "readiness" of this project to move forward (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 2007. The NEPA process will likely take at least a year, and hopefully will be fully accomplished through funding received in previous proposals. This funding will be used to award an herbicide contract in the spring of 2008.

Describe partnerships for this project. (Include documentation):

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
(2) The monitoring approach
(3) Whether this project monitoring fits in to a larger monitoring or research program?

A final monitoring plan will be established during the NEPA process. It is anticipated the questions the monitoring program for chemical control will be designed to answer are:

1) What is the status of noxious weed infestations throughout the LTBMU? For example, are the gross and infested acres of weed infestations reduced over time with chemical control treatments?
2) Are the chemical treatments proposed to control noxious weed infestations effective? If not, what would a more effective control strategy be?

To answer these questions, the following monitoring program would 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. This monitoring is part of the LTBMU Forest Plan monitoring program, as described in LTBMU 5 Year Plan, 2006.

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

Results/accomplishments summarized in Annual Forest Monitoring Program Report, as well as project-specific monitoring reports. Project-specific monitoring reports will be produced one to five years after project implementation, depending on the variables being monitored and the questions to be answered.

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.

Include an 8 ½ X 11 map depicting the project.