

**Washington State Commission on Pesticide Registration
REQUEST FOR FUNDING**

PROJECT # _____

Project Title: Field Evaluations of herbicides for Knotweed Control.		
1) Applicant (user group) Name and Address: Pacific County Noxious Weed Control Board Pacific County Commissioners Office P.O. Box 187 South Bend, WA 98586		3) Project Contact Name and Phone: Kim Patten , Washington State University – Long Beach Research and Extension Unit, 2907 Pioneer Road, Long Beach, WA 98631; phone/fax: 360-642-2031; e-mail: pattenk@wsu.edu
2) Details of Project: Crop/Site <u>Riparian zone</u> Chemical <u>imazapyr & glyphosate</u> <small>(if specific to a particular chemical(s))</small> Pest Management Issue <u>Invasive Weeds</u> Pest <u>Knotweed</u>		4) Research Lead: Name, Institution Kim Patten , WSU Long Beach
5) Project Category: Check all that describe the focus of your project. Old Mandate <u>100%</u> <small>(see pg.1 of Guidelines for definition)</small> New Mandate <u>0%</u> <small>(see pg.1 of Guidelines for definition)</small> <input type="checkbox"/> GLP <input checked="" type="checkbox"/> Efficacy Trial <input type="checkbox"/> Integrated Pest Management <input checked="" type="checkbox"/> non-GLP <input type="checkbox"/> Phytotoxicity Study <input type="checkbox"/> Pesticide Resistance Study <input type="checkbox"/> Residue Study <input type="checkbox"/> Other _____		
6) Project Duration Start Date : <u>04/01/05</u> End Date : <u>03/31/06</u>		
7) Total Project Cost \$ 4,401 WSCP R Request \$ 2,051 Matching \$ 2,350		
8) Project Summary: Knotweed has become a very problematic weed species in Washington. Several million dollars are proposed for knotweed control in this biennium, but the current control options have been found wanting. Knotweed control research will be conducted to evaluate early season applications of several herbicides to large-scale riparian infestations of Bohemian knotweed in Pacific County.		
9) Signatures <i>I certify to the best of my knowledge that the information in this application is true and correct.</i>		
Printed Name of applicant: Bob Rose		Signature of Applicant
Title of Applicant: President, Pacific County Weed Board		Date Signed: Feb 12, 2004

Problem Description

Knotweed is designated as a Class 'B' Noxious Weed in the State of Washington. It is one of the worlds most invasive weed species. It is found in almost every county within the State of Washington. Several species are problematic in Washington. This includes Japanese knotweed (*Polygonum cuspidatum*), Himalayan knotweed (*Polygonum polystachyum*), giant knotweed (*Polygonum sachalinense*), and Bohemian knotweed (*Polygonum X bohemicum*, a hybrid of Japanese and giant knotweed). Based on recent survey data, Pacific County has one of the largest populations of knotweed in the Pacific Northwest (Dr. Grevstad, UW). The 2005 Washington House Bill 1423 states that "the legislature finds that the presence of invasive knotweed on public and private land threatens wildlife habitat, agricultural production, and environmental quality statewide. The legislature further finds that invasive knotweed found on private lands is a source of renewed infestation on public lands. The legislature therefore finds that it is in the public interest to protect public resources by making concerted efforts to control or contain invasive knotweed on both public and private lands statewide." Applicators have expressed frustrations with the currently available control options and although several million dollars are proposed for knotweed control in this biennium, none is allocated for research on control.

Small-scale infestations of knotweed can be controlled by stem injection, wiping or ground covers; these methods are not feasible for large-scale infestations. Foliar applications will work for these infestations, but they are also very problematic. They require late summer/fall applications when the canopy is 12-15+' tall and more than one year of treatment. Because of the tall stature of knotweed, it is very difficult to achieve good canopy coverage with foliar applied herbicides in dense riparian zones, without also damaging non-target plants. What is needed is a control program that can be used cost-effectively on large-scale infestations before the canopy has reached maturity. Based on our research with *Spartina*, the herbicide Habitat has potential to achieve control with an early to early mid-season application, well before full canopy size is reached. Field trials of this type of application have not been evaluated for knotweed. We propose to conduct knotweed control research that targets early season applications to large-scale infestations of Bohemian knotweed.

Ranking and Prioritization

Priorities:

This project fits within two priority categories:

Category B - Protection of the environment

- I. Protection of wildlife (e.g. birds, mammals, fish)
- II. Protection of natural resources (riparian habitat)
- III. Control of non-native, invasive pests

Category C - Importance to local or regional economy

- I. Existence of an emergency situation with no effective alternative
- II. Development of integrated pest management tactic

Project Description

We propose to conduct knotweed control research that targets early season applications to large-scale infestations when the plants are 1 to 2 m tall.

Five herbicide treatments will be evaluated on Bohemian knotweed:

- 1. Habitat, 4 pt/ac in May
- 2. Habitat, 4 pt/ac in June
- 3. Habitat, 4 pt/ac in May and Habitat, 2 pt/ac in October on any regrowth
- 4. Habitat, 4 pt/ac and Aquamaster 8 pt/ac in May
- 5. Habitat (4 pt/ac) and Aquamaster 8 pt/ac in June.

Plot size will be 15' by 20' with 4 replications per plot. Treatments will be applied at 100 gpa spray volume. Competitor will be used as a surfactant at 0.25% v/v. Research will be conducted along the Naselle River. Regrowth will be assessed in fall 2005 and spring 2006. Efficacy and treatment cost (application cost and time) will be monitored and provided to the WSDA knotweed control program.

Time Frame: Field trials will occur during the summer of 2005. Data collection will occur in spring 2006. Final plot assessments won't be available until summer 2006.

Project Budget

Expenditure	WSCPR (Request)	Matching (CASH or IN-KIND)*			TOTAL COST
		Source:	Source:	Source:	
		Amount (CASH)	Amount (IN-KIND)	Amount (IN-KIND TIME)	
Temporary workers + Benefits	1554 ¹	1000 ⁴		400 ⁷	2954
Travel	247 ²				247
Equipment	0		300 ⁵		300
Supplies and other misc.	250 ³		650 ⁶		900
Total	2051	1000	950	400	4401

¹ Timeslip labor = hourly wages (\$1400) plus benefits @ 11% (\$164)

² Travel at \$0.405/mile; 8 trips Long Beach – Naselle (50 miles RT), 1 trip to Olympia

(210 miles RT) to conduct research and monitoring work.

³ Supplies: stakes, spray equipment, markers, misc.

⁴ Cash gift from BASF for project support.

⁵ In-kind use of boat, spray equipment and ATV from Pacific County Weed Board and Willapa Wildlife Refuge.

⁶ Herbicide supplies from BASF.

⁷ In-kind assistance from Pacific County Weed Board for pesticide application.

Has this budget been reviewed for accuracy? yes By Whom? Terry L. Porter,
Principal Assistant to the SW District Director WSU-Extension

Projected Expenditures (by quarter)

Time Period	Jan-Mar 2005	Apr-Jun 2005	Jul-Sept 2005	Oct-Dec 2005	Jan-Mar 2006	Apr-Jun 2006
WSCPR Funds		1251	550	100	150	0
Total Funds		2751	1200	100	150	200

Has this project been funded previously by WSCPR? no