

Secure Rural Schools and Community Self-Determination Act of 2000
Public Law 106-393

Title II Project Submission Form
USDA Forest Service Pacific Southwest Region
Shasta County Resource Advisory Committee

1. Project Number (Assigned by Designated Federal Official): _____

2. Project Name: Native Riparian and Rare Plant Species Conservation Project	3. County: Shasta
4. Project Sponsor: West Valley High School, Happy Valley Elementary School, and Sierra Pacific Industries.	5. Date: 03-08-2002
6. Sponsor's Phone Number: (530) 347-7171; (530) 357-2111; (530) 378-8151	
7. Sponsors E-mail: kstemmler@anderson.k12.ca.us; mkurth@shastalink.k12.ca.us; cjames@spi-ind.com	

8. Project Location (attach project area map)	
a. National Forest: Shasta-Trinity National Forest (Field and monitoring locations)	b. Forest Service District: Shasta Lake*, Hat Creek, and Weaverville Ranger Districts (field and monitoring locations)
c. State / Private / Other lands involved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Sierra Pacific holdings, Anderson Union High School District and Happy Valley Union School District (see maps)	
d. Location: Township 29N Range 5W Section(s) 2 (West Valley High School); Township 30N Range 5W Section(s) 15 (Happy Valley Elementary School); Various sites throughout the Shasta-Trinity National Forest and Sierra Pacific holdings.	

9. Statement of Project Goals and Objectives: (max. 7 lines) This project examines the ecological and management requirements of native riparian and rare plants. Native plants will be propagated in greenhouses by trained students, teachers, and Sierra Pacific Industries scientists, and out-planted on US Forest Service and private land. The project will further the knowledge of native and rare plant ecology by studying species habitat requirements, post-planting survival, and tolerance to disturbance. A natural resource education curricula and outreach program will be implemented in participating schools. This research will increase biological diversity, conserve rare plant species and their habitats, and contribute to watershed health, the reduction of soil erosion, and the maintenance of fish and wildlife habitat.

10. Project Description: (max. 30 lines.) California's flora is the largest in the nation; nearly 33% of this flora is considered rare, threatened, or uncommon, a total of 2,073 species. This project promotes rare and native plant research and education through the re-establishment of native species on US Forest Service and private lands. Seeds collected from public and private lands will be propagated in greenhouses at Happy Valley Elementary School and West Valley High School. There are two phases to this study: 1.) Construction of two greenhouses to be used to propagate rare and native plants. Greenhouses will be staffed by SPI and UC Berkeley researchers, a Natural Resources instructor, and student volunteers. Threefold replication of the study ensures a statistically valid experiment, increases the number of potential plantings, broadens the reach of educational impact, widens the scope of public information and outreach, and a viable source of conservation material (seedlings) remains in case of a loss of native wild populations or problems encountered with greenhouse conditions. 2.) Completion of native riparian and rare plant experiments. Projects will include the re-establishment of

native riparian vegetation, experiments to measure plant success under varying canopy cover, and the reintroduction of ultramafic specialist species (in conjunction with the Special Interest Plant Species of the Trinity Ultramafic Region Project (see question 11)). We will use the Natural Diversity Database (NDDB) to locate potential seed sources for rare and native plant propagation. Many of the known locations occur on US Forest Service lands.

This study has broad public involvement: it will benefit youth science education by engaging students in a hands-on exploration of native and rare plants and encouraging stewardship of public lands. It will aid the scientific community by adding to the body of knowledge of rare and native California flora. It will benefit communities by creating local jobs (Natural Resource Instructor, research staff, curriculum coordinator, and the construction/maintenance of greenhouses), expanding the local flora, and raising the awareness of the importance of native plant species and communities. Implementation of natural science curricula in area schools will help this project be self-sustaining. Forestlands comprise a large portion of this region; these experiments will lay the scientific groundwork for long-term adaptive management projects that investigate population persistence or re-establishment after the types of disturbance typical of timber harvest activities. The desired ecological outcome is an expanded local flora, with at least a 50% first-year survival of planted species and an increased knowledge of their habitat and site requirements. By determining the life histories and site requirements of native species, and through careful selection of seedlings to be used in field experiments, this project will more than exceed these basic objectives.

11. Coordination of this project with other related project(s) on adjacent lands?

Yes No **If yes, then describe** (max. 10 lines)

Sierra Pacific Industries (SPI), the Shasta-Trinity National Forest (STNF), the California Department of Fish and Game (DFG), and the University of California, Berkeley (UCB), is assessing the abundance and habitat requirements of approximately 50 Special Interest Plant Species (SIPS) that grow on or near a major region of serpentine soil in Trinity, Siskiyou, and Shasta counties, California. A number of these SIPS have potential habitat on private land managed for timber production, wildlife habitat, and water quality and on land managed by the Forest Service for multiple uses. The project's goals are to test an alternative sensitive plant survey method, to advance plant habitat characterization descriptions, and to better predict effects of land management activities on these habitats. Contacts: Cajun James, Sierra Pacific Industries, cjames@spi-ind.com; Susan Erwin, Weaverville Botanist, serwin@fs.fed.us; Julie Nelson, Shasta Trinity Botanist, jnelson@fs.fed.us.

12. How does proposed project meet purposes of the Legislation? [Sec. 203(b)(1)]

Improves maintenance of existing infrastructure. [Sec. 2(b)]

Implements stewardship objectives that enhance forest ecosystems. [Sec. 2(b)]

Restores and improves land health. [Sec. 2(b)]

Restores water quality. [Sec. 2(b)]

13. Project Type (check all that apply) [Sec. 203(b)(1)]	
<input type="checkbox"/> Road Maintenance [Sec. 2(b)(2)(A)]	<input type="checkbox"/> Trail Maintenance [Sec. 2(b)(2)(A)]
<input type="checkbox"/> Road Decommission/Obliteration [Sec. 2(b)(2)(A)]	<input type="checkbox"/> Trail Obliteration [Sec. 2(b)(2)(A)]
<input type="checkbox"/> Other Infrastructure Maintenance (specify): [Sec. 2(b)(2)(A)]	
<input checked="" type="checkbox"/> Soil Productivity Improvement [Sec. 2(b)(2)(B)]	<input checked="" type="checkbox"/> Forest Health Improvement [Sec. 2(b)(2)(C)]
<input checked="" type="checkbox"/> Watershed Restoration & Mntc. [Sec. 2(b)(2)(D)]	<input checked="" type="checkbox"/> Wildlife Habitat Restoration [Sec. 2(b)(2)(E)]
<input checked="" type="checkbox"/> Fish Habitat Restoration [Sec. 2(b)(2)(E)]	<input type="checkbox"/> Control of Noxious Weeds [Sec. 2(b)(2)(F)]
<input checked="" type="checkbox"/> Reestablish Native Species [Sec. 2(b)(2)(G)]	
<input checked="" type="checkbox"/> Other Project Type (specify) [Sec. 2(b)(2)]:Community Education/Outreach	

14. Measure of Project Accomplishments/Expected Outcomes [Sec. 203(b)(5)]	
a. Total Acres: 250,000	b. Total Miles: 1000
c. No. Structures: 2	d. Est. People Reached (for environmental education projects): 1500 (in first three years)
e. No. Laborer Days: 3670	
f. Timber: possible small group selection, 300 acres	g. Forage
h. Other Commodities	i. Economic Activity
j. Jobs Generated: 11	k. Other (specify):

15. Estimated Completion Date: [Sec. 203(b)(2)]

09-30-2005 (Estimated completion date for plant propagation work and rare plant trials is September 2005, but community education, outreach, and mentoring programs will be ongoing and self-sustaining)

16. How will cooperative relationships among people that use federal lands be improved?

[Sec. 2(b)(3)] (max. 12 lines)

Data from this project will benefit the scientific community, natural resource professionals (including the US Forest Service), and will improve forest management techniques by contributing baseline ecological information that will be integrated into adaptive management decisions. Increased knowledge of the habitat requirements of rare and native plants will improve vegetation management techniques and allow managers to make better informed decisions about the use of public lands. This type of science-based information is essential to formulate sound, reasonable land management strategies. This project will increase public education and awareness of rare and native flora. Through the development of an articulated natural resources curriculum among local schools that is programmatically linked to various public and private agencies, we provide a model for other cooperative projects. Further, the re-establishment of rare and native plants on federal lands will benefit community members who visit these lands and the federal employees who manage them.

17. How is this project in the best public interest? [Sec. 203(b)(7)] **Identify benefits to communities.**

(max. 12 lines)

This project combines a significant scientific research project on rare and native plants with the goal of educating middle and high school students and the local community. The project will contribute to new scientific understanding of the ecology of rare and native plants, while exposing students to cutting edge scientific research. Participating students will interact with researchers and natural

resource professionals to address the interface between science and resource management. Students will develop advanced educational and employment skills, which is paramount for this region in California. Sierra Pacific Industries scientists will help implement a more rigorous science curriculum that will guide students through the process of conducting scientific research: asking testable research questions, defining hypotheses, designing a research methodology, collecting data, organizing and summarizing data, analyzing data with simple statistics, and presenting research results. Scientists will be available for field trips and to demonstrate proper greenhouse techniques, including care of seeds, propagation, and plant care. Students will improve their ability to identify native vegetation.

18. How does project benefit federal lands/resources? (max. 12 lines)

This project benefits federal lands by fostering science-based management for native riparian and rare plants species. The ecological requirements for many of these species are unknown at this time and therefore the impacts of various management strategies are unknown. Through seed collection, propagation, out-planting, and experimental greenhouse trials, the project will contribute to a better understanding of the ecological and management requirements of these species. This information will lead to adaptive management approaches for these ecosystems. Better information on habitat requirements and tolerance to various types of management will lead to more informed decisions concerning potential impacts to these species. The re-establishment of rare and native plants will lay the foundation for future ecological studies throughout the region, as well as providing an opportunity to educate the community about California’s diverse flora. Many of these species are rare due to lack of seed source. Reestablishment of such plants in areas of suitable habitat will increase their dominance across the landscape.

19. Proposed Method(s) of Accomplishment (<i>check those that apply</i>)	
<input checked="" type="checkbox"/> Contract	<input type="checkbox"/> Federal Workforce
<input type="checkbox"/> County Workforce	<input checked="" type="checkbox"/> Volunteers
<input checked="" type="checkbox"/> Other (specify): Educational staff from West Valley High School, Happy Valley Elementary School, and Sierra Pacific Industries.	

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