



Forest Service staff and City of Port Townsend Water Resources Manager discuss weed control in the Little Quilcene River watershed

Olympic Peninsula Cooperative Noxious Weed Control 2008 Project Report

A Title II Participating Agreement between the
USDA NFS Olympic National Forest
and the
Clallam County and Jefferson County Noxious Weed Control Boards

Report compiled by:

Clallam County Noxious Weed Control Board

Cathy Lucero, Coordinator
Eve Dixon, Weed Control Specialist
Cody Hagen, Field Technician

December 2008

223 E. Fourth Street, Suite 15
Port Angeles, WA 98362-3015

Report Recipients

Full Version:

Olympic National Forest
Deborah McConnell

Washington State Noxious Weed Control Board
Alison Halpern

Abridged Version plus Electronic Form:

Olympic National Forest
Dale Hom, Forest Supervisor
Shawna Bautista

Abridged Version Only:

Olympic National Forest
Kathy O'Halloran
Susan Piper, Pacific District
Dean Yoshima, Hood Canal District

Olympic Peninsula RAC members (12)

Clallam County Commissioners
Mike Chapman
Mike Doherty
Steve Tharinger

Clallam County Noxious Weed Control Board
Nina Barnes-Thomas
Curt Beus, Ex-officio
Walt Forsberg
Fred Grant
Dean Hurn
Mike Jeldness

Jefferson County Commissioners
John Austin
Phil Johnson
David Sullivan

Jefferson County Noxious Weed Control Board
Linda Davis
Katherine Baril, Ex-officio
Jill Silver
Richard Hild
Katherine Ackerman
John Richmond

WA State Legislators
Senator Jim Hargrove
Representative Lynn Kessler
Representative Kevin Van De Wege

United States Legislators
Senator Maria Cantwell
Representative Norm Dicks
Senator Patty Murray

City of Port Townsend Public Works
Ian Jablonski

City of Sequim Public Works
Bill Bullock

Electronic Form Only:

Kitsap County Noxious Weed Control Board
Dana Coggon, Coordinator

Mason County Noxious Weed Control Board
Pat Grover, Coordinator

Grays Harbor Noxious Weed Control Board
Nancy Ness, Coordinator

Quinault Nation, Dorothy Davis,
Hoh Tribe, Steve Allison

Makah Tribe, Rob McCoy
Quileute Tribe, Frank Geyer

Lower Elwha Tribe, Mike McHenry

Jamestown S'Klallam Tribe, Hilton Turnbull,
Clallam County Sheriff's Department,
Matt Blore

Olympic National Park, Steve Acker

Olympic National Park, Dan Campbell

Acknowledgements

We'd like to acknowledge the support and cooperation from the following people and organizations. Thanks for all your hard work!

Clallam County Noxious Weed Control Board Field Technicians

Cody Hagen

Bonnie Eyestone

Jay Nolan

Clallam County Sheriff's/Road Department Chain Gang

Matt Blore, Program Sergeant

Richard Pitt, Chain Gang Officer

(360) 417-2284

Olympic Corrections Center crew, led by Scott DePew

Olympic National Forest

Deborah McConnell

Pacific District

(360) 288-0236

Cheryl Bartlett

Hood Canal District

(360)-765-2223

Joan Ziegltrum

Ecologist

(360) 956-2320

Table of Contents

EXECUTIVE SUMMARY	1
PROJECT SUMMARY.....	2
MAPS.....	6
POST-SEASON OBSERVATIONS.....	14
CONCLUSIONS AND RECOMMENDATIONS.....	16
2008 PROTOCOLS	18
APPENDIX A: 2008 PROJECT AREAS WITH ACTION TAKEN.....	23
APPENDIX B: ROCK SOURCE SURVEYS AND TREATMENT	41
APPENDIX C: OTHER WORK CREW ACCOMPLISHMENTS.....	42
APPENDIX D: ROADS SURVEYED/TREATED	44
APPENDIX E: POTENTIAL TREATMENT SITES.....	63
APPENDIX F: CONTROL RECOMMENDATIONS BY WEED SPECIES	66
APPENDIX G: WEED SPECIES REPORTED, 2002-2008.....	68
APPENDIX H: WASHINGTON STATE NOXIOUS WEED LIST.....	69
APPENDIX I: SAMPLE HERBICIDE NOTIFICATION-LEGAL AD AND ON-SITE POSTING	72
APPENDIX J: PROJECT FORMS	74

Executive Summary

Project Goal:

The goal of this project is to protect the natural resources of Clallam and Jefferson Counties from the negative impacts of invasive non-native plants. This goal is implemented by reducing existing weed populations and preventing the establishment of new ones, across both counties. Coordinating and standardizing weed control efforts across jurisdictional boundaries maximizes the efficiency of these efforts and minimizes the negative impacts of noxious weeds on watershed function, wildlife habitat, human and animal health, and recreational activities.

Project Overview:

This project is a comprehensive program for noxious weed control on the North Olympic Peninsula. On National Forest lands, the project involves surveying, identifying and treating invasive weeds in Project Areas identified by the Forest Service. On non-federal lands, this project, coordinated by Clallam County, oversees and implements Jefferson County Noxious Weed Control Board's program. The Weed Board's program includes public education, survey and monitoring of noxious weed infestations, and seeking landowner compliance with RCW 17.10. For the second year the project used a crew from the Olympic Correction Center (OCC) in west Jefferson County to control Scotch broom in selected pits and along Highway 101 in west Clallam and Jefferson Counties. These pits are high-use and shared by different agencies, making them likely weed sources across a broad spectrum of public and private lands.

2008 Project Goals:

1. Increase treatments of known sites using the full range of tools allowed under the new EIS.
2. Remain flexible and responsive to needs identified by the FS *during* the field season.
3. Identify and treat new populations.
4. Revisit previously controlled sites and perform necessary follow-up control work.
5. Survey and control weeds in rock sources and on roads scheduled for decommission.
6. Scope and prioritize weed sites for future treatment by the Weed Board or other cooperators.

2008 Resources:

Clallam/Jefferson Noxious Weed Control Boards Staff:

- Supervisor (4 hours/week, 9 months)
- Project Specialist (40 hours/week, 3.5 months)
- 2 Field Technicians (40 hours/week, 2.5 months)
- Jefferson County Noxious Weed Coordinator (25 hours/week, 7 months, 40 hours/week, 2 months).

Other crews: OCC—Six to seven person crew, (40 hours/week, 8 weeks)

Clallam County Sheriff's/Road Department Chain Gang, when available

2008 Accomplishments:

- Treated a total of **261** weed-infested acres (CCNWCB and OCC).
- Surveyed **423** miles of Forest Service roads.
- Coordinated the Jefferson County Noxious Weed Control Program for 7 months.
- Manually removed **24,350** weeds from Forest Service roads (Sheriff's Chain Gang—acreage N/A)
- Completed and submitted FACTS treatment forms to USFS for upload to their database.
- Completed annual Project Report

Conclusions and Recommendations:

The ability to use herbicide throughout Olympic National Forest, as allowed under the March 2008 *Olympic National Forest Final Environmental Impact Statement And Record of Decision—Beyond Prevention: Site-Specific Invasive Plant Treatment Project*, was a significant step toward achieving the goal of the project. By using herbicide where appropriate, and combining chemical and manual treatments, the Clallam County Noxious Weed Control Board crew was able to treat more acres than in previous years, and to make more return visits to sites in the course of the field season—an essential part of effective weed control.

In the immediate future this project will continue to focus on treatment. However, thorough surveys must be incorporated into the work plan to discover new infestations while they are small and easy to control. We must strike the right balance between the need to treat known problems, and the need to detect new sites early. Weed Board crew is knowledgeable about new invaders and is local. This makes us ideally suited to surveying and monitoring large areas, identifying new infestations, controlling moderate-sized, widely dispersed and/or remote sites, assisting with project planning and overseeing other crews engaging in larger projects.

Project Summary

Project Goal:

The goal of this project is to protect the natural resources of Clallam and Jefferson Counties from the negative impacts of invasive non-native plants. This goal is implemented by reducing existing weed populations and preventing the establishment of new ones, across both counties. Coordinating and standardizing weed control efforts across jurisdictional boundaries maximizes the efficiency of these efforts and minimizes the negative impacts of noxious weeds on watershed function, wildlife habitat, human and animal health and recreational activities.

Project Overview:

This project is a comprehensive program for noxious weed control on the North Olympic Peninsula. Included are activities to survey, identify, and control noxious weeds, to coordinate action and communication between local, state and federal jurisdictions, and to raise public awareness of the impacts imposed by noxious weeds. This project also provides funding for the Jefferson County Noxious Weed Control Board and their local education, survey, and treatment programs. Work on this project began in 2002 and under current funding continued through 2008. The funding source was re-authorized in 2008 and is expected to continue for several more years, although at declining levels.

In 2008 the project involved monitoring and treating weed infestations in 24 broad "Project Areas" identified by the Forest Service. The "Project Areas" consolidated multiple sites identified in prior years. Other components included surveying and recording additional locations of noxious weed infestations as resources allowed, and assisting with the development of a comprehensive control plan. All noxious weed sites were mapped in the County's ArcView GIS. The Forest Activity Tracking Sheet (FACTS) form was used to document manual or chemical treatment.

The program also operates on non-Forest Service land. Coordinated by Clallam County Noxious Weed Control Board (CCNWCB) and utilizing CCNWCB staff, the program assists with oversight and implementation of the Jefferson County Noxious Weed Control Board's program (JCNWCB). Because funding for weed control in Jefferson County is limited, funding from Secure Rural Schools has enabled the JCNWCB program to remain viable. Program goals include public education, monitoring of infested sites previously identified by JCNWCB staff, surveying for new noxious weed infestations, seeking private and public landowner compliance with RCW 17.10 and WAC 16-750, and assisting other public agencies with their efforts to control noxious weeds.

In both 2007 and 2008 a crew from the Olympic Correction Center (OCC) in west Jefferson County was used to control Scotch broom selected pits and along Highway 101 in west Clallam and Jefferson Counties. These pits are high-use and shared by different agencies, making them likely weed sources across a broad spectrum of public and private lands.

2008 Project Description:

This project implements control measures using the most effective site-specific treatments. The publication in March, 2008, of the *Olympic National Forest Final Environmental Impact Statement And Record of Decision—Beyond Prevention: Site-Specific Invasive Plant Treatment Project* authorized herbicide use in all areas of the Olympic National Forest. Following this decision, herbicide treatment and/or manual control are used on Forest Service land, as appropriate to the weed species and the site. State and county guidelines are followed on state land and county rights-of-way. The focus is on areas where uncontrolled noxious weed populations on federal, state, county, and private land are spreading and hindering coordinated control activities. The Clallam and Jefferson County Weed Boards provide the vital link to private landowners whose weeds threaten federal lands. On Forest Service lands the project continues to work under a

policy of early discovery and rapid response to prevent the establishment of new infestations wherever possible. For known sites, the emphasis is on controlling noxious weeds along roads and trails, in high use locations like campgrounds and trailheads, and in gravel pits. Due to heavy use or potential off-site movement of infested materials, these types of sites serve as the primary source of new weed invasions into previously uninfested areas. Special emphasis is also placed on Botanical Areas and similar critical sites, because of the severe threat that invasive weeds pose to these unique environs. Roads scheduled to be decommissioned in the near future are also targeted because of the difficulty of reaching these sites to control weeds after decommissioning. In addition to the Weed Board field crew and the OCC crew, the Clallam County Sheriff's/Road Department Chain Gang performed weed control.

In 2008, the project focus for Forest Service lands was to:

1. Increase treatments of known sites using the full range of tools allowed under the new EIS.
2. Remain flexible and responsive to needs identified by the FS *during* the field season.
3. Identify and treat new populations.
4. Revisit previously controlled sites and perform necessary follow-up control work.
5. Survey and control weeds in rock sources and on roads scheduled for decommission.
6. Scope and prioritize weed sites for future treatment by the Weed Board or other cooperators.

2008 Project Resources and Performance:

The number of staff/participants, the amount of time devoted to this project, and tasks completed were:

- **1 Supervisor: 4 hours/week, for 9 months, licensed applicator**
 - Supervised the project
 - Provided technical information and support, crew training, and assisted with field treatments
 - Participated in 3 planning meetings with Forest Service staff
 - Oversaw end-of-season reporting and planning for 2009 field season
- **Field team: 1 project specialist, 40 hours/week for 3.5 months (licensed aquatic applicator); 2 field technicians for 40 hours/week for 2 months**
 - Treated a total of **186** acres
 - Surveyed **423** miles of roads
 - Filled out FACTS forms for all treated sites
 - Surveyed pits and provided reports to FS
 - Assisted with end-of-year reporting
- **1 Jefferson County Noxious Weed Control Coordinator/FS Program Assistant: 25 hours/week, for 7 months, 40 hours/week for 2 months**
 - Coordinated Jefferson County Noxious Weed Control Program for seven months
 - Compiled data and prepared report
- **Clallam County Sheriff's/Road Department Chain Gang, as available**
 - Removed **24,350** weeds (all weeds removed by the Chain Gang may not have been recorded)
- **OCC crew: 6-7 persons, 40 hours/week for eight weeks**
 - Controlled Scotch broom on **75** acres in the west end of both Clallam and Jefferson Counties, in pits and on Highway 101

2008 Project Accomplishments:

It is evident that the expansion of herbicide treatments and use of the OCC crew allowed the project to accomplish much more noxious weed control than in previous years. In 2008, 263 acres of noxious weeds were treated. Comparison with previous years work is difficult because of changes in focus, crews, and reporting.

- The focus in 2008 was almost exclusively on control, not on surveying or recording new sites.
- 2008 was the first year that chemical treatment was allowed throughout Olympic National Forest. This change alone meant that more acres were treated than in previous years.
- A crew from the Olympic Correction Center (OCC), was hired for a second year to do manual and minor chemical treatment of Scotch broom in pits and quarries and on Highway 101 in the west end of both Clallam and Jefferson Counties, but the crew size was smaller in 2008 than in 2007.
- The Forest Service, for the first time, hired a contractor to do weed control work in certain areas of the forest. Work by the contractor was commissioned and overseen directly by the Forest Service is not included in this document.

A summary of work performed under this project from 2002-2008 is shown in the following table but changes in reporting over the years make comparison difficult. Specific changes are listed below:

- Prior to 2006 the program combined reporting of road miles surveyed and/or treated. Acres were extrapolated from those miles. In 2006 to 2008 the FS requirement was to record only acres treated. However, in all 3 of those years staff kept track of miles driven and surveyed. Survey miles are probably under-reported since crews often traveled the same road many times.
- Prior to 2006 the program reported all treatments as number of weeds removed (manually). Chemical control was implemented in 2006, and from that point on, the Forest Service requested that all treatments be reported in acres. In 2006, during the transition, crews reported manual treatments both as number of weeds treated and acres treated. They reported chemical treatments only as acres treated. Number of weeds removed was not reported by CCNWCB crews in 2007 or 2008. The Chain Gang continues to report numbers of weeds removed. This explains data gaps in the table for certain years.
- 0.1 acres was the smallest unit allowed in the NRIS forms. FACTS sheets allow reporting in different units, but crews have tended to stick with 0.1 acres as the smallest unit because all reporting was originally done with NRIS forms. This has caused some artificial inflation of the figures for acres treated which is most evident in the small infestations treated by the CCNWCB.
- In compiling acreage figures for the summary table we have, each year, tried consistently to use the "infested acres" figure, taken directly from the FACTS sheets filled out by crew members. However, crew members have not always understood what is meant by "infested acres" and we feel that at times there has been both over-reporting and under-reporting as a consequence. The situation was further complicated in 2008 by the production of new FACTS forms which required reporting of "infested acres" for each plant species treated. Sometimes these "infested acres" overlapped, so when compiling figures for the table, staff made some effort to compensate for this.
- Clallam County Chain Gang reported removing 24,350 weeds in 2008. However, they performed other work as well as weed removal and in some cases they simply reported roads they had worked on, without giving the number of weeds removed; this change in reporting may have caused artificial reduction in number of weeds removed.

2002-2008 Accomplishments Summary Table								
	2002	2003	2004	2005	2006	2007	2008	Total
Miles of Roads Surveyed/Treated	192	702	265	113	N/A	N/A	N/A	1,272
Acres Surveyed/Treated ¹	233	851	321	137	N/A	N/A	N/A	1,542 ¹
Miles of Roads Surveyed	N/A	N/A	N/A	N/A	390.44	368.77	422.74	1,182.05
Acres Surveyed ²	N/A	N/A	N/A	N/A	946.52 ²	893.99 ²	1,024.84 ²	2,865.35 ²
New Sites/Total	122	497/619	147/766	74/840	147/986	12/998	1/999	999

Number of Weeds Removed, by Crew								
	2002	2003	2004	2005	2006	2007	2008	Total
# of Weeds Removed by Field Crew ³	736	886	11,716	51,775	21,016 ³	N/A	N/A	86,129 ³
# of Weeds Removed by WCC Crew	31,085	87,623	1,166,200	880,655	N/A	N/A	N/A	2,165,563
# of Weeds Removed by Chain Gang	8,286	102,748	112,858	108,225	56,775	72,700	24,350 ⁴	485,942
TOTAL # of Weeds Removed	40,107	191,257	1,290,774	1,040,655	77,791	72,700	24,350	2,737,634

Acres Treated, by Crew								
	2002	2003	2004	2005	2006	2007	2008	Total
Acres Treated by Field Crew ⁵	N/A	N/A	N/A	N/A	20.28 ⁵	59.95 ⁵	185.95 ⁵	266.18 ⁵
Acres Treated by WCC Crews	N/A	N/A	N/A	N/A	N/A	22.35 ⁵	N/A	22.35 ⁵
Acres Treated by OCC Crew ⁵	N/A	N/A	N/A	N/A	N/A	337 ⁵	74.82 ⁵	411.82 ⁵
Acres Treated by Chain Gang ⁶	N/A	N/A	N/A	N/A	5.67 ⁶	7.27 ^{6*}	2.43 ⁶	15.37 ⁶
TOTAL # of Acres Treated					25.95	426.57	263.2	715.72

1. Derived from miles surveyed/treated

2. Derived from miles surveyed. Recorded as a separate value for 2006 to 2008 only. Previously combined in miles treated/surveyed and acres treated/surveyed

3. "# of weeds removed" refers to manual only, does not account for chemical treatment and was not reported in 2007 or 2008 because the Forest Service did not require it.

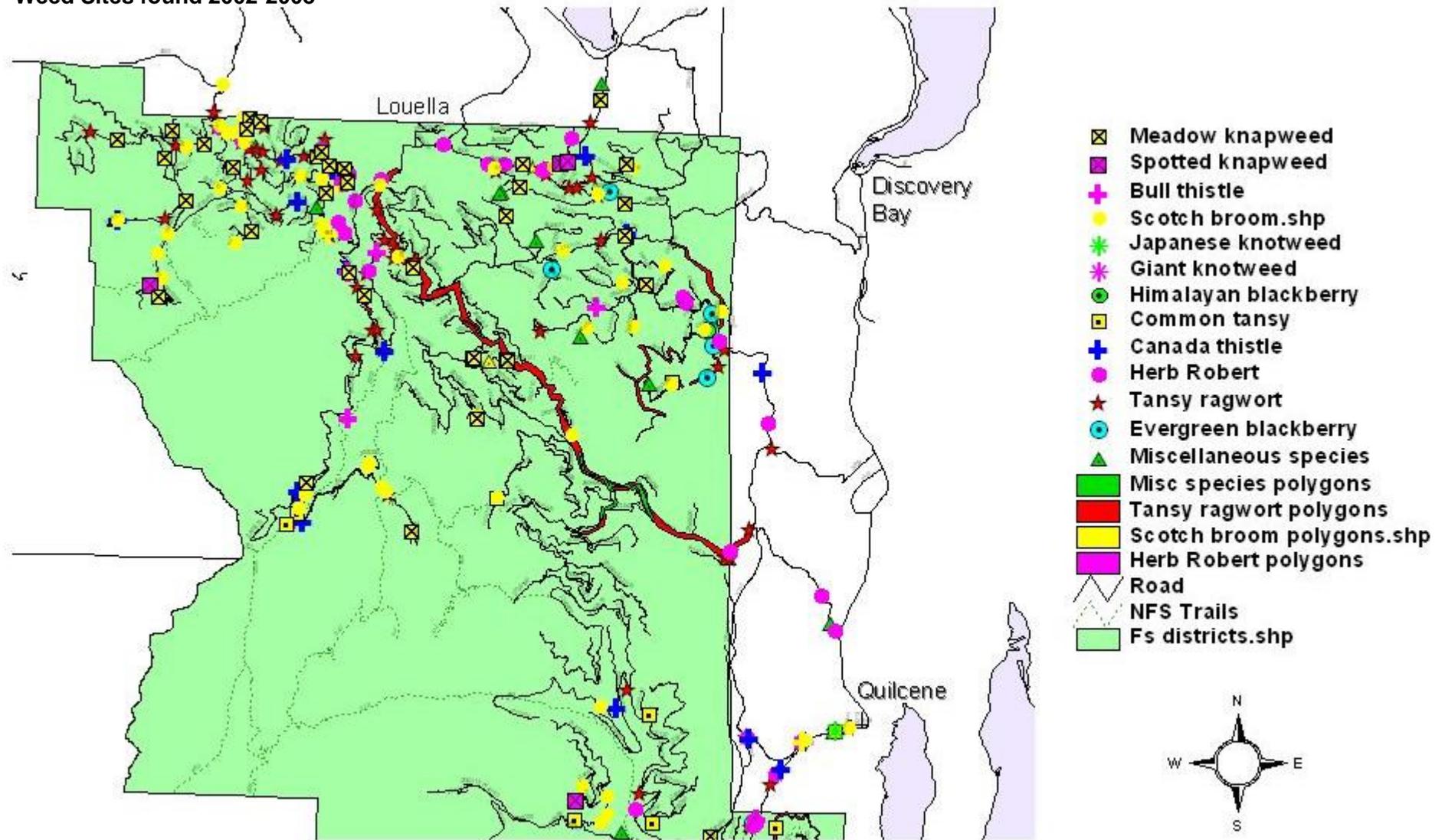
4. In 2008 the Chain Gang did other work besides weed removal and in some cases just reported "roads worked on", rather than giving #s of weeds removed. This makes the number of weeds removed artificially low.

5. "Acres Treated" include chemical and manual treatment and are taken from the FACTS forms filled out by crew members. See Page 4 for discussion on acreage reporting. We believe that the figure of 337 acres reported for the OCC crew in 2007 is a misrepresentation due to different reporting protocols.

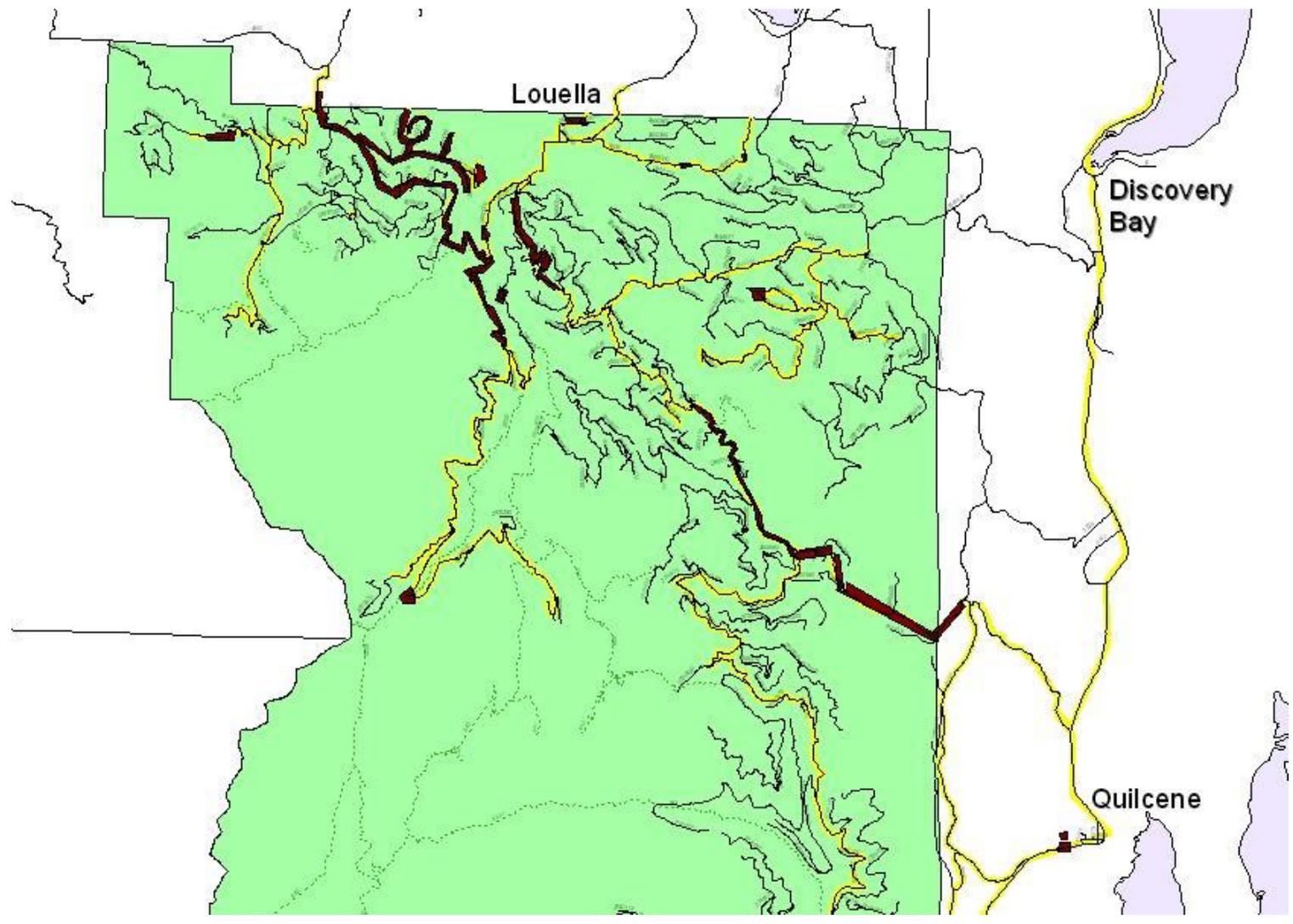
6. For the Chain Gang, each thousand plants were estimated to encompass .1 acre

If possible, accomplishment reporting in future years' reports should allow direct comparison to this report. This can be more easily accomplished if data reporting requirements remain consistent.

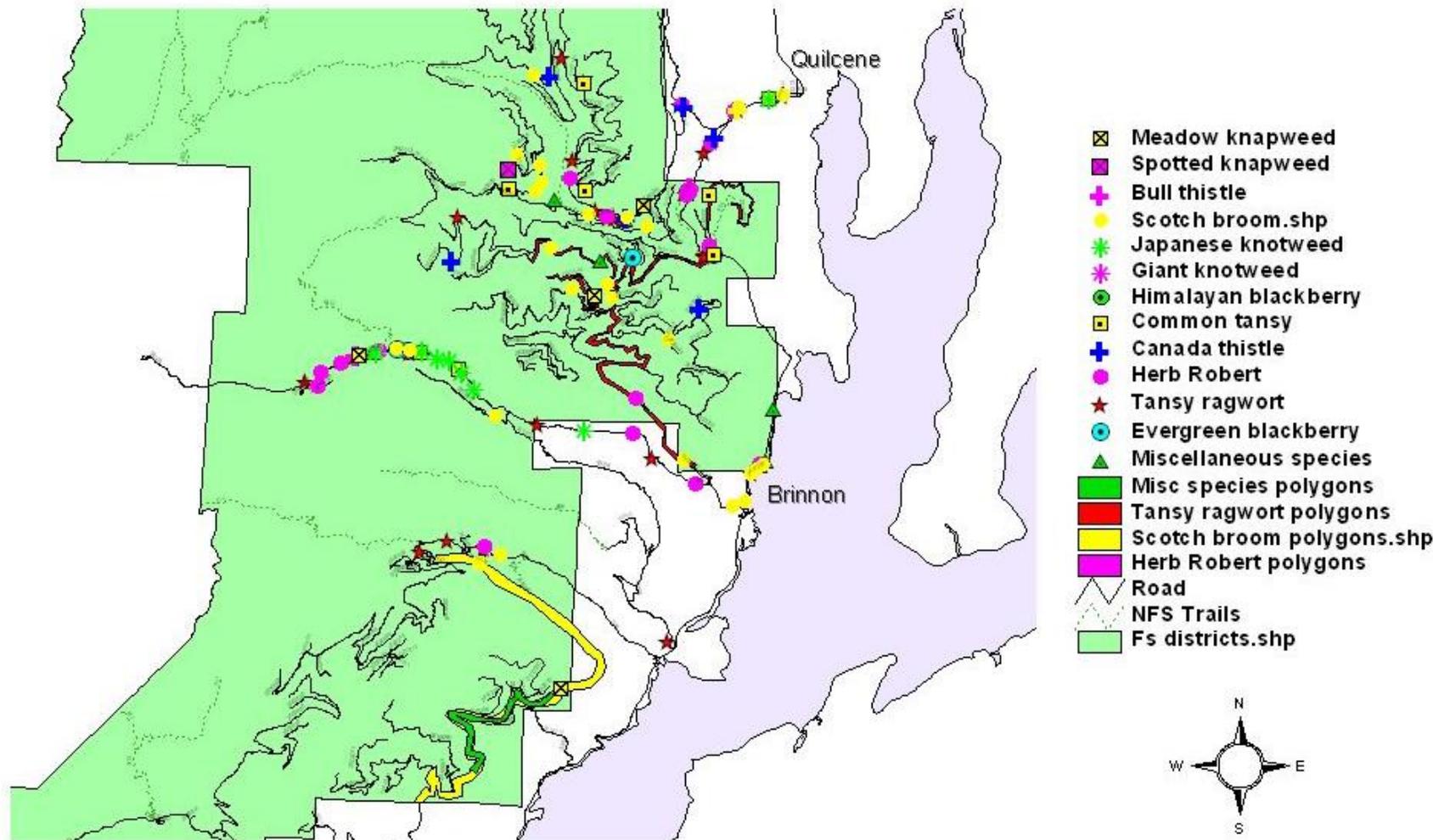
Maps
 Hood Canal District North
 Weed Sites found 2002-2008



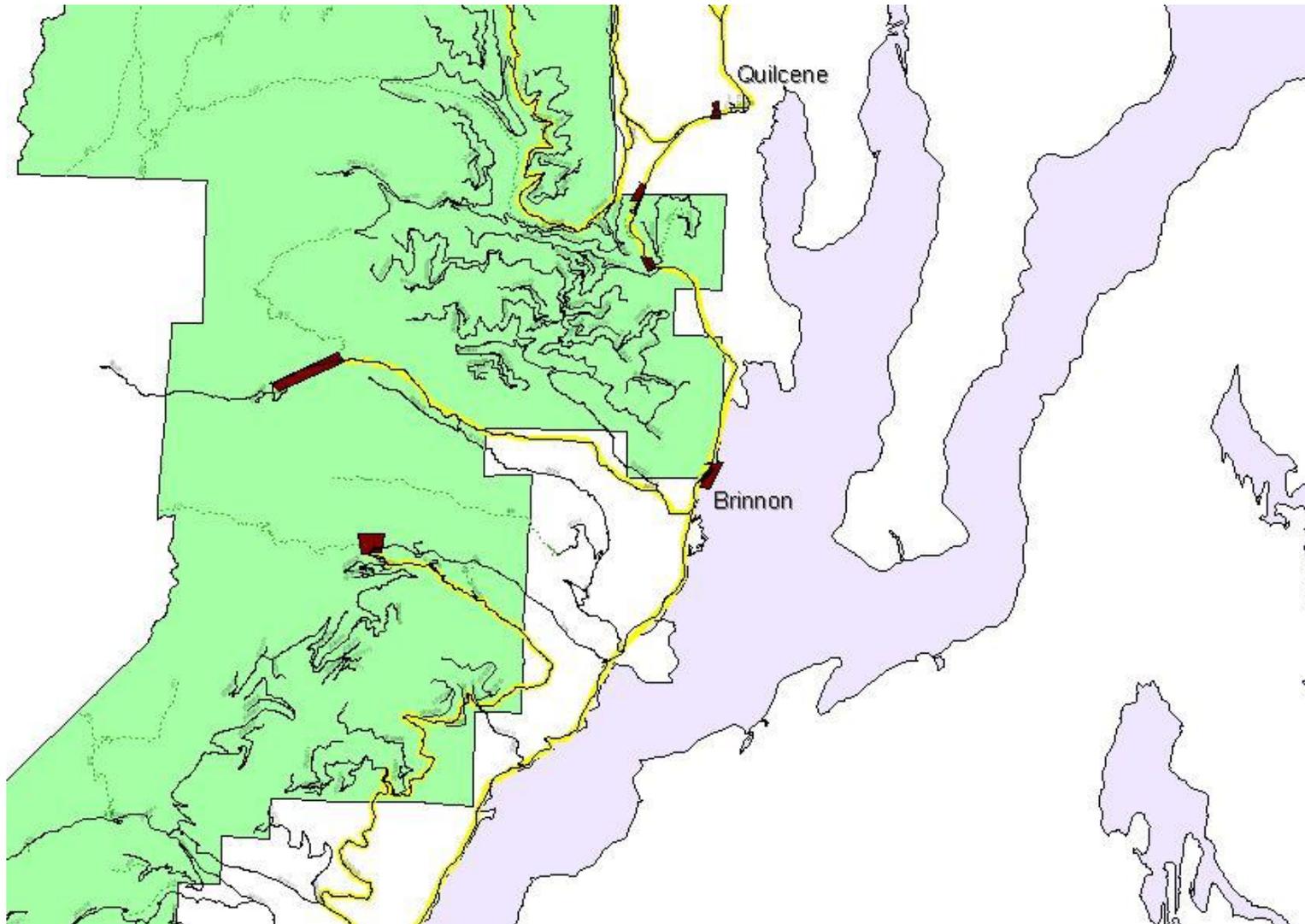
Hood Canal District North
2008 Survey—yellow lines. 2008 Ttreatments—brown



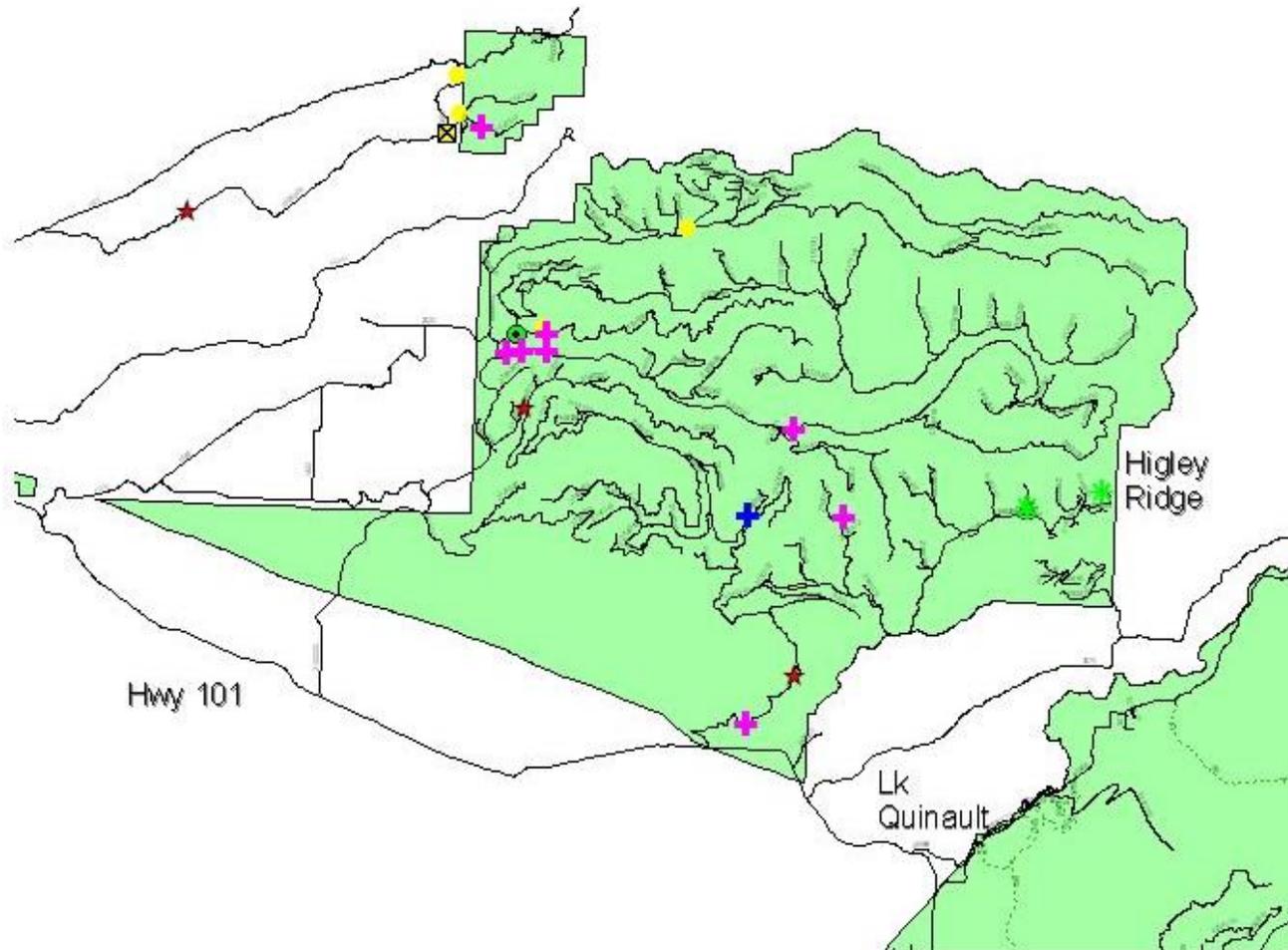
Hood Canal District South
Weed Sites found 2002-2008



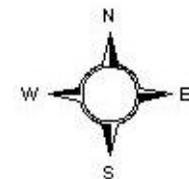
Hood Canal District South
2008 Survey—yellow lines. 2008 Treatments—brown



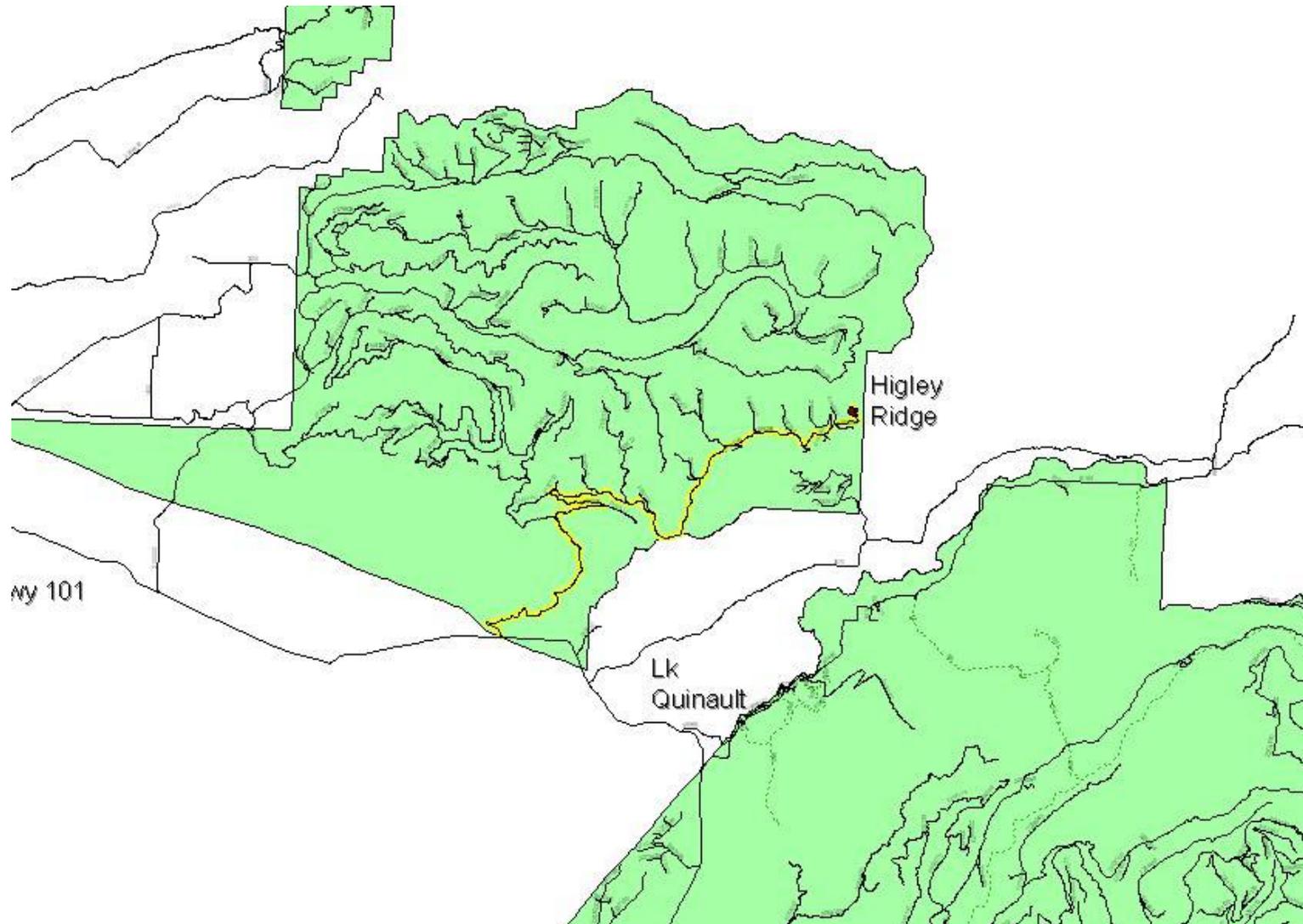
**Pacific District South
Weed Sites found 2002-2008**



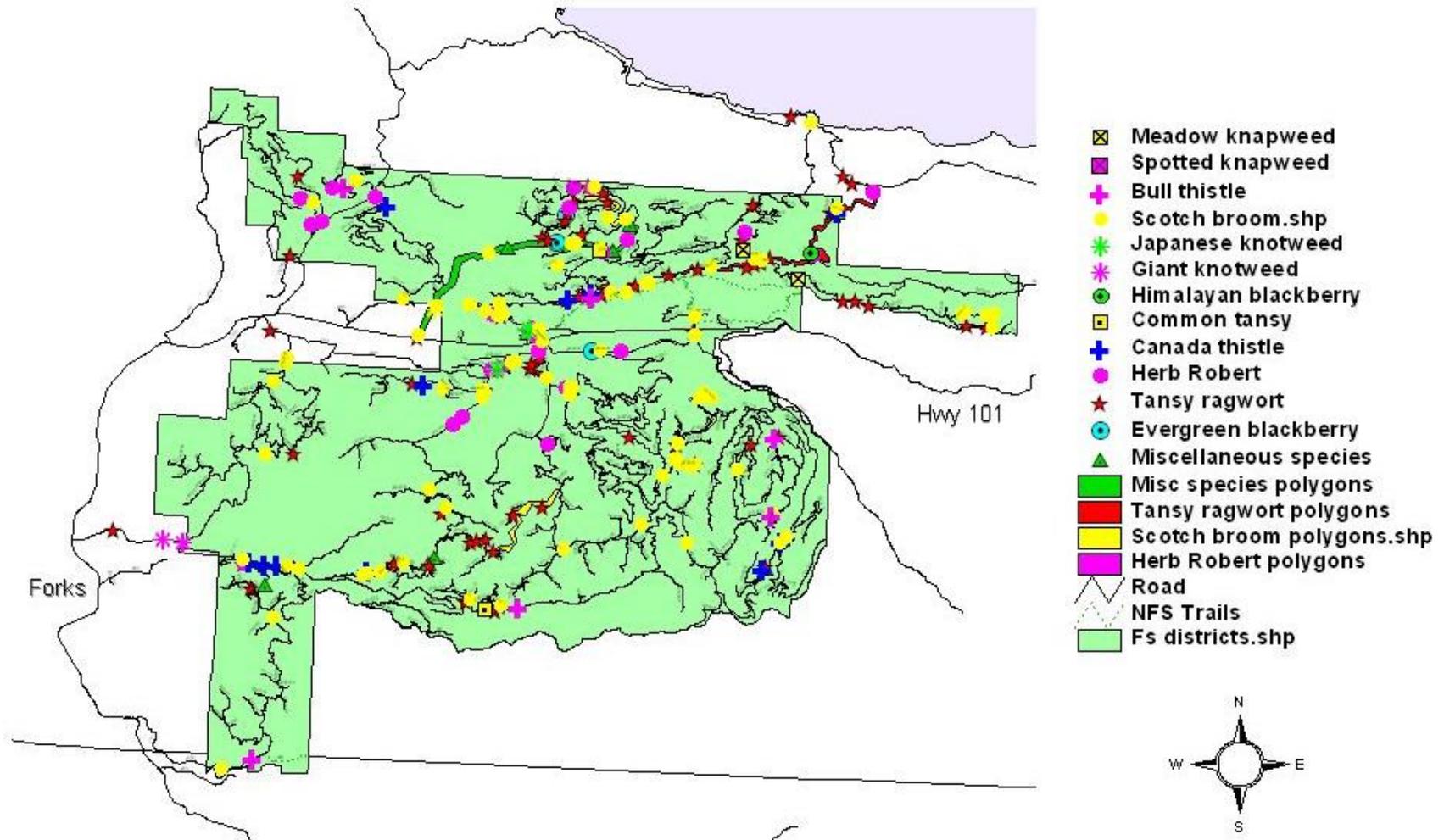
- ⊗ Meadow knapweed
- Spotted knapweed
- ✚ Bull thistle
- Scotch broom.shp
- ✱ Japanese knotweed
- ✱ Giant knotweed
- Himalayan blackberry
- Common tansy
- ✚ Canada thistle
- Herb Robert
- ★ Tansy ragwort
- Evergreen blackberry
- ▲ Miscellaneous species
- Misc species polygons
- Tansy ragwort polygons
- Scotch broom polygons.shp
- Herb Robert polygons
- Road
- - - NFS Trails
- Fs districts.shp



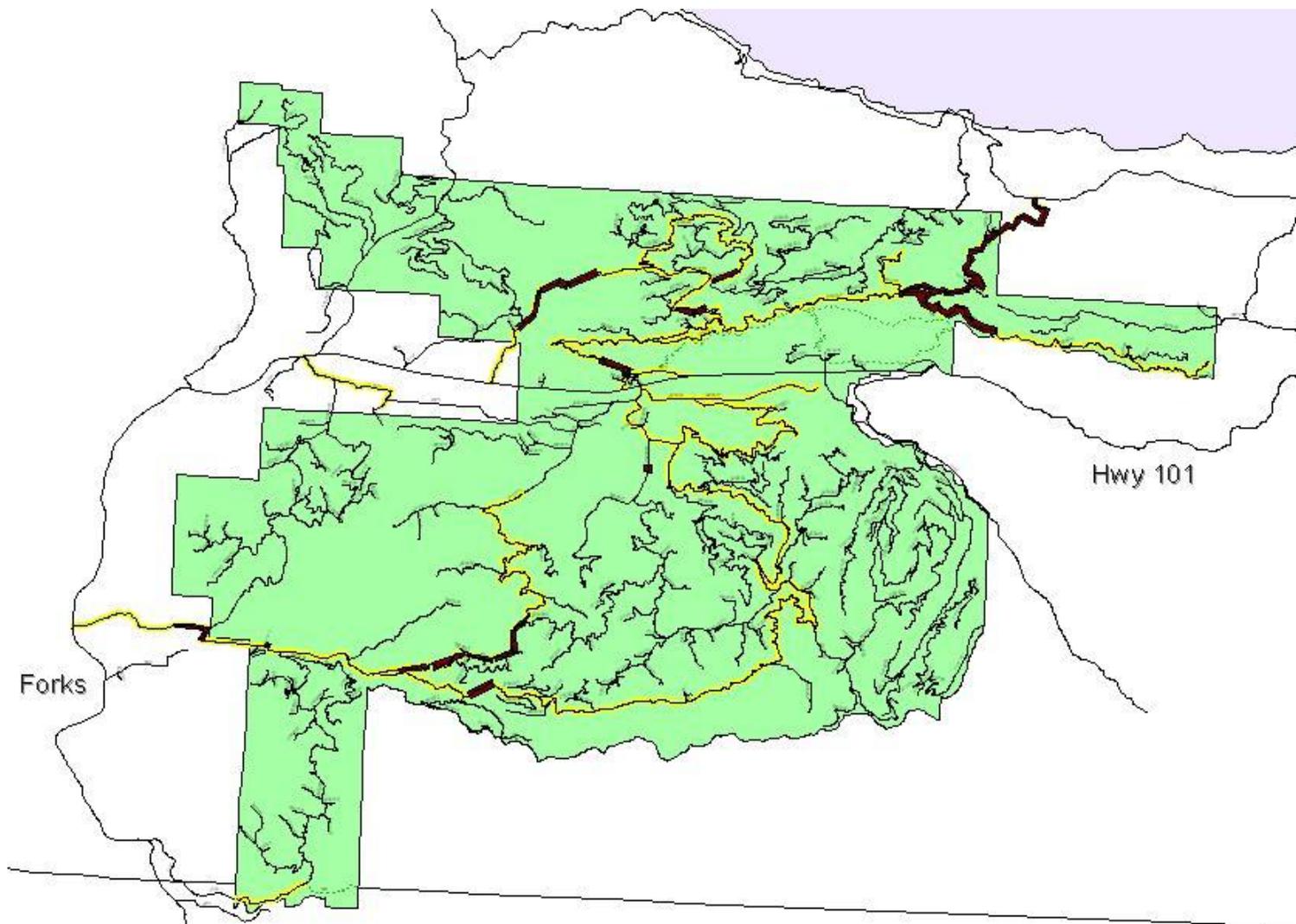
Pacific District South
2008 Survey—yellow lines. 2008 Treatments—brown



**Pacific District North
Weed Sites found 2002-2008**



Pacific District North
2008 Survey—yellow lines. 2008 Treatments—brown



Post-Season Observations:



European hawkweed
(*Hieracium sabaudum*)

Nature of the Problem:

Known infestations where control work is repeated regularly show decreasing size and density. New, poorly established infestations respond best to control efforts and should remain the focus of this project, but addressing long standing infestations is both essential and possible. The focus in 2008 was on treatment, but in future more surveys should be incorporated into the work plan to ensure discovery and treatment of new infestations while they are small.

- The most commonly recorded invasive species continue to be Scotch broom, tansy ragwort, herb Robert, Canada thistle, bull thistle, everlasting peavine and meadow knapweed.
- Herb Robert sites, although increasingly common, continue to be a high concern, because of the plant's ability to invade undisturbed forest under-story.
- The most infrequently recorded species are borage, hawkweeds, knotweed, and spotted and diffuse knapweed. All known sites of these species were treated this year. Controlling these species, and locating and treating neighboring populations will continue to be a high priority.
- Small populations of purple loosestrife, yellow hawkweed, wild chervil, sulfur cinquefoil and common reed have appeared on Jefferson and/or Clallam County roadsides. We consider control of all of these plants—as yet unrecorded on Forest Service land—a high priority to prevent their spread.
- Poison hemlock is common on roadsides in Jefferson County. It has not yet been seen on FS land but could easily spread there.
- European hawkweed has appeared on Hwy 101, as it passes through Forest Service land and yellow archangel was seen in the Olympic National Forest for the first time. Controlling neighboring populations of these highly invasive plants on non-Forest Service lands in Clallam or Jefferson Counties will be a priority.

Survey and Treatment

- In 2008 the program's focus was control of weeds in "Project Areas", outlined by the Forest Service. Treatments were structured to comply with an EIS consult with the Fish and Wildlife Service and National Marine Fisheries Service. This approach provided considerable program guidance and is a good strategy toward holistic management of all invasives within a discrete, manageable area.
- The adoption of the new EIS, which allowed both manual and herbicide treatments where appropriate, resulted in far greater acreage being treated. Clallam County Noxious Weed Control Board (CCNWCB) crews treated 185.95 acres. This total may be our full capacity for annual treatment by a 2-3-man crew.
- Herbicide use in Municipal Watersheds was complicated by concerns about effects to water quality. However, very good progress was made toward treating in the Port Townsend watershed, through the united efforts of Weed Board and Forest Service Staff and much appreciated cooperation and willingness from Municipal Watershed managers.
- Weed Board staff made a point to respond promptly to requests from the FS to treat weeds in specific areas that arose during the field season, but were outside the regular work plan.

- Many pits and other rock sources continue to harbor noxious weeds. This is a concern because pits are often shared by multiple users and weed-infested material can be taken to many different areas and cause new infestations. CCNWCB crews surveyed 12 rock sources; only two of the 12 were declared weed-free. The weed board needs to step up work in pits earlier in the season.
- The OCC crew removed heavy infestations of Scotch broom from additional pits and quarries in the west end of both Clallam and Jefferson Counties that were not on Forest Service lists, and on Highway 101. This is an import task to prevent cross boundary contamination. This work would not have occurred without FS support.
- The chain gang was under-utilized this year for weed control projects. The weed board should put more effort into coordinating large projects with this crew next year.
- The FS hired a contractor to perform weed control work in some of the Project Areas. Contractors are better suited to treating dense infestations, by being able to carry more water. However, the contractor treated each site only once during the season, although follow-up treatments or monitoring are necessary. Also, they tended to treat only the road shoulder, not the entire weed infestation.
- Small chain saws for cut-stump treatment on large stands of Scotch broom were not allowed because decibel information was impossible to obtain. Decibel output is unavailable from manufacturers because there is no standard distance that levels are tested. This best treatment method was therefore under-utilized where most appropriate.
- The extent of invasive plant populations in less accessible areas continues to be less well documented.
- The large, remote area covered by this project still makes travel time a significant factor in the amount of fieldwork that can be accomplished in a season.

Data Collection

- The FS created new FACTS sheets in 2008, but crew members did not get the new ones until several weeks into the season. Switching to a different form, and having to use different forms for chemical and manual treatments, created some confusion.
- The chemical FACTS sheets do not have a space for the most pertinent information—the amount of product applied and the percentage of the mix.
- There was not enough training to fill out FACTS sheets correctly, especially in regard to counting the acres treated, which is an important means of assessing the effectiveness of our work.
- The new system of “Project Areas” was a significant improvement and we appreciate the work FS staff put into creating the maps and information sheets on each one. However, because the same road sometimes appears in different Project Areas and because crew members did not always record mileposts, we sometimes did not know, post-treatment season, in which Project Area work had taken place.
- It is entirely possible that crew members did not record treating small trailheads or pits because these were not spelled out in the list of “Project Areas” and the field crew was new to the Forest this year.

Conclusions and Recommendations:



Future Direction of the Project

Now that the Secure Rural Schools Act has been re-authorized, counties can apply for more Title II funding. If granted, this co-operative project between the County Weed Boards and the Forest Service can continue for several more years. This is an unusual (possibly unique) partnership between Federal and County agencies, which we feel has been very effective and would like to see continue.

The successful adoption of the *Olympic National Forest Final Environmental Impact Statement And Record of Decision. Beyond Prevention: Site-Specific Invasive Plant Treatment Project*, was ground breaking and perhaps one of the most significant steps toward effective management of invasive species on Forest Service land since the inception of the project. The document acknowledges the impact of invasive species on public resources and the urgency for action, without ignoring other environmental criteria. Broadening control options for invasive species throughout the Forest now allows effective treatment of larger infestations and certain weed species that do not lend themselves to non-chemical methods. We will continue to consider all control methods, but the most effective treatments for a small CCNWCB crew will likely utilize herbicides on a regular basis.

Weed Board staff has extensive knowledge ranging from project history and infestation locations to weed identification and best treatment methods. However, the CCNWCB Program is not equipped to carry on large-scale treatment operations, and the expertise of the Weed Board staff would be most efficiently used in other ways. Ideally, this staff is best suited to identify and control new infestations, tackle moderately-sized or widely-dispersed infestations and serve as advisors and/or supervisors for other crews that are able to tackle larger projects. We appreciate the opportunity to provide input on weed control strategy and to help coordinate the Forest Service's weed management plan. Specific recommendations are listed below.

Program Development

- Support from Forest Service staff when applying for renewed Title II funding will help ensure a successful outcome.
- Control crews must be thoroughly trained but high staff turn-over makes this task difficult in the course of the short field season. Stable funding provides improved year-to-year continuity and an improved weed control program in Jefferson County lands that are adjacent and directly connected to the Olympic National Forest. Funding from the Forest Service is especially important because allocations from Jefferson County for weed control have been cut significantly for 2009.
- Earlier planning meetings to set the work plan and procedures would improve field performance.
- Staggering treatments by a contractor and weed board crews would greatly increase effectiveness. This would require more planning, better communication and tighter coordination, but would be worth the effort and should be part of the early season meeting.
- Establishing a permanent Forest Service staff contact to replace the current project officer as soon as possible will be vital to a smooth transition.

Survey and Treatment

- Close attention should be paid to previous lists, treatments and results. Careful examination of where we have or haven't been must be performed prior to each treatment season.
- We should adopt a "No Weed Gets Left Behind Strategy" by ensuring treatment of all known weed sites while allowing for discovery and treatment of new and small sites.
- To ensure Early Detection—Rapid Response (ED-RR), we must divide the Forest into four parts and incorporate thorough surveys of one quarter of the Forest every year as part of the work plan.
- Agency personnel as well as visitors need to identify and report invasive plants to facilitate ED-RR. We should be pro-active in establishing a reporting system, possibly through the Clallam County Website, which could include pictures of plants we would like reported.
- The large size of the project area and remoteness of many sites necessitates that field crews be fully trained and equipped at all times to perform survey, monitoring and both manual and chemical treatments. Preparing equipment and training new crew takes several weeks every season.
- Rock sources that contain noxious weeds must be treated before being utilized and an early-season list of pits of high-interest would facilitate weed inspections and control in pits and reduce the risk of weed-contaminated material being spread from pits.
- Both substantial initial treatment efforts and **repeated follow-up** are necessary for successful control of noxious weed infestations. Not only is it necessary to continue treatments year after year, but multiple treatments to the same site during a single growing season provide substantially improved weed control. 2008 was virtually the first year that we began to meet this goal.
- Restoration or specific future management goals should be part of all control plans.
- Certain forest maintenance tasks create noxious weed contaminated waste that should be documented and monitored and maintenance yards should be examined and where necessary, treated for invasive species.

Documentation

- One form should be created for use when monitoring, recording new sites, or recording manual or chemical treatment. In all four cases, much of the required information is the same—road number, mile post, plant species, date, etc. Chemical treatment could be recorded on the back of the form, and space should be added for the amount of herbicide product applied and the percentage of the mix.
- Crews should carry a simple GPS unit and mark the location of sites. Trimble units do not function well under tree cover, but a simpler unit such as the Garmin 60 CFX, which is relatively inexpensive, may work in remote areas or under thick canopy cover.
- Instructions to record treated acres should be available at the START of the field season, should be easy to follow and should remain consistent each year so that the amount of work done by each crew each year can be compared.
- Weed Board staff should check the crew's FACTS sheets for completeness several times during the field season and should submit them to Forest Service staff during the season rather than waiting until the end.

2008 Protocols



1. Team and Project Dates

This year's project focused almost entirely on treatment of "Project Areas", identified by the Forest Service, rather than survey. Cathy Lucero (coordinator), and field technicians Cody Hagen, Bonnie Eyestone and Jay Nolan performed treatments and collected data. Fieldwork began in June 2008 and continued through late September.

2. Invasive Species Recorded

Treatment and surveys focused on Class A and B-designate weeds on the Washington State Noxious Weed List (see Appendix H), and additional species that are of concern to the Forest Service. In most cases Class B non-designate, Class C, and unlisted non-native weeds were only documented when an infestation was in a site of particular concern (e.g. a Botanical Area), when the infestation was of notable size, or when a new species was found. Exceptions were made for especially invasive species, such as herb Robert or knotweeds, which can threaten undisturbed areas. See Appendix G for a complete listing of species recorded from 2002 to 2008. Treatment and surveys were not intended to target all non-native species.

3. Road Survey and Treatment (see Appendix D):

The project focus was on treatment of known infestations in specific project areas identified by the Forest Service, often including sites that had received treatment in the past. Survey and treatment of new infested sites was also a priority, especially if new sites were seen en route to known sites.

- a. Trailheads, campground parking areas, and gravel pits were surveyed on foot whenever found.
- b. Typically, 10 feet on both sides of each road was surveyed. The distance surveyed was recorded in the field and the area surveyed was calculated using the following formula.

$$\frac{\text{miles surveyed} \times 5280 \text{ ft/mi} \times 10 \text{ ft/roadside} \times 2 \text{ roadsides/survey}}{43560 \text{ ft}^2/\text{acre}}$$

- c. Prior to 2007, survey miles were recorded and two surveys on the same road on separate days were recorded twice. This is justified because many plants are only visible on a windshield survey at a specific time of year. Miles surveyed in 2007 and 2008 were estimated from treatment sites (recorded on FACTS forms) and roads taken to get to those treatment sites.
- d. Small weed infestations were usually treated manually when found.
- e. Herbicide treatments were applied based on guidelines established in the 2008 EIS.
 - i. No measurement of the number of plants treated was made, thereby making any comparison to accomplishments of previous years difficult. This data was not required and was not collected in favor of accomplishing more treatment.
 - ii. Foliar herbicide applications were made using 1.5% Aqua Neat (glyphosate) and 0.5% Competitor (surfactant), in areas where there was any chance of herbicide getting into water. On roadsides and other areas well away from water Garlon 3A was used, also 1.5% with Competitor at 0.5%. Garlon3A was chosen because it can legally be used up to water's edge and because it does not kill established grasses.

- iii. A legal notice listing all sites under consideration for herbicide treatment (see Appendix I) was published in the Peninsula Daily News on 7-7-2008, 1 week before any herbicide applications. Herbicide applications were carried out between 7-14-08 and 9-30-08.
- iv. On-site postings (see Appendix I) were in place at least 24 hours before and after herbicide application, and at least 1 week prior to application in high-use areas like campgrounds and trailheads.

4. Data Collection

In the field, weed site data for new sites that were not controlled were recorded on a modified Olympic NF Invasive Plant Inventory Data Collection Form (see Appendix J). Minor modifications to this form allowed for collection of county noxious weed data as well as Forest Service data. The specifics of data entry for the form are described below.

Olympic NF Invasive Plant Inventory Data Collection Form (see Appendix K)

- a. Site ID field (30 characters) contains the concatenation of the following:

Year	YYYY
Month	MM
Day	DD
Township	TT
Range	RR
Section	SS
Qtr. Section	QQ
Road ID	XXXXXXX (all 7 characters required, fill with zeros (0) or spaces)
Weed Code	CCCCCC (typically 4-5 characters, leave extra space blank for codes less than 7 characters)
Complete Site ID	YYYYMMDDTTRRSSQXXXXXXXXCCCCCC
Example Site ID	20050917241001SE2170000CIVU

- i. The Road ID for trails surveyed is a “T” and the trail number (fill to 7 characters with spaces), e.g: T823□□□.
 - ii. The Road ID for botanical areas (BA) surveyed is the abbreviated name of the BA, e.g: South Fork Calawah River Botanical Area = SFCRBA.
 - iii. Road IDs for non Forest Service roads were denoted by a two-letter prefix and the road number. County road numbers were preceded by “CR” and state highway routes received the prefix “SR”.
 - iv. In the case of identical Site IDs (e.g. two (or more) separate sites of the same weed found on the same day, on the same road, and in the same quarter quarter section), the second or subsequent site simply received an additional number (second site gets 2, third gets 3, etc.) at the end of the original Site ID in the first available open weed code character space (e.g. 20060701281118NW2923000CEJA and 20060701281118NW2923000CEJA2).
 - v. Prior to 2007, revisits were entered into Rangeland PC with the **original Site ID**. All other information (e.g. date in the date field, not the date embedded in the Site ID) is entered based on the actual revisit. No revisits were recorded in 2007 or 2008; FACTS forms were used instead.
- b. Locational information was primarily recorded as road number and milepost (typically recorded to the nearest 0.05 mi. as estimated from the vehicle trip odometer). The legal description of township, range, section, quarter section, and quarter quarter section was then determined based on road and milepost and either a GIS database

- or a Forest Service brown line map. Milepost numbers and any additional useful on-the-ground information (e.g. at turnout) were recorded under site comments.
- c. Location at site, site address, owner information, parcel number, site ID, database record number, and contact information were intended for county sites and were not recorded at Forest Service sites.
 - d. Aspect and slope were not recorded. Elevation was estimated from GIS or brown line maps.
 - e. Dominant plant life form type was selected from the list; dominant species were considered optional.
 - f. Site comments included locational information (e.g. milepost) and/or directions to the site.
 - g. Phenology, life form, and distribution were selected from the lists.
 - h. Infested area was always noted with a minimum size of 0.1 acres (due to NRIS Terra and FACTS constraints). Gross area was only recorded for very large sites with low cover class and/or scattered patchy distribution. Infested area, cover class, and distribution were sufficient to characterize most sites. Note that the definitions of infested and gross area vary slightly from those used in previous years.
 - i. *Infested Area* was defined as the sum of the areas of all separate patches of the weed (not including the area between patches; including the space between plants within a single patch of low cover class) within one site.
 - ii. *Gross Area* was defined as the total area of a box (polygon or circle) circumscribed about all of the separate patches of a weed within one site. It is effectively equal to infested area plus the total area between individual patches.
 - i. Daubenmire cover class was selected from the list based on a visual estimate of weed canopy cover within the *infested* area.
 - j. Distance to water was estimated visually if water was near enough to be a significant factor. This field was left blank for most upland sites that were far removed from water.
 - k. Associated species were included only if they stood out for any reason.

New sites that were found and treated were recorded on FACTS forms.

Forest Activity Tracking Sheet (FACTS)—Manual

The Forest Activity Tracking Sheets (FACTS) forms, which were introduced in 2006, became a requirement in 2007 and 2008 for all treatment sites. One form was supplied for manual treatment and one for chemical treatment. A sample manual treatment form and instructions for filling it out, as supplied by USFS are in Appendix J. Infested area treated was calculated as infested area × percent cover class. Infested area treated was listed for each weed.

Forest Activity Tracking Sheet (FACTS)—Chemical

The FACTS chemical treatment form took the place of the Department of Agriculture Pesticide Forms that were used in 2006. A sample chemical treatment form and instructions for filling it out, as supplied by USFS are in Appendix J. Infested area treated was calculated as infested area × percent cover class. Infested area treated was listed for each weed.

Rock Source Inspections

A Compliance Form was filled out for each rock source or quarry inspected. A sample form is shown in Appendix J

5. RangelandPC Data Entry for NRIS Terra Database:

- a. All site data collected were to be entered into RangelandPC files and submitted to Forest Service staff for upload to the NRIS Terra database. The exceptions were data collected for pits that contained no weeds or only low priority non-native species; these data were not entered into RangelandPC.
- b. The NRIS Terra database allows a minimum entry of 0.1 acres in the Infested Area field. Since many sites were well under 0.1 acres, the total infested area for the project reported to NRIS Terra is likely artificially inflated somewhat above the actual infested area found.
- c. Site revisits, records of weeds found at previously recorded sites, were entered into separate RangelandPC files than new sites. Revisits were entered using the original Site ID, but the actual date of the revisit was entered into the Date Found field.
- d. New sites were also recorded into a separate spreadsheet that included Site ID, road number, and beginning and ending milepost numbers. This spreadsheet was submitted separately to Forest Service GIS staff so that the Forest Service invasive plants coverage could be updated and linked to all available NRIS Terra data.
- e. Site re-visits that included treatment were documented through FACTS sheets.

6. Arc View Plotting:

Weed sites had already been mapped in ArcView GIS on a laptop computer so that a real-time map was available to the field crew throughout the season. The shape files produced for this map are retained by the Clallam County Noxious Weed Control Board for use in future fieldwork as necessary. These files are not submitted to the Forest Service because a Forest Service GIS analyst must construct a GIS coverage that coincides with other Forest Service database materials.

- a. Sites were plotted as points for individual sites. Where practical, multiple sites on a road of the same species were turned into a linear polygon. Each point or polygon was identified with its Site ID.
- b. There is a separate layer (shape file) for each weed species.
- c. Polygons were drawn on a separate layer – one layer for each species.
- d. Point and polygon layers were joined with the database (table) from the NRIS TERRA system.
- e. Two new layers were added—one of roads surveyed and one of sites where control work was done. Maps are presented on pages 6 to 13. Two maps are shown for each section of the Olympic National Forest—one showing weed sites recorded over the years and one showing roads surveyed and areas treated in 2008.

7. Data Reporting

All FACTS forms and Rock Source Survey forms were submitted to the Forest Service at the end of the field season. Copies of both were retained in the Clallam County Weed Board office. More detailed data is included in the Appendices to this report, as described below.

- a. Appendix A is the Project Area list supplied by the Forest Service at the start of the season, with details of 2008 treatments by acreage, date and species. It is a comprehensive account of work accomplished in 2008.
- b. Appendix B is summary of rock source inspections and treatments.
- c. Appendix C is a summary of work accomplished by other crews—the OCC crew and the Sheriff's Chain Gang in 2008.
- d. Appendix D is a master list of the roads surveyed and treated over the course of this project. This list shows the amount of survey completed on each road, and totals for each year, as well as the number of weeds pulled manually for each

year up to 2006. It also lists the area of treatment, by road, completed in 2007 and 2008, and weed species treated.

- e. Appendix E shows previously-listed weed sites that were not included in a Forest Service "Project Area".
- f. Appendix F gives control recommendations for each invasive species identified during the course of this project..
- g. Appendix G is a list of all weed species reported and entered into the NRIS Terra database during the course of this project.
- h. Appendix H shows the 2008 Washington State Noxious Weed List, which is updated annually according to WAC Chapter 16-750. Under RCW Chapter 17.10 all non-federal landowners in the state are responsible for controlling or eradicating any listed noxious weeds on their property. This same law provides for the formation of the County Noxious Weed Control Boards, and thus the weed control program in Jefferson County that is administered under this project. Federal agencies are required to work with local agencies to meet or match local weed control standards under the Federal Noxious Weed Act amended in 1994
- i. Appendix I shows examples of a legal notice regarding herbicide use and an on-site posting notice.
- j. Appendix J shows all forms used in the project.

Appendix A: 2008 Project Areas with Action Taken (Work Plan)

This table is based on the list of 24 “Project Areas” created by the Forest Service, in Clallam or Jefferson Counties, which served as the work plan for Clallam County Noxious Weed Control Board (CCNWCB). Not all Project Areas are shown here because some in other counties. 2 of the 24 Project Areas were assigned to a contractor. CCNWCB crew controlled weeds in 20 of the remaining 22. Time did not allow treatment in 2 Project Areas, the Pysht and Bogachiel Rivers, (totaling an estimated 1.1 acres.

This season’s treatments are summarized for each Project Area in the columns headed “Invasive Plants”, “Method”, “Acres Treated—manual”, “Herbicide”, Amount”, “Date” and “Acres Treated—chemical”. The table also shows the acreage the FS estimated would be treated with herbicide, so that a comparison can be made with the acreage actually treated. Totals for each Project Area are shown on the pink line, and an overall total is given at the bottom of the table.

In some of the Project Areas the FS estimate and the Acres Treated--chemical are similar, but in others the figures are somewhat different. This discrepancy occurs mainly because some roads appear in more than one Project Area and crews did not always record mileposts so treatment may sometimes have been put in the wrong Project Area.

The Forest Service estimated 138.35 acres would be treated with herbicide, in those Project Areas that CCNWCB crews worked in. Crews actually treated 131.35 acres chemically and 54.6 acres manually. The ability to use chemicals and to combine chemical and manual treatments resulted in more acres being treated than in previous years, but chemical usage did not exceed the FS estimate.

This table gives only work accomplished on FS land, by the CCNWCB crew. Details of work done on FS land by the contractor are not available, and work done by the Clallam County Sheriff’s Chain Gang and the OCC crew are given in Appendix C.

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
1	Calawah River	2	Calawah Botanical Area									
		2C	Calawah Pit	2900015	CYSC4 RUDI2 SEJA GERO	Chemical		AquaNeat	12	7/24	0.5	
		2D	Elk Quarry									
		2B		2900000	CYSC4 SEJA CIVU	Manual	2.5			6/17		

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
		2B		2932000	CYSC4 SEJA	Manual	8			7/24		
		2B		2932000	GERO	Chemical		Garlon	4	7/28	0.5	
		2B		2932013								
		2		2932030	CYSC4	Manual	0.1			7/24		
			Calawah Botanical Area— Treatment Totals				10.6				1.0	11.9

3	Sol Duc River	3	Snider & 3040 road									
		3A		2071000								
		3A		3040900								
		3A		3040800								
		3A		3040000	CYSC4	Manual	1			6/23		
		3A		3040000	CYSC4	Manual	1			7/2		
		3A		3040000	SEJA	Manual	0.1			8/6		
		3A		3040000	GERO SEJA LALA4	Chemical		Garlon	13	8/6	2	
		3A		3040000	LALA4	Chemical		Garlon	4	9/17	1	
			Snider Work Center	3040800	GERO	Manual	1			6/5		

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
		3A	Snider Work Center	3040800	GERO SEJA POBO10 CYSC4 CIVU CIAR4 LALA4 RUDI2	Chemical		Garlon	48	8/6	4	
		3A	Snider Work Center	3040800	GERO	Chemical		Garlon	40	9/16	2	
			Snider & 3040 road— Treatment Totals				3.1				9.0	4.9

1	Dungeness River	4	Cranberry Bog & 2870 roads									
		4A		2870000	CYSC4	Manual	0.5			7/2		
		4A		2870000	CEDE5 CYSC4	Chemical		Garlon	2	8/5	0.5	
		4A		2870000	LALA4 CIVU CIAR4 SEJA CEDE5	Chemical		Garlon	2	8/7	3	

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
		4A		2870000	CIVU CIAR4 CEDE5 CYSC4	Chemical		Garlon	24	8/14	3	
		4A		2870030								
		4A		2870050								
		4A		2870050								
		4A		2870052								
		4A		2870053	CIAR4 CIVU	Chemical		AquaNeat	10	9/11	3	
		4A		2870054								
		4A	Elk Project	2870056	CIAR4 CIVU	Chemical		AquaNeat	12	9/11	5	
		4A		2870057								
		4A	pit	2870000								
		4E	Lower Caraco Quarry	2870000		Inspected						
		4F	Upper Caraco Quarry	2870000		Inspected						
		4A		2870110								
		4A		2870130								
		4A		2870150								
		4A		2870058								
		4A		2870059	GERO PHAR4 CIAR4 CIVU RUDI2 LEVU	Chemical		AquaNeat	90	7/14	8	

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
		4B	bog	2870050								
	Dungeness River	4A		2878000	LALA4 CIAR4 CEJA CYSC4	Chemical		Garlon	18	8/5	4	
		4A		2878000	LALA4 GERO CIAR4 SEJA	Chemical		Garlon	54	8/7	5	
		4A		2878060								
		4A		2878080								
		4A		2878085								
		4A		2878100								
		4D	Ned Hill Quarry									
		4A		2878120								
		4A		2878110								
		4A	Slab Camp?	2875000	CEDE5 LALA4 CIVU CIAR4	Chemical		Garlon	6	8/5	2.5	
		4A		2875020								
		4A		2877040								
		4A		2875070								
		4C	Canyon Pit	2875000								
				2880000	SEJA CYSC4	Manual	0.1			8/9		
			Cranberry Bog & 2870 roads— Treatment Totals				0.6				34	14.2

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
3	Sol Duc River	5	Klahowya CG									
		5A		2900990								
		5A	Klahowya CG	3040595	GERO	Manual	1			6/23		
		5A		2900992								
		5A		3040595	SEJA	Manual	1			6/23		
		5A	Kloshe Nanitch Loop Trail									
			Klahowya CG— Treatment Totals				2					0.6

1	Upper West Hood Canal Frontal	6	Seal Rock CG									
		6A	Seal Rock CG	2610200	CYSC4 SEJA	Manual	3			7/29		
			Seal Rock CG— Treatment Totals				3					4

3	Calawah River	7	2923 Road South									
		7A		2923000	CYSC4	Manual	2.5			7/29		
		7A		2923000	CYSC4 RUDI2 LALA4 HYPE	Chemical				7/24	2	
		7A		2912060								
			2923 Road South— Treatment Totals				2.5				2	2.3

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
3	Calawah River	8	2923 Road North									
		8B		2923000	GERO	Chemical		Garlon	4	9/16	1	
		8B		2065								
		8B		2923060								
		8E		2923070								
		8E	Grindstone Pit	2923070								
		8E	decom	2923077								
		8E	decom	2923078								
		8C	2922 Rd	2922000								
		8D	2900 Rd	2900000	CYSC4 RUDI2 LALA4 HYPE	Chemical		AquaNeat	18	7/24	2	
		8D	2900 Rd	2900000	HIAU	Manual	0.1			7/28		
		8A	Bonidu Meadow	none								
			2923 Road North— Treatment Totals				0.1				3	18.9

5	Upper Quinault River	11	Higley Ridge Knotweed									
		11A		2190200	POBO10	Chemical		AquaMaster	1	9/8	0.1	
			Higley Ridge Knotweed— Treatment Totals								0.1	0.1

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
1	Port Angeles Harbor	14	2877 Road									
		14A		2877000	CEDE5 LALA4 CIAR4 CIVU	Chemical		Garlon	2	8/5	5	
		14A		2877000	CYSC4	Manual	0.4			7/2		
		14A		2877100								
		14A	Pat's Prairie	2877000	CIAR4	Chemical		Garlon	12	8/5	7	
			2877 Road— Treatment Totals				0.4				12	0.4

1	Dungeness River	15	Graywolf Trail Access									
		15A		2875000								
		15B	Slab Camp Quarry	2875000								
		15C		2870000								
		15C	Dungeness Trails Trailhead	2880000	GERO CIAR4	Chemical		AquaNeat	4	9/2	1	
		15D	Dungeness Forks Campground	2880050	GERO	Chemical		Garlon	54	9/3	5	
			Graywolf Trail Access— Treatment Totals				0				6	1.9

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
1	Dungeness River	16	Middle Dungeness Subwatershed									
		16A		2870000	SEJA CYSC4	Manual	0.1			8/9		
		16A	Lower Dungeness TR	2870230								
		16B		2860000								
		16C		2800000								
		16C		2800260								
		16C		2800130								
		16C		2800132								
		16C		2830000								
		16C		2830030								
		16C		2830034								
		16C		2820000								
		16	Middle Dungeness Subwatershed— Treatment Totals				0.1				0	4

1	Dungeness River	17	Upper Dungeness Subwatershed			Contractor	0					23.85
		17A		2870000								
		17A		2870270								
		17B	Camp Handy	none								
		17C		none								
		17C		none								

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
1	Sequim Bay	18	Jimmy-Come-Lately Subwatershed									
		18A		2850000								
		18A		2850120								
				2852000	CEDE5	Manual	1			8/26		
		18B		2855000	SEJA	Manual	2			8/25		
		18B		2855100								
		18B		2855070	SEJA CYSC4 CEBI2	Manual	3			8/25		
		18B		2855070	CEDE5	Chemical		AquaNeat	14	9/2	1	
		18B		2855030								
		18C		5006								
		18C		5331								
		18D		2800350								
		18D		2800351	CEDE5	Chemical		AquaNeat	8	8/27	1	
		18D		2800360								
		18D		2800362								
		18D	Pit at end of 2845073 and 2845070	2845073	CEDE5 CYSC4 SEJA CIAR4 CIVU	Chemical		AquaNeat	18	8/26	4	
		18F		2840000								
		18F		2840030								

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
		18F		2840034								
		18F		2840035								
		18F		2840036								
		18F		2840070								
		18F		2840071								
		18F		2840120								
		18E	Wolf Quarry	2840120								
		18F		2840080								
		18	Louella Work Station		CEDE5	Chemical		AquaNeat	6	8/27	1	
			Jimmy-Come-Lately Subwatershed— Treatment Totals				6				7	4

1	Dosewallips River	19	Lower Dosewallips River Subwatershed									
		19A		2500000	POBO10	Chemical		AquaNeat	9	9/8	0.75	
		19A		2610000	SEJA CYSC4	Manual	0.5			9/15		
		19A		2610040								
		19A		2610050								
		19B		2620000								
		19B		2620030								
		19B		2620030								
		19B		2620050								
		19B		2620051								
		19B		2620053								
		19B		2620056								

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
			Lower Dosewallips River Subwatershed— Treatment Totals				0.5				0.75	11.1

3	Lyre River/ Twin River	20	Deep Creek Subwatershed			Contractor, but CCNWCB did some work	1				2	20.2
3			Bear Saddle TS									
3		20C		3040000								
3		20B	Deep Creek Stabil	3067000								
3		20B	Middle 30 road	3000000								
3		20A		3000200	CYSC4	Manual	1			7/2		
3		20A		3000200	CYSC4 GERO LALA4	Chemical		Garlon	72	9/18	2	
3		20A		3000250								
3		20A		3000330								
			Deep Creek Subwatershed— Treatment Totals				1				2	20.2

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
3	Sol Duc River	21	West 30 road and 3006 road									
		21B	Bear Saddle TS									
		21A		3000000	CYSC4	Manual	4			6/23		
		21B		3000200	GERO	Chemical		Garlon	16	9/17	2	
		21B		3000300								
		21C		3006000								
		21C		3006011								
		21C		3100010								
		21D		3100300								
		21D		3116000								
		21E	added 5/20/08	2065								
		21E	added 5/20/08	2923100								
		21E	added 5/20/08	2923090								
			West 30 road and 3006 road— Treatment Totals				4				2	12

3	Bogachiel River	22	2932 Road to Bogachiel Trailhead			Crews did not get to this project	0					0.3
		22A		2932000								
		22B	unnamed pit	2932000								

3	Pysht River/ Clallam River	23	Pysht River Subwatershed			Crews did not get to this project	0					0.8
		23A		3000200								
		23A		3000250								
		23A		3000215								

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
3	Lyre River/ Twin River	24	East Twin River Subwatershed									
		24A		3040000	SEJA CYSC4 CIVU CIAR4	Manual	2			8/11		
		24A		3040000	SEJA CIVU CIAR4 LALA4 GERO CEDE5	Chemical		Garlon	18	8/11	3	
		24A		3040011								
				3068000	SEJA	Manual	5			8/12		
				3068000	CIVU	Chemical		Garlon	0.06	8/11	0.1	
			East Twin River Subwatershed— Treatment Totals				7				3.1	0.6

3	Lyre River/ Twin River	25	West Twin River Subwatershed									
		25A	Bear Saddle TS									
		25B		3000000	SEJA	Chemical		Garlon	4	7/17	2	
		25B		3000000	GERO	Chemical		Garlon	6	8/12	1	
		25B		3000000	SEJA CIVU CIAR4 CYSC4	Chemical		Garlon	0.5	8/11	9	

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
		25B		3000000	LALA4 CIVU CYSC4 CEDE5 GERO	Chemical		Garlon	50	8/6	12	
		25B		3000000	CYSC4 GERO CIAR4	Manual	1			6/25		
		25B		3000200	CYSC4	Manual	2			7/9		
		25B		3000591								
		25B		3000590								
		25B		3000400								
		25B		3000580								
3		25B		3000600								
3		25B		3000800								
3		25C		3040000								
			West Twin River Subwatershed— Treatment Totals				3				24	15.2

3	Sol Duc River	26	Headwaters Sol Duc River Subwatershed			No Treatment						0.9
		26A		2918000								
		26A		2920000								
		26A	decom	2920020								
		26A		2931000								
		26B	Upper Tom Quarry									

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
1	Big Quilcene River	28	Lower Big Quilcene River Subwatershed									
		28B	Quilcene office compound	2730300	CYSC4 LALA4	Chemical		Garlon	12	9/8	3	
		28F		3039								
		28A		3057								
		28A		2700000								
		28A		2740000								
		28A		2700080								
		28C		2620000								
		28D		2730000								
		28D		2730011								
		28D	Jackson planning									
		28D	Falls View CG	2730200	GERO	Manual	1			6/9		
		28D	Falls View CG	2730200	GERO	Chemical		Garlon & AquaNeat	12	9/5	2	
		28D										
		28D	Rainbow CG	???	SEJA	Manual	0.1			6/24		
		28D	Penny Creek Road	3039	SEJA	Manual	0.5			7/31		
			Lower Big Quilcene River Subwatershed— Treatment Totals				1.6				5	2.7

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
2	Duckabush River	32	Lower Duckabush Subwatershed									
		32B		2510000	SEJA	Manual	2			8/29		
		32B		2510070								
		32C		2530000								
		32C		2530100								
		32C		2530200								
		32A	Duckabush Pit	2510000								
		32	Collins CG	2510000	GERO	Chemical		Garlon	54	9/4	3	
			Lower Duckabush Subwatershed— Treatment Totals				2				3	8.3

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
1	Upper West Hood Canal Frontal	35	Little Quilcene River Sub WS									
		35A		2800000	CEDE5 LALA4 CIAR4 CIVU GERO	Chemical		AquaNeat	34	9/5	10	
		35A		2800000	LALA4 CIAR4 CIVU GERO SEJA	Chemical		AquaNeat	6	9/30	6	
		35A		2800000	SEJA CYSC4	Manual	0.1			8/9		
		35A		2800000	SEJA CIVU CEBI2	Manual	7			9/30		

Forest Service District	Watershed Name	Project #	Project Name	Road #	Invasive Plants	Method	Acres Treated-manual	Herbicide	Amount (oz)	Date	Acres Treated--chemical	FS Total Estimated Acres Herbicide
		35A		2800010	GERO CIAR4 LALA4	Chemical		Garlon	28	9/30	1	
		35A		2800060								
		35B		2800080								
		35C		2700000								
		35C		2700330								
		35C		2700280								
		35C		2700281								
		35D		2700220								
		35F	Bon Jon Quarry	2800000	SEJA LALA4	Chemical		AquaNeat	6	9/30	0.4	
		35E	unnamed pit	2700000								
			Little Quilcene River SubWS— Treatment Totals				7.1				17.4	15.3
3	Sol Duc River	36	Upper Sol Duc River Sub WS			No Treatment	0				0	5.95
		36A		2065								
		36B		2900000								
		36B		2900960								
		36B		2900950								
		36F	Bonidu Pit									
		36C		2929000								
		36C		2929070								
		36D		2918000								
		36D		2931000								
		36G	Tom Creek Pit	2931000		Inspected						
		36E		3071000								
		36H	unnamed pit									

Total Acres Treated Manually	54.6
Total Acres Treated Chemically	131.35
Total Acres Estimated by FS for Chemical Treatment, in Project Areas Worked on by CCNWCB	138.35

Appendix B: Rock Source Surveys and Treatment

The following is a summary of rock sources surveyed/ treated in 2008 including those shown within the FS Project Areas, and additional high use pits treated by the Olympic Correctional Crew. We did not receive a specific list of high priority pits from the Forest Service until September. This is not an exhaustive list of rock sources surveyed/treated to date. It is possible that more small or unnamed pits, were treated, but not specifically documented with a pit survey form.



Name	Road	Weed	Date	Treatment Type	Acreage Treated
Herrick Pit	Highway 101	CYSC4 GERO CEDE5 CIAR4 CIVU LEVU HYPE PHAR LALA4 DIPU	9/18/08	Surveyed, report filed	
Bon Jon	2800	LALA4 SEJA CIVU DIPU CYSC4 CEBI2 LEVU	9/30/08	Manual and chemical	0.1
Penny Creek Quarry	CR3039	RUDI2 DACA6 SEJA POCU CIAR4 CYSC4 RUCR	10/3/08	Surveyed, report filed	
Upper Caraco Quarry	2870		9/23/08	Surveyed, no weeds found	
Lower Caraco Quarry	2870		9/23/08	Surveyed, no weeds found	
Canyon Pit	2875	CIAR4 CEDE5 LALA4	8/5/08	Surveyed, report filed	
Calawah Pit	2900-015	CYSC4 LALA4 LEVU DIPU RUDI2 CIVU SEJA HYRA3 RULA	7/24/08	Chemical	0.5
Tom Creek Quarry	2931	CYSC4 HYRA DIPU LEVU HYPE CIVU	10/9/08	Surveyed, report filed	
Kirner Pit		COMA CEBI2 POCU LALA4 LEVU RUDI2		Surveyed, report filed	
Bloedel	RSI 123	CYSC4 HYRA	9/18/08	Surveyed, report filed	
Jimmy-Come-Lately	2845073	SEJA CYSC4 CIAR4 CEDE5 CIVU	8/26/08	Chemical	1
Caraco Cat	056	CIAR4 CIVU	9/11/08	Chemical	4
Hillcar-Fletcher Pit		CYSC4	6/18/08	Chemical and manual	0.7
Hoh Mainline Pit		CYSC4	6/19/08	Chemical and manual	19.75
Winfield Pit		CYSC4	7/7/08	Chemical and manual	9.25
Mora Pit		CYSC4	7/10/08	Chemical and manual	5.83
Copper Mine Pit		CYSC4	6/17/08	Manual	5
Goodman Mainline Pit		CYSC4	6/23/08	Manual	3
Moriarty Pit		CYSC4	8/14/08	Manual	1

Appendix C: Other Work Crew Accomplishments

Sheriff's Chain Gang:

In 2008, the Chain Gang continued its effort to control noxious weeds on National Forest lands and on other roads in Clallam County. Their participation in this project is important for its success. When removing weeds their major target was Scotch broom and they removed 24,530 Scotch broom plants from roads around the county. They also removed meadow knapweed from Olympic Hot Springs Road and poison hemlock from other roads, but we do not know how many plants. We have little data to report because in 2008 the Chain Gang's primary focus was not on noxious weed removal. In 2009 more effort should be put into coordinating weed control with the Chain Gang.

Olympic Correctional Center Crew:

A crew from the Olympic Correction Center (OCC) controlled Scotch broom in pits and quarries and on Highway 101 in the west end of both Clallam and Jefferson Counties. The selected pits are high use and are shared by different agencies, making them likely sources of weeds.

In 2007 the OCC crew comprised 10 people each day and was extremely efficient and cost-effective. In 2008 only 6 or 7 people were available each day, on average. Even though the crew members worked hard they could only accomplish two-thirds the work of a 10-person crew. The cost was the slightly higher due to increased transportation costs. We would like to use the OCC crew again, but need to ensure full crews are available.

The CCNWC developed the following work list for the OCC crew at the start of the field season. Details of work accomplished in 2008 have been added.

OCC PRELIMINARY WORK LIST, WITH 2008 TREATMENT ADDED							
Pits	Name	Ownership	Size	Location/Access	2008 Treatment	Date	Acres
1	Mary Clark	DNR	15 acres	Mary Clark Rd-on right, AA1 Key needed for gate			
2	Box Car -Mary Clark extension	DNR	5 acres	Mary Clark Rd-half mile past 1st pit, or access out back end			
3	Tyee Pit	Rayonier	10 acres	Off 101 at Beaver			
4	Loop Pit	DNR	5 acres	Off 101 S of Tyee Pit			
5	Lake Creek-County Pit	Clallam	5 acres	Bedrock Road-County shop (behind shop and on adjoin prop)			
6	Moriarty Pit	DNR	5 acres	La Push Rd to Quileute Rd left of Maxfield Property to 3200 Rd	Manual	8/14	1

7	Duncan Pit	Rayonier	40 acres	La Push Rd to Quileute Rd just past address 2781			
8	Mora Pit	DNR	5 acres	Quileute Prairie Rd-on way to Mora-3400 Rd on right	Chemical and manual	7/10	5.83
9	new pit	Rayonier		Off Goodman mainline-right at start			
10	Hillcar and Fletcher	Rayonier	10 acres	360-640-0700 or 0701	Chemical and manual	6/18	0.7
11	Winfield Pit			Clearwater	Chemical and manual	6/9 to 6/16	9.25
12	Copper Cr				Manual	6/17	5
13	Hoh Mainline Pit (Added)				Chemical and manual	6/19	19.75
14	Goodman Mainline Pit (Added)				Manual	6/23	3
Roads							
	Hwy 101			Approximately 30 miles of Highway 101	Chemical and manual	Many	29.46
	Clearwater						
	Mary Clark Rd						
	Cooper Ranch Rd						
	Hoh Mainline (added)				Manual	6/17	0.68
	Copper Mine Camp Road (added)				Manual	6/17	0.15
Total Acreage							74.82

Appendix D: Roads Surveyed/Treated

The following table shows survey and treatment work for each year since the initiation of the project in 2002, as well as totals for the entire project. The numbers of weeds pulled and areas treated below include work carried out by the Weed Board crews, WCC crews, OCC crews and the Clallam County Sheriff's Department Chain Gang. Since area of treatment was not required for reporting in the past, it is only listed for 2006, 2007 and 2008. Further, since Chain Gang work was only reported as number of weeds pulled, area of treatments has been estimated at 0.1 acre per 1000 weeds, rounded up.

Project accomplishments are directly tied to project funding which has varied since its inception. Additionally, the project focus has shifted each year as the program has matured. The specific focus for each year is listed below.

- 2002: Weed Board staff familiarization with the Olympic National Forest road system. Begin learning which noxious weeds threatened the health of the forest. Begin the formal survey of the Pacific and Hood Canal districts, learn documentation and mapping processes, and begin control efforts.
- 2003: Survey as many roads as possible and document findings. Continue control efforts. Roads in Mason and Grays Harbor Counties (numbered 2500000 or lower) were surveyed as part of a Botanical Areas survey.
- 2004: Survey any roads not previously completed, monitor prior control sites, and perform as much new control work as possible.
- 2005: Increase the amount of control work preformed and continue to monitor prior control sites, repeating treatments as necessary.
- 2006: Focus primarily on control work, especially herbicide applications on selected sites. Also survey and treat as many rock sources as possible. Continue monitoring prior control sites and repeating treatments as necessary.
- 2007: Focus primarily on control work, including herbicide applications on selected sites. Continue monitoring prior sites and repeating treatments as necessary. Survey and remove small infestations en route to treatment sites.
- 2008: Focus still on control, especially since the EIS, completed in March 2008, allows herbicide use on all sites. Continue monitoring prior sites and repeating treatments as necessary. Survey and remove small infestations en route to treatment sites.

For definitions for the Forest Service weed species plant codes, see Appendix G.

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
SR101	3		3.00	0	-		1.00	-	HICA10 GERO	1.00	4	0.10	SEJA	1.0	0.68	POBO10 POSA4 CYSC4	7.5	18	CYSC4
CR5695	5	8,499	8.98	4.98	8,499	SEJA CIAR4 CYSC4		-		-	-	-		0	0		4	2	SEJA

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
CR5331	3	-	14.24	0					8.24	-	-		2.0	1.03	GERO CEDE5 SEJA	4	0		
CR3057	1	-	1.90	0					1.90	3	0.10	SEJA	0	0		0	0		
CR3039	2	4,800	5.10	0	4,800	GERO		-	1.10	159	0.10	SEJA CYSC4 GERO	0	0		4	0.5	SEJA	
CR2515	1		0.40	0					0.40	-	-		0	0		0	0		
CR2500	4	35,074	25.05	23.5 5	35,07 4	GERO CYSC4		-	1.50	-	-		0	0		0	0		
CR2274	2	-	5.70	0					3.70	-	-		0	0		2	0.5	SEJA	
CR2071	1	-	1.80	0					1.80	15	0.20	SEJA	0	0					
CR2065	4	22,049	10.52	0.01	5,564	CYSC4	4.4	16,485	CYSC4 SEJA GERO	4.11	-	-	0	0		2	1	GERO CYSC4	
3116000	2	-	10.00	10.0	-			-		-	-		0	0		0	0		
3100420	1	-	0.60	0.6	-			-		-	-		0	0		0	0		
3100400	1	-	2.90	2.9	-			-		-	-		0	0		0	0		
3100300	1	-	5.00	5.0	-			-		-	-		0	0		0	0		
3071015	1	-	0.60	0.6	-			-		-	-		0	0		0	0		
3071000	3	60	2.20	1.2	60	CYSC4		-		-	-		0	0		1	0		
3071000	2	-	3.40	3.4	-			-		-	-		0	0		0	0		
3068200	3	815	7.20	4.8	80	CYSC4	2.4	735	CYSC4		-	-	0	0		0	0		
3068190	2	-	0.40	0.4	-			-		-	-		0	0		0	0		
3068000	5	30	5.20	1.6	-		0.8	30	SEJA		-	-	0.8	0.1	CYSC4	2	5	SEJA CYSC4 CIVU CIAR4	
3068000	4	491	31.10	19.4	336	CYSC4 SEJA	9.7	155	CEJA SEJA		-	-	0	0		2	0.1	CIVU	
3067000	2	1,402	7.06	3.53	1,402	SEJA CYSC4		-			-	-	0	0		0	0		
3050011	1	-	1.50	1.5	-			-			-	-	0	0		0	0		
3050000	1	2	3.80	3.8	2	SEJA		-			-	-	0	0		0	0		
3040900	1	-	0.50	0.5	-			-			-	-	0	0		0	0		

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
3040000	5	35,136	40.80	21.6	34,396	SEJA CYSC4 GERO	7.2	740	GERO SEJA	-	-		0	0		12	3	SEJA CYSC4 CIVU CIAR4 LALA4 CEDE5 GERO	
30-200	1		16.00	0									16.0	16.55	GERO LALA4 CIVU	0	0		
30-250	1		7.60	0									7.6	2.66		0	0		
3006300	1	-	4.10	4.1	-			-		-	-		0	0		0	0		
3006011	1	-	1.20	1.2	-			-		-	-		0	0		0	0		
3006000	1	-	7.80	7.8	-			-		-	-		0	0		0	0		
3000401	1	-	1.00	1.0	-			-		-	-		0	0		0	0		
3000400	1	-	2.20	2.2	-			-		-	-		0	0		0	0		
3000400	1	-	2.30	2.3	-			-		-	-		0	0		0	0		
3000395	1	-	0.20	0.2	-			-		-	-		0	0		0	0		
3000300	1	-	3.50	3.5	-			-		-	-		0	0		0	0		
3000260	1	-	0.70	0.7	-			-		-	-		0	0		0	0		
3000250	2	-	9.45	3.9	-			-	5.55	10	1.20	CYSC4	0	0		0	0		
3000220	1	-	2.80	2.8	-			-		-	-		0	0		0	0		
3000215	2	-	3.60	0.6	-			-	3.00	-	-		0	0		0	0		
3000200	2	-	3.00	3.0	-			-		-	-		0	0		0	0		
3000200	4	-	44.67	6.0	-			-	26.67	6	0.20	SEJA	0	0		12	7	CYSC4 GERO LALA4	
3000200	2	-	7.00	7.0	-			-		-	-		0	0		0	0		
3000011	1	-	0.70	0.7	-			-		-	-		0	0		0	0		
3000000	4	-	42.21	2.86	-			-	32.35	553	1.00	CYSC4	0	0		7	7	CYSC4 SEJA GERO	

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
3000000	4	14,745	32.50	22.5	14,743	GERO RULA CYSC4		2	SEJA		-	-		0	0		10	9	SEJA CIVU CIAR4 CYSC4
3000000	4	867,800	48.90	33.9	867,800	CYSC4 GERO CIVU		-			-	-		0	0		15	13	LALA4 CIVU CIAR4 CYSC4 CEDE5 GERO
2978085	2	-	1.10	1.1	-			-			-	-		0	0		0	0	
2978040	2	-	0.30	0.3	-			-			-	-		0	0		0	0	
2978035	2	-	0.10	0.1	-			-			-	-		0	0		0	0	
2978030	2	-	0.60	0.6	-			-			-	-		0	0		0	0	
2978030	2	-	0.70	0.7	-			-			-	-		0	0		0	0	
2978025	2	-	0.30	0.3	-			-			-	-		0	0		0	0	
2978025	2	-	0.80	0.8	-			-			-	-		0	0		0	0	
2978015	2	18	1.60	1.6	18	CYSC4		-			-	-		0	0		0	0	
2978011	2	-	0.40	0.4	-			-			-	-		0	0		0	0	
2978000	2	3,604	4.70	4.7	3,604	CYSC4 SEJA		-			-	-		0	0		0	0	
2932070	1	12	0.90	0.9	12	CYSC4		-			-	-		0	0		0	0	
2932050	1	-	0.30	0.3	-			-			-	-		0	0		0	0	
2932040	1	-	0.40	0.4	-			-			-	-		0	0		0	0	
2932035	1	-	0.20	0.2	-			-			-	-		0	0		0	0	
2932031	1	-	0.50	0.5	-			-			-	-		0	0		0	0	
2932030	3	-	2.40	1.3	-			-		0.10	-	-		0	0		1	0.1	CYSC4
2932000	5	1,970	25.80	11.4	2,010	LEVU CYSC4		-		3.20	143	0.30	CYSC4	3.2	0		8	8.5	CYSC4 SEJA GERO
2931200	1	-	2.50	2.5	-			-			-	-		0	0		0	0	
2931190	1	-	1.70	1.7	-			-			-	-		0	0		0	0	
2931000	1	1	11.90	11.9	1	SEJA		-			-	-		0	0		0	0	
2929070	2	525	5.80	2.9	525	GERO RULA CYSC4		-			-	-		2.9	0		0	0	

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
2929000	2	-	4.40	2.2	-			-			-	-		2.2	0		0	0	
2929000	2	-	6.20	3.1	-			-			-	-		3.1	0		0	0	
2929000	2	-	8.80	4.4	-			-			-	-		4.4	0		0	0	
2923100	1		0.20	0					0.20		-	-		0	0		0	0	
2923077	1		15.60	0									15.6	2.15	CYSC4 SEJA	0	0		
2923070	2	2	11.60	5.2	2	SEJA		-			-	-		6.4	8	CIVU HYPE GERO SEJA CYSC4	0	0	
2923060	1		0.80	0					0.80		-	-		0	0		0	0	
2923000	4	106	62.84	27.4	106	SEJA CIAR4 HIAU CYSC4			13.7 4	1,328	0.50	SEJA CYSC4	13.7	0		8	3.5	CYSC4 GERO	
2922000	2	-	25.20	12.6	-			-			-	-		12.6	0.1	GERO	0	0	
2920210	1	-	0.20	0.2	-			-			-	-		0	0		0	0	
2920020	1	-	1.40	1.4	-			-			-	-		0	0		0	0	
2920000	1	-	1.40	1.4	-			-			-	-		0	0		0	0	
2920000	1	-	1.80	1.8	-			-			-	-		0	0		0	0	
2920000	1	-	5.70	5.7	-			-			-	-		0	0		0	0	
2918110	1	-	0.80	0.8	-			-			-	-		0	0		0	0	
2918100	1	-	3.30	3.3	-			-			-	-		0	0		0	0	
2918000	1	-	9.00	9.0	-			-			-	-		0	0		0	0	
2918000	2	2,315	11.00	11.0	765	SEJA CYSC4		1,550			-	-		0	0		0	0	
2912060	2	3	2.80	2.8	3	SEJA					-	-		0	0		0	0	
2903000	1	78	6.80	6.8	78	SEJA CYSC4		-			-	-		0	0		0	0	
2902375	1	-	0.80	0.8	-			-			-	-		0	0		0	0	
2902300	1	-	0.60	0.6	-			-			-	-		0	0		0	0	
2902000	3	2,500	1.11	1.1	2,500	CYSC4			0.01	1,627	0.20	CYSC4	0	0		0	0		

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
2902000	1	48	1.80	1.8	48	SEJA CYSC4		-			-	-		0	0		0	0	
2902000	1	-	2.50	2.5	-			-			-	-		0	0		0	0	
2900990	2	5,300	2.40	2.4	5,300	CYSC4 GERO					-	-		0	0		0	0	
2900950	1	-	0.10	0.1	-			-			-	-		0	0		0	0	
2900650	1	-	1.20	1.2	-			-			-	-		0	0		0	0	
2900540	1	-	2.00	2.0	-			-			-	-		0	0		0	0	
2900200	2	54	0.70	0	-		0.7	54	SEJA CYSC4		-	-		0	0		0	0	
2900070	1	-	0.40	0.4	-			-			-	-		0	0		0	0	
2900070	1	-	2.30	2.3	-			-			-	-		0	0		0	0	
2900015	2	-	0.3	0.1	-			-			-	-		0.2	4	CYSC4	0.5	0.5	CYSC4 RUDI2 SEJA GERO
2900000	3	-	12.60	3.4	-			-									0	0	
2900000	3	-	4.21	3.7	-			-									0	0	
2900000	3	1,074	18.90	13.9	-			1,074	CYSC4 GERO		-	-		0	0		5	2.5	CYSC4 SEJA CIVU
2900000	3	595,386	32.80	22.6	11,870	CYSC4 HIAU GERO		583,516	HIAU GERO SEJA	4.60	420	0.30	SEJA GERO HIAU	4.6	0.2	HIAU SEJA	1	0.1	HIAU
2900000	5	52,092	28.51	18	50,467	POSA4 CYSC4 SEJA CIAR4 GERO	6	1,625	SEJA CYSC4	0.01	15,253	2.00	CYSC4 SEJA	0.5	0.1	SEJA	4	2	CYSC4 RUDI2 LALA4 HYPE
2880050	6	247,264	1.10	0.2	5,760	GERO	0.1	241,504	GERO	0.30	7,740	0.50	GERO	0	0		0.5	5	GERO
2880000	6	8,700	24.84	3.62	8,700	GERO SEJA		-		13.02	1,223	0.30	GERO	4.2	4.0	CEDE5 SEJA	4	1.1	SEJA CYSC4 GERO CIAR4
2878123	2	-	0.40	0.2	-			-			-	-		0.2	0		0	0	

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
2878120	2	2,170	2.10	1.05	2,170	CYSC4		-			-	-		1.05	0		0	0	
2878110	1	-	0.90	0.9	-			-			-	-		0	0		0	0	
2878109	1	-	0.27	0.27	-			-			-	-		0	0		0	0	
2878108	1	-	0.13	0.13	-			-			-	-		0	0		0	0	
2878102	1	-	0.40	0.4	-			-			-	-		0	0		0	0	
2878100	1	-	1.59	1.59	-			-			-	-		0	0		0	0	
2878085	1	-	0.90	0.9	-			-			-	-		0	0		0	0	
2878080	1	-	1.40	1.4	-			-			-	-		0	0		0	0	
2878060	1	127	0.40	0.4	127	CYSC4		-			-	-		0	0		0	0	
2878050	1	-	0.60	0.6	-			-			-	-		0	0		0	0	
2878000	4	1,344	16.13	4.06	1,340	CYSC4		4	CYSC4	0.01	1,627	0.20	CYSC4	4.06	0		8	9	LALA4 CIAR4 CEDE5 CYSC4 GERO SEJA
2877100	1	-	0.30	0.3	-			-			-	-		0	0		0	0	
2877052	1	-	0.29	0.29	-			-			-	-		0	0		0	0	
2877050	1	-	1.00	1.0	-			-			-	-		0	0		0	0	
2877050	1	-	1.65	1.65	-			-			-	-		0	0		0	0	
2877040	1	-	0.51	0.51	-			-			-	-		0	0		0	0	
2877040	1	-	0.78	0.78	-			-			-	-		0	0		0	0	
2877000	2	-	14.60	4.6	-			-			-	-		0	0		10	12.4	CEDE5 LALA4 CIAR4 CIVU CYSC4
2875090	1	-	0.10	0.1	-			-			-	-		0	0		0	0	
2875070	2	-	2.60	2	-			-		0.60	-	-		0	0		0	0	
2875020	1	6	0.50	0.5	6	CYSC4		-			-	-		0	0		0	0	
2875000	4	-	20	2.3	-			-		5.90	238	0.40	CEJA	5.9	5	CEDE5	5.9	2.5	CEDE5 LALA4 CIVU CIAR4
2875000	2	30	9.4	3.6	30	CEJA		-			-	-		5.8	1.5	CEDE5	0	0	

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
2870270	2		3.50	0						3.50	-	0.28	CIAR4 CIVU	0	3.2	CIVU CEDE5 SEJA HYPE	0	0	
2870250	1			0										0	1.5	CEDE5 CEBI2	0	0	
2870230	4	18	3.97	0			1.41	18	SEJA	2.56	20	0.30	CIAR4 CIVU HYPE	0	0.4	CIVU CIAR4 GERO	0	0	
2870150	1		0.60	0						0.60	-	-		0	0		0	0	
2870130	1		0.70	0						0.70	1	0.10	CYSC4	0	0		0	0	
2870110	1	729	0.30	0.3	729	CYSC4		-			-	-		0	0		0	0	
2870059	5	19,529	3.36	1.44	20	CEJA	0.48	19,509	CIAR4 CIVU SEJA CEJA CYSC4 GERO	0.96	-	-		0.9 6	0		0	0	
2870058	4	-	6.20	1	-			-		1.60	-	2.55	GERO CIAR4 PHAR3	3.6	5	PHAR3 CIAR4 CIVU GERO	0	0	
2870057	1		2.40	0										2.4	1.5	CIAR4 CIVU HYPE	0	0	
2870056	5	14	3.80	1.4	14	CEJA SEJA		-		0.70	-	0.10		0.7	2.9	SEJA CIVU CEDE5 CYSC4	1	5	CIAR4 CIVU
2870054	1		0.50	0										0.5	3	CEDE5	0	0	
2870053	2		1.00	0										0.5	0.2	CEDE5	0.5	3	CIAR4 CIVU

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
2870050	6	110	25.90	5.6	16	SEJA HYPE	2.3	94	SEJA	7.80	-	0.80	CEJA CYSC4 GERO CIAR4 LALA4 CIVU	2.4	0.5	SEJA	7.8	8	GERO PHAR4 CIAR4 CIVU RUDI2 LEVU
2870030	4	78	6.80	3.4	43	CEJA CYSC4 SEJA	1.7	35	SEJA CEJA		-	-		1.7	2	CEDE5 SEJA	0	0	
2870000	6	1,963	367.8	19.8	151	SEJA	9.9	1,812	SEJA GERO CYSC4	112. 77	1,89 0	3.13	CEJA SEJA CYSC4	112 .77	9.4	CEDE5 CYSC4	112. 7	7.1	CYSC4 CEDE5 LALA4 CIVU CIAR4 SEJA
2860120	1	-	1.60	1.6	-			-			-	-		0	0		0	0	
2860011	2	2,708	0.40	0	-		0.4	2,708	SEJA GERO		-	-		0	0		0	0	
2860000	4	54,000	49.45	48.4 5	50,50 0	GERO CIVU	1	3,500	CIVU		-	-		0	0		0	0	
2855100	2	-	2.40	2.4	-			-			-	-		0	0		0	0	
2855070	5	103	4.40	0.9	103	CEBI2 RULA	0.3	-		1.50	1,97 6	0.52	GERO SEJA CEBI2	0	0		1.5	4	SEJA CYSC4 CEBI2 CEDE5
2855070	2	3,418	2.60	1.3	1,127	SEJA CIAR4	1.3	2,291	CEBI2 GERO SEJA CYSC4		-	-		0	0		0	0	
2855032	2	1	1.60	1.6	1	RULA		-			-	-		0	0		0	0	
2855030	2	19,200	5.40	5.4	19,20 0	SEJA		-			-	-		0	0		0	0	

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
2855000	4	51,701	17.90	5.4	51,701	CEBI2 CYSC4 CIVU GERO SEJA CEJA		-		4.50	246	0.40	SEJA	0	0		8	2	SEJA
2852150	2	25	1.29	1.29	25	CYSC4		-			-	-		0	0		0	0	
2852090	2	1,550	0.40	0.4	1,550	SEJA CIAR4	9.9	1,812	SEJA GERO CYSC4		-	-		0	0		0	0	
2852000	4	45,331	7.41	5.4	45,331	SEJA CEJA RULA GERO CIAR4				0.01	2,274	0.30	SEJA	0	0		2	1	CEDE5
2851090	2	-	1.2	0.6	-			-			-	-		0	0		0	0	
2851080	2	1,660	3.20	3.2	1,660	TAVU CYSC4 SEJA					-	-		0	0		0	0	
2851000	3	4,750	8.21	8.2	-			4,750	SEJA	0.01	5,340	0.60	SEJA	0	0		0	0	
2850124	1	-	0.20	0.2	-			-			-	-		0	0		0	0	
2850120	2	-	2.81	2.8	-			-		0.01	1,400	0.20	CYSC4	0	0		0	0	
2850093	1	-	0.10	0.1	-			-			-	-		0	0		0	0	
2850090	1	-	1.02	1.02	-			-			-	-		0	0		0	0	
2850010	3	12	3.21	3.2	12	RULA		-		0.01	5,340	0.90	SEJA	0	0		0	0	
2850000	4	61,544	22.21	22.2	46,444	GERO SEJA CYSC4 RULA		15,100	SEJA GERO	0.01	5,790	0.60	SEJA	0	0		0	0	
2845200	1	-	0.28	0.28	-			-			-	-		0	0		0	0	
2845150	1	-	0.20	0.2	-			-			-	-		0	0		0	0	

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
2845120	2	84	3.40	1.7	84	SEJA CYSC4		-			-	-		1.7	1.9	CIVU SEJA CYSC4	0	0	
2845090	2	12	1.00	1	12	SEJA CYSC4					-	-		0	0		0	0	
2845073	1	-	0.90	0.9	-						-	-		0	0		0	0	
2845070	3	1,860	3.20	5.6	1,860	CYSC4		-			-	-		1.6	0		4	4	CEDE5 CYSC4 SEJA CIAR4 CIVU
2845040	1	160	0.30	0.3	160	SEJA		-			-	-		0	0		0	0	
2845000	4	5,204	13.81	4.6	5,204	SEJA		-		0.01	7,174	0.70	SEJA	4.6	0		4.6	0	
2840150	1	1	0.64	0.64	1	SEJA		-			-	-		0	0		0	0	
2840130	1	-	1.10	1.1	-			-			-	-		0	0		0	0	
2840120	1	-	0.73	0.73	-			-			-	-		0	0		0	0	
2840120	1	-	1.27	1.27	-			-			-	-		0	0		0	0	
2840084	1	-	0.25	0.25	-			-			-	-		0	0		0	0	
2840080	1	-	0.73	0.73	-			-			-	-		0	0		0	0	
2840080	1	1	0.89	0.89	1	RULA		-			-	-		0	0		0	0	
2840071	2	36	2.00	2	36	SEJA BORAG					-	-		0	0		0	0	
2840070	2	5,753	3.54	3.54	5,753	SEJA CYSC4					-	-		0	0		0	0	
2840034	1	-	1.44	1.44	-			-			-	-		0	0		0	0	
2840030	1	-	3.04	3.04	-			-			-	-		0	0		0	0	
2840000	4	10,010	16.20	10.8	10,010	CIAR4 SEJA CYSC4					-	-		5.4	0		5.4	0	
2830034	1	-	0.33	0.33	-			-			-	-		0	0		0	0	
2830032	1	-	1.00	1.0	-			-			-	-		0	0		0	0	
2830030	1	-	1.80	1.8	-			-			-	-		0	0		0	0	
2830000	3	1,250	14.85	9.9	1,250	CEBI2					-	-		0	0		4.95	0	
2820000	3	-	8.01	4	-			-		0.01	2,274	0.20	SEJA	0	0		4	0	

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
2810070	1	-	0.61	0.61	-			-			-	-		0	0		0	0	
2810000	2	10,190	8.02	8.02	10,190	SEJA CYSC4		-			-	-		0	0		0	0	
2800351	2		1.20	0										1.2	1.0	CEDE5 CYSC4	1.2	1	CEDE5
2800310	4	2,155	0.60	0.25	1,550	CYSC4	0.25	605	CYSC4	0.10	2,500	0.20	CYSC4	0	0		0	0	
2800290	2	1	0.30	0	-		0.3	1	SEJA CYSC4		-	-		0	0		0	0	
2800270	1	310	0.47	0			0.47	310	SEJA CYSC4		-	-		0	0		0	0	
2800262	1	-	0.60	0.6	-			-			-	-		0	0		0	0	
2800260	1	-	1.20	1.2	-			-			-	-		0	0		0	0	
2800250	3	7	4.60	1.1	-		1.1	7	SEJA	2.40	85	0.10	SEJA	0	0		0	0	
2800240	1	-	0.80	0.8	-			-			-	-		0	0		0	0	
2800220	1	-	1.20	1.2	-			-			-	-		0	0		0	0	
2800210	1	-	0.40	0.4	-			-			-	-		0	0		0	0	
2800145	1	-	0.30	0.3	-			-			-	-		0	0		0	0	
2800132	2	-	1.2	0	-			-		0.60	463	0.10	CEB12 CEJA	0.6	0		0	0	
2800130	1		1.6	0										1.6	1.2	SEJA CEB12	0	0	
2800060	1	-	1.10	1.1	-			-			-	-		0	0		0	0	
2800010	2	-	3.10	1.1				-			10	0.10		0	00		2	1	GERO CIAR4 LALA4
2800000	7	60,883	150.61	43.5	25,052	SEJA CIAR4 CYSC4 GERO CIVU	14.5	35,831	SEJA CEJA	30.87	9,438	1.00	SEJA CYSC4	30.87	52.3	SEJA CIVU CIAR4 DIPU CEDE5	30.87	26.2	CEDE5 CEB12 CIAR4 CIVU GERO LALA4 CYSC4 ILAQ80 SEJA
2750020	1	-	1.50	1.5	-			-			-	-		0	0		0	0	

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
2750000	1	-	4.90	4.9	-			-			-	-		0	0		0	0	
2740075	1	-	0.47	0.47	-			-			-	-		0	0		0	0	
2740072	3	-	1.2	0.4	-			-		0.40	200	0.10	CEBI2	0.4	0		0	0	
2740070	2	-	4.00	3.05	-			-		0.95	-	-		0	0		0	0	
2740060	3	-	11.48	5.8	-			-		2.84	33	0.20	CYSC4	2.84	0		0	0	
2740000	4	-	34.12	13.7	-			-		6.72	-	-		13.7	1.61	CYSC4 CEBI2 SEJA	0	0	
2730300	3	934	1.60	1.1	834	CYSC4		100	CYSC4		-	-		0	0		0.5	3	CYSC4 LALA
2730200	5	19,621	5.60	3.4	2,972	GERO SEJA	1.7	16,649	GERO SEJA CIVU		-	-		0	0		0.5	3	GERO
2730100	3	35	0.40	0.4	35	SEJA					-	-		0	0		0	0	
2730020	3	-	1.20	1.2	-			-			-	-		0	0		0	0	
2730011	1	51	0.90	0.9	51	GERO		-			-	-		0	0		0	0	
2730000	4	146,400	15.20	11.4	145,160	SEJA CYSC4 TAVU	3.8	1,240	SEJA		-	-		0	0		0	0	
2700330	1		1.00	0						1.00	-	-		0	0		0	0	
2700140	1	-	1.20	1.2	-			-			-	-		0	0		0	0	
2700100	1	-	4.60	4.6	-			-			-	-		0	0		0	0	
2700090	1	-	1.99	1.99	-			-			-	-		0	0		0	0	
2700000	5	4,201	48.24	34.8	4,201	TAVU SEJA				1.84	-	-		11.6	0.05	GERO	0	0	
2650090	1	-	1.68	1.68	-			-			-	-		0	0		0	0	
2650050	2	-	0.90	0.9	-			-			-	-		0	0		0	0	
2650000	2	2	15.00	15	2	ARMI2		-			-	-		0	0		0	0	
2620056	2	24	0.76	0.76	24	CEJA					-	-		0	0		0	0	
2620053	2	-	1.30	1.3	-			-			-	-		0	0		0	0	
2620051	2	-	0.89	0.89	-			-			-	-		0	0		0	0	
2620050	2	-	2.80	2.8	-			-			-	-		0	0		0	0	
2620043	1	-	0.70	0.7	-			-			-	-		0	0		0	0	
2620030	1	-	9.70	9.7	-			-			-	-		0	0		0	0	

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
2620000	4	39,464	46.48	23.2 4	15,29 7	SEJA CIVU CYSC4 GERO RULA	11.6 2	24,167	SEJA CYSC4 GERO CIVU		-	-		0	0		11.6 2	0	
2610200	6	3,454	8.90	6.4	954	CYSC4 SEJA HEHE RUDI GERO	1.6	2,500	CYSC4	2.50	222	0.20	CYSC4	0	0		1.6	3	CYSC4 SEJA
2610040	2	3,000	0.40	0	-		0.4	3,000	SEJA		-	-		0	0		0	0	
2610012	1		0.85	0						0.85	397	0.20	GERO	0	0		0	0	
2610000	2	50	0.50	0	-		0.5	50	CYSC4		-	-		0	0		0	0	
2610000	6	6,520	35.60	12.3	2,592	GERO SEJA CYSC4 RULA	4.1	3,928	SEJA CIVU CIAR4 GERO CYSC4	3.20	2	0.10	CEJA	0	0		16	0.5	SEJA CYSC4
2530000	2	-	5.70	5.7	-			-			-	-		0	0		0	0	
2527000	1	-	1.20	1.2	-			-			-	-		0	0		0	0	
2510070	3	1,600	1.10	0.1	1,600	GERO		-		1.00	-	0.82	GERO	0	0		0	0	
2510065	1		0.15	0						0.15	-	-		0	0		0	0	
2510012	1		1.10	0						1.10	-	-		0	0		0	0	
2510000	3	-	10.60	0.2	-			-						0.4	8	GERO HYPE CIAR4 CIVU RUDI2 RULA SEJA	10	2	SEJA
2510000	3	-	54.76	1.8	-			-		32.9 6	8	0.53	CEJA CYSC4	0	0		20	3	GERO
2510000	1	45	4.60	4.6	45	SEJA		-			-	-		0	0		0	0	
2500000	2	-	16.20	0.2	-			-			-	-		0	0		16	0.75	POBO10
2500000	1	-	0.98	0.98	-			-			-	-		0	0		0	0	
2500000	1	-	1.20	1.2	-			-			-	-		0	0		0	0	

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
2500000	1	-	1.32	1.32	-			-			-	-		0	0		0	0	
2500000	1	-	1.46	1.46	-			-			-	-		0	0		0	0	
2500000	1	-	4.16	4.16	-			-			-	-		0	0		0	0	
2500000	1	-	4.54	4.54	-			-			-	-		0	0		0	0	
2480000	1	-	0.91	0.91	-			-			-	-		0	0		0	0	
2480000	1	-	1.54	1.54	-			-			-	-		0	0		0	0	
2480000	1	-	5.27	5.27	-			-			-	-		0	0		0	0	
2471022	1	-	0.42	0.42	-			-			-	-		0	0		0	0	
2471020	1	-	0.88	0.88	-			-			-	-		0	0		0	0	
2471013	1	-	2.60	2.6	-			-			-	-		0	0		0	0	
2471000	1	-	0.15	0.15	-			-			-	-		0	0		0	0	
2471000	1	-	0.23	0.23	-			-			-	-		0	0		0	0	
2471000	1	-	0.70	0.7	-			-			-	-		0	0		0	0	
2471000	1	-	0.76	0.76	-			-			-	-		0	0		0	0	
2471000	1	-	1.97	1.97	-			-			-	-		0	0		0	0	
2469022	1	-	0.59	0.59	-			-			-	-		0	0		0	0	
2469022	1	-	0.63	0.63	-			-			-	-		0	0		0	0	
2469000	1	-	0.10	0.1	-			-			-	-		0	0		0	0	
2469000	1	-	0.54	0.54	-			-			-	-		0	0		0	0	
2469000	1	-	0.63	0.63	-			-			-	-		0	0		0	0	
2469000	1	-	0.67	0.67	-			-			-	-		0	0		0	0	
2469000	1	-	0.80	0.8	-			-			-	-		0	0		0	0	
2469000	1	-	1.46	1.46	-			-			-	-		0	0		0	0	
2469000	1	-	1.96	1.96	-			-			-	-		0	0		0	0	
2464000	1	-	0.15	0.15	-			-			-	-		0	0		0	0	
2464000	1	-	0.65	0.65	-			-			-	-		0	0		0	0	
2464000	1	-	0.90	0.9	-			-			-	-		0	0		0	0	
2464000	1	-	5.00	5.0	-			-			-	-		0	0		0	0	
2451115	1	-	0.32	0.32	-			-			-	-		0	0		0	0	
2451100	1	-	1.50	1.5	-			-			-	-		0	0		0	0	
2451100	1	-	4.70	4.7	-			-			-	-		0	0		0	0	
2451020	1	-	0.40	0.4	-			-			-	-		0	0		0	0	
2451017	1	-	0.30	0.3	-			-			-	-		0	0		0	0	
2451000	1	-	0.03	0.03	-			-			-	-		0	0		0	0	
2451000	1	-	0.67	0.67	-			-			-	-		0	0		0	0	

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
2451000	1	-	0.84	0.84	-			-		-				0	0		0	0	
2451000	1	-	0.90	0.9	-			-		-				0	0		0	0	
2451000	1	-	1.20	1.2	-			-		-				0	0		0	0	
2451000	1	-	1.42	1.42	-			-		-				0	0		0	0	
2451000	1	-	1.59	1.59	-			-		-				0	0		0	0	
2441200	1	-	3.47	3.47	-			-		-				0	0		0	0	
2421000	1	-	0.13	0.13	-			-		-				0	0		0	0	
2421000	1	-	0.19	0.19	-			-		-				0	0		0	0	
2421000	1	-	0.19	0.19	-			-		-				0	0		0	0	
2421000	1	-	1.95	1.95	-			-		-				0	0		0	0	
2421000	1	-	2.08	2.08	-			-		-				0	0		0	0	
2419014	1	-	1.00	1.0	-			-		-				0	0		0	0	
2419000	1	-	0.31	0.31	-			-		-				0	0		0	0	
2419000	1	-	1.24	1.24	-			-		-				0	0		0	0	
2419000	1	-	2.53	2.53	-			-		-				0	0		0	0	
2419000	1	-	2.66	2.66	-			-		-				0	0		0	0	
2419000	1	-	3.44	3.44	-			-		-				0	0		0	0	
2401100	1	-	0.12	0.12	-			-		-				0	0		0	0	
2401033	1	-	1.08	1.08	-			-		-				0	0		0	0	
2401012	1	-	0.15	0.15	-			-		-				0	0		0	0	
2401000	1	-	0.59	0.59	-			-		-				0	0		0	0	
2401000	1	-	1.07	1.07	-			-		-				0	0		0	0	
2401000	1	-	1.21	1.21	-			-		-				0	0		0	0	
2401000	1	-	1.81	1.81	-			-		-				0	0		0	0	
2401000	1	-	1.85	1.85	-			-		-				0	0		0	0	
2401000	1	-	2.38	2.38	-			-		-				0	0		0	0	
2401000	1	-	3.19	3.19	-			-		-				0	0		0	0	
2361700	1	-	0.69	0.69	-			-		-				0	0		0	0	
2361210	1	-	2.76	2.76	-			-		-				0	0		0	0	
2361200	1	-	0.67	0.67	-			-		-				0	0		0	0	
2361000	1	-	0.50	0.5	-			-		-				0	0		0	0	
2361000	1	-	0.90	0.9	-			-		-				0	0		0	0	
2361000	1	-	1.00	1.0	-			-		-				0	0		0	0	
2361000	1	-	3.50	3.5	-			-		-				0	0		0	0	
2353140	1	-	0.10	0.1	-			-		-				0	0		0	0	

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
2353140	1	-	0.30	0.3	-			-			-	-		0	0		0	0	
2353140	1	-	0.50	0.5	-			-			-	-		0	0		0	0	
2353140	1	-	0.60	0.6	-			-			-	-		0	0		0	0	
2353100	1	-	0.60	0.6	-			-			-	-		0	0		0	0	
2340088	1	-	0.96	0.96	-			-			-	-		0	0		0	0	
2340080	1	-	0.70	0.7	-			-			-	-		0	0		0	0	
2340000	1	-	0.46	0.46	-			-			-	-		0	0		0	0	
2340000	1	-	0.73	0.73	-			-			-	-		0	0		0	0	
2340000	1	-	1.11	1.11	-			-			-	-		0	0		0	0	
2300000	1	-	0.12	0.12	-			-			-	-		0	0		0	0	
2300000	1	-	0.26	0.26	-			-			-	-		0	0		0	0	
2300000	1	-	4.88	4.88	-			-			-	-		0	0		0	0	
2300000	1	-	7.47	7.47	-			-			-	-		0	0		0	0	
2190240	1	-	0.30	0.3				-			-	-		0	0		0	0	
2190220	1	251	0.00	0	-			251	POCU6 COTON		-	-		0	0		0	0	
2190200	3		40.7	0						3.50	-	0.10	POCU6	18.6	1.6	POBO10 DIPU SEJA CIVU CYSC	18.6	0.1	POBO10
2190170	1	-	1.59	1.59	-			-			-	-		0	0		0	0	
2190000	2	-	2.98	1.49	-			-			-	-		1.4	0		0	0	
2190000	2	-	3.40	1.7	-			-			-	-		1.7	0		0	0	
2190000	2	-	4.82	2.41	-			-			-	-		2.4	0		0	0	
2190000	2	-	12.66	8.44	-			-			-	-		4.2	0		0	0	
2180000	2	-	2.52	2.52	-			-			-	-		0	0		0	0	
2180000	1	-	4.24	4.24	-			-			-	-		0	0		0	0	
2180000	1	-	4.60	4.6	-			-			-	-		0	0		0	0	
2170020	1	-	4.28	4.28	-			-			-	-		0	0		0	0	
2170000	1	-	8.24	8.24	-			-			-	-		0	0		0	0	
2160000	2	-	4.70	4.7	-			-			-	-		0	0		0	0	

ROAD	Totals 2002-2008			2002-2004			2005			2006				2007			2008		
	No. Years Visited	Total Weeds Removed '02 - '08	Total Miles '02 - '08	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Weed Species Removed	Survey Miles	# of Weeds Removed	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed	Survey Miles	Area Treated (acres)	Weed Species Removed
2160000	2	-	11.60	11.6	-			-			-	-		0	0		0	0	
2140000	1	-	1.70	1.7	-			-			-	-		0	0		0	0	
2140000	1	-	3.10	3.1	-			-			-	-		0	0		0	0	
2140000	1	-	7.20	7.2	-			-			-	-		0	0		0	0	
2120000	1	-	1.20	1.2	-			-			-	-		0	0		0	0	
2100000	1	-	2.84	2.84	-			-			-	-		0	0		0	0	
2100000	2	-	3.40	3.40	-			-			-	-		0	0		0	0	
2100000	2	50	7.40	7.40	50	SEJA		-			-	-		0	0		0	0	
TOTALS		2,562,778	1432.59	1162.52			264.92	1,290,774		297.62	77,792	26.68		368.77	112.06		422.74	185.95	

Note that much of the work done in 2008, particularly by the OCD crew, was done in pits and does not show up on this table of roads. Also note that the totals here given include only work on Forest Service land, not work on Highway 101 or the county roads listed at the top of the table.

Appendix E: Potential Treatment Sites

The Forest Service's new system of Project Areas has superseded the old priority listing used by the Clallam County Noxious Weed Control Board (CCNWCB) to evaluate and prioritize sites. We have determined that almost all of the sites that were listed previously are contained within the Project Areas. The few which are not contained within a Project Area are listed here to ensure they are addressed in future years, especially since some have never been surveyed. Priority ranking is based on total number of categories in the final column.

Priority Ranking	No in Final Column
2	=6
3	=5
4	=4
5	=3
6	=2

Priority	FS Road	Location	Weed(s)	2007 FS Priority	County Priority	Prior Control?	new (03-07) Infestation	TrHd/CG	'98 EA Site	WCC, OCC Priority	Botanical Area	Pit	To be decommissioned	Action 2006	Action 2007	Action 2008	Total no. of Categories
2	SR101	N. of Seal Rock CG	HIPR GERO		Y	Y	Y							Marked for WSDOT to spray	Controlled manually	Marked for WSDOT to spray	6
3	2900200	Pit	CYSC4	Y		Y	Y			Y		Y		None	None	Not Treated	5
3	3040012	.32 mi - walk (poss drv?)	??	Y		Y							Y	Surveyed to sta. 0+500 - cut down all CYSC4 (3)	SEJA, GERO and CYSC4 treated manually	Not Treated	5
4	2800250		SEJA			Y	Y							Treated all - manual	Controlled some - manual	Not Treated	4
4	3040025	.2 mi - walk (poss drv?)	RUDI2 ??	Y		Y							Y	Surveyed all - no weeds	SEJA, GERO and CYSC4 treated manually	Not Treated	4
4	2860011	East Crossing CG	GERO SEJA	Y		Y	Y	Y						None	None	Not Treated	4

Priority	FS Road	Location	Weed(s)	2007 FS Priority	County Priority	Prior Control?	New (03-07) Infestation	TrHd/CG	'98 EA Site	WCC, OCC Priority	Botanical Area	Pit	To be decomm issioned	Action 2006	Action 2007	Action 2008	Total no. of Categories
4	2610012	Dose Rd. spur - 1.8mi - cond unknown	CIAR4 ??	Y		Y							Y	Surveyed to CMP sta. 25+22 - Treated some - manual	None	Not Treated	4
5	2800310	Schmith Knob	CYSC4			Y								Treated some - manual	CYSC4 controlled manually	Not Treated	3
6	2800270		CYSC4 SEJA			Y	Y							None	None	Not Treated	2
6	2851000		SEJA			Y	Y							None	None	Not Treated	2
6	2900200	West end	CYSC4 SEJA			Y	Y							None	None	Not Treated	2
6	2800290		SEJA CYSC4			Y	Y							Surveyed all - some CIAR4	None	Not Treated	2
6	2740110	Charlia Lks E Waytrail-WILDERN ESS	CEBI2		Y				Y					None	None	Not Treated	2
6	2750000	Upper Big Quil TrHd (833)	CIAR4					Y	Y					None	None	Not Treated	2
6	3068050	Off 3040, above Snider	any	Y		Y								None	CYSC4 treated manually	Not Treated	2
6	3068150	Off 3040, above Snider	any	Y		Y								None	CYSC4 treated manually	Not Treated	2
6	3068190	Off 3040, above Snider	any	Y		Y								None	CYSC4 treated manually	Not Treated	2

Priority	FS Road	Location	Weed(s)	2007 FS Priority	County Priority	Prior Control?	new (05-07) Infestation	TrHd/CG	'98 EA Site	WCC, OCC Priority	Botanical Area	Pit	To be decommissioned	Action 2006	Action 2007	Action 2008	Total no. of Categories
6	3068200	Off 3040, above Snider	CYSC4	Y		Y								None	None	Not Treated	2
6	2650000	MP 1.56	ARMI2	Y		Y								None	None	Not Treated	2
6	3040100	2.22 mi - drive	??	Y									Y	Surveyed all - no weeds	Surveyed all - no weeds	Not Treated	2
6	3040115	.68 mi - drive	??	Y									Y	Surveyed all - no weeds	Surveyed all - no weeds	Not Treated	2
6	3040200	.47 mi - drive	??	Y									Y	Surveyed all - no weeds	Surveyed all - no weeds	Not Treated	2
6	3040000	unlabelled spur - station 15888 - near jct 2068 - .12mi - drive	??	Y									Y	Surveyed all - no weeds	Surveyed all - no weeds	Not Treated	2
6	3040000	unlabelled spur - station 17000 - near MP 11 - .33mi - walk	??	Y									Y	Surveyed all - no weeds - no spur at this location	None	Not Treated	2



Tansy ragwort (*Senecio jacobaea*)

Appendix F: Control Recommendations by Weed Species

Specific treatment recommendations for each species encountered are given in the table below. General recommendations based on plant lifecycle are listed below.

- Annuals like herb Robert, particularly at campgrounds, should be treated as early in the season as possible. With herb Robert in particular it will almost certainly be necessary to repeat treatments within the season, though if seed set is prevented each time the size of the infestation can be greatly reduced with each treatment effort.
- Early blooming perennials, such as orange and yellow hawkweed should be treated as early as possible.
- Biennials like tansy ragwort are often difficult to treat effectively with either chemical or manual treatment alone; once plants have bolted it may be most effective to pull and deadhead flowering stalks, though first year rosettes may be easier to treat chemically.
- Scotch broom and other woody shrubs can be effectively pulled early in the season before seed set and while the ground is damp; herbicide treatments will be most effective later in the summer.
- Later blooming perennials like reed canarygrass, Canada thistle, everlasting peavine, knotweeds, knapweeds, common tansy and common toadflax may be effectively treated from midsummer until fall, depending on the species and the location (altitude, aspect, etc).

Control Recommendations Protocol:

1. These control recommendations are based on best management practices for our local forest.
2. The overall system burden of invasive plant species needs to be reduced before manual and mechanical methods become feasible in many cases.
3. Greater emphasis needs to be placed on prevention and early detection, continued surveys, early intervention, and incorporation of weed control into Forest Service projects such as road decommissioning, restoration, and routine road maintenance.
4. Effective noxious weed control depends on a combination of factors: plant biology, level of infestation, and location. These control recommendations reflect a consideration of Olympic National Forest conditions with currently available data.
5. For additional control recommendations, see [Common Control Measures for Invasive Plants of the Pacific Northwest Region](#). (A NFS publication.)

Plant Code	Common Name	Botanical Name	Control Recommendation
BORAG	borage	<i>Borago officinalis</i>	Minimal occurrence; spot herbicide application
CIVU	bull thistle	<i>Cirsium vulgare</i>	Where minimal occurrence, manual removal; spot herbicide application to rosettes by early spring or to second year growth, before budding
CIAR4	Canada thistle	<i>Cirsium arvense</i>	Manual removal has limited effectiveness, for only very early infestations; spot herbicide application with glyphosate at bud to full bloom; fall or foliar application of a selective herbicide throughout the summer, fall

Plant Code	Common Name	Botanical Name	Control Recommendation
BORAG	borage	<i>Borago officinalis</i>	Minimal occurrence; spot herbicide application
ARMI2	common burdock	<i>Arctium minus</i>	Where minimal occurrence, manual removal; spot herbicide application to rosettes by early spring; or to second year growth, before budding
TAVU	common tansy	<i>Tanacetum vulgare</i>	Spot herbicide application
LIVU2	common toadflax	<i>Linaria vulgaris</i>	Spot herbicide application
CEDI3	diffuse knapweed	<i>Centaurea diffusa</i>	Manual removal for very small sites; foliar herbicide application - clopyralid preferred
ILAQ80	English holly	<i>Ilex aquifolium</i>	Manual removal; cut stump or foliar herbicide treatment
HEHE	English ivy	<i>Hedera helix</i>	Manual removal; cut stump or foliar herbicide application
RULA	evergreen blackberry	<i>Rubus laciniatus</i>	Cut stump or foliar herbicide application - triclopyr preferred
LALA4	everlasting peavine	<i>Lathyrus latifolius</i>	Foliar herbicide application - clopyralid preferred
CEJA	meadow knapweed	<i>Centaurea jacea x nigra</i>	Foliar herbicide application with selective herbicide - clopyralid preferred
GERO	herb Robert	<i>Geranium robertianum</i>	Manual removal for small infestations; spot herbicide application where feasible;
RUDI	Himalayan blackberry	<i>Rubus discolor</i>	Treat cut stump with glyphosate or foliar application as appropriate to site
	knotweed species	<i>Polygonum spp.</i>	Injection with glyphosate; and/or foliar application of glyphosate
CEJA	meadow knapweed	<i>Centaurea jacea x nigra</i>	Foliar herbicide application - clopyralid preferred
HIAU	orange hawkweed	<i>Hieracium aurantiacum</i>	Spot spray with selective herbicide in late spring or summer; - clopyralid preferred - possible manual removal for very small infestation
LEVU	oxeye daisy	<i>Leucanthemum vulgare</i>	Pervasive. Preventative control should be incorporated into restoration and maintenance projects. Herbicide control options are available should this species otherwise become a resource management issue.
LYSA2	purple loosestrife	<i>Lythrum salicaria</i>	There is only one known site: manual removal should be possible, however herbicide application is available (potential aquatic application)
PHAR3	reed canary grass	<i>Phalaris arundinacea</i>	Selective or glyphosate in mid-June and mid-Sept.
COTON	rockspray cotoneaster	<i>Cotoneaster horizontalis</i>	Manual removal; herbicide treatment only if size of infestation increases
CYSC4	Scotch broom	<i>Cytisus scoparius</i>	Manual removal for small infestations; cut stump treatments preferred for very large infestations, foliar herbicide applications possible
CEBI2	spotted knapweed	<i>Centaurea stoebe</i>	Manual removal very small sites; spot application with selective herbicide - clopyralid preferred
HYPE	St. Johnswort	<i>Hypericum perforatum</i>	Pervasive. Preventative control should be incorporated into restoration and maintenance projects. Herbicide control options are available should this species otherwise become a resource management issue.
SEJA	tansy ragwort	<i>Senecio jacobaea</i>	Will require <u>systematic</u> removal from roadsides and follow-up; manual removal before full bloom (after full bloom, flower heads need to be removed and disposed of); selective herbicide application in first year or by April/May of 2 nd year.
DACA6	wild carrot	<i>Daucus carota</i>	Manual removal; spot herbicide application
ANSY	wild chervil	<i>Anthriscus sylvestris</i>	Manual removal; spot herbicide application

Appendix G: Weed Species Reported on Forest Service Land in Clallam or Jefferson Counties, 2002-2008

(Other counties may have reported other species)



Herb Robert (*Geranium robertianum*)

Plant Codes come from the USDA Natural Resources Conservation Service PLANTS database.

Common Name	Botanical Name	Plant Code
borage	<i>Borago officinalis</i>	BOOF
bull thistle	<i>Cirsium vulgare</i>	CIVU
Canada thistle	<i>Cirsium arvense</i>	CIAR4
common burdock	<i>Arctium minus</i>	ARMI2
common tansy	<i>Tanacetum vulgare</i>	TAVU
common toadflax	<i>Linaria vulgaris</i>	LIVU2
diffuse knapweed	<i>Centaurea diffusa</i>	CEDI
English holly	<i>Ilex aquifolium</i>	ILAQ80
English ivy	<i>Hedera helix</i>	HEHE
European hawkweed	<i>Hieracium sabaudum</i>	HISA
evergreen blackberry	<i>Rubus laciniatus</i>	RULA
everlasting peavine	<i>Lathrus latifolius</i>	LALA4
giant knotweed	<i>Polygonum sachalinense</i>	POSA4
herb Robert	<i>Geranium robertianum</i>	GERO
Himalayan blackberry	<i>Rubus discolor</i>	RUDI2
Japanese knotweed	<i>Polygonum cuspidatum</i>	POCU6
meadow knapweed	<i>Centaurea debeauxii</i>	CEDE5
orange hawkweed	<i>Hieracium aurantiacum</i>	HIAU
oxeye daisy	<i>Leucanthemum vulgare</i>	LEVU
purple loosestrife	<i>Lythrum salicaria</i>	LYSA2
reed canary grass	<i>Phalaris arundinacea</i>	PHAR3
rockspray cotoneaster	<i>Cotoneaster</i>	COTON
Scotch broom	<i>Cytisus scoparius</i>	CYSC4
spotted knapweed	<i>Centaurea stoebei</i>	CEBI2
St. Johnswort	<i>Hypericum perforatum</i>	HYPE
tansy ragwort	<i>Senecio jacobaea</i>	SEJA
wild carrot	<i>Daucus carota</i>	DACA6
yellow hawkweed	<i>Hieracium caespitosum</i>	HICA10

High-Risk Species in Clallam and Jefferson Counties, Not Yet Detected on FS Lands

common reed	<i>Phragmites australis</i>
Spurge laurel	<i>Daphne laureola</i>
poison hemlock	<i>Conium maculatum</i>
sulfur cinquefoil	<i>Potentilla recta</i>
wild chervil	<i>Anthriscus sylvestris</i>
yellow archangel	<i>Lamiaeum galeobdolon</i>

Appendix H: Washington State Noxious Weed List

Noxious weeds are non-native plants introduced to Washington through human actions. Because of their aggressive growth and lack of natural enemies in the state, these species can be highly destructive, competitive or difficult to control. These exotic species can reduce crop yields, destroy native plant and animal habitat, damage recreational opportunities, clog waterways, lower land values and poison people and livestock.

To help protect the state's resources, the Washington State Noxious Weed Control Board adopts a State Noxious Weed List each year. This list categorizes weeds into three major classes - A, B & C -according to the seriousness of the threat they pose to the state or a region of the state.

Class A Weeds: Non-native species with a limited distribution in Washington. Preventing new infestations and eradicating existing infestations is the highest priority. **Eradication is required by law.**

Common Name	Scientific Name		
bean-caper, Syrian	<i>Zygophyllum fabago</i>	thistle, Italian	<i>Carduus pycnocephalus</i>
blueweed, Texas	<i>Helianthus ciliaris</i>	thistle, milk	<i>Silybum marianum</i>
broom, Spanish	<i>Spartium junceum</i>	thistle, slenderflower	<i>Carduus tenuiflorus</i>
buffalobur	<i>Solanum rostratum</i>	variable-leaf milfoil	<i>Myriophyllum heterophyllum</i>
clary, meadow	<i>Salvia pratensis</i>	velvetleaf	<i>Abutilon theophrasti</i>
cordgrass, common	<i>Spartina anglica</i>	woad, dyers	<i>Isatis tinctoria</i>
cordgrass, dense flower	<i>Spartina densiflora</i>		
cordgrass, salt meadow	<i>Spartina patens</i>		
crupina, common	<i>Crupina vulgaris</i>		
flax, spurge	<i>Thymelaea passerina</i>		
four o'clock, wild	<i>Mirabilis nyctaginea</i>		
goatsrue	<i>Galega officinalis</i>		
hawkweed, European	<i>Hieracium sabaudum</i>		
hawkweed, yellow devil	<i>Hieracium floribundum</i>		
hogweed, giant	<i>Heracleum mantegazzianum</i>		
hydrilla	<i>Hydrilla verticillata</i>		
johnsongrass	<i>Sorghum halepense</i>		
knapweed, bighead	<i>Centaurea macrocephala</i>		
knapweed, Vochin	<i>Centaurea nigrescens</i>		
kudzu	<i>Pueraria montana var. lobata</i>		
lawnweed	<i>Soliva sessilis</i>		
mustard, garlic	<i>Alliaria petiolata</i>		
nightshade, silverleaf	<i>Solanum elaeagnifolium</i>		
primrose-willow, floating	<i>Ludwigia peploides</i>		
ricefield bulrush	<i>Schoenoplectus mucronatus</i>		
sage, clary	<i>Salvia sclarea</i>		
sage, Mediterranean	<i>Salvia aethiopsis</i>		
spurge, eggleaf	<i>Euphorbia oblongata</i>		
starthistle, purple	<i>Centaurea calcitrapa</i>		
sweetgrass, reed	<i>Glyceria maxima</i>		

Appendix H: WA State Noxious Weed List, continued

Class B Weeds: Non-native species presently limited to portions of the state. Species are designated for control in regions where they are not yet widespread. Preventing new infestations in these areas is a high priority. In regions where a Class B species is already abundant, control is decided at the local level, with containment as the primary goal.

Common Name	Scientific Name		
alyssum, hoary	<i>Berteroa incana</i>	knapweed, Russian	<i>Acroptilon repens</i>
arrowhead, grass-leaved	<i>Sagittaria graminea</i>	knapweed, spotted	<i>Centaurea stoebe</i>
blackgrass	<i>Alopecurus myosuroides</i>	knotweed, Bohemian	<i>Polygonum bohemicum</i>
blueweed	<i>Echium vulgare</i>	knotweed, giant	<i>Polygonum sachalinense</i>
broom, Scotch	<i>Cytisus scoparius</i>	knotweed, Himalayan	<i>Polygonum polystachyum</i>
bryony, white	<i>Bryonia alba</i>	knotweed, Japanese	<i>Polygonum cuspidatum</i>
bugloss, common	<i>Anchusa officinalis</i>	kochia	<i>Kochia scoparia</i>
bugloss, annual	<i>Anchusa arvensis</i>	lawnweed	<i>Soliva sessilis</i>
butterfly bush	<i>Buddleja davidii</i>	laurel, spurge	<i>Daphne laureola</i>
camelthorn	<i>Alhagi maurorum</i>	lepyrodiclis	<i>Lepyroclis holosteoides</i>
carrot, wild	<i>Daucus carota</i>	loosestrife, garden	<i>Lysimachia vulgaris</i>
catsear, common	<i>Hypochaeris radicata</i>	loosestrife, purple	<i>Lythrum salicaria</i>
chervil, wild	<i>Anthriscus sylvestris</i>	loosestrife, wand	<i>Lythrum virgatum</i>
cinquefoil, sulfur	<i>Potentilla recta</i>	nutsedge, yellow	<i>Cyperus esculentus</i>
cordgrass, smooth	<i>Spartina alterniflora</i>	ox tongue, hawkweed	<i>Picris hieracioides</i>
cordgrass, common	<i>Spartina anglica</i>	parrotfeather	<i>Myriophyllum aquaticum</i>
daisy, oxeye	<i>Leucanthemum vulgare</i>	pepperweed, perennial	<i>Lepidium latifolium</i>
elodea, Brazilian	<i>Egeria densa</i>	primrose, water	<i>Ludwigia hexapetala</i>
fanwort	<i>Cabomba caroliniana</i>	poison-hemlock	<i>Conium maculatum</i>
fennel, common	<i>Foeniculum vulgare</i>	puncturevine	<i>Tribulus terrestris</i>
fieldcress, Austrian	<i>Rorippa austriaca</i>	ragwort, tansy	<i>Senecio jacobaea</i>
floating heart, yellow	<i>Nymphoides peltata</i>	reed, common (nonnative genotypes)	<i>Phragmites australis</i>
gorse	<i>Ulex europaeus</i>	saltcedar	<i>Tamarix ramosissima</i>
hawkweed, mouseear	<i>Hieracium pilosella</i>	sandbur, longspine	<i>Cenchrus longispinus</i>
hawkweed, orange	<i>Hieracium aurantiacum</i>	skeletonweed, rush	<i>Chondrilla juncea</i>
hawkweed, queen-devil	<i>Hieracium glomeratum</i>	sowthistle, perennial	<i>Sonchus arvensis</i> ssp. <i>arvensis</i>
hawkweed, smooth	<i>Hieracium laevigatum</i>	spurge, leafy	<i>Euphorbia esula</i>
hawkweed, yellow	<i>Hieracium caespitosum</i>	spurge, myrtle	<i>Euphorbia myrsinites</i>
hedgearsley	<i>Torilis arvensis</i>	starthistle, yellow	<i>Centaurea solstitialis</i>
helmet, policeman's	<i>Impatiens glandulifera</i>	swainsonpea	<i>Sphaerophysa salsula</i>
herb-Robert	<i>Geranium robertianum</i>	thistle, musk	<i>Carduus nutans</i>
houndstongue,	<i>Cynoglossum officinale</i>	thistle, plumeless	<i>Carduus acanthoides</i>
indigobush	<i>Amorpha fruticosa</i>	thistle, Scotch	<i>Onopordum acanthium</i>
knapweed, black	<i>Centaurea nigra</i>	toadflax, Dalmatian	<i>Linaria dalmatica</i> ssp. <i>dalmatica</i>
knapweed, brown	<i>Centaurea jacea</i>	watermilfoil, Eurasian	<i>Myriophyllum spicatum</i>
knapweed, diffuse	<i>Centaurea diffusa</i>		
knapweed, meadow	<i>Centaurea jacea x nigra</i>		

Appendix H: WA State Noxious Weed List, continued

Class C Weeds: Non-native weeds found in Washington. Many of these species are widespread in the state. Long-term programs of suppression and control are a county option, depending upon local threats and the feasibility of control in local area.

Common Name	Scientific Name
archangel, yellow	<i>Lamiastrum galeobdolon</i>
babysbreath	<i>Gypsophila paniculata</i>
beard, old man's	<i>Clematis vitalba</i>
bindweed, field	<i>Convolvulus arvensis</i>
canarygrass, reed	<i>Phalaris arundinacea</i>
cockle, white	<i>Silene latifolia</i> ssp. <i>alba</i>
cocklebur, spiny	<i>Xanthium spinosum</i>
cress, hoary	<i>Cardaria draba</i>
dodder, smoothseed alfalfa	<i>Cuscuta approximata</i>
goatgrass, jointed	<i>Aegilops cylindrica</i>
groundsel, common	<i>Senecio vulgaris</i>
hawkweed, nonnative and invasive species not listed elsewhere	<i>Hieracium</i> spp.
henbane, black	<i>Hyocyamus niger</i>
iris, yellow flag	<i>Iris pseudocorus</i>
ivy, English	<i>Hedera helix</i> 'Baltica'
four cultivars only	<i>Hedera helix</i> 'Pittsburgh'
	<i>Hedera helix</i> 'Star'
	' <i>Hedera hibernica</i> 'Hibernica'
mayweed, scentless	<i>Matricaria perforata</i>
pondweed, curly-leaf	<i>Potamogeton crispus</i>
rye, cereal	<i>Secale cereale</i>
spikeweed	<i>Hemizonia pungens</i>
St. Johnswort, common	<i>Hypericum perforatum</i>
tansy, common	<i>Tanacetum vulgare</i>
thistle, bull	<i>Cirsium vulgare</i>
thistle, Canada	<i>Cirsium arvense</i>
toadflax, yellow	<i>Linaria vulgaris</i>
water lily, fragrant	<i>Nymphaea odorata</i>
whitetop, hairy	<i>Cardaria pubescens</i>
willow-herb, hairy	<i>Epilobium hirsutum</i>
wormwood, absinth	<i>Artemisia absinthium</i>

Appendix I: Samples of Herbicide Notification-Legal Ad and On-Site Posting

A legal notice preceding herbicide application on the Olympic National Forest was published in the Peninsula Daily News (PDN), which is distributed throughout both Clallam and Jefferson Counties. The notice appeared on 7/7/08, one week before the first herbicide application was carried out on 7/14/08. Two additional notices were published after consulting with or notifying municipal watershed representatives in regard to treatment.

The text of the legal notice in the PDN read as follows:

LEGAL NOTICE

The Pacific and Hood Canal Ranger Districts, Olympic National Forest may be applying herbicide containing glyphosate or triclopyr to noxious weeds or other invasive plant species at the following Forest Service sites in Clallam and Jefferson Counties between July 7 and October 20, 2008. Applications will be conducted as planned in the 2007 Final EIS-Olympic National Forest Site Specific Invasive Plant Treatment Project, which was finalized in March 2008. Notices indicating that glyphosate or triclopyr will be applied, will be posted at entrances to target road systems and/or individual sites. Campgrounds and trailheads will be posted at least 24 hours prior to application. People with questions about applications should contact Joan Ziegler, Forest Ecologist, at (360) 956-2320. **PACIFIC RANGER DISTRICT PROJECTS** are located within **the Upper Quinault River Subwatershed (Prj #11)** Rd 2190020, **the Raft River Subwatershed (Prj #41)** Rd 2100000, **the Headwaters Sol Duc River Subwatershed (Prj #26)** Rds 2918000, 2920000, 282020, and 2931000, **the Upper Sol Duc River Subwatershed (Prj #5 and Prj #36)** including Klahowya Campground, Kloshe Nanitch Loop Trails (#16,20,21), Bonidu Pit, Tom Creek Pit, an unnamed pit, Rds 2900990, 2900992, 3040595, 2065000,2900000, 2900960, 2900950, 2929000, 2929070, 2918000, 2931000, and 3071000, **the Middle Sol Duc River Subwatershed (Prj #3 and Prj #21)** including Snider Work Center, Bear Saddle TS, Rds 207100, 2923100, 2923090, 3040000, 3040800, 3040900, 3000000, 3000200, 3000300, 3006000, 3006011, 3100010, 3100300, 3116000, and 2065, **the South Fork (Prj #2 and Prj #7) and North Fork (Prj #8) Calawah River Subwatersheds** including Calawah Pit, Elk Quarry Pit, Rds 2900000, 2912060, 2923000, 2065, 2932000, 2932013, and 2923060, **the Lower Bogachiel River Subwatershed (Prj #22)** including Bogachiel Trailhead, an unnamed pit, and Rd 293200, **the Deep Creek Subwatershed (Prj #20)** including Bear Saddle TS, Rds 3040000, 3067000, 3000000, 3000200, 3000250, and 3000330, **the Pysht River Subwatershed (Prj #23)** Rds 3000200, 3100250, and 3000215, **the West Twin River Subwatershed (Prj #25)** Rds 3000000,3000591, 3000590, 3000400, 3000580, 3000600, 3000800, and 3040000, **the East Twin River Subwatershed (Prj #24)** Rds 3040000, 3040010, and 3068000. **HOOD CANAL RANGER DISTRICT PROJECTS** are located within **the McDonald Creek/Siebert Creek Subwatersheds (Prj #14)** including access to Pat's Prairie, and Rds 2877000, and 2877100, **Jimmy-Come-Lately Creek Subwatershed (Prj #18)** including Louella Work Center, Wolf Quarry, Rds 2850000,2850120, 2855070, 2855030, 5006, 5331, 2800350,2800351, 2800360, 2800362, 2840000, 2840030, 2840034, 2840035, 2840036, 2840070, 2840071, 2840120, and 840080, **Spencer Creek /Marple Creek Subwatersheds, (Prj #6)** including Seal Rock Campground, and Rd 2610200, **the Lower Big Quilcene River Subwatershed (Prj #28)** including Falls View and Rainbow Campground, trailheads, Quilcene Ranger Station, Rds 2730300, 3039, 3057, 2700000, 2740000, 2700080, 262000, 2730000, 2730011, and 2730200, **the Lower Dosewallips River Subwatershed (Prj #19)** including Elkhorn Campground, Rds 2500000, 2610000, 2610040, 2610050, 2620000, 2620030, 2620030, 2620050, 2620051, 2620053, and 2620056, **the Lower Duckabush Subwatershed (Prj #32)** including Duckabush pit, campgrounds, Rds 2510000, 2500070, 2530000, 2530100, 2530200, and 2510000, **the Fulton Creek/Waketick Creek Subwatersheds (Prj #43)** Rds 2500000, 2510000, 2510500, 2510510, 2510300, 2510200, and 2510210, **the Mainstem Hamma Hamma Subwatershed (Prj #34)** two unnamed pits, Rd 2500000, 2502000, and 2480000.

Onsite Posting Sample: Postings were placed at each application site at least 24 hours prior to applications, and at least one week prior for high use sites (campgrounds and trailheads). The blank lines (planned/actual date of application and weed species targeted) were filled out by hand at the site.

NOTICE

The herbicide glyphosate, triclopyr, or clopyralid will be applied to this site between July 14, 2008 and October 20, 2008 to control noxious weeds, which threaten native vegetation and habit in this area.

Planned / Actual application date* : _____

*Actual date of application contingent upon weather conditions.

Targeted Noxious Species :** _____

**Other weed species in this area may also be treated at this time.

NO USE RESTRICTIONS ARE IN PLACE

Avoid contact with treated vegetation until after it has dried.

FOR MORE INFORMATION CONTACT:

**Olympic National Forest
Joan Ziegltrum, ecologist
1835 Black Lake Blvd. SW, Suite A
Olympia, WA 98512-5623
(360) 956-2320**

or

**Clallam County Noxious Weed Control Board
Cody Hagen, weed control specialist
223 East Fourth Street, Suite 15
Port Angeles, WA 98362
(360) 417-2442**

Appendix J: Project Forms

- Sample Invasive Plant Inventory Data Collection Form
- FACTS Manual Treatment Data Form
- Instructions for Filling out FACTS Manual Treatment Data Form
- FACTS Herbicide Application Data Form
- Instructions for Filling out FACTS Herbicide Application Data Form
- Rock Source Inspection Form

Sample Invasive Plant Inventory Data Collection Form

20060911.pdr

**Olympic NF/Clallam and Jefferson County Noxious Weed Control Boards
Invasive Plant Inventory Form
Adapted from NF/pg NRIS TERRA Form
July 2003 cld**

Fill out one form for each weed, and attach a map to each form. Site ID must be unique for each form.

Site ID: Region 06, Forest 09, District: (circle) 01 Hoodspout 03 Quinault
~~02 Clifton~~ 05 Soleduck
 Twnshp (2): 28W Range (2): 03W Section (2): 10 Qtr. Section (2): SW Qtr Qtr: SF
 NE, NW, SE, SW
 Initials (2): MM Road ID (6): 2800132 Ownership: FS
 Weed PLANTS Code (4): CEDI3 Common Name: Diffuse Knotweed
 Weed Class: A B+ Bs Cs Date (MM/DD/YYYY): 09/16/06
 Primary Examiner (Last, First, Middle): McDonnan Land Use: Roadside
 WA State County (Circle) 009 Clallam 031 Jefferson Compliance Date _____

Location at site: _____

Site Address: _____

Owner and Owner Address: _____

Parcel #: _____ Situs ID: _____ Land ID: _____

Previous Contact? _____ Contact? _____ Name: _____

Aspect (deg) _____ OR ALL Average Slope (%) _____

Elevation (ft) _____ min _____ max OR _____ average

Circle *Dominant Life Form	AL Algae	LC Lichen	SS Subshrub
	FB Forb	NP Nonvascular plant	TR Tree
	GR Graminoid	SH Woody shrub	
<u>3 Dominants</u>	PLANTS Code	Scientific Name.	
	_____	_____	
	_____	_____	
	_____	_____	

Site Comments (Directions, description, aerial photo # and aerial photo date, etc) _____

End of Road

Infestation Density (1-5): _____
 Infestation Size in Acres (≤1, 1-5, 5-10, 10-20): _____

* Must make address based on nearest possible - then estimate

Sample Invasive Plant Inventory Data Collection Form, continued

Circle one each for phenology, life form, and distribution of the weed.

Phenology	Grasses		Forbs and Shrubs			
	G1	Leaves Partially Developed, no heads	F1	Vegetative, rosette, pre-flowering		
	G2	Inflorescence inside the sheath	<u>F2</u>	Flowering		
	G3	Inflorescence partially or fully extended	F3	Fruiting		
	G4	Seeds maturing or mature	F4	Senescent or dormant		
	G5	Senescent or dormant				
	RG	Regrowth				
Life Form	AL	Algae	LC	Lichen	SS	Sub-shrub
	<u>FB</u>	Forb	LI	Woody liana	TR	Tree
	FU	Fungus	NP	Nonvascular plant	UN	Unknown
	GR	Graminoid	SH	Woody Shrub	VI	Herbaceous Vine
Distribution	<u>Cl</u>	Clumpy	SE	Scattered even		
	SP	Scattered patchy	LI	Linear		

*Infested Area (acres) 1 Gross area (ac) _____
 (Infested area is REQUIRED. Minimum size is 0.1 acre. Use Gross Area ONLY when portions of polygon are uninfested. Minimum Gross Area ≥ 1 acre. Gross Area x % of land occupied by weeds = Infested Area.)

Daubenmire Cover Class		*Weed Canopy Cover of Infested Area					
		OR	Estimated percent cover				
T	0 - 1%	<u>2</u>	5.1 - 25%	4	50.1 - 75.0%	6	95.1 - 100%
1	1 - 5.0%	3	25.1 - 50.0%	5	75.1 - 95.0%		

Horizontal Distance to Water (ft) _____ Vertical Distance to Water (ft) _____
 as crow flies, not slope distance

Associated Species	PLANTS Code	Scientific Name
_____	_____	_____
_____	_____	_____
_____	_____	_____

Comments: Survey pulled all found (453) + 10 meadow knotweed

Map: _____ North

10/7

FACTS Manual Treatment Data Form

General Activity Fields

Region	Forest District	Watershed Name (FACTS ID)	Subunit #	Treatment (Subunit) Name	Owner	Workforce
06	09	Calawah River		Calawah Botanical 2B Area	FS	Clallam County
Method Code	Equipment Code	Fund Code	# of Units Accomplished (Acres)	Comments		
100	Woodchuck		2.5 acres	Pulled from a half mile of along the road, up and down from Klakanie Camp ground. Gawks up		

Site Fields

Treatment Type	Start Date	Stop Date	Application Site	Crew Leader	Phenology—circle appropriate stage for the majority of the plants
MH	6/17/08	6/17/08	29 up to the Klakanie Camp	CL, CTT, JN	Vegetative / Flowering / Fruiting
Target Weeds			Infested Area Treated (Acres)		
Scotch Broom			450 that pulled	2.5	Vegetative / Flowering / Fruiting
Jan 57 Ragwort				2.5	Vegetative / Flowering / Fruiting
Bull thistle				2.5	Vegetative / Flowering / Fruiting
					Vegetative / Flowering / Fruiting
					Vegetative / Flowering / Fruiting
					Vegetative / Flowering / Fruiting
					Vegetative / Flowering / Fruiting
					Vegetative / Flowering / Fruiting
					Vegetative / Flowering / Fruiting

Instructions for filling out the FACTS Manual Treatment Data Form Olympic National Forest

General Activities Fields

District:

Provided in the projects table included in the contract or agreement package. See District Codes at bottom of data form

5th-Field Watershed Name:

Provided in individual project reports (Exhibit E).

Subunit #: Leave blank

Project Number and Name:

Provided in individual project reports (Exhibit E).

Workforce:

Name of county, contractor, or USFS employee/s performing the work.

Fund Code:

Contractor or USFS = NFVW; County = PSRS

Gross Infested Area Treated (acres):

The portion of the project area that is occupied/infested by invasive plants and was treated on this occasion. An infested area of land is defined by drawing a line around the actual perimeter of the infestation as defined by the canopy cover of the invasive plants, excluding areas not infested. Areas containing only occasional invasive plants per acre do not equal one acre infested.

To calculate Gross Infested Acres Treated: estimate the % of the project area occupied by invasive plants, then multiply that by the acreage of the project area (Note: for acreage of the project area see the 'Estimated Acres' field in the projects table or use the acreage calculations below).

Calculating acreage of the project area

Acres to square feet conversion: 1 acre = 43,560 ft²

Road miles to acres conversion: Multiply road length in feet (1 mile = 5,280 ft) by the average width of roadside vegetation, by 2 roadsides = area in ft². Convert to acres by dividing by 43,560 (using conversion above). **NOTE: for most roads we use 8 ft as the average width of roadside vegetation, if this is your situation you can use the multiplication factor of 1 mile = 1.9 acres of road edge. See Road Miles by Acreage Chart (Exhibit Q).**

Example follows.....

EXAMPLE: A large Canadian thistle infestation is located along the West Fork road system. An invasive plant treatment project was designed to treat this infestation and the project area encompasses the entire population, 30 miles of road, which is 57 acres (average width of roadside

vegetation is 8 ft, so using the multiplication factor 30 miles x 1.9 acres/mile = 57 acres). There are significant portions of the area that are not infested. It is estimated that approximately 40% of the area is actually occupied by invasive plants, which equates to 23 infested acres (57 x 0.4 = 23).

Comments:

Enter comments relevant to the project.

Site Fields

Start Date/Stop Date:

Date treatment work began and ended on the project. Use __/__/____ format (mo/day/year – for example, August 12, 2008 would be 08/12/2008).

Crew Leader:

Name of the crew leader (first and last name).

Target Weeds:

List the scientific names or codes for the weeds being treated. See Exhibit G for species names and codes.

Infested Area Treated (Acres):

Report the infested area of each individual species treated in the project area. See section on gross infested area treated for instructions on calculating infested area. *Note: the difference between gross infested area treated and infested area treated is that gross infested area treated represents the sum of the non-overlapping infested areas, the sum of the infested areas for each invasive species may be greater than the gross infested area treated.*

EXHIBIT K (form)

FACTS Herbicide Application Data Form

General Activity Fields

Region	Forest	District*	Watershed Name	Subunit #	Project Number and Name	Owner	Workforce**
06	09	01	Calawah River	Lower Blank	2C Calawah Pit	FS	Clallam County, Bannip, Cathy, Cody, Bannip
Method Code	Equipment Code (circle one)		Fund Code***		Comments		
700	711 hand sprayer	716 injector	PSRS		Spayed all plants around perimeter. The pit loaded clean.		
	712 backpack sprayer	721 mobile ground sprayer					
	713 hack and squirt	000 other					

Site Fields

Treatment Type	Start Date	Stop Date	Application Site (circle one)		Licensed Applicator: Name and License #
Pesticide	7/24/08	7/24/09	Trailhead	Forest	Cody Hogen 76674
			Campground	Riparian	
Target Weeds (scientific name or code, one species per line)	Infested Area Treated (acres)				
CYSC4		.3	Phenology—circle appropriate stage for the majority of the plants		
RUD12		.5	Vegetative / Flowering / Fruiting		
TAVU		.5	Vegetative / Flowering / Fruiting		
			Vegetative / Flowering / Fruiting		
			Vegetative / Flowering / Fruiting		
			Vegetative / Flowering / Fruiting		
			Vegetative / Flowering / Fruiting		
			Vegetative / Flowering / Fruiting		
			Vegetative / Flowering / Fruiting		
			Vegetative / Flowering / Fruiting		

* District codes: 01 Hood Canal North; 02 Hood Canal South; 03 Pacific North; 05 Pacific South
 ** Workforce: County Name, Contractor Name, or USFS Force Account
 *** Fund Codes: PSRS (County); NFWW (Contractor or USFS)

Daily Log

Application Date	Time Start (military time)	Time Stop (military time)	Application Area (acres)	Temp (F)	Wind Speed (MPH)	Wind Direction
7/24/09	11:00	13:00	40	64°	4-5	SE
Calibrated Volume	UOM	Gal/Acre	Volume Applied	UOM	Gal	Dilutant
		100	6			Water
Herbicide Product Name	Product Rate	UOM	Adjuvants	Product Rate	UOM	Remarks - NOAA forecast for vicinity --
AquaNeat	.3	Oz/Ac	Competitor	.1	Oz/Ac	
		Oz/Ac			Oz/Ac	
		Oz/Ac			Oz/Ac	
		Oz/Ac			Oz/Ac	
		Oz/Ac			Oz/Ac	
		Oz/Ac			Oz/Ac	

08 K_FACTS_Herbicide_Application_Data_Form_revised.doc

Instructions for filling out the FACTS Herbicide Application Data Form Olympic National Forest

General Activities Fields

District:

Provided in the projects table included in the contract or agreement package. See District Codes at bottom of data form

5th-Field Watershed Name:

Provided in individual project reports (Exhibit E).

Subunit #: Leave blank

Project Number and Name:

Provided in individual project reports (Exhibit E).

Workforce:

Name of county, contractor, or USFS employee/s performing the work.

Fund Code:

Contractor or USFS = NFVW; County = PSRS

Comments:

Enter comments relevant to the project.

Note: comments specific to the date of treatment should be reported in the Daily Log block under remarks

Site Fields

Start Date/Stop Date:

Date treatment work began and ended on the project. Use __/__/____ format (mo/day/year – for example, August 12, 2008 would be 08/12/2008).

Licensed Applicator:

Name of licensed applicator and valid Washington State pesticide applicator's license number.

Target Weeds:

Scientific name or code for the weeds being treated. One species per line. See Exhibit G for species names and codes.

Infested Area Treated (acres):

The portion of the project area that is occupied/infested by invasive plants and was treated on this occasion. An infested area of land is defined by drawing a line around the actual perimeter of the infestation as defined by the canopy cover of the invasive plants, excluding areas not infested. Areas containing only occasional invasive plants per acre do not equal one acre infested.

To calculate Infested Acres Treated: estimate the % of the project area occupied by invasive plants, then multiply that by the acreage of the project area (Note: for acreage of the project area see the 'Estimated Acres' field in the projects table or use the acreage calculations below).

Calculating acreage of the project area

Acre to square feet conversion: 1 acre = 43,560 ft²

Road miles to acres conversion: Multiply road length in feet (1 mile = 5,280 ft) by the average width of roadside vegetation, by 2 roadsides = area in ft². Convert to acres by dividing by 43,560 (using conversion above). **NOTE: for most roads we use 8 ft as the average width of roadside vegetation, if this is your situation you can use the multiplication factor of 1 mile = 1.9 acres of road edge. See Road Miles by Acreage Chart (Exhibit Q).**

Example follows.....

EXAMPLE: A large Canadian thistle infestation is located along the West Fork road system. An invasive plant treatment project was designed to treat this infestation and the project area encompasses the entire population, 30 miles of road, which is 57 acres (average width of roadside vegetation is 8 ft, so using the multiplication factor 30 miles x 1.9 acres/mile = 57 acres). There are significant portions of the area that are not infested. It is estimated that approximately 40% of the area is actually occupied by invasive plants, which equates to 23 infested acres (57 x 0.4 = 23).

Note: the difference between gross infested area treated and infested area treated is that gross infested area treated represents the sum of the non-overlapping infested areas, the sum of the infested areas for each invasive species may be greater than the gross infested area treated.

Daily Log

Application Date:

Date the application was applied.

Note: if more than one day is needed to treat the site, a daily log must be filled out for each day herbicide applications occurred.

Time Start/Time Stop:

Record the time herbicide application began and ended in military time.

Application Area:

This is the actual extent in acres of the treatment for the specific Daily Log entry, i.e. gross acres. This represents the non-overlapping treatment area.

Calibrated Volume:

The volume (gallons per acre) in which the applicator and equipment have been calibrated and is used to determine the mixing rate. Example: spot treatment with backpack sprayers calibrated for 100 gallons per acre, enter 100. **Note:** the 'calibrated volume' value must be within the parameters established by the pesticide label.

Volume Applied:

The total volume of the tank mix applied on the site (including product and dilutant). Example: 2.5 gallons of spray mix are actually applied on a 1/10 acre site. This will often be less than the calibrated volume for the site, where the calibrated volume would be to apply 10 gallons of mix by backpack sprayer on 1/10 acre if the total area were sprayed rather than spot spraying within 1/10 acre.

Remarks:

Enter relevant comments concerning the pesticide application.

Herbicide Product Name:

Record the product name.

Note: if tank mixing, list all products added to the tank.

Product Rate:

The label rate of the pesticide product in oz per acre as instructed on the product label.

Adjuvants:

Record the product name and product rate of adjuvants used.

Compliance Form: Invasive Plant ROD Standard 7:

"Inspect active gravel, fill, sand stockpiles, quarry sites and barrow material for invasive plants before use and transport.

Treat or require treatment of infested sources before any use of pit material

Use only gravel, fill, sand, and rock judged to be weed free by District or Forest Weed Specialists" per ROD, October 11, 2005

This form is to be placed in project implementation folder:

Project Name: Calawah pit
Legal Description (Township/Range/Section) _____
Name of Rock Source: Calawah pit
Pit or Quarry Rock Source Inventory (RSI) Number
or Road Number & Milepost: 7900015 mp, 0.15
Name and Title if Inspector: Ross McDorman Clallam cnty. weed tech
Date of Inspection: 7/24/07

District or Forest Weed Specialist compliance statement and signature:

Based on the results of the rock source inventory (see backside of this form) conducted on the date above.....

CHECK ONE

I hereby judge this rock material to be weed free and in full compliance with Standard 7 of the Invasive Plant FEIS and ROD.

I hereby quarantine this rock material until it is treated and judged to be weed free.

Name of Local Weed Specialist:

Date:

Over 

REPORT ON ROCK SOURCE INVENTORY

Target species for conducting rock source inventories consist of the priority 1 & 2 invasive plants on the Olympic National Forest invasive plant list (attached). Report any invasive plants growing on the rock source itself, rimming the piles, or in the yard area.

Please attach:

1. NRIS forms
2. Sketch map of the pit showing the location of the invasive plants
3. FACTS treatment form if treatment was conducted on site.

Infested Area:

1. Estimated size of the pit: 4 acres
2. Estimate the percent of the pit that is occupied by invasive plants (if plants are scattered, mentally lump them together to estimate their cover in the pit)
75 %

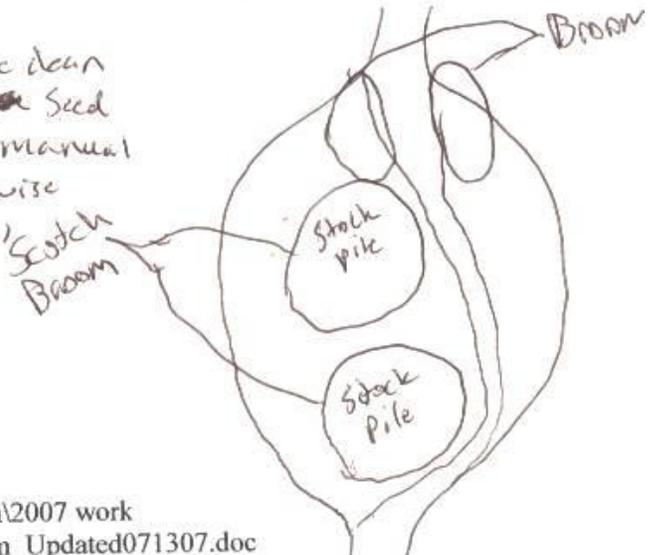
NRIS Site ID numbers for inventory:

Site ID #	Species Code	Common Name	Comments
	CYSC4	Scotch Broom	only on Stock piles

Mitigation/Treatment:

Provide recommendations for mitigation measures that would allow the rock material to be judged weed free. Include a proposed treatment plan listing possible treatment options and a timeline for anticipated follow-up treatments. Make notations on pit sketch map for clarification.

Many years before material will be clean
lots of old plants guaranteed ~~the~~ Seed
Bank, multiple years of more manual
or chemical treatments, otherwise
Broom will grow where material
goes.



J:\users\clucero\Word97\Title II Application\2007 work
info\Olv weed free rock Compliance form Updated071307.doc