Olympic Peninsula Cooperative Noxious Weed Control
2010 Project Report

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

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November 2010

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Acknowledgements

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

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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 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 has been a comprehensive program for noxious weed control on the North Olympic Peninsula. On Forest Service lands it includes surveying, identifying, and controlling noxious weeds in areas identified by the Forest Service. On non-federal lands this project, coordinated by Clallam County, has overseen and implemented Jefferson County Noxious Weed Control Board's program which includes public education, survey and monitoring of noxious weed infestations, and seeking landowner compliance with RCW 17.10. Work has been accomplished with funding under Title II of the Secure Rural Schools Act (SRS), which was designed in part to promote cooperation and collaboration between federal and local governments. This project began in 2002 and was expected to end in 2008 when the Act was set to expire. It was in fact re-authorized in 2008 and is now expected to sunset in 2011. Work has been accomplished by crews of varying size and expertise. This has included a small field crew and a weed specialist hired by the Clallam County Noxious Weed Control Board (CCNWCB), a larger Washington Conservation Corps (WCC) crew, and/or a Olympic Correction Center (OCC) inmate crew, working in pits and on Highway 101 in the west end of Jefferson and Clallam Counties. (Neither of these crews were used in 2010.) In 2008, 2009 and 2010 the Forest Service hired contractors for certain projects.

2010 Project Goals:
1. Control weeds on roads scheduled for decommission.
2. Control weeds in Botanical Areas and similar critical sites.
3. Control weeds in quarries and other rock sources.
4. Control weeds in campgrounds, trailheads and other heavily-used sites
5. Revisit previously controlled sites and perform necessary follow-up control work.
6. Identify and treat new populations

2010 Resources: (Clallam/Jefferson Noxious Weed Control Boards Staff)
- Supervisor (14 hours/week, 5 months)
- 2 Project Specialists (40 hours/week, 3.5 months)
- 1 Field Technician (40 hours/week, 1.5 months)
- Jefferson County Noxious Weed Coordinator/FS Program Assistant (18 hours/week, 7 months, 40 hours/week, 1 month).

2010 Accomplishments:
- Treated a total of **337** weed-infested acres
- Supported coordination of the Jefferson County Noxious Weed Control Program for 7 months.
- Completed and submitted FACTS treatment forms to USFS for upload to their database.
- Completed annual Project Report

Conclusions and Recommendations:
The Secure Rural Schools Act was re-authorized towards the end of 2008 and funding was secured for 2010, 2011 and possibly 2012. We do not expect it to be re-authorized yet again. Therefore it is essential that we make the best use of the resources for 2011 and that we search for other funding to continue this cooperative project into the future.

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.

The Clallam County Chain Gang has been funded to perform multiple tasks, including weed control, for two years. We need to tighten and formalize coordination and scheduling to maximize their effectiveness and incorporation into the broader invasive plant strategy. To do this will require more planning, increased training in identification and treatment, and most importantly closing the communication gap between all involved,

It would greatly assist our efforts to understand where treatments have and have not taken place if we were provided with information about contractor treatment locations. Future Chain Gang activities would also fall into this request.

We should discuss possible ways to utilize the monitor to not only document that treatments have taken place, but also to provide valuable feedback to counties about treatment status or whether re-treatments are needed.

We need to determine our goals and uses of hand-held GPS units in the field.

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 has been a comprehensive program for noxious weed control on the North Olympic Peninsula, including surveying, identifying, and controlling noxious weeds, coordinating action and communication between local, state and federal jurisdictions, and raising public awareness of the impacts of noxious weeds. This project has also provided funding for the Jefferson County Noxious Weed Control Board and supported their local education, survey, and treatment efforts. Work has been accomplished with funding under Title II of the Secure Rural Schools Act (SRS), which was designed in part to promote cooperation and collaboration between federal and local governments. This project began in 2002 and was expected to end in 2008 when the Act was set to expire. Funding was in fact re-authorized in 2008 and it is now expected that the project will end in 2011, when the Secure Rural Schools Act will sunset.

On Forest Service lands the project has worked under a policy of early discovery and rapid response to prevent the establishment of new infestations wherever possible. Initial work focused on surveys to identify and update weed baselines; the focus has since shifted to treatments. For known sites, the emphasis has been on controlling high priority noxious weeds in areas with high potential to spread, such as rock sources or campgrounds, or in particularly fragile, sensitive environments such as Biological Areas.

On non-Forest Service lands, the emphasis has been on areas where uncontrolled noxious weed populations on federal, state, county, and private land were spreading and hindering coordinated control activities. The Clallam and Jefferson County Weed Boards provided the vital link to private landowners whose weeds threatened federal lands. For that reason, the project includes oversight and implementation of the Jefferson County Noxious Weed Control Board's program. Program goals include public education, monitoring infested sites, 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.

Work has typically been accomplished by crews of varying size and expertise to match the need on the ground. This has included a small field crew and weed specialist hired by the Clallam County Noxious Weed Control Board (CCNWCB), a larger Washington Conservation Corps (WCC) crew, and/or a Olympic Correction Center (OCC) inmate crew, working in the west end of Jefferson and Clallam Counties (neither were used in 2010). In 2008, 2009 and 2010 the Forest Service hired contractors for certain projects. Details of work performed by the contractor are not available to us and are not incorporated into this report.

2010 Project Description:

This year's work primarily involved monitoring and treating previously identified weed infestations on Forest Service land. The Forest Activity Tracking Sheet (FACTS) form was used to document manual or chemical treatment. Treatment reporting was based on a unique "Reference Number", arbitrarily assigned within "Project Areas", a broader, previously used reporting model. For the second year a Forest Service employee monitored treatment sites and sent feedback to the counties.

Although Title II funding was re-authorized in 2008, it was not available until the summer of 2010 because of a delay in RAC appointments. The RAC did not convene until May and contracts were not in place until early August. These delays made it difficult to set the scope of work and have sufficient time to hire and train an appropriately sized crew within seasonal time constraints.

A two-person crew was hired in June; a third person was added in August. Additionally, each county coordinator went out separately with the crew one day a week, enlarging crew capacity and using the coordinators' greater expertise to find a wider variety of non-native plant species.

County Weed Board stability protects Forest Service lands from noxious weed encroachment from surrounding lands. Because funding for weed control in Jefferson County is severely underfunded, past support from Title II under the Secure Rural Schools Act has enabled the Jefferson County Noxious Weed Control Board program to remain viable. In 2010 less funding was available from Jefferson County's general fund and more staff time was spent achieving Forest Service goals under Title II funds. This reduced the JCNWCB Program's ability to both survey for and achieve compliance from landowners in respect to their noxious weed responsibilities.

In 2010, treatments on Forest Service lands were prioritized in the following manner:

1. Control weeds on roads scheduled for decommission.
2. Control weeds in Botanical Areas and similar critical sites.
3. Control weeds in quarries and other rock sources.
4. Control weeds in campgrounds, trailheads and other heavily-used sites
5. Revisit previously controlled sites and perform necessary follow-up control work.
6. Identify and treat new populations

2010 Project Resources and Performance:
The number of staff/participants, the amount of time devoted to this project, and tasks completed were:

- **1 Supervisor: 14 hours/week, for 5 months, licensed applicator**
  - Supervised and administered 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 2011 field season

- **Field team: 2 project specialists, 40 hours/week for 3.5 months (licensed aquatic applicators); 1 field technician for 40 hours/week for 1.5 months**
  - Treated a total of **337.31** acres
  - Surveyed **222** miles of roads
  - Filled out FACTS forms for all treated sites

- **1 Jefferson County Noxious Weed Control Coordinator/FS Program Assistant: 18 hours/week, for 7 months, 40 hours/week for 1 month**
  - Coordinated Jefferson County Noxious Weed Control Program for seven months
  - Assisted with FS field treatments
  - Reviewed crew's FACTS sheets and submitted them to the Forest Service
  - Compiled data and prepared report

- **Clallam County Sheriff's/Road Department Chain Gang (Funded by Clallam County)**
  - Manually removed **1,652** Scotch broom and tansy ragwort plants from County roads and property.

  A crew was funded through Title II to do Forest Service treatments but was not organized soon enough in the season to provide assistance with weed control projects.

2010 Project Accomplishments:

In 2010 337 acres on noxious weeds were treated by the Clallam County crew. This appears to be an increase of over 50% from 2009. However, this figure is inflated because of new Forest Service reporting protocols, discussed on Page 12.

County staff performed virtually all treatments this season. This explains why overall treatment totals, derived by the combined efforts by all crew types, (eg. Clallam, OCC, WCC) were lower than previously. Funding delays precluded hiring additional crews that were used in previous years.

A summary of work performed under this project from 2002-2010 is shown on the following page, but changes in reporting over the years make comparisons difficult. For details on how much work was manual or chemical and specific weeds treated, see Appendix A.

2002 to 2010 Accomplishments Summary Table										
	2002	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Total**
Miles of Roads Surveyed/Treated	192	702	265	113	N/A	N/A	N/A	N/A	**N/A**	**1,272**
Acres Surveyed/Treated[1]	233[1]	851[1]	321[1]	137[1]	N/A	N/A	N/A	N/A	**N/A**	**1,542**[1]
Miles of Roads Surveyed	N/A	N/A	N/A	N/A	391	369	423	299	**222**	**1,704**
Acres Surveyed[2]	N/A	N/A	N/A	N/A	947[2]	894[2]	1,025[2]	724[2]	**626**[3]	**4,216**
New Sites/Total	**122**	**497/619**	**147/766**	**74/840**	**147/986**	**12/998**	**1/999**	**3/1,002**	**29/1,031**	**1,031**

Number of Weeds Removed, by Crew										
	2002	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Total**
Removed by Field Crew[4]	736[4]	886[4]	11,716[4]	51,775[4]	21,016[4]	N/A	N/A	N/A	**N/A**	**86,129**[4]
Removed by WCC Crew	31,085[4]	87,623[4]	1,166,200[4]	880,655[4]	N/A	N/A	N/A	N/A	**N/A**	**2,165,563**[4]
Removed by Chain Gang	8,286[4]	102,748[4]	112,858v	108,225[4]	56,775[4]	72,700[4]	24,350[4]	69,380[4]	**1,652**[4]	**556,974**[4]
TOTAL # of Weeds Removed	**40,107**[4]	**191,257**[4]	**1,290,774**[4]	**1,040,655**[4]	**77,791**[4]	**72,700**[4]	**24,350**[4]	**69,380**[4]	**1,652**[4]	**2,808,666**[4]

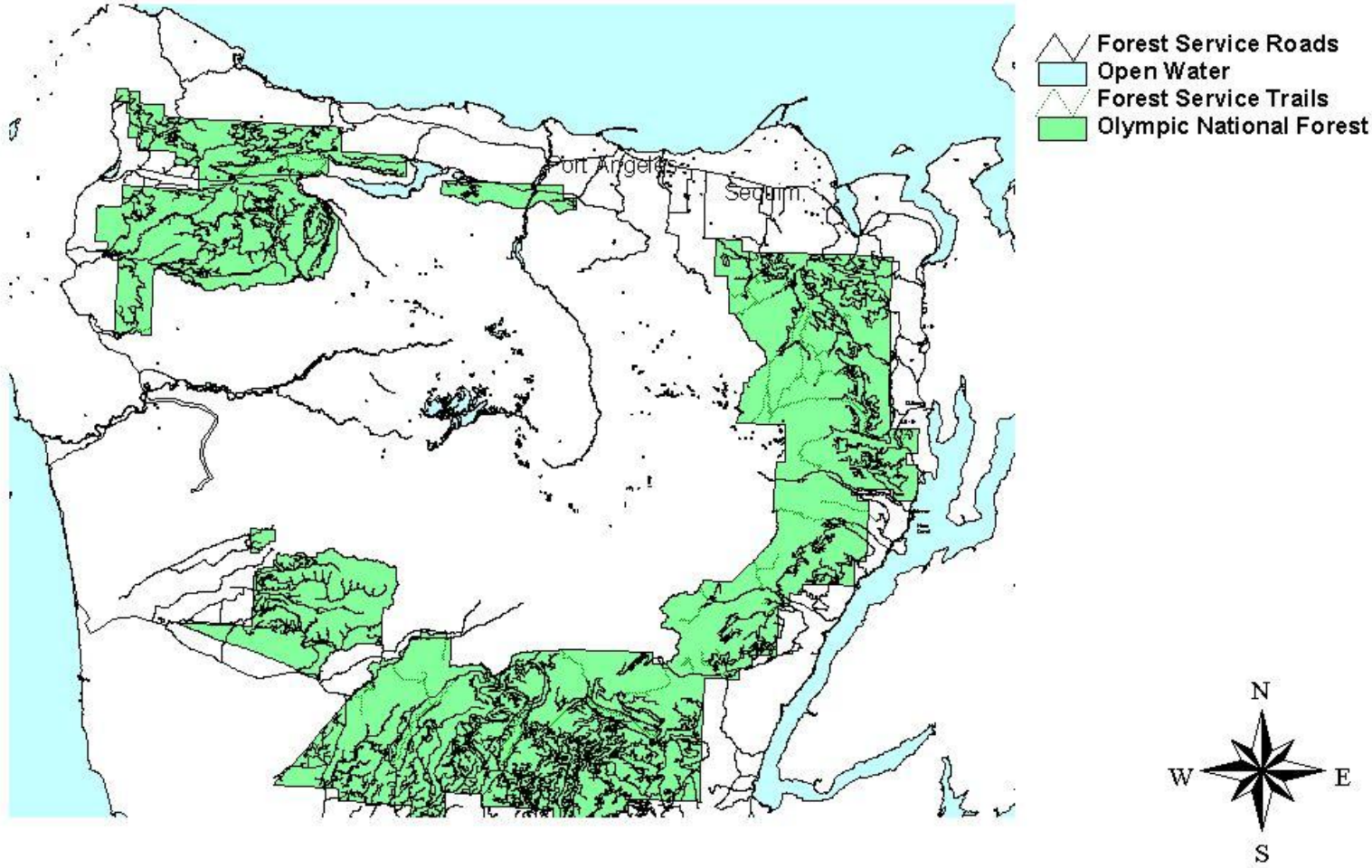
Acres Treated, by Crew										
	2002	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Total**
Acres Treated by Field Crew[5]	N/A	N/A	N/A	N/A	20.28[5]	59.95[5]	185.95[5]	221.59[5]	**337.31**[5]	**825.08**
Acres Treated by OCC Crew	N/A	N/A	N/A	N/A	N/A	337[5]	74.82[5]	77.5[5]	**N/A**	**489.32**[5]
Acres Treated by WCC Crews	N/A	N/A	N/A	N/A	N/A	22.35	N/A	53.87	**N/A**	**76.22**
Acres Treated by Chain Gang[6]	N/A	N/A	N/A	N/A	5.67[6]	7.27[6]*	2.43[6]	6.93[6]	**0.16**[6]	**22.46**[6]
TOTAL Acres Treated	**N/A**	**N/A**	**N/A**	**N/A**	**25.95**	**426.57**	**263.2**	**359.89**	**337.47**	**1,413.08**

1. Derived from miles surveyed/treated
2. Derived from miles surveyed. Recorded as a separate value for 2006 to 2010 only. Previously combined in miles treated/surveyed and acres treated/surveyed
3. Taken from FACTS sheets—"Area Examined for Weeds"
4. "# of weeds removed" refers to manual only, does not account for chemical treatment and was not reported by crews from 2007 to 2010 because the Forest Service instituted new protocols
5. "Acres Treated" include chemical and manual treatment and are taken from the FACTS forms filled out by crew members. The figure of 337 acres reported for the OCC crew in 2007 is inflated due to different reporting protocols. New 2010 Forest Service Protocols have inflated "Acres Treated by Field Crew" when compared with previous years. This is discussed on Page 12
6. For the Chain Gang, each thousand plants were estimated to encompass .1 acre

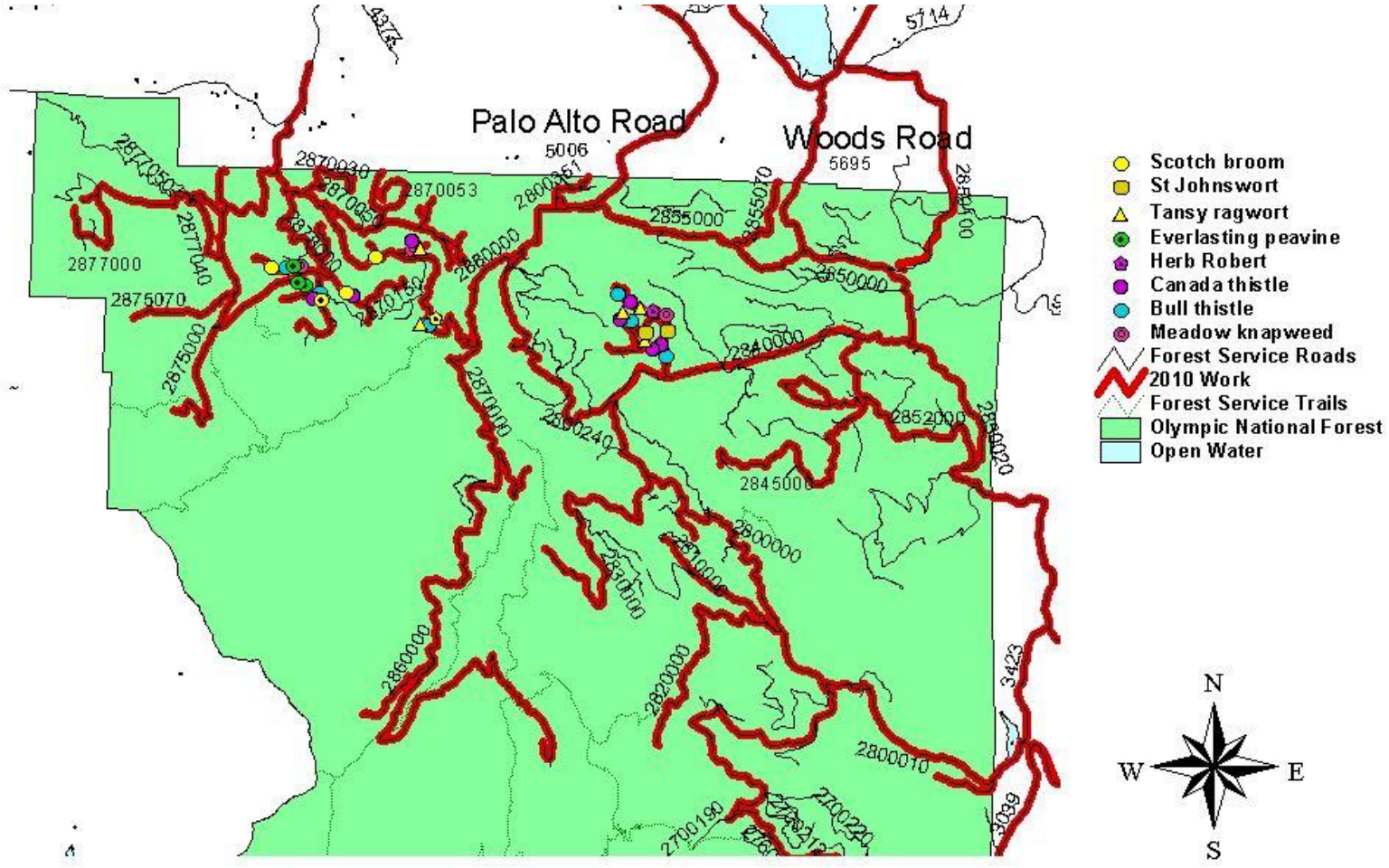
Maps

- Six maps are shown—an Overview of the Olympic National Forest, three covering the Hood Canal from north to south, one showing the Pacific North district and one showing the area of the 3050 roads south of Lake Sutherland.
- Roads that crew worked on in 2010 are shown in reddish-brown. This layer was created in the office and may not be 100% accurate.
- Only new weed sites found in 2010 are shown. Again, these layers were created by office staff and simply show the road the weed was found on, not the exact location.
- For baseline weed sites, please see previous reports.

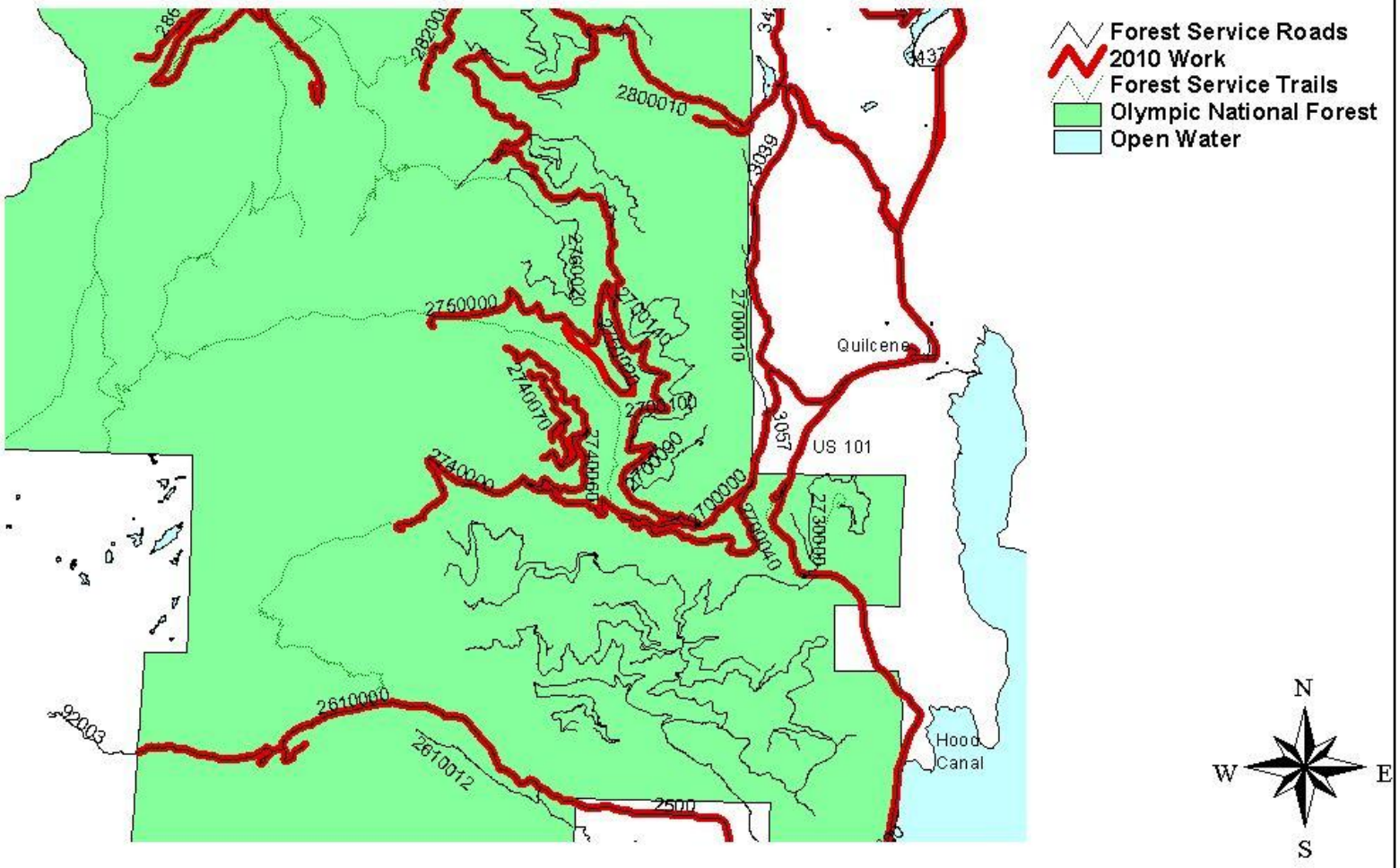
Overview of Olympic National Forest



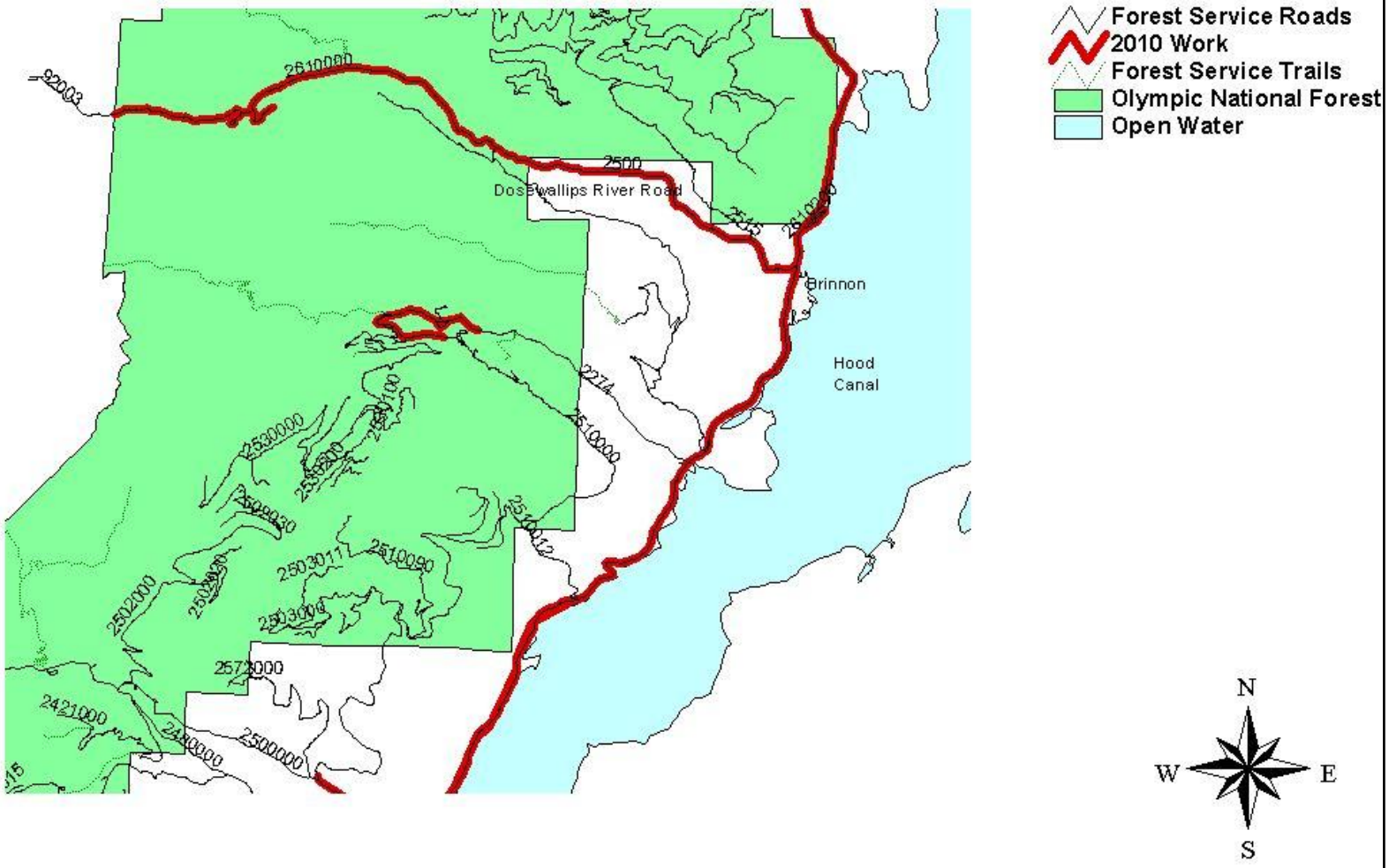
Hood Canal North
Roads Treated and New Sites Found



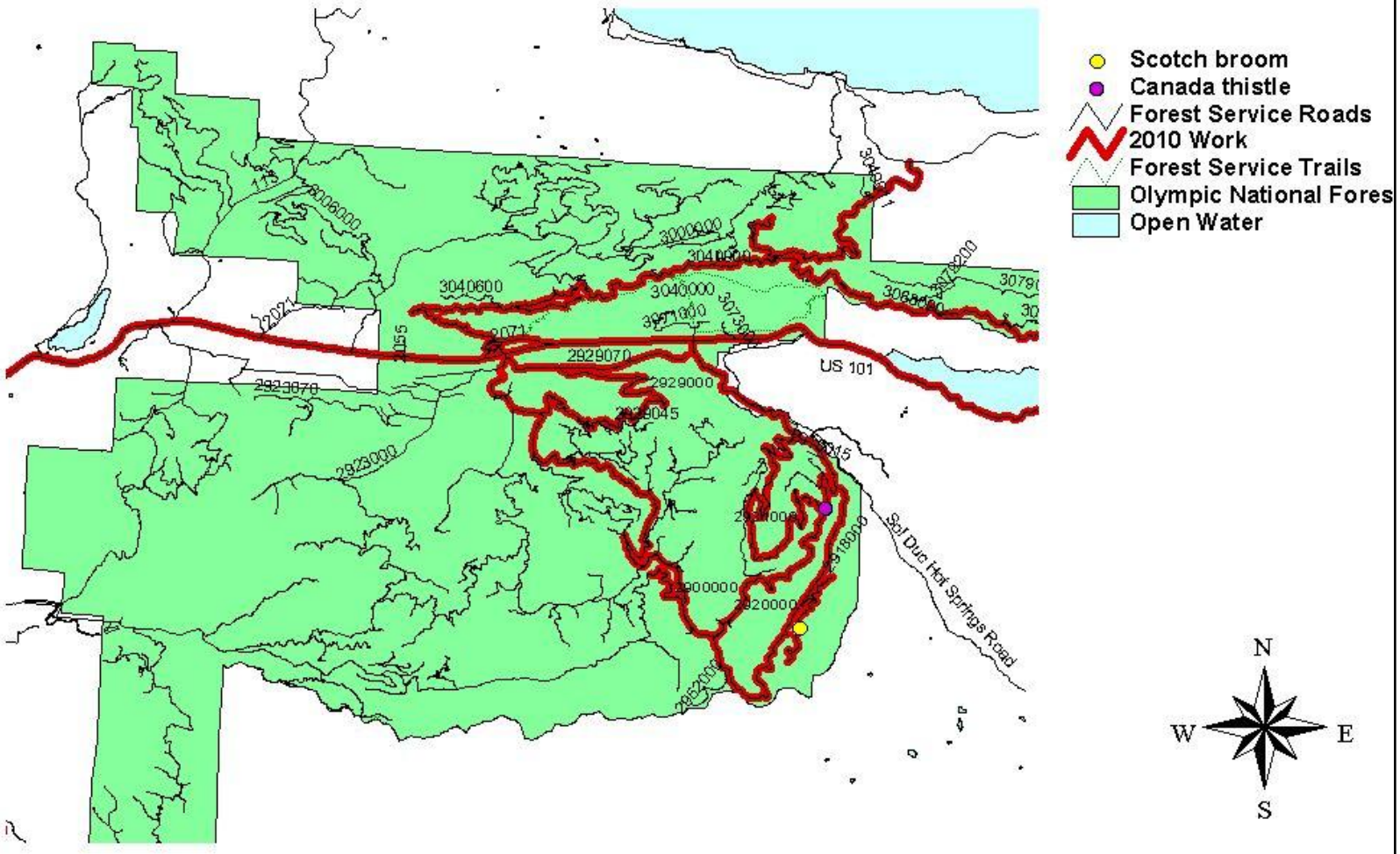
Mid Hood Canal
Roads Treated



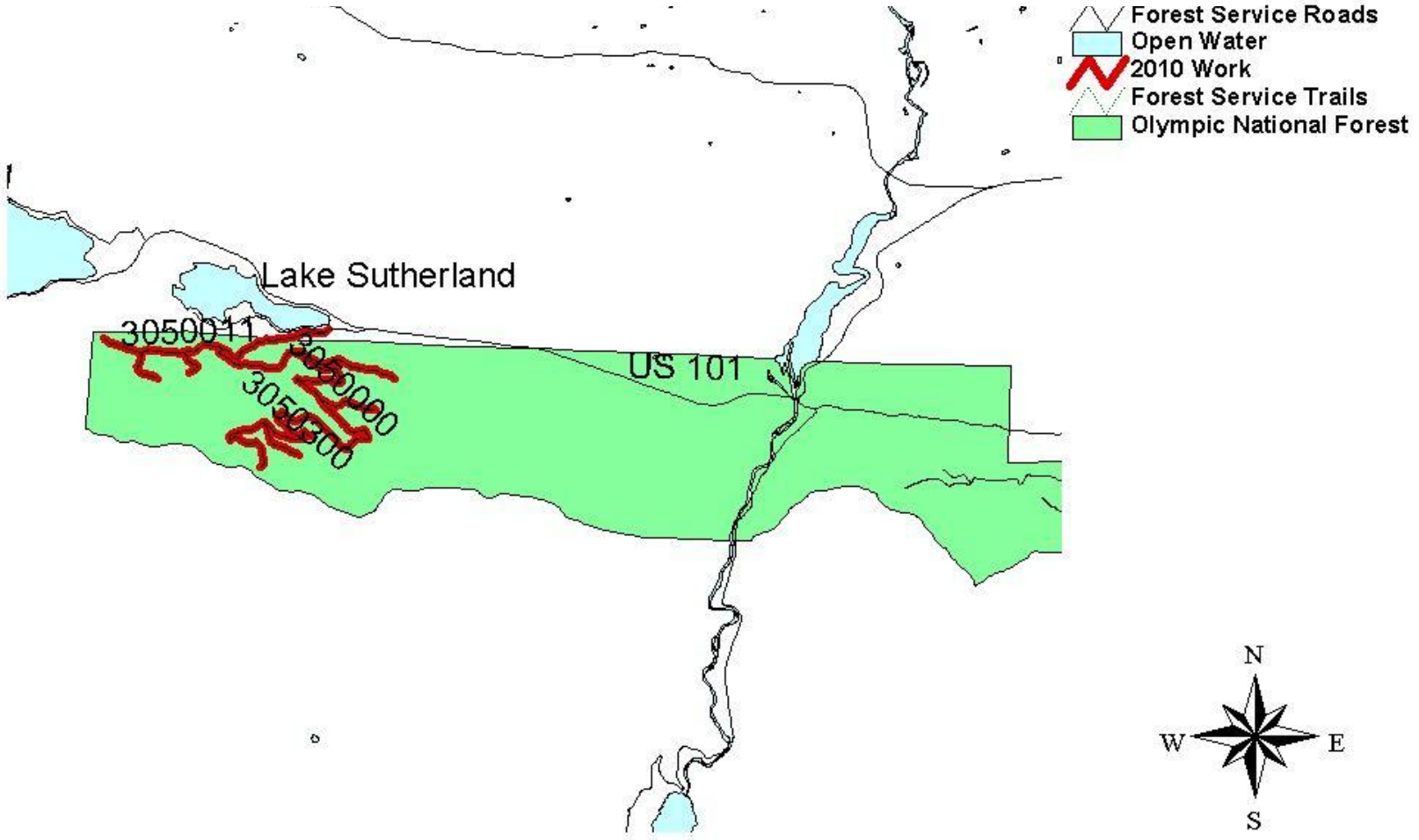
Hood Canal South
Roads Treated



Pacific North
Roads Treated and New Sites Found



3050 Roads Treated



POST-SEASON OBSERVATIONS:

Nature of the Problem:

Weed infestations continue to threaten the health and diversity of native plant communities both within the Olympic National Forest and on adjacent lands. Aggressive and invasive, these exotic plants can displace native species. Some weeds are toxic to humans and wildlife, and some can adversely affect soil chemistry and/or cause erosion. Many die back in the winter and offer no food or habitat for native wildlife.

Crews have treated weeds on most of the sites identified in the 2003 baseline survey and infestation size and density has been reduced overall. Continued follow-up on known sites is essential to effective control but we have concerns about some sites that have not as yet been visited (see Appendix D).

- Treatments are showing success; For example, Scotch broom patches are smaller and less dense, and tansy ragwort has noticeably decreased on the 2800 roads, compared to a few years ago.
- The most commonly recorded invasive species continue to be Scotch broom, tansy ragwort, herb Robert, Canada thistle, bull thistle and everlasting peavine.
- Everlasting peavine may be the most abundant. Populations in some areas, especially the 2878 roads (2878085, 2878110 and 2878100) were so large they were not only beyond the capacity of our crew to treat, but also appear to be significantly retarding regeneration of native understory and tree species.
- Herb Robert continues to be a high concern, because of its ability to invade undisturbed forest under-story, and to produce prolific seedling growth throughout the year.
- A surprising number of new patches of meadow knapweed and herb Robert were found, especially within the Dungeness watershed, often on spurs which had not previously been inspected.
- The most infrequently recorded species are comfrey, hawkweeds, sulfur cinquefoil and knotweed. Controlling these species will continue to be a high priority.
- No new weed species were found on Forest Service land in 2010. This is in contrast with 2009, when sulfur cinquefoil and butterfly bush were found for the first time and European hawkweed was discovered on Highway 101 as it passed through Forest Service land.
- Small populations of purple loosestrife, yellow and European hawkweed, hoary alyssum, hairy willowherb, garlic mustard and common reed are all present 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 and wild chervil are still common on roadsides in Jefferson County. Neither has yet been seen on FS land but could easily spread there.

Survey and Treatment

- The Forest Service provided excellent pre-season planning documents. However, in season readjustments resulted in some confusion over projects for county vs. contractor.
- Surveys were only performed while driving to assigned treatment project areas. Crew treated new infestations as they were discovered.
- Combining manual and herbicide treatments has greatly increased productivity. CCNWCB crews treated 337.31 acres in 2010.
- Favoring triclopyr (with increased residual and greater selectivity) over glyphosate has increased treatment efficacy. Native species appeared less damaged and the overall site was less barren and seemed to recover faster where selective herbicides were used.
- A major focus in 2010 was controlling weeds on soon-to-be-decommissioned roads, because once decommissioning takes place access is very difficult. The 3050 road system south of Lake

Sutherland was a top priority for the Forest Service and crews spent many days there treating herb Robert.

- Pits continued to increase in priority. The Forest Service incorporated high-priority pits into the general project list; most were treated.
- Treatment of campgrounds and trailheads continues to be a high priority because of the potential for spread. All priority campgrounds were treated in 2010.
- Cooperation between the Weed Boards, the Forest Service and the Port Townsend Municipal Watershed continued to be excellent, resulting in more weed treatments within the watershed.
- Cooperation between the Forest Service, Jefferson County Noxious Weed Control Board and the East Jefferson WCC Riparian Crew resulted in knotweed being found and treated on FS land high in the Dosewallips watershed.
- Cranberry Bog treatments could not have taken place without the extraordinary cooperation and coordination with FS staff and the FS fire crew, which facilitated on-site water storage.
- 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.
- Wet weather severely hampered herbicide treatments.
- Late-season (October) treatments were done on herb Robert in several locations.
- Because of time constraints, field crew was not able to re-treat as frequently as necessary.
- The extent of invasive plant populations in less accessible areas continues to be less well documented, nor is there sufficient time allowed in the work plan to do so.
- The monitor may have been deployed too early in the season for various reasons. This may explain why there was sometimes an unrealistic expectation to provide locations to be monitored. Consequently we received less realtime monitor feedback this season to inform us where re-treatments may have been needed.

Data Collection

- The FS modified the FACTS sheets. The 2010 version required crews to enter "acres examined for weeds" and "% of area examined infested with this species". These were additional data fields and consequently the crew spent longer filling out the forms.
- Additionally, the crew were instructed to not lump plants together when estimating "infested area", and were also told to use the same acreage for "application area" when making a chemical application. **We feel that this artificially inflates the acreage treated and is thus being used inappropriately as a measure of harm or risk to endangered or threatened species during consultation.**
- FS staff supplied us with 8 ½ by 11 inch maps, with site Reference Numbers marked on them. The crew found these very useful.
- The FACTS sheets and Rock Pit inspection forms are becoming increasingly complex and confusing to the crew.
- Equipping the crew with recreational-grade Garmin units loaded with Topo made it much easier for them to navigate and know where they were, and return to sites as needed. However, we were still experimenting with what these units were capable of and we did not establish clear goals about what data should be collected and how it was documented.
- Crew did a much better job of measuring road miles, figuring out which Reference Number site they were working on and recording the Reference Number on the FACTS sheets
- Office staff did a better job in 2010 of reviewing FACTS sheets every few weeks, filling in the gaps and submitting them to the Forest Service.
- There is poor communication about contractor activities and the Weed Boards do not have information about contractor accomplishments during the season or after treatment.

Mapping

- The majority of weed sites in the Olympic National Forest have already been mapped in the county's GIS system. Approximately 29 new sites were found this year.
- Office staff created maps showing where crews had treated. Ideally, track logs from the Garmin units would have provided this information effortlessly.

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RECOMMENDATIONS:

Butterfly bush—first discovered in ONF in 2009

Future Direction of the Project

The Secure Rural Schools Act is scheduled to sunset in 2011 and, given the state of the economy, we do not anticipate it being re-authorized yet again. Therefore it is more essential than ever that we make the best use of the resources available for 2011. We need to search for other means and funding to continue this cooperative project into the future; it would be both disheartening and wasteful to lose the ground we have worked so hard to gain.

The successful adoption of the 2008 EIS, which authorized herbicide use throughout the Olympic National Forest, 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. The County weed boards have provided a relatively inexpensive, locally based work force with county wide jurisdiction and long term focus. However, the CCNWCB Program is not equipped to carry out 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

- Stable funding provides improved year-to-year weed control continuity within the Forest and an improved weed control program on 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 continue to be cut.
- The Clallam County Chain Gang has been funded to perform multiple tasks, including weed control, for two years. We need to tighten and formalize coordination and scheduling to maximize their effectiveness and incorporation into the broader invasive plant strategy. To do this will require more planning, increased training in identification and treatment, and most importantly closing the communication gap between all involved,
- It would greatly assist our efforts to understand where treatments have and have not taken place over the years if we were provided with information about contractor treatment locations and findings at the end of each season. Future Chain Gang activities would also fall into this request.
- We should discuss how the monitor work is scheduled and possible ways to utilize the monitor to not only document that treatments have taken place, but also to provide valuable realtime feedback to respective counties about treatment status or whether re-treatments are needed.
- We need to determine our goals and uses of hand-held GPS units in the field.

Survey and Treatment

- While our focus will continue to be treating known sites, more time must be allowed each season for surveying and locating new infestations before they become well established. More periodic surveys will also give a better sense of whether we are getting ahead of new invasions, or they simply haven't been identified yet. A list of potential survey sites is given in Appendix D.
- Set aside at least two weeks during the season for surveys—these could be used on poor weather days. Pre-planning should include identifying areas where we have not been for four years and including a portion of those areas in the annual workplan.

- Additional time must be built into the work plan for follow-up treatments because multiple applications to the same site during a single growing season provide substantially improved weed control. Specifically, all herb Robert sites will likely require 2 to 3 follow-up treatments per season.
- It would help to add the FS RSI code to pit projects to improve our treatment documentation. We will bold these sites on the project list and possibly make a separate list.
- An annual list of high priority non-FS pits and their locations at the beginning of the season would be very useful
- While it is hard to anticipate due to seasonality, the monitor may need to be sent out later in the treatment season.

Documentation

- Continue to discuss clear goals for data collection and how to realistically achieve them.
- Rather than use arbitrarily assigned Reference Numbers for sites, consider making each Project Number unique and use that as the Reference Number. For example, rather than using the Project Number 4A multiple times for different Cranberry Bog roads, use 4AA, 4AB etc. These numbers would then be more meaningful and would let crews know in which Project Area that site is located.
- Also, consider combining sites into larger, more clearly defined units (for example, from one road intersection to another). This would reduce time spent filling in and checking FACTS sheets.
- For the most part, the aerial photos of pits were useful to mark where and what species were found. It would be helpful to note on the project list if a pit survey form was needed or not for the current year.

2010 PROTOCOLS

1. Team and Project Dates

This year's project focused almost entirely on treatment, rather than survey. Cathy Lucero (coordinator), and field technicians Eve Dixon, Ben Eyestone, Angela Fletcher, Bret Carey and Leo Sprinzen performed and documented treatments. Fieldwork began in June 2010 and continued through mid-October.

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 2010. 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 infestations was also a priority, especially if new sites were seen en route to known sites.

a. Most known sites are roadside, and are typically surveyed by vehicle. . Typically, at least 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.

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

b. Trailheads, campground parking areas, and gravel pits were surveyed on foot and area surveyed or treated was estimated.

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. From 2007 through 2010 miles surveyed were estimated from treatment sites (recorded on FACTS forms) and roads taken to get to those treatment sites.

d. Small tap rooted 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 after 2008, making comparison to accomplishments of previous years difficult.

   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 or when Garlon 3A was not available. On roadsides and other areas well away from water Garlon 3A was used, also at 1.5% with Competitor at 0.5%. Garlon3A was chosen because it can legally be used up to water's edge, does not kill established grasses and has a residual effect.

   iii. A legal notice listing all sites under consideration for herbicide treatment (see Appendix I) was published in the Peninsula Daily News more than two weeks before any herbicide applications. Herbicide applications were carried out between 6-23-10 and 10-19-10.

   iv. On-site notices (see Appendix I) were posted prior to treatments and left in place for at least 24 hours afterwards. Treatments in high-use areas such as campgrounds were avoided during busy times (near weekends or holidays) and Forest Service recreational personnel were contacted prior to commencing treatment.

4. Data Collection

The protocol for data collection has changed over the years, going from reporting individual infestations to reporting all weeds in units identified by the Forest Service. This system began in 2008 when the Forest Service identified 24 broad "Project Areas" that consolidated individual species sites reported in previous years. Each "Project Area" was subdivided, usually into road segments or spurs. Clearly defined areas such as campgrounds or pits became a subunit. This system was further refined in 2009 when each subunit was given its own unique "Reference Number". The same system was used in 2010.

Forest Activity Tracking Sheet (FACTS)

FACT sheets are used to record treatments in each Reference # site.. In 2010 the Forest Service made some changes to the combined Herbicide/Manual Treatment Data Form which had been introduced in 2009. Specifically, "Acres examined for weeds" are now recorded separately from "Infested area treated". Also, the new forms require an estimation of the cover class of each weed—giving the Forest Service information about the status of the infestation as well as details of treatment. A sample form and instruction for filling it out, as supplied by the Forest Service, are in Appendix J

Invasive Plant Inventory for Rock Sources, Olympic National forest

To track the suitability of quarries, the Forest Service created a new form in 2010, to be filled out for each rock source or quarry inspected. A sample form is shown in Appendix I

NRIS

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***. This data was entered into ***RangelandPC Data*** and submitted to the Forest Service for staff to upload into the ***NRIS Terra Database.*** For specifics of data collection and entry see previous reports. New sites that were found *and* treated were recorded on FACTS forms only

5. Spatial Data Collection and Mapping:

Weed sites were previously mapped in ArcView GIS on a laptop computer by county staff, so that a real-time map could be available to the field crew. 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 and metadata.. .

a. Sites were plotted as points for individual sites. Where practical, multiple sites on a road of the same species were turned into a polygon.
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. New layers were produced post-season showing where treatment occurred.

- In 2010, county crew carried a Garmin 78 or a Garmin 76 Cx pre-loaded with Topo US 24K. Protocols for using this equipment were developed over the course of the season.
- The automatic track log function was enabled.
- Meta data was set to NAD83 Harn, State Plane North 4601, statute feet.
- Crew was instructed to turn and leave on units, enroute to project area,
- Crew was directed to take waypoints for significant events or sites, such as beginning or end of treatments, or new weed locations.
- Crew documented the waypoint number, the nature of event or species, and road number in a log book, The waypoint may have also been noted on the relevant FACTS sheet.
- Waypoints and tracklog data were downloaded in the office and converted into shapefiles through the Minosota DNR public domain software DNRGarmin version 5.14.

6. Data Reporting

Office staff reviewed FACTS forms and Rock Source Survey forms and submitted copies of them to the Forest Service several times during the field season. The originals 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 2009 treatments by acreage, date and species. It is a comprehensive account of work accomplished in 2009.
b. **Appendix B** is summary of rock source inspections and treatments.
c. **Appendix C** 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 from 2007 through 2010, and weed species treated.
d. **Appendix D** shows previously-listed weed sites that were not included in a Forest Service "Project Area" as well as others that have never been surveyed and are close to known infestations.
e. **Appendix E is** a summary of weed control work in Clallam and Jefferson Counties, off Forest Service
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 2009 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: SUMMARY OF 2009 PROJECT ACCOMPLISHMENTS

This table is based on the Project List issued by the Forest Service, which served as the work plan for Clallam County Noxious Weed Control Board (CCNWCB). Only sites in Clallam or Jefferson Counties are shown here. Information on sites treated by the contractor is not available.

The table shows the acreage treated each time the crew was on site, and whether the treatment was manual or chemical. **Re-treatments** are identified with green shading and total 17.35 acres. When deducted from the total treated acres, this leaves 337.31 acres treated, manually or chemically. The Forest Service estimate of infested acres is added for comparison, but in some cases no estimate was given. This makes the treated acres much larger than the estimated infested acres (337.31 compared with 140.3).

The list was prioritized into Priority 1, 2 or no priority.

Almost all of the Priority 1 sites were treated at least once. Some got missed because of time constraints or because the crew could not find them. These are highlighted in blue and should be treated in 2010.

Some Priority 2 sites went untreated and are highlighted in grey; these also should be treated in 2010. A few Priority sites were treated but not properly documented.. These have not been highlighted in the table. Sites with no priority were treated, if convenient, while en route to other sites.

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
153		2A	South Fork Calawah	**Calawah Botanical Area**		0.3						
157		2D	South Fork Calawah	Elk Quarry		?						
158		2E	South Fork Calawah		2912060	0.2						
159		2F	South Fork Calawah		2932013	?						
13	1	4A	Canyon Creek/Pats Creek	Cranberry Bog 052 road	2870052	none?	1.5	0.1	Garlon 3A	0.75	7/21/2010	HYPE CIAR
14	1	4A	Canyon Creek/Pats Creek	Cranberry Bog 053 road	2870053	none?	15	15	Garlon 3A	9	7/15/2010	SEJA CIVU CIAR
15	1	4A	Canyon Creek/Pats Creek	Cranberry Bog 056 road	2870056	0.6	3.6	0.1	Garlon 3A	0.75	7/21/2010	CIVU CIAR TAVU HYPE
15	1	4A	Canyon Creek/Pats Creek	Cranberry Bog 056 road	2870056	0.6	0.6	0.002	Garlon 3A	0.001	9/21/2010	CEDE5

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
24	1	4A	Canyon Creek/Pats Creek		2870000	0.8	4.3	4	Garlon 3A	12	9/16/2010	GERO CYSC RUDI HYPE SEJA CIAR LALA
25	1	4A	Canyon Creek/Pats Creek		2875000	1.2	1.9	1.9	Garlon 3A	54	8/26/2010	LALA CIAR
25	1	4A	Canyon Creek/Pats Creek		2875000	1.2	0.5	0.5	Aqua Neat Polaris	42 10	9/2/2010	HYPE GERO CIAR CIVU LALA CYSC SEJA
25	1	4A	Canyon Creek/Pats Creek		2875000	1.2	3	3	Garlon 3A	67.5	9/3/2010	HYPE GERO CIAR CIVU LALA CYSC SEJA
26	1	4A	Canyon Creek/Pats Creek		2878000	0.2	4	4	Aqua Neat	28	9/3/2010	LALA CIAR GERO CIVU
26	1	4A	Canyon Creek/Pats Creek		2878000	0.2	4	4	Garlon 3A	12	9/9/10	LALA CIAR GERO CIVU (LALA not treated)
33	2	4A	Canyon Creek/Pats Creek		287000	0.9	0.25	0.3	Garlon 3A	7.5	9/16/2010	CEDE5 CYSC SEJA
10	1	4B	Canyon Creek/Pats Creek	Cranberry Bog		0.7	3	3	Aqua Neat Polaris	210 61	8/24/2010	GERO CIAR CIVU PHAR
10	1	4B	Canyon Creek/Pats Creek	Cranberry Bog		0.7	2	2	Garlon 3A	62	9/21/2010	GERO CIAR CIVU
10	1	4B	Canyon Creek/Pats Creek	Cranberry Bog		0.7	2	1.5	Aqua Neat Polaris	100 25	9/22/2010	GERO PHAR
37		4BB	Canyon Creek/Pats Creek		2875070	0.3						
5	1	4C	Canyon Creek/Pats Creek	Canyon Pit		unknown	4	4	Polaris	17	8/20/2010	CEDE5 HYPE CYSC SEJA CIAR
38		4CC	Canyon Creek/Pats Creek		2878060	0.1	0.7	0.01	Garlon 3A	0.5	9/9/2010	CYSC (LALA present, not treated)
6	1	4D	Canyon Creek/Pats Creek	Caraco Cat Unit 6			6	6	Garlon 3A	20.25	8/11/2010	CIAR, CYSC, LEVU

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
39		4DD	Canyon Creek/Pats Creek		2878080	0.1	0.7	0.25	Garlon 3A	1	9/9/2010	SEJA CIAR CYSC
40		4EE	Canyon Creek/Pats Creek		2878085	0.1	0.7	0.01	Garlon 3A	0.5	9/9/2010	SEJA CIAR (LALA present, not treated)
8	1	4F	Canyon Creek/Pats Creek	Caraco Cat Unit 2			4	4	Garlon 3A	46.5	8/11/2010	CIAR CYSC CIVU
41		4FF	Canyon Creek/Pats Creek		2878110	0.1	1.2	0.01	Garlon 3A	1	9/9/2010	CIVU CYSC CEDE5 (LALA present, not treated)
9	1	4G	Canyon Creek/Pats Creek	Caraco Cat Unit 3			4	4	Garlon 3A	37.5	8/12/2010	CIAR PHAR
42	1	4GG	Canyon Creek/Pats Creek		2878120	0.2	0.25	0.25	AqauNeat	50	9/3/2010	LALA CYSC CIVU
11	1	4H	Canyon Creek/Pats Creek	Cranberry Bog 050 road	2870050	3.6	1.8	0.4	Garlon 3A	12	8/11/2010 & 8/12/2010	CIVU CIAR GERO CEDE5
587	1	4HH	Canyon Creek/Pats Creek	unnamed gravel pit		0.5	6	1.75	Garlon 3A Polaris	46.5 3.6	7/13/2010 7/15/2010 7/21/2010	CIAR CIVU CYSC LALA CEDE5 PORE PHAR HYPE
12	1	4I	Canyon Creek/Pats Creek	Cranberry Bog 050 road	2870050	0.6	3.6	0.2	Garlon 3A	1.5	7/21/2010	CIVU HYPE CIAR
16	1	4J	Canyon Creek/Pats Creek	Cranberry Bog 057 road	2870057	none?	1	0.1	Garlon 3A	0.75	7/21/2010	CIVU
17	1	4K	Canyon Creek/Pats Creek	Cranberry Bog 058 road	2870058	1.1	1	0.25	Aqua Neat Polaris	0.5 0.125	9/22/2010	GERO
18	1	4L	Canyon Creek/Pats Creek	Cranberry Bog 059 road	2870059	2.2						
19	2	4M	Canyon Creek Pats Creek	Lower Caraco Quarry		unknown	2	1	Garlon 3A	26	9/16/2010	SEJA CEDE5 CIAR CIVU GERO CYSC

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
20	1	4N	Canyon Creek/Pats Creek	Ned Hill Quarry		unknown	2.5	1.5	Polaris	18	8/20/2010	LALA CIVU CYSC CIAR
21	1	4P	Canyon Creek/Pats Creek	Upper Caraco Quarry		unknown	1.5	0.5	Polaris	1	8/20/2010	BUDA CIAR CIVU
22	1	4Q	Canyon Creek/Pats Creek	Sand Stone quarry			0	0				Same as Ned Hill Quarry
23	1	4R	Canyon Creek/Pats Creek		2870030	0.4	10.3	10.3	Garlon 3A	8.25	7/21/2010	CIAR HYPE CIVU CEDE5
27	1	4S	Canyon Creek/Pats Creek		2875020		1.1	1.1	Garlon 3A	12	8/26/2010	CEDE5 CIAR CIVU CYSC SEJA
27	1	4S	Canyon Creek/Pats Creek		2875020		1.1	trace	Aqua Neat Polaris	1.3 0.3	8/26/2010	PHAR
28	1	4T	Canyon Creek/Pats Creek		2877040	0.5	1.3	1.3	Garlon 3A	4	8/26/2010	CIVU CYSC CIAR GERO
29	1	4U	Canyon Creek/Pats Creek		2878100	0.1	3.1	0.2	Garlon 3A	2.5	9/9/2010	CIAR CIVU SEJA GERO (LALA present, not treated)
31	1	4W	Canyon Creek/Pats Creek	Cranberry Bog 054 road	2870054	0.2	5	0.75	Garlon 3A	15	7/15/2010	CIAR CIVU SEJA
32	1	4X	Canyon Creek/Pats Creek	unnamed gravel pit	2870000	unknown						
34		4Y	Canyon Creek/Pats Creek		2870110	none?	0.2	0.1	Manual		9/16/2010	CYSC
35		4Z	Canyon Creek/Pats Creek		2870130	none?	1	0.11	Manual		9/15/2010	SEJA CEDE5
166	1	5A	Upper Sol Duc River	Klahowya CG		0.2	1	0.2	Manual		9/23/2010	GERO

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
319	**1**	6A	Spencer Creek/Marple Creek	**Seal Rock CG**	2610200	4	1	trace	Manual		10/12/2010	SEJA
134	1	8C	North Fork Calawah River	Bonidu Meadow		2						
138		8G	North Fork Calawah River	?	2923077	?						
139		8H	North Fork Calawah River	?	2923078	?						
98	1	14A	McDonald Creek/Siebert Creek		2877000	0.3	3.8	3.8	Garlon 3A	15	8/26/2010	CIAR CIVU CYSC HYPE SEJA
99	1	14A	McDonald Creek/Siebert Creek	Pat's Prairie								
100	2	14B	McDonald Creek/Siebert Creek		2877100	0.1	0.15					None found
93	2	15A	Lower Gray Wolf River		2875000	0.5						
95		15B	Lower Gray Wolf River	Slab Camp Quarry	2875000	unknown						
96	1	15C	Lower Gray Wolf River		2870000	1.1	1.9	0.6	Garlon 3A	30	9/9/2010	GERO LALA CIAR CIVU
96	1	15C	Lower Gray Wolf River		2870000	1.1	1.5	1	Garlon 3A	22.5	9/15/2010	GERO
94	1	15D	Lower Gray Wolf River	Dungeness Forks Campground	2880050	0.1	3	2	Garlon 3A	82	8/30/2010	GERO

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
94	1	15D	Lower Gray Wolf River	Dungeness Forks Campground	2880050	0.1	3	2	Garlon 3A	75	9/15/2010	GERO
97		15E	Lower Gray Wolf River		2880000	0.2						
30	1	15H	Lower Gray Wolf River		2880000	0.1						
586	1	15J	Lower Gray Wolf River	Armpit quarry		0.3	0.6	0.6	Polaris	34	8/20/2010	LALA CIVU CIAR
102	1	16C	Middle Dungeness River		2820000	0.2	6	6	Aqua Neat	6	8/3/2010	CIAR, CIVU, SEJA, HYPE
111	2	16K	Middle Dungeness River		2830034	0.2						
112	2	16L	Middle Dungeness River		2860000	0.2						
105		16D	Middle Dungeness River		2870230							
106		16E	Middle Dungeness River		2870250							
113		16M	Middle Dungeness River		2800260	0.1						
114		16N	Middle Dungeness River		2830030	0.1						
115		16P	Middle Dungeness River		2870230	0.3						
162		17B	Upper Dungeness River	Camp Handy	none	0.35						
163		17C	Upper Dungeness River		none	0.2						
164		17D	Upper Dungeness River		none	0.2						

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
61	1	18AA	Jimmy-come-lately Creek	unnamed pit								
76		18R	Jimmy-come-lately Creek		5331	unknown						
77		18S	Jimmy-come-lately Creek		2800362	unknown						
79		18U	Jimmy-come-lately Creek		2840030	0.1	7.5	7.5	Polaris	16	8/18/2010	HYPE SEJA CIVU CIAR CEDE5
80		18V	Jimmy-come-lately Creek		2840034	unknown	2.5	2.5	Polaris	10	8/18/2010	GERO SEJA CIAR CIVU CEDE5
81		18W	Jimmy-come-lately Creek		2840035	unknown	0.6	0.6	Polaris	4	8/18/2010	HYPE CIAR CIVU
82		18X	Jimmy-come-lately Creek		2840036	unknown	1	1	Polaris	0.3	8/18/2010	CEDE5 CIAR SEJA
298	1	19A	Lower Dosewallips River	Elkhorn (2610) Road	2610000	2.2						
299	1	19A	Lower Dosewallips River		2500000	0.3						
300	1	19A	Lower Dosewallips River	Elkhorn (2610) Road	2610040	0.1	2.25	2.25	Garlon 3A	31	8/30/2010	GERO
300	1	19A	Lower Dosewallips River	Elkhorn (2610) Road	2610040	0.1	5	4	Garlon 3A	202	9/8/2010	GERO
301	2	19B	Lower Dosewallips River		2620000	0.9						
302	2	19B	Lower Dosewallips River		2620056	0.2						
303		19A	Lower Dosewallips River	Elkhorn (2610) Road	2610050	6.8						

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
304		19B	Lower Dosewallips River		2620030	0.1						
305		19B	Lower Dosewallips River		2620030	0.1						
306		19B	Lower Dosewallips River		2620050	0.1						
307		19B	Lower Dosewallips River		2620051	0.1						
308		19B	Lower Dosewallips River		2620053	0.2						
46		20B	Deep Creek	?	3067000	0.1						
119	1	21A	Middle Sol Duc River		3040000	3.2	25	15	Garlon 3A	58	10/7/2010	GERO HYPE CIAR CIVU
119	1	21A	Middle Sol Duc River		3040000	3.2		2	Manual		10/7/2010	CYSC
119	1	21A	Middle Sol Duc River		3040000	3.2	1	1	Garlon 3A	20	10/13/2010	GERO
119	1	21A	Middle Sol Duc River		3040000	3.2	3	3	Garlon 3A	37	10/19/2010	GERO
117	1	21C	Middle Sol Duc River		2071000	0.5	8	4	Garlon 3A	36	7/9/2010	GERO
117	1	21C	Middle Sol Duc River		2071000	0.5	6.5	2	Garlon 3A	22.5	7/12/2010	GERO
118	1	21D	Middle Sol Duc River		3040800	1.2	4	4	Garlon 3A	148.5	7/29/2010	GERO RUDI2 POBO ILAQ80 ARMI2 CIVU VIM, LALA
118	1	21D	Middle Sol Duc River		3040800	1.2	5	4	Garlon 3A Aqua Neat	107.5 5.2	9/14/2010	GERO RUDI2 POBO CIVU,

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
122		21G	Middle Sol Duc River		3006000	2.1						
125		21K	Middle Sol Duc River	Bear Saddle TS								
127		21L	Middle Sol Duc River		2923090	unknown						
128		21M	Middle Sol Duc River		3000300	0.2						
129		21N	Middle Sol Duc River		3006011	0.1						
130		21P	Middle Sol Duc River		3040900	?						
131		21Q	Middle Sol Duc River		3100010	0.1						
207		22B	Lower Boqachiel River	unnamed gravel pit	2932000	unknown						
145		23C	Pysht River		3000250	0.1						
183		25B	West Twin River		3000591	0.5						
186		25A	West Twin River	Bear Saddle TS								
187		25B	West Twin River		3000000	14						
188		25B	West Twin River		3000400	0.1						
189		25B	West Twin River		3000580	unknown						
190		25B	West Twin River		3000590	unknown						
191		25B	West Twin River		3000600	unknown						
192		25B	West Twin River		3000800	unknown						
193		25C	West Twin River		3040000	0.6						
52		26A	Headwaters Sol Duc River	?	2920020	0.1						

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
53		26B	Headwaters Sol Duc River	Upper Tom Quarry		unknown						
54	2	26C	Headwaters Sol Duc River		2918000	0.6	15	5	Garlon 3A	4.5	7/22/2010	CYSC
54	2	26C	Headwaters Sol Duc River		2918000	0.6	18	1	Garlon 3A	0.75	8/17/2010	GERO SEJA CIVU
412	1	26D	Headwaters Sol Duc River	2918 and spurs Decomm	2918000		15	2	Garlon 3A	1.5	7/22/2010	HYPE CYSC
413		26E	Headwaters Sol Duc River	2918 and spurs Decomm	2918100		4	0.5	Garlon 3A	4.5	7/22/2010	CYSC CIAR
414		26F	Headwaters Sol Duc River	2918 and spurs Decomm	2918110		3					No weeds found
55	1	26G	Headwaters Sol Duc River		2920000	0.1	20	0.5	Garlon 3A	3	7/22/2010	GERO CIVU CIAR CYSC
56	2	26H	Headwaters Sol Duc River		2931000	unknown	25	6	Garlon 3A	49.5	8/13/2010	CYSC LALA
289	1	28A	Lower Big Quilcene River	Big Quilcene/ Tunnel Creek Roads	2700000	0.5						
291	1	28A	Lower Big Quilcene River	Big Quilcene/ Tunnel Creek Roads	2740000	0.2						
288		28A	Lower Big Quilcene River		3057	0.2						
462	1	28A	Lower Big Quilcene River	Big Quilcene/ Tunnel Creek Roads	2700040	3.7	10	10	Garlon 3A Aqua Neat	15.5 30	8/4/2010	GERO SEJA HYPE CIVU
462	1	28A	Lower Big Quilcene River	Big Quilcene/ Tunnel Creek Roads	2700040	3.7	0.5	0.5	Garlon 3A	21	8/9/2010	GERO SEJA

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
462	1	28A	Lower Big Quilcene River	Big Quilcene/ Tunnel Creek Roads	2700040	3.7	2	2	Aqua Neat	177	8/25/2010	GERO SEJA HYPE CIVU
462	1	28A	Lower Big Quilcene River	Big Quilcene/ Tunnel Creek Roads	2700040	3.7	3	2.5	Garlon 3A	85	9/13/2010	GERO SEJA HYPE CYSC CIAR LALA
296		28A	Lower Big Quilcene River	Big Quilcene/ Tunnel Creek Roads	2700080	unknown						
285	1	28B	Lower Big Quilcene River	Quilcene office compound	2730300	0.5	2	2	Manual		9/30/2010	CYSC
295		28C	Lower Big Quilcene River		2620000	0.2						
290	1	28D	Lower Big Quilcene River		2730011	0.1	4	1.8	Garlon 3A	1.12	7/6/2010	SEJA
290	1	28D	Lower Big Quilcene River		2730011	0.1		2	Manual		7/6/2010	GERO,SEJA
292	1	28D	Lower Big Quilcene River	Falls View CG	2730200	0.6	10	1.6	Garlon 3A	42.75	7/6/2010	GERO
292	1	28D	Lower Big Quilcene River	Falls View CG	2730200	0.6	1.5	1.5	Garlon 3A	30	10/12/2010	GERO
287		28D	Lower Big Quilcene River			0.1						
293		28D	Lower Big Quilcene River	? Jackson planning								
294		28D	Lower Big Quilcene River	Rainbow CG	???	0.1						
297		28D	Lower Big Quilcene River		2730000	0.1						

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
286		28F	Lower Big Quilcene River		3039	0.1						
590	1	28G	Lower Big Quilcene River	PT Muni WS caretakers cabin		1.5	3	2	Garlon 3A Aqua Neat	16.5 4.5	8/9/2010	GERO CIAR PHAR HIAU periwinkle bishops weed
310	1	32B	Lower Duckabush River	Collins CG	2510070		7	7	Garlon 3A	80	9/30/2010	GERO
310	1	32B	Lower Duckabush River	Collins CG	2510070		8	8	Garlon 3A	41	10/12/2010	GERO
453	2	32F	Lower Duckabush River	Duckabush Roads	2510065		0.5	0.5	Garlon 3A	10	8/26/2010	GERO HYPE SEJA
311		32A	Lower Duckabush River	Duckabush Pit	2510000	unknown						
313		32C	Lower Duckabush River	Duckabush Roads	2530100	unknown						
314		32C	Lower Duckabush River	Duckabush Roads	2530200	unknown						
458		33L	Middle Quinault River	Bills Bog/ Matheny Prairie Roads	2190000							
459		33M	Middle Quinault River		2190110							
460		33N	Middle Quinault River		2190120							
259		33K	Middle Quinault River	Bills Bog / Matheny Prairie Roads	2140000							
195	1	35A	Little Quilcene River		2800010	0.1	9	4.5	Aqua Neat	23	7/27/2010	GERO

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
195	1	35A	Little Quilcene River		2800010	0.1	5	5	Aqua Neat	74	7/28/2010	GERO CIAR HYPE
195	1	35A	Little Quilcene River		2800010	0.1	2	2	Aqua Neat	21	8/3/2010	GERO CIAR HYPE
198	2	35A	Little Quilcene River		2800000	11.6	1.5	1.5	Manual		8/9/2010	SEJA
198	2	35A	Little Quilcene River		2800000	11.6	1	1	Aqua Neat	20.8	8/10/2010	LALA CIAR CYSC
198	2	35A	Little Quilcene River		2800000	11.6	2	2	Aqua Neat	128	8/23/2010	LALA CIAR CIVU HYPE SEJA PHAR
204		35A	Little Quilcene River		2800060	0.1						
205		35B	Little Quilcene River		2800080	unknown						
199	2	35C	Little Quilcene River		2700000	1.5						
201		35C	Little Quilcene River		2700280	unknown						
202		35C	Little Quilcene River		2700281	unknown						
203		35C	Little Quilcene River		2700330	2						
200		35D	Little Quilcene River		2700220	unknown						
197		35E	Little Quilcene River	unnamed gravel pit	2700000	unknown						
194	1	35F	Little Quilcene River	Bon Jon Quarry		unknown	2.5	0.3	Aqua Neat	5.2	8/3/2010	LALA CIVU HYPE
196	2	35G	Little Quilcene River		2820000		8	8	Aqua Neat	22.75	8/3/2010	CIAR SEJA CIVU LALA CYSC
168	A1	36B	Upper Sol Duc River	Tom Creek Pit		unknown	11	3	Garlon 3A	3	8/17/2010	CYSC SEJA CIVU HYPE CEBI2

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
170	1	36D	Upper Sol Duc River		2929070	0.4	12	0.5	Garlon 3A	3	6/30/2010	CIVU GERO
170	1	36D	Upper Sol Duc River		2929070	0.4	4	0.2	Manual		9/23/2010	GERO
170	1	36D	Upper Sol Duc River		2929070	0.4	5	0.12	Manual		10/19/2010	GERO
170	1	36D	Upper Sol Duc River		2929070	0.4	5	0.12	AquaNeat	6	10/19/2010	GERO
171	1	36E	Upper Sol Duc River			0.1						
172	2	36F	Upper Sol Duc River	Kloshe Nanitch Loop Trail		0.2						
173	1	36G	Upper Sol Duc River	Littleton Horse Camp gravel pit					Manual		9/23/10	CYSC
175		36J	Upper Sol Duc River		2900950	unknown						
176		36K	Upper Sol Duc River		2900960	unknown						
177	2	36L	Upper Sol Duc River		2918000	1.35	13	13	Garlon 3A	8.25	8/17/2010	CYSC HYPE CIVU
178	1	36M	Upper Sol Duc River		2929000	unknown	20	0.5	Garlon 3A	6	6/30/2010	CIAR HYPE LALA CYSC GERO
178	1	36M	Upper Sol Duc River		2929000	unknown	1	0.03	Manual	0	9/23/2010	GERO
179	2	36N	Upper Sol Duc River		2931000	unknown	10	1	Garlon 3A	9	8/13/2010	CIVU CYSC LALA
180		36P	Upper Sol Duc River		3040595	0.2						
181	1	36Q	Upper Sol Duc River		3071000	0.1						
317		42B	Salmon River		2140000							
318		42B	Salmon River	Bills Bog / Matheny Prairie Roads	2140000							

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
461		42C	Salmon River		2140030							
281		43C	Fulton Creek/Waketickeh Creek		2510210	unknown						
282		43B	Fulton Creek/Waketickeh Creek		2510300	unknown						
283		43B	Fulton Creek/Waketickeh Creek		2510500	unknown						
284		43B	Fulton Creek/Waketickeh Creek		2510510	unknown						
475		43F	Fulton Creek/Waketickeh Creek		2503035							
476		43G	Fulton Creek/Waketickeh Creek		2503045							
85	1	45A	Lower Elwha River	3050 road and spurs decomm	3050000		75.8	67.75	Garlon 3A	340.5	6/23/2010 6/24/2010 6/29/2010 7/7/2010 7/8/2010 7/12/2010 7/19/2010 7/26/2010 8/2/2010 8/16/2010	GERO CIVU CIAR HYPE HIAU LALA
86	1	45B	Lower Elwha River	3050 road and spurs decomm	3050011		15	2	Garlon 3A	12	6/25/2010	GERO
86	1	45B	Lower Elwha River	3050 road and spurs decomm	3050011		5	3.5	Garlon 3A	55.5	7/26/2010	GERO HYPE CIVU
87		45C	Lower Elwha River	3050 road and spurs decomm	3050012							

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
88		45D	Lower Elwha River	3050 road and spurs decomm	3050013							
89		45E	Lower Elwha River	3050 road and spurs decomm	3050150		11	1.7	Garlon 3A	9	6/25/2010	GERO
90		45F	Lower Elwha River	3050 road and spurs decomm	3050200							
91		45G	Lower Elwha River	3050 road and spurs decomm	3050270							
92		45H	Lower Elwha River	3050 road and spurs decomm	3050300							
455	1	46F	Upper Big Quilcene River	Big Quilcene/ Tunnel Creek Roads	2700000		20	4	Manual		7/14/2010	SEJA CIAR
320		46B	Upper Big Quilcene River		2740000							
323	2	46D	Upper Big Quilcene River		2750000		33	18	AquaNeat	109.2	7/14/2010 7/20/2010 7/27/2010	LALA SEJA CIAR HYPE CIVU
485	1	46H	Upper Big Quilcene River		2740060							
486	1	46J	Upper Big Quilcene River		2740070							
322	1	46A	Upper Big Quilcene River		2740110							
321	1	46C	Upper Big Quilcene River		2740072							
454		46E	Upper Big Quilcene River	Big Quilcene/ Tunnel Creek Roads	2740000							
484		46G	Upper Big Quilcene River		2740000							

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
487		46K	Upper Big Quilcene River		2740075							
488		46M	Upper Big Quilcene River		2750020							
148	1	47E	Snow Creek/Salmon River		2845073							
150	1	47B	Snow Creek/Salmon River		2852000		6	0.5	Garlon 3A	7.5	9/10/2010	CIAR CIVU CEDE5 GERO HYPE CYSC SEJA
150	1	47B	Snow Creek/Salmon River		2852000			3.1	Manual	0	9/10/2010	SEJA
151	1	47C	Snow Creek/Salmon River		2852090							
501	1	47F	Snow Creek/Salmon River		2850000		6	5.9	Manual		9/10/2010	SEJA
147	2	47D	Snow Creek/Salmon River		2845070							
149		47A	Snow Creek/Salmon River		2850010							
502		47G	Snow Creek/Salmon River		2840000		12	0.5	Polaris	5	8/18/2010	SEJA CIAR HYPE LEVU GERO CYSC comfrey
502		47G	Snow Creek/Salmon River		2840000		2	2	Polaris	4	8/19/2010	HYPE SEJA CIAR
315		49B	Matheny Creek		2140000							
456		49C	Matheny Creek		2190140							

Ref #	Priority: 1=high 2=medium	Project	6th Field Watershed Name	2010 Site Name	Road #	FS Estimate Infested Acres	Acres Inspected	Acres Treated	Herbicide Used	Herbicide Amount (oz)	Date	Species Treated
457		49D	Matheny Creek		2190147							
4	1	52A	Bockman Creek	Mary Clark Pit								
Totals						140.3	652.3	354.662				
Minus Re-treatments							-25.9	-17.352				
Actual Totals							**626.4**	**337.308**				

APPENDIX B: ROCK SOURCE SURVEYS AND TREATMENT

High-priority pits were incorporated into the project list in 2010. Details of treatment are given here. Rock Source Index numbers and codes have been added because they are helpful when locating pits.

Name	RSI	RSI Code	Road	Weeds	Date	Treatment Type	Acreage Treated
Highest Priority Pits							
Canyon Pit	139	287500001.40		CEDE5 HYPE CYSC SEJA CIAR	8/20/2010	Treated chemically	4
Caraco Unit 6			2870	CIAR, CYSC, LEVU	8/12/2010	Treated chemically	6
Caraco Unit 2			2870	CIAR CYSC CIVU	8/11/2010	Treated chemically	4
Caraco Unit 3			2870	CIAR PHAR	8/12/2010	Treated chemically	4
Unnamed Gravel Pit at junction of 2870 and 2878 roads (ref #587)				CIAR CIVU CYSC LALA CEDE5 PORE, PHAR HYPE	7/13/2010 7/15/2010 7/21/2010	Treated chemically	1.75
Upper Caraco Quarry	142	287000001.30		BUDA CIAR CIVU	8/20/2010	Treated chemically	0.5
Armpit quarry	140	287015000.50		LALA CIVU CIAR	8/20/2010	Treated chemically	0.5
Bon Jon Quarry	21	280000004.60	2800	LALA CIVU HYPE	8/3/2010	Treated chemically	0.3
Tom Creek Pit	51	293100000.20	2931	CYSC SEJA CIVU HYPE CEBI2	8/17/2010	Treated chemically	3
Mary Clark Pit	78	201000000.60	2010	CIAR CIVU CYSC LALA PHAR POBO RUDI SEJA DIPU HYRA PLLA	9/7/2010	Inspected—meets minimum requirements	
Ned Hill Quarry (aka Sandstone Quarry)	138	287812500.50	2878125	LALA CIVU CYSC CIAR	8/20/2010	Treated chemically	1.5
Unnamed pit at MP 0.9 on 2845073 road (ref #61)						Not treated	
Not so High Priority Pits							
Lower Caraco Quarry	143	287000001.00		SEJA CEDE5 CIAR CIVU GERO CYSC	9/16/2010	Treated chemically	1

Other Pits					
Name	**Address**	**Weeds Present**	**Date Inspected**	**Conclusion**	**Acres Inspected**
Anderson & Sons Gravel Pit	721 Old State Road	CIAR CIVU HYPE		Inspected at FS request—meets requirements	6.8
Beaver Falls Pit	Burnt Mountain Road (Highway 113)	CIAR CIVU CYSC HYPE SEJADIPU HYRA LEVU LOPE		Inspected at FS request—meets requirements	10

APPENDIX C: ROADS SURVEYED OR 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 from 2006 through 2010. 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 roads not previously completed, monitor prior control sites, and perform as much new control work as possible—manual only.
- 2005: Increase the amount of control work preformed and continue to monitor prior control sites, repeating treatments as necessary—manual only.
- 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. First year herbicide treatments allowed.
- 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. Little to no new survey work.
- 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. No new survey work.
- 2009: Focus still on control, especially since the EIS, completed in March 2008, allows herbicide use on all sites. Survey and remove small infestations en route to treatment sites. Few re-treatments and no new surveys.
- 2010: Focus still on control, especially in areas soon to be de-commissioned. More re-treatments, especially of herb Robert sites; some new weed sites found on previously unsurveyed roads.

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

Note that some of the work done in 2010 was done in pits or campgrounds and does not show up on this table of roads. Also note that the lower-numbered roads (lower than 2500) are not in Clallam or Jefferson Counties and have been removed from this table.

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
SR101	3	15.5	4	2	4	0.1	HICA10 GERO SEJA	1	0.68	POBO POSA CYSC	7.5	18	CYSC	5	5	CYSC			
CR5695	5	8.98	8,499	4.98	8,499		CYSC CIAR SEJA				4	2	SEJA						
CR5331	3	14.24		8.24				2	1.03	GERO CEDE SEJA	4								
CR3057	1	1.9	3	1.9	3	0.1	SEJA												
CR3039	2	5.1	4,959	1.1	4,959	0.1	GERO				4	0.5	SEJA						
CR2515	1	0.4		0.4															
CR2500	4	25.05	35,074	25.1	35,074		GERO CYSC												
CR2071	4	4	15	2	15	0.2	SEJA							1	3	GERO CIAR LALA POBO CYSC	1	6	GERO POBO
CR2065	4	11.52	22,049	8.52	22,049		CYSC SEJA GERO				3	1	GERO CYSC						
3116000	4	13.45		10										3.45	3.1	GERO CIAR RUDI			
3100420	1	0.6		0.6															
3100400	1	2.9		2.9															
3100300	3	6.95		5										1.95	3.5	GERO			
3071015	1	0.6		0.6															
3071000	3	3.4	60	3.4	60		CYSC				1								
3068200	3	7.2	815	7.2	815		CYSC												

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
3068190	2	0.4		0.4															
3068000	5	35.1	521	32.3	521		SEJA CYSC CEDE	0.8	0.1	CYSC	2	5	SEJA CYSC CIVU CIAR						
3067000	2	7.06	1,402	7.06	1,402		SEJA CYSC												
3050150	1	1.1												1.1	1.7	GERO			
3050011	3	4		1.5										1	1.58	GERO	1.5	3.5	GERO HYPE CIVU
3050000	3	22	2	3.8	2		SEJA							9	18	GERO HIAU LEVU LALA	9	68	GERO HIAU LALA CIVU CIAR HYPE
3040800	5	3	54,709	0.5	54,709	1.85	POCU ARMI2 ILAQ80	0.5		GERO ARMI2 CIVU ILAQ80 LALA PHAR3 POBO	0.5	7	GERO CYSC RUDI POBO LALA CIVU CIAR SEJA RUDI	1	10	GERO CIAR LALA POBO CYSC	0.5	4	GERO RUDI POBO ILAQ CIVU
3040595	3	4	373	4	373		CIVU SEJA				4	1	SEJA GERO						
3040200	1	1		1															
3040115	2	1	95	1	95	0.1	GERO												
3040100	2	6	8	4	8	0.3	SEJA CYSC	2											
3040025	3	0.5	1	0.4	1		RUDI												

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
3040012	1	0.31	2	0.31	2	0.1	CYSC												
3040011	2	2		2															
3040000	8	158	35,136	71	35,136	1.3	CYSC SEJA GERO	18	8.4		26	10	GERO SEJA LALA CYSC CIVU CIAR CEDE	23	5	CYSC GERO CIAR LALA	20	19	GERO HYPE CIAR CIVU CYSC
3006300	1	4.1		4.1															
3006011	1	1.2		1.2															
3006000	2	10		8										2	1	CYSC			
3000401	1	1		1															
3000400	1	2.2		2.2															
3000400	1	2.3		2.3															
3000395	1	0.2		0.2															
3000300	1	3.5		3.5															
3000260	1	0.7		0.7															
3000250	2	18	10	10	10	1.2	CYSC	8	2.66										
3000220	1	2.8		2.8															
3000215	3	4.6		3.6										1	2	GERO			
3000200	5	100	6	70	6	0.2	SEJA	16	16.6	GERO LALA CIVU	12	7	CYSC GERO LALA	2	3	GERO			
3000011	1	1		1															

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
3000000	5	131	883,098	92	883,098	1	GERO RULA CYSC CIVU SEJA				32	29	CYSC SEJA GERO CIVU CIAR LALA CEDE	7	3	CYSC SEJA			
2978085	2	1.1		1.1															
2978040	2	0.3		0.3															
2978035	2	0.1		0.1															
2978030	2	0.6		0.6															
2978030	2	0.7		0.7															
2978025	2	0.3		0.3															
2978015	2	1.6	18	1.6	18		CYSC												
2978011	2	0.4		0.4															
2978000	2	4.7	3,604	4.7	3,604		CYSC SEJA												
2932070	1	0.9	12	0.9	12		CYSC												
2932050	1	0.3		0.3															
2932040	1	0.4		0.4															
2932035	1	0.2		0.2															
2932031	1	0.5		0.5															
2932030	3	2.4		1.4							1	0.1	CYSC						
2932000	5	23	2,153	15	2,153	0.3	LEVU CYSC	3			8		CYSC SEJA GERO						
2931200	1	2.5		2.5															
2931190	1	1.7		1.7															

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
2931000	2	24	1	12	1		SEJA										12	7	CYSC LALA CIVU
2929070	4	12	525	3	525		GERO RULA CYSC	3						3	2	GERO	3	1	GERO
2929000	4	26		10				10						3	1	HIAU GERO CIVU CYSC	3	0.5	CIAR HYPE LALA CYSC GERO
2923100	1	0.2		0.2															
2923077	1	16						16	2.15	CYSC SEJA									
2923070	3	14	2	5	2		SEJA	7	8	CIVU HYPE GERO SEJA CYSC				2	0.6	CIAR RUDI			
2923060	2	4		1										3	0.15	CYSC CIAR GERO			
2923000	5	68	1,434	41	1,434	0.5	SEJA CIAR HIAU CYSC	14			8	3.5	CYSC GERO	5	0.5	GERO			
2922000	3	33		13				13	0.1	GERO				7	4.1	GERO CYSC			
2920210	1	0.2		0.2															
2920020	1	1.4		1.4															

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
2920000	2	12		6													6	0.5	GERO CIVU CIAR CYSC
2918110	3	2		1										1	1	CYSC DIGIT LEVU LALA	1		None
2918100	3	23		3										3	1	CYSC DIGIT LEVU LALA	17	20	CYSC CIAR GERO SEJA CIVU HYPE
2918000	2	29	2,315	20	2,315		SEJA CYSC							9	1.5	CYSC DIGIT LEVU LALA			
2912060	2	2.8	3	2.8	3		SEJA												
2903000	1	7	78	7	78		SEJA CYSC												
2902375	1	0.8		0.8															
2902300	1	0.6		0.6															
2902000	3	2.91	4,175	2.91	4,175	0.2	CYSC SEJA												
2900992	1	0.5												0.5	0.1	GERO			
2900990	3	4.4	5,300	2.4	5,300		CYSC GERO							2	0.4	GERO			
2900950	1	0.1		0.1															
2900650	1	1.2		1.2															
2900540	1	2		2															

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
2900200	2	0.7	54	0.7	54		CYSC SEJA												
2900070	1	2.3		2.3															
2900015	2	0.3		0.1				0.2	4	CYSC	0.5	0.5	CYSC RUDI SEJA GERO						
2900000	6	99.6	664,225	72.2	664,225	2.3	CYSC GERO HIAU SEJA POSA CIAR	5.1	0.3	HIAU SEJA	10	4.6	CYSC SEJA CIVU HIAU RUDI LALA HYPE	10	3.2	SEJA HIAU GERO CYSC			
2880050	8	3	255,004	0.5	255,004	0.5	GERO				0.5	5	GERO	1	18	GERO	1	4	GERO
2880000	6	25	9,923	17	9,923	0.3	GERO SEJA	4	4	CEDE SEJA	4	1.1	SEJA CYSC GERO CIAR						
2878123	2	0.4		0.2				0.2											
2878120	4	4	2,170	1	2,170		CYSC	1						1	2	LALA	1	0.25	LALA CYSC CIVU
2878110	3	3		1										1	1	LALA	1	0.25	CIVU CYSC LALA CEDE
2878109	1	0.27		0.27															
2878108	1	0.13		0.13															
2878102	1	0.4		0.4															

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
2878100	3	3.5		1.5										1	3	LALA CIVU CIAR SEJA GERO	1	0.2	LALA CIVU CIAR SEJA GERO
2878085	3	3		1										1	1	CIAR CIVU GERO	1	0.01	SEJA CIAR CIVU
2878080	3	3.5		1.5										1	0.5	LALA CIAR	1	0.25	SEJA CIAR CYSC
2878060	3	2.5	127	0.5	127		CYSC							1	0.5	LALA CIAR	1	0.25	SEJA CIAR CYSC
2878050	1	0.6		0.6															
2878000	6	28	2,971	4	2,971	0.2	CYSC	4	0		8	9	LALA CIAR CEDE CYSC GERO SEJA	8	4	LALA	4	8	LALA CIAR GERO CIVU
2877100	2	1.5		0.5													1		None
2877052	1	0.29		0.29															
2877050	1	2.65		2.65															
2877040	3	4.5		2.5										1	0.2	SEJA CEDE CIAR CIVU	1	1.3	CIVU CYSC CIAR GERO

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
2877000	4	35		5							10	12.4	CEDE LALA CIAR CIVU CYSC	10	1	SEJA CEDE CIAR CIVU	10	3.8	CIAR CIVU CYSC HYPE
2875090	1	0.1		0.1															
2875070	3	3.5		2.5										1	0.5	CIAR CYSC			
2875020	3	2.5	6	0.5	6		CYSC							1	0.5	CIAR CYSC POBO	1	1.1	CEDE CIAR CIVU CYSC SEJA PHAR
2875000	6	39	268	12	268	0.4	CEDE	12	6.5	CEDE	6	2.5	CEDE LALA CIVU CIAR	5	1.8	CEBI	4	3.5	HYPE GERO CIAR CIVU LALA CYSC SEJA
2870270	2	7		3.5		0.28	CIAR CIVU	3.5	3.2	CIVU CEDE SEJA HYPE									
2870250	1	1						1	1.5	CEDE CEBI									
2870230	4	8	38	4	38	0.3	SEJA CIAR CIVU HYPE	4	0.4	CIVU CIAR GERO									
2870150	2	1.5		0.5										1	3	LALA			

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
2870130	2	2	1	1	1	0.1	CYSC										1	0.1	SEJA CEDE
2870110	2	1	729	0.5	729		CYSC										0.5	0.1	CYSC
2870059	5	4	19,529	3	19,529		CIAR CIVU SEJA CEDE CYSC GERO	1											
2870058	5	15		3		2.55	GERO CIAR PHAR	4	5	GERO CIAR PHAR CIVU				4	1.5	GERO CIAR PHAR CIVU	4	0.25	GERO
2870057	2	6						2.5	1.5	CIAR CIVU HYPE				2.5	2.5	CIAR CIVU GERO PHAR	1	0.1	CIVU
2870056	7	6	14	2	14	0.1	CEDE SEJA	1	2.9	SEJA CIVU CEDE CYSC	1	5	CIAR CIVU	1	1	CIAR CIVU CEDE	1	0.1	CIVU CIAR TAVU HYPE CEDE
2870054	3	2.5						0.5	3	CEDE				1	1	CIAR CIVU	1	0.75	CIAR CIVU SEJA
2870053	4	3.5						0.5	0.2	CEDE	0.5	3	CIAR CIVU	1	1	CIAR CIVU	1.5	15	CIAR CIVU SEJA
2870052	1	1															1	0.1	CIAR HYPE

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
2870050	8	32	110	16	110	0.8	CEDE CIAR CIVU CYSC GERO HYPE LALA SEJA	3	0.5	SEJA	8	8	CIAR CIVU GERO LEVU PHAR RUDI	2	5	CIAR CIVU	3	0.6	CEDE CIAR CIVU GERO HYPE
2870030	6	11	78	5	78		CEDE CYSC SEJA	2	2	CEDE SEJA				2	1.5	CEDE CIAR CYSC SEJA	2	10.3	CEDE CIAR CIVU HYPE
2870000	8	429	3,853	143	3,853	3.13	CEDE SYSC SEJA	113	9.4	CEDE CIAR CIVU CYSC GERO HYPE LEVU SEJA	113	7.1	CEDE CIAR CIVU CYSC LALA SEJA	30	5.2	CIAR CIVU CYSC LALA SEJA	30	5.6	CEDE CIAR CIVU CYSC GERO HYPE LALA RUDI SEJA
2860120	1	1.6		1.6															
2860011	2	1	2,708	1	2,708		GERO SEJA												
2860000	4	50	54,000	50	54,000		CIVU GERO												
2855100	2	2.4		2.4															
2855070	6	8	5497	5	5497	0.52	CEDE CIAR CYSC GERO RULA SEJA				1.5	4	CEBI CEDE CYSC SEJA	1.5	1	CEBI			
2855032	2	1.6	1	1.6	1		RULA												

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
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2855030	2	5.4	19,200	5.4	19,200		SEJA												
2855000	5	21	51,947	10	51,947	0.4	CEBI CEDE CIVU CYSC GERO SEJA				8	2	SEJA	3	0.2	SEJA			
2852150	2	1.29	25	1.29	25		CYSC												
2852090	2	10	3,362	10	3,362		CIAR CYSC GERO SEJA												
2852000	5	10	47,605	5	47,605	0.3	CEDE CIAR GERO RULA SEJA				2	1	CEDE				3	3.6	CEDE CIAR CIVU CYSC GERO HYPE SEJA
2851090	2	1		1															
2851080	2	4	1,660	4	1,660		CYSC SEJA TAVU												
2851000	3	8	10,090	8	10,090	0.6	SEJA												
2850124	1	0.2		0.2															
2850120	2	3		3		0.2	CYSC												
2850093	1	0.1		0.1															
2850090	1	1		1															
2850010	3	3	5,352	3	5,352	0.9	RULA SEJA												

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
2850000	5	27	67,334	22	67,334	0.6	CYSC GERO RULA SEJA										5	6	SEJA
2845200	1	0.28		0.28															
2845150	1	0.2		0.2															
2845120	2	4	84	2	84		CYSC SEJA	2	1.9	CIVU CYSC SEJA									
2845090	2	1	12	1	12		CYSC SEJA												
2845073	2	2.5		1										1.5	2	CYSC			
2845070	3	12	1,860	6	1,860		CYSC	2			4	4	CEDE CYSC SEJA CIAR CIVU						
2845040	1	0.3	160	0.3	160		SEJA												
2845000	4	15	12,378	5	12,378	0.7	SEJA	5			5								
2840150	1	1	1	1	1		SEJA												
2840130	1	1		1															
2840120	1	1.27		1.27															
2840084	1	0.25		0.25															
2840080	1	0.89	1	0.89	1		RULA												
2840071	2	2	36	2	36		BORAG SEJA												
2840070	2	4	5,753	4	5,753		CYSC SEJA												

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
2840036	1	3.5															3.5	1	CEDE CIAR SEJA
2840035	1	1															1	0.6	CIAR CIVU HYPE
2840034	2	4		2													2	2.5	CEDE CIAR CIVU GERO SEJA
2840030	2	6		3													3	7.5	CEDE CIAR CIVU HYPE SEJA
2840000	5	23	10,010	11	10,010		CIAR CYSC SEJA	5			5						2	2.5	CIAR CYSC GERO HYPE LEVU SEJA comfrey
2830034	1	0.33		0.33															
2830032	1	1		1															
2830030	1	2		2															
2830000	4	20.5	1,250	10	1,250		CEBI				5			5.5	0.2	SEJA			
2820000	4	16	2,274	4	2,274	0.2	SEJA				4			4	2	SEJA CIAR CEDE	4	14	CIAR CIVU HYPE SEJA
2810070	1	0.61		0.61															

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
2810000	2	8	10,190	8	10,190		CYSC SEJA												
2800351	3	4.5						1.5	1	CEDE CYSC	1.5	1	CEDE	1.5	1	CEDE			
2800350	1	3												3	4	CEDE CIAR CIVU			
2800310	4	1	4,655	1	4,655	0.2	CYSC												
2800290	2	1	2	1	2		CYSC SEJA												
2800270	1	1	310	1	310		CYSC SEJA												
2800262	1	0.6		0.6															
2800260	1	1.2		1.2															
2800250	3	5	92	5	92	0.1	SEJA												
2800240	1	0.8		0.8															
2800220	1	1.2		1.2															
2800210	1	0.4		0.4															
2800145	1	0.3		0.3															
2800132	2	2	463	1	463	0.1	CEBI CEJA	1											
2800130	1	2						2	1.3	CEBI SEJA									
2800060	1	1		1															
2800010	4	5	10	1	10	0.1					2	1	GERO CIAR LALA	1	5	GERO CIAR CIVU ILAQ80	1	11.5	GERO

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
2800000	9	201	70,321	89	70,321	1	CEDE CIAR CIVU CYSC GERO SEJA	31	52.3	CEDE CIAR CIVU DIPU SEJA	31	26	CEBI CEDE CIAR CIVU CYSC GERO ILAQ SEJA	25	5.5	CIAR CIVU CYSC LALA SEJA	25	3.5	CIAR CIVU CYSC HYPE LALA PHAR SEJA
2750020	1	1.5		1.5															
2750000	3	15		5										5	8	SEJA LALA CIAR CIVU CYSC	5	18	CIAR CIVU HYPE LALA SEJA
2740110	1	1.5												1.5	1	SEJA CYSC CIAR CIVU CEDE			
2740075	2	1		0.5										0.5	1	SEJA CYSC CIAR CIVU CEDE			
2740072	4	2	200	1	200	0.1	CEBI	0.5						0.5	1	SEJA CYSC CIAR CIVU CEDE			
2740070	3	7		4										3	1	SEJA CYSC CIAR CIVU CEDE			

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
2740060	4	18	33	9	33	0.2	CYSC	3						6	1	SEJA CYSC CIAR CIVU CEDE			
2740000	5	46		21				13	1.6	CEBI SEJA				12	2	CEDE CIAR CIVU CYSC SEJA			
2730300	5	4	934	1	934		CYSC				1	3	CYSC LALA	1	5.3	CYSC RUDI PORE SEJA GERO CIAR	1	2	CYSC
2730200	7	8	19,621	5	19,621		CIVU GERO SEJA				1	3	GERO	1	1	GERO	1	1.6	GERO
2730100	3	0.4	35	0.4	35		SEJA												
2730020	3	1		1															
2730011	2	2	51	1	51		GERO										1	2	GERO SEJA
2730000	4	15	146,400	15	146,400		CYSC SEJA TAVU												
2700330	1	1		1															
2700140	1	1.2		1.2															
2700100	1	4.6		4.6															
2700090	1	1.99		1.99															

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
2700080	1	1												1	2	GERO SEJA LALA CYSC CEJA CIAR CIVU			
2700040	2	8												4	11.2	GERO SEJA CYSC HIAU BORAG ILAQ80 PRLA5 CIVU LAGA2 PHAR HEHE	4	10.5	CIAR CIVU CYSC GERO HYPE LALA SEJA
2700000	8	67	4,201	37	4,201		SEJA TAVU	12	0.05	GERO				9	15	CEDE CIAR CIVU CYSC GERO LALA SEJA	9	4	CIAR SEJA
2650090	1	1.68		1.68															
2650050	2	0.9		0.9															
2650000	2	15	2	15	2		ARMI2												
2620056	2	0.76	24	0.76	24		CEJA												
2620053	2	1.3		1.3															
2620051	2	0.89		0.89															

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
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2620050	2	2.8		2.8															
2620043	1	0.7		0.7															
2620030	1	9.7		9.7															
2620000	4	47	39,464	35	39,464		CIVU CYSC GERO RULA SEJA				12								
2610200	8	16	3,676	11	3,676	0.2	CYSC GERO HEHE RUDI SEJA				2	3	CYSC SEJA	2	2	CYSC	1	0.1	SEJA
2610050	1	1												1	1	GERO SEJA CIAR CYSC			
2610040	4	3	3,000	1	3,000		SEJA							1	2	GERO SEJA CIAR CYSC	1	4	GERO
2610012	1	0.85	397	0.85	397	0.2	GERO												
2610000	7	51	6,570	20	6,570	0.1	CEDE CIAR CIVU CYSC GERO RULA SEJA				16	0.5	CYSC SEJA	16	17	CIAR CYSC GERO POBO SEJA			
2530000	2	5.7		5.7															
2527000	1	1.2		1.2															

	Totals 2002-2010			2002-2006				2007			2008			2009			2010		
ROAD	No. Years Visited	Total Miles	Total Weeds Removed	Survey Miles	# of Weeds	Acres Treated (2006 Only)	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species	Survey Miles	Acres Treated	Weed Species
2510070	5	3	1,600	1	1,600	0.82	GERO							1	6.5	GERO	1	11	GERO
2510065	2	2		1													1	0.5	GERO HYPE SEJA
2510012	1	1		1															
2510000	4	81	53	40	53	0.53	CEDE CYSC SEJA	1	8	CIAR CIVU GERO HYPE RUDI RULA SEJA	30	5	GERO SEJA	10	6.5	GERO SEJA			
2500000	3	23		4							16	0.75	POBO	3	3	GERO SEJA CIAR CYSC POBO			
2190220	1		251		251		COTON POCU												
2190200	3	42		4		0.1	POCU	19	1.6	CIVU CYSC DIPU POBO SEJA	19	0.1	POBO						
2190170	1	2		2															
2190000	2	24		14				10											
2100000	2	8	50	8	50		SEJA												
TOTALS		**2856.35**	**2695475**	**1501.5**	**2695475**	**28.53**		**385.3**	**151.87**		**445**	**203.65**		**310**	**249.53**		**222.5**	**291.81**	

APPENDIX D: POTENTIAL SURVEY AND TREATMENT SITES

Future Forest Service work should focus on FS Priority species, especially those with limited distribution in the forest.

- Add sulfur cinquefoil and butterfly bush to the FS list as number 1 priorities and eradicate.
- Treat spotted knapweed populations—these are all confined to the Dungeness and Little Quilcene watersheds and should be a priority.
- Eradicate orange hawkweed, yellow archangel, butter and eggs (yellow toadflax) and knotweeds.
- Allow sufficient time for multiple treatments of all herb Robert sites. Inspect and treat neighboring road spurs.
- Meadow knapweed is poised to invade: we should ensure that **ALL** meadow knapweed sites are on the work plan in 2011.
- Try to include the ends of roads and small spurs in projects, since these areas often harbor weeds.
- Treat all campgrounds, pits, trailheads and special use facilities such as administrative sites and water diversions.
- Identify high-priority cross-boundary projects with other public land agencies.

At the end of the 2010 season we compared shape files and tables of this year's treatments with our baseline weed survey files and tables and identified roads that still need survey or treatment. These are listed below along with some other sites that may have been overlooked.

FS Road	Note	Weed(s)
2610	Above Elkhorn Campground —herb Robert is rampant below	GERO
3006	Close to known herb Robert infestation	CYSC treated in 2009
3078	Olympic Hot Springs Road as it passes through ONF	??
2277050	"	
2610012		GERO
2620053 (to end of road)	Never surveyed	On 2010 list, low priority
2630000	Never surveyed	
2650000	MP 1.56	ARMI2
2700090	Never surveyed	
2800250		SEJA
2800270		CYSC4 SEJA
2800290		SEJA CYSC4
2800310	Schmidt Knob	CYSC4
2800320	Close to known herb Robert infestation	
2800321	"	
2800360	"	
2840080	Close to known herb Robert infestation	
2840088	"	
2850090		CEDE5—untreated for several years
2851000		SEJA
2860000	Not surveyed since 2004	
2860011	East Crossing CG	GERO SEJA
2877050	Never surveyed	
2900200	Pit	CYSC4 SEJA
2923070 (to end of road)	Close to known herb Robert infestation	CIAR and RUDI treated 2009
3000300	"	
3000400	"	
3000450	Close to known herb Robert infestation	
3068000		CEDE5 & SEJA. Treated 2007 and 2008
3068200	Off 3040, above Snider	CYSC4
3100700	Close to known herb Robert infestation	
3116000 (to end of road)	Close to known herb Robert infestation	
3116200	"	

APPENDIX E: COUNTY ACCOMPLISHMENTS

(This is not a complete list of county work, but gives some highlights and focuses on work and issues of relevance to the Forest Service)

Clallam County covers 1,112,960 acres on the north edge of the Olympic Peninsula, along the Strait of Juan de Fuca. Almost half the acreage of the county (46%) is in federal ownership (National Park or National Forest). The major highway, US 101, runs from east to west through most of the county. Many roads lead from US 101 into the National Forest and many go through the Forest into the popular Olympic National Park. The County has a stable weed program, funded by an assessment.

Clallam County 2010 Snapshot	
Number of Known Weed Species	67
Number of Regulated Weed Species	42
Most Common Weeds	tansy ragwort, poison hemlock, knapweeds
Least Common Weeds	garlic mustard, hoary alyssum, hairy willowherb, purple loosestrife, sulfur cinquefoil, giant hogweed, gorse
Total Number of Sites (Regulated Species Only)	1,662
Number of Landowner Contacts	1,100
Educational Events	40
Public Contacts (Phone Calls or Walk-Ins)	800
Web-Site Hits	1,370
Weed Pulls	2
Area of Weeds Controlled by Weed Board Staff	4.6 solid acres—over 13,700 individual plants removed.

Jefferson County is actually larger, covering 1,397,760 acres on the eastern edge of the Olympic Peninsula. However, more than half of Jefferson County in is federal ownership and the county is split into two sections with federal land in the center. The western portion is sparsely populated and is 120 miles from Port Townsend, the county seat. Consequently, Jefferson County Weed Board operates almost exclusively in the eastern portion of the county, comprising roughly 300,000 acres. The weed control program is poorly funded and has relied extensively of Title II funding and help from Clallam County to remain viable. Jefferson County Road Department has had a no-spray policy for 20 years but in 2009 the Weed Board was able to get permission to spray certain weeds on county roads. Weed Board staff sprayed large infestations of wild chervil and meadow knapweed in 2010.

Jefferson County 2010 Snapshot	
Number of Known Weed Species	48
Number of Regulated Weed Species	37
Most Common Weeds	tansy ragwort, poison hemlock, knapweeds
Least Common Weeds	purple loosestrife, sulfur cinquefoil, milk thistle, giant hogweed, gorse
Total Number of Sites (Regulated Species Only)	502
Number of Landowner Contacts (est)	250
Educational Events	5
Weed Pulls	7

The two Counties work together closely. In addition to receiving Title II funding, they have for several years jointly received funding from Washington State Department of Agriculture for knotweed control and have worked on all the major waterways in both counties. This program has involved cooperation with six Native American Tribes, Olympic National Park, 4 state agencies (WSDOT, WDNR, WDFW, and Washington State Parks) and hundreds of private landowners. Six workshops for landowners with knotweed were offered during 2010, covering knotweed ID, impacts and control and safe herbicide use. Equipment and supplies were made available to landowners who attended the workshop.

Additionally, Clallam County is the *de facto* leader of the Olympic Knotweed Working Group, a loose consortium of government entities, tribes, and non-profits that meets twice a year to exchange information and strategize effective knotweed control on the Peninsula.

Both Counties partner with many other agencies and volunteer groups, including the Back Country Horseman, Master Gardeners, Stream Keepers, Beach Watchers, North Olympic Land Trust, Jefferson Land Trust and Port Townsend School District.

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).

Plant Code	Common Name	*Botanical Name*	Control Recommendation
	knotweed species	*Polygonum spp.*	Injection with glyphosate; and/or foliar application of glyphosate or imazapyr
ANSY	wild chervil	*Anthriscus sylvestris*	Manual removal; spot herbicide application
ARMI2	common burdock	*Arctium minus*	Where minimal occurrence, manual removal; spot herbicide application to rosettes by early spring; or to second year growth, before budding
BUDA	butterfly bush	*Buddleja davidii*	Manual removal small plants, or cut-stump/foliar treat with triclopyr, or glyphosate,
CEBI2	spotted knapweed	*Centaurea stoebe*	Manual removal very small sites; spot application with selective herbicide - clopyralid preferred
CEDI	diffuse knapweed	*Centaurea diffusa*	Manual removal for very small sites; foliar herbicide application - clopyralid preferred
CEDE5	meadow knapweed	*Centaurea jacea x nigra*	Foliar herbicide application with selective herbicide - clopyralid preferred
CIAR4	Canada thistle	*Cirsium arvense*	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
CIVU	bull thistle	*Cirsium vulgare*	Where minimal occurrence, manual removal; spot herbicide application to rosettes by early spring or to second year growth, before budding
COTON	rockspray cotoneaster	*Cotoneaster horizontalis*	Manual removal; herbicide treatment only if size of infestation increases

Plant Code	Common Name	*Botanical Name*	Control Recommendation
CYSC4	Scotch broom	*Cytisus scoparius*	Manual removal for small infestations; cut stump treatments preferred for very large infestations, foliar herbicide applications possible
DACA6	wild carrot	*Daucus carota*	Manual removal; spot herbicide application
GERO	herb Robert	*Geranium robertianum*	Manual removal for small infestations; spot herbicide application where feasible;
HEHE	English ivy	*Hedera helix*	Manual removal; cut stump or foliar herbicide application
HIAU	orange hawkweed	*Hieracium aurantiacum*	Spot spray with selective herbicide in late spring or summer; - clopyralid preferred - possible manual removal for very small infestation
HYPE	St. Johnswort	*Hypericum perforatum*	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.
ILAQ80	English holly	*Ilex aquifolium*	Manual removal; cut stump or foliar herbicide treatment
LAGA2	yellow archangel	*Lamiastrum galeobdolon*	Foliar herbicide application – triclopyr, glyphosate, or a combination
LALA4	everlasting peavine	*Lathyrus latifolius*	Foliar herbicide application - clopyralid preferred
LEVU	oxeye daisy	*Leucanthemum vulgare*	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.
LIVU2	common toadflax	*Linaria vulgaris*	Spot herbicide application
LYSA2	purple loosestrife	*Lythrum salicaria*	There is only one known site: manual removal should be possible, however herbicide application is available (potential aquatic application)
PHAR3	reed canary grass	*Phalaris arundinacea*	Glyphosate in mid-June and mid-Sept.
PORE	sulfur cinquefoil	*Potentilla recta*	Selective herbicides preferred. Will need several years of re-treatment
RUDI	Himalayan blackberry	*Rubus discolor*	Cut stump with glyphosate or triclopyr or foliar application as appropriate to site. Triclopyr preferred
RULA	evergreen blackberry	*Rubus laciniatus*	Cut stump or foliar herbicide application - triclopyr preferred
SEJA	tansy ragwort	*Senecio jacobaea*	Will require systematic 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 pre-bloom in 2nd year.
SYOF	comfrey	*Symphaticum officinale*	Minimal occurrence; spot herbicide application
TAVU	common tansy	*Tanacetum vulgare*	Spot herbicide application

APPENDIX F: WEED SPECIES REPORTED ON FOREST SERVICE LAND IN CLALLAM OR JEFFERSON COUNTIES, 2002-2010

(Other counties may have reported other species)
List sorted alphabetically by botanical name.

Sulfur cinquefoil

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

Common Name	*Botanical Name*	Plant Code
bishop's weed	*Aegopodium podgraria*	AEPO
common burdock	*Arctium minus*	ARMI2
cheatgrass	*Bromus tectorum*	BRTE
butterfly bush	*Buddleja davidii*	BUDA
meadow knapweed	*Centaurea debeauxii*	CEDE5
diffuse knapweed	*Centaurea diffusa*	CEDI
spotted knapweed	*Centaurea stoebei*	CEBI2
Canada thistle	*Cirsium arvense*	CIAR4
bull thistle	*Cirsium vulgare*	CIVU
rockspray cotoneaster	*Cotoneaster*	COTON
Scotch broom	*Cytisus scoparius*	CYSC4
wild carrot	*Daucus carota*	DACA6
herb Robert	*Geranium robertianum*	GERO
English ivy	*Hedera helix*	HEHE
orange hawkweed	*Hieracium aurantiacum*	HIAU
yellow hawkweed	*Hieracium caespitosum*	HICA10
European hawkweed	*Hieracium sabaudum*	HISA
St. Johnswort	*Hypericum perforatum*	HYPE
English holly	*Ilex aquifolium*	ILAQ80
yellow archangel	*Lamiastrum galeobdolon*	LAGA
everlasting peavine	*Lathrus latifolius*	LALA4
oxeye daisy	*Leucanthemum vulgare*	LEVU
common toadflax	*Linaria vulgaris*	LIVU2
purple loosestrife	*Lythrum salicaria*	LYSA2
reed canary grass	*Phalaris arundinacea*	PHAR3
Japanese knotweed	*Polygonum cuspidatum*	POCU6
giant knotweed	*Polygonum sachalinense*	POSA4
Bohemian knotweed	*Polygonum x bohemicum*	POBO10
sulfur cinquefoil	*Potentilla recta*	PORE
Himalayan blackberry	*Rubus discolor*	RUDI2
evergreen blackberry	*Rubus laciniatus*	RULA
tansy ragwort	*Senecio jacobaea*	SEJA
comfrey	*Symphytum officinale*	SYOF
common tansy	*Tanacetum vulgare*	TAVU
periwinkle	*Vinca minor*	VIMI

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

wild chervil	*Anthriscus sylvestris*
hoary alyssum	*Berteroa incana*
poison hemlock	*Conium maculatum*
spurge laurel	*Daphne laureola*
hairy willowherb	*Epilobium hirsutum*
common reed	*Phragmites australis*

Class A Weeds: Non-native species whose distribution in Washington is still limited. Preventing new infestations and eradicating existing infestations are the highest priority. **Eradication of all Class A plants is required by law.**

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

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. Please contact your County Noxious Weed Control Coordinator to learn which species are designated in your area.

Austrian fieldcress	*Rorippa austriaca*
blackgrass	*Alopecurus myosuroides*
blueweed	*Echium vulgare*
Brazilian elodea	*Egeria densa*
bugloss, annual	*Anchusa arvensis*
bugloss, common	*Anchusa officinalis*
butterfly bush	*Buddleja davidii*
camelthorn	*Alhagi maurorum*
common catsear	*Hypochaeris radicata*
common fennel	*Foeniculum vulgare*
common reed (nonnative genotypes)	*Phragmites australis*
Dalmatian toadflax	*Linaria dalmatica* ssp. *dalmatica*
Eurasian watermilfoil	*Myriophyllum spicatum*
fanwort	*Cabomba caroliniana*
gorse	*Ulex europaeus*
grass-leaved arrowhead	*Sagittaria graminea*
hawkweed oxtongue	*Picris hieracioides*
hawkweed, mouseear	*Hieracium pilosella*
hawkweed, orange	*Hieracium aurantiacum*
hawkweed, polar	*Hieracium atratum*
hawkweed, queen-devil	*Hieracium glomeratum*
hawkweed, smooth	*Hieracium laevigatum*
hawkweed, yellow	*Hieracium caespitosum*
herb-Robert	*Geranium robertianum*
hoary alyssum	*Berteroa incana*
houndstongue	*Cynoglossum officinale*
indigobush	*Amorpha fruticosa*
knapweed, black	*Centaurea nigra*
knapweed, brown	*Centaurea jacea*
knapweed, diffuse	*Centaurea diffusa*

Class B Weeds - Continued	
knapweed, meadow	*Centaurea jacea x nigra*
knapweed, Russian	*Acroptilon repens*
knapweed, spotted	*Centaurea stoebe*
knotweed, Bohemian	*Polygonum bohemicum*
knotweed, giant	*Polygonum sachalinense*
knotweed, Himalayan	*Polygonum polystachyum*
knotweed, Japanese	*Polygonum cuspidatum*
kochia	*Kochia scoparia*
lawnweed	*Soliva sessilis*
lepyrodiclis	*Lepyrodiclis holosteoides*
longspine sandbur	*Cenchrus longispinus*
loosestrife, garden	*Lysimachia vulgaris*
loosestrife, purple	*Lythrum salicaria*
loosestrife, wand	*Lythrum virgatum*
oxeye daisy	*Leucanthemum vulgare*
parrotfeather	*Myriophyllum aquaticum*
perennial pepperweed	*Lepidium latifolium*
perennial sowthistle	*Sonchus arvensis* ssp. *arvensis*
policeman's helmet	*Impatiens glandulifera*
poison-hemlock	*Conium maculatum*
puncturevine	*Tribulus terrestris*
rush skeletonweed	*Chondrilla juncea*
saltcedar	*Tamarix ramosissima*
Scotch broom	*Cytisus scoparius*
spurge laurel	*Daphne laureola*
spurge, leafy	*Euphorbia esula*
spurge, myrtle	*Euphorbia myrsinites*
sulfur cinquefoil	*Potentilla recta*
swainsonpea	*Sphaerophysa salsula*
tansy ragwort	*Senecio jacobaea*
thistle, musk	*Carduus nutans*
thistle, plumeless	*Carduus acanthoides*
thistle, Scotch	*Onopordum acanthium*
water primrose	*Ludwigia hexapetala*
white bryony	*Bryonia alba*
wild carrot	*Daucus carota*
wild chervil	*Anthriscus sylvestris*
yellow floating heart	*Nymphoides peltata*
yellow nutsedge	*Cyperus esculentus*
yellow starthistle	*Centaurea solstitialis*

Class C Weeds: Noxious weeds which are already widespread in WA or are of special interest to the state's agricultural industry. The Class C status allows counties to enforce control if locally desired. Other counties may choose to provide education or technical consultation.

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

To help protect the State's resources and economy, the Washington State Noxious Wee Control Board adopts a State Noxious Weed List each year (WAC 16-750). This list classifies weeds into three major classes – A, B, and C – based on the stage of invasion of each species and the seriousness of the threa they pose to Washington State. This classification system is designed to:

- Prevent small infestations from expanding by eradicating them when they are first detected
- Restrict already established weed populations to regions of the state where they occur and prevent their movement to un-infested areas
- Allow flexibility of weed control at the local level for weeds that are already widespread.

To learn more about noxious weeds and noxious weed control in Washington State, please contact:

Washington State Noxious Weed Control Board
P.O. Box 42560
Olympia, WA 98504-2560
(360) 725-5764
Email: noxiousweeds@agr.wa.gov
Website: http://www.nwcb.wa.gov

Or

Washington State Department of Agriculture
21 North First Avenue #103
Yakima, WA 98902
(509) 225-2604

Or

Clallam County Noxious Weed Control Board
223 East 4th Street
Port Angeles WA 98362
(360) 417-2442

Please help protect Washington's economy and environment from noxious weeds!

2010 Washington State Noxious Weed List

Flowering rush, *Butomus umbellatus*, a Class A noxious weed

APPENDIX H: 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 more than two weeks before the first herbicide application was carried out on 6/21/10. 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 the herbicides glyphosate, triclopyr or imazapyr to noxious weeds or other invasive plant species at the following Forest Service sites in Clallam and Jefferson Counties between June 21 through October 15, 2010. Applications will be conducted as planned in the Final EIS-Olympic National Forest Site Specific Invasive Plant Treatment Project, which was finalized in 2008. Notices indicating that formulations containing glyphosate, triclopyr or imazapyr will be applied, will be posted at entrances to the target road systems and/or individuals sites. For questions about applications or to receive a complete list of individual sites contact Susan Piper, Wildlife, Botany, and Invasive Plant Program Manager at 360-956-2435, Joan Ziegltrum, Forest Ecologist and Botanist at (360)956-2320, or Cathy Lucero, Jefferson/Clallam County Noxious Weed Coordinator at 360-417-2442.

Bockman Creek Subwatershed, including Mary Clark Pit (Rd 2902), and Bockman Pit (Rd 2902); **Canyon Creek /Pats Creek Subwatershed**, including Canyon Pit (Rd 2875), Ned Hill Quarry (Rd 2878123), Upper & Lower Caraco Quarry (Rd 2870), unnamed gravel pit (Rd 2870 x 2878 roads), the 2870, 2875, 2877, 2878 roads and associated spurs, and Cranberry Bog; **Deep Creek Subwatershed**, including the 3040 and 30 roads and associated spurs; **East Twin River Subwatershed,** including the 3040 and 3068 roads and associated spurs; **Fulton Creek/Waketickeh Subwatershed**, including the 2503, 2510, and 25 roads and associated spurs; **Headwaters Sol Duc River Subwatershed**, including the 2918, 2920, 2931 roads and associated spurs; **Jimmy-come-lately Creek Subwatershed**, including the 28, 2840, 2850, 2855 roads and associated spurs, Coho Pit (Rd 2840070), Louella Rock pit (Rd 2800351), Luella LuLu quarry (Rd 2800360), Racoon Pit (Rd 2855070), unnamed gravel pit (Rd2845073 MP .9), and the Wolf Quarry 2 (Rd 2840130); **Little Quilcene River Subwatershed**, including the 27, 28, and 2820 roads and associated spurs, and the Bon Jon Quarry (28 road); **Lower Big Quilcene River Subwatershed**, including the 27, 2730, and 2740 roads and associated spurs, and Falls View campground; **Lower Boqachiel River Subwatershed** including the 2932 road and associated spurs; **Lower Dosewallips River Subwatershed**, including the 25, 2610, and 2620 roads and associated spurs; **Lower Duckabush River Subwatershed**, including the 2510 and 2530 roads and associated spurs; **Lower Elwha River Subwatershed**, including the 3050 road and associated spurs; **Lower Gray Wolf River Subwatershed,** including the 2870, 2875, and 2880 roads and associated spurs; **McDonald Creek/Siebert Creek Subwatershed**, including the 2877 road and associated spurs, and Pats Prairie; **Middle Dungeness River Subwatershed**, including the 28, 2820, 2830, 2860, and 2870 roads and associated spurs; **Middle Sol Duc River Subwatershed,** including the 2923, 30, 3040, and 31 road and associated spurs; **North Fork Calawah Subwatershed**, including the 29, 2922, and 2923 roads and associated spurs, Calawah Pit (2900015 road), Bonidu meadow (near 29 x 2929 jxn), and the Grindstone Pit (2923070 road); **Pysht River Subwatershed,** including the 30 road and associated spurs; **Salmon River Subwatershed**, including the 21 road; **Snow Creek/Salmon River Subwatershed**, including the 2845, 2850, 2852, and the 2845 roads and associated spurs; **South Fork Calawah Subwatershed**, including 29, 2923, and 2032 roads and associated spurs, **Spencer Creek/Marple Creek Subwatershed**, including Seal Rock campground; **Upper Big Quilcene River Subwatershed**, including the 27, 2740, and 2750 roads and associated spurs; **Upper Dungeness River Subwatershed**, including the 2870 road and associated spurs; Upper Sol Duc River Subwatershed, including the 29, 2918, 2923, 2929, 2931, and 3071 roads and associated spurs, Klahowya campground, Littleton Horse Camp, Kloshe Nanitch Loop Trail, Bonidu Pit (29 road, MP 37.2), and Tom Creek Pit (2931 road); and the West Twin River Subwatershed, including the 3040 road and associated spurs.

Onsite Posting Sample: 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, imazapyr, or clopyralid will be applied to this site between June 21 2010 and October 15 2010 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:

Cheryl Bartlett,
Botanist
Olympic National Forest
1835 Black Lake Blvd., SW Suite A
Olympia, WA 98512
360-956-2283

Or
Cathy Lucero
Clallam County Noxious Weed Control Board
223 East Fourth Street, Suite 15
Port Angeles, WA 98362
360-417-2442

Herbicid Manual Treatment Data Form

(Circle one)

Ref #: 27

Should ... area be a high priority for follow-up treatments next year? Yes / No (circle one)
Provide reasoning in comments field below or on back page (For example: Are high priority species present? Major infestation? Sensitive area?)

General Activity Fields

Region	Forest	District (circle one)*	6th Field Watershed Name	Project # and Name	Owner	Workforce**
06	09	PAC-N (HC-N) PAC-S HC-S	Canyon Creek/Pats Creek	45	FS	AF, BE, BC

Method Code	Equipment Code (circle one)	Job Code: (from spreadsheet)	Comments: If road, enter requested information, including beginning & ending mileposts. If non-road, give site name. Comments box can be used to describe extent of infestation, provide recommendations, indicate if wet areas are present, or give any other relevant information.	
700 Herbicide	711 hand sprayer (712 backpack sprayer) 713 hack & squirt 716 injector 721 mobile ground sprayer 000 other	S2F902	Road number with BMP & EMP –OR- site name: 2875-020 Was entire area represented by the Ref# examined and treated for weeds? (Yes) / No If no, describe what part was surveyed and treated in comments box.	Other Comments:
100 Manual			Beginning MP UTM E: _____ Ending MP UTM E: _____ Beginning MP UTM N: _____ Ending MP UTM N: _____	

***District Codes:** Pacific North (05) = PAC-N; Pacific South (03) = PAC-S; Hood Canal North (02) = HC-N; Hood Canal South (01) = HC-S
****Workforce:** County Name, Contractor Name, WCC, USFS Force Account

Site/Inventory Fields

Start Date	Stop Date	Acres examined for weeds	Application Site (circle one)	Licensed Applicator: Name and License #
8/26	8/26	1.1 acres	(Road edge/ROW) Campground Gravel/rock source Trailhead Forest Riparian Admin Site Other	Angela Fletcher 80364
				Total Manual Infested Area Treated: (DO NOT lump plants together) acres

Weeds Treated (Just the PLANTS code is OK. Include common or scientific name as well if it is an uncommon weed on the ONF)	Infested Area Treated (DO NOT lump plants together)	Phenology (circle stage of majority of plants)	UTM coordinates	% of area examined for weeds infested with this species (lump plants together – use cover classes [Y] listed below)
CEDES	1 ft² acres	Vegetative / (Flowering) / Fruiting		1 - a small patch only
CIAR	1.1 acres	Vegetative / (Flowering) / Fruiting		2
CIVU	0.5 acres	Vegetative / (Flowering) / Fruiting		1
CYSC	0.2 acres	(Vegetative) / Flowering / Fruiting		1
PHAR	25ft² acres	(Vegetative) / Flowering / Fruiting		1 - one patch
SETA	trace acres	Vegetative / Flowering / Fruiting		1 - just 1 flowering plant
	acres	Vegetative / Flowering / Fruiting		

[Y] **Cover Classes:** 1 = Trace, 2 = 1 – 3%, 3 = 3 – 5% 4 = 5 – 10%, 5 = 10 – 25%, 6 = 25 – 50%, 7 = 50 – 75%, 8 = 75 – 95%, 9 = 95 – 100%
Note: Cover classes are meant to be *approximations only*. DO NOT spend more than a few moments determining cover class

Admin Use Only
Activity Unit FACTS ID#: _____ Name: _____
Activity Subunit # _____ Name:

DailyLog

Application Date	Time Start (military time)	Time Stop (military time)	Application Area (Acres)	Temp (F)	Wind Speed (MPH)	Wind Direction	Cloud Cover	Acres Treated within 150' of Water
8-26-10	1100	1145	1.1	65	1-2	E	partly cloudy	0

Volume Applied	UOM	Mix (oz/gal)	Dilutant	Remarks – Weather forecast.
6	Gal.	2 oz/gal	Water	

Herb Product Name	Percent Solution	Adjuvants	Product Rate	UOM
Garlon 3A	1.5%	Competitor	2 oz/3 gal	Oz/Ac
		Blazon Blue	1 pace	Oz/Ac
				Oz/Ac

For reed canarygrass (PHAR)

~~Daily Log (Day2)~~ For use when more than one day is necessary to treat the infestation.

Application Date	Time Start (military time)	Time Stop (military time)	Application Area (Acres)	Temp (F)	Wind Speed (MPH)	Wind Direction	Cloud Cover	Acres Treated within 150' of Water
9-26-16	1100	1110	25 ^{2} ft	65	1-2	E	partly cloudy	0

Volume Applied	UOM	Mix (oz/gal)	Dilutant	Remarks – Weather forecast.
0.25	Gal.	3 oz/gal	Water	

Herb Product Name	Percent Solution	Adjuvants	Product Rate	UOM
AquaNeat	2.3%	Competitor	1/2 oz/gal	Oz/Ac
Polaris AQ	0.4%			Oz/Ac
				Oz/Ac

Notes:

APPENDIX I: PROJECT FORMS

- Rock Pit Inspection Form

Office copy

Rock Source Inventory (RSI) Number:
(Administrative use only)

Invasive Plant Inventory for Rock Sources, Olympic National Forest

A copy of this form is to be placed in implementation folders for projects utilizing this rock source

District or Forest Weed Specialist compliance statement and signature:
This designation is valid for two years from the inspection date listed below.

CHECK ONE:

☐ **Option A. Rock source exceeds requirements:** ***I have determined that this rock source to be completely free of weeds, with no non-native plants observed.*** Non-native plants, even those listed as tolerated species, are not present in, and are not associated with, this rock source.

☒ **Option B. Rock source meets requirements:** ***I have determined that this rock source to be acceptable for use, with acceptable levels of contamination.*** *It is very unlikely that distribution of materials from this rock source would contribute to the spread of noxious weeds.*

- Any species listed as priority 1 by Olympic NF, OR those listed as Class A, B or selected weeds on State and County noxious weed lists, OR species of particular concern are absent in or around rock source.
- Species listed as priority 2 by Olympic NF (but not on State or County list specified above) may be present in very small, isolated patches within or near the rock source.
- Species listed as tolerated are present to various degrees within and around rock source.

☐ **Option C. Rock source meets minimum requirements:** ***I have determined that this rock source acceptable for use, but only if no other source is available.*** *Distribution of materials from this rock source may contribute to the spread of noxious weeds if precautionary measures are not followed.* ***These measures are described in the comments box below.***

- Any species listed as priority 1* by Olympic NF, OR any species listed as Class A, B* or selected weeds* on State and County noxious weed lists, OR species of particular concern are absent in or around rock source.
- Species listed as priority 2 by Olympic NF (but not on State or County list specified above) are present in patches, but some portions of the rock source are relatively free of weeds, are most likely are not contaminated with a significant amount of propagules (seeds, roots, etc.) from these species, and may be an acceptable rock source for FS lands. **Areas contaminated with these weeds and/or their propagules must be clearly flagged (with weed species codes written on flagging) prior to any rock being removed from this source.**

Color of flagging: _____ **Species code(s) written on flagging:** _____

*In limited circumstances, as determined by the inspector, this box may be checked when species listed as priority 1 by Olympic NF, OR class B or selected weeds on State and County noxious weed lists are present in very small, isolated patches AND these patches were treated with herbicides at the time of inspection AND the location of the infestation is clearly marked with flagging.

☐ **Option D. Rock source fails to meet requirements.** ***I have determined that this source is unsuitable for use at this time.*** *Distribution of materials from this rock source would likely contribute to the spread of noxious weeds.*
Weed species listed as priority 1 by Olympic NF, OR those listed as Class A, B or selected weeds on State and County noxious weed lists, OR species of particular concern are present in or around this rock source, OR weed species listed as priority 2 by Olympic NF are present to the extent that plants and/or propagules (seeds, roots, etc.) are present in significant portions of the rock source and cannot be isolated by precautionary measures.

Signature _____ Date 6/30/10

Name of Rock Source: Beaver Falls **Ownership (circle one): Forest Service / Private**

Narrative of Pit Location (include, at minimum, road number and milepost for FS pits **OR** address/cross streets for private pits):
Burnt Mt Rd (Hwy 113)
head N on 113 from 101 Junction **Ref # (from project spreadsheet):**

upt 697

Coordinates of Location N: 48° 05' 46.7" **E:** 124° 16' 03.4" State Plane N NAD 83 *UTM NAD 83 is preferred
Projection (circle one): (UTM NAD 83) (UTM NAD 27) (NAD 83 Albers) (Lat/Long) (Decimal Degrees) (Other):

Name and Title of Inspector: Cathy Lucero, Coordinator **Date of Inspection:** 6/30/10

Comments: Include, at minimum, a description of what parts of pit are usable, and what parts must be avoided. This information should also be shown in the sketch of the pit on next page.

Mr. Bruch indicated the area of the pit planned for use - all is clean there. We discussed spraying outer edges where St. Johns Wort is present to ensure that future faces are usable. In general, pit very clean, Mr. Bruch agreed to spray thistles. Did not inspect south side of pit & thus stockpiles - indicated on map

tansy rag

Name of Rock Source: **Date inspected:**

Field Data

Species present:

Present?	Code	Scientific Name	Common Name	ONF Treatment Priority	% of infestation	Comments
	AEPO	*Aegopodium podagraria*	Bishop's weed, goutweed	1		
	ARMI2	*Arctium minus*	lesser burrdock	2		
	BOOF	*Borago officinalis*	common borage	2		
	BRTE	*Bromus tectorum*	cheatgrass	1		
	CEBI2	*Centaurea biebersteinii*	spotted knapweed	1		
	CEDE5	*Centaurea debeauxii*	meadow knapweed	1		
	CEDI	*Centaurea diffusa*	diffuse knapweed	1		
	CEJA	*Centaurea jacea*	brownray knapweed	1		
✓	CIAR4	*Cirsium arvense*	Canada thistle	2		trace - will treat (nt near face
✓	CIVU	*Cirsium vulgare*	Bull thistle	2		10 x 5 patch will treat - nt near face
	COAR4	*Convolvulus arvensis*	field bindweed	2		
	CYES	*Cyperus esculentus*	yellow nutsedge	1		
✓	CYSC4	*Cytisus scoparius*	Scotch broom	2		1/2 doz sm. nt near face
	DACA6	*Daucus carota*	Queen Anne's lace	2		
	GERO	*Geranium robertianum*	herb Robert, stinky Bob	1		
	HEHE	*Hedera helix*	English ivy	2		
	HIAU	*Hieracium aurantiacum*	orange hawkweed	1		
	HIPR	*Hieracium caespitosum*	meadow (yellow) hawkweed	1		
	HISA4	*Hieracium sabaudum*	European hawkweed	1		
✓	HYPE	*Hypericum perforatum*	common St. Johnswort	2	1%	root on rock face - outside edges - owner will spray this week
	ILAQ80	*Ilex aquifolium*	English holly	2		
	LAGA2	*Lamiastrum galeobdolon*	yellow archangel	1		
	LALA4	*Lathyrus latifolius*	everlasting peavine	2		
	LIVU2	*Linaria vulgaris*	butter and eggs	1		
	LYSA2	*Lythrum salicaria*	purple loosestrife	1		
	LYVU	*Lysimachia vulgaris*	garden yellow loosestrife	2		
	PHAR3	*Phalaris arundinacea*	reed canarygrass	2		
	POBO10	*Polygonum bohemicum*	Bohemian knotweed	1		
	POCU6	*Polygonum cuspidatum*	Japanese knotweed	1		
	POSA4	*Polygonum sachalinense*	giant knotweed	1		
	PRLA5	*Prunus laurocerasus*	English laurel	2		
	RUDI2	*Rubus discolor*	Himalayan blackberry	2		
	RULA	*Rubus laciniatus*	cutleaf blackberry	2		
✓	SEJA	*Senecio jacobaea*	tansy ragwort	2		nt near face 5 plants removed
	TAVU	*Tanacetum vulgare*	common tansy	2		
	VIMA	*Vinca major*	bigleaf periwinkle	1		
	VIMI2	*Vinca minor*	common periwinkle	1		

If other priority species are present that are not listed above, write them down in the spaces provided on the next page. this column (including what's on next page) should

Species present that are not listed on previous page.						
Present?	**Code**	**Scientific Name**	**Common Name**	**Treatment Priority**	**% of infestation**	**Comments**

this column (including what is on previous page) should add up to 100%

The following species are tolerated when present. However, please indicate if they are present in the rock pit:					Do not include in % of infestation.	
✓	DIPU	Digitalis purpurea	purple foxglove	Tolerate		
✓	HYRA3	Hypochaeris radicata	hairy catsear	Tolerate		
✓	LEVU	Leucanthemum vulgare	oxeye daisy	Tolerate		
✓	LOPE80	Lotus pedunculatus	big trefoil	Tolerate		
	PLLA	Plantago lancoelata	narrowleaf plantain	Tolerate		
	RARER	Ranunculus repens var repens	creeping buttercup	Tolerate		
	TAOF	Taraxacum officinale	common dandelion	Tolerate		

DON'T FORGET TO FILL OUT THIS SECTION!

Estimated size of pit: 10 **acres**
(**1 acre** = 43560 ft^2, or approximately 209 ft x 209 feet. **1/10 acre** = 4356 ft^2, or 66 ft x 66 ft, or approximately 435 ft x 10 ft)

Percent of pit occupied by invasive plants 1 **%**
(This percent should indicate the percent of the pit that is NOT usable as a rock source)

Was this pit treated for invasive plants during this visit? Yes / No — will be treated this week
If yes, please fill out a FACTS form documenting treatment

Has this pit been treated for weeds before? (Yes) / **No / Don't know** **If yes, what year?** 2009

face is broom & thistle free

Name of Rock Source:
Beaverfalls Pit

Date inspected:
6/30/10

Name of Rock Source: Beaver Falls **Date inspected:**

Sketch of pit (or aerial photo .jpegs of pits can be pasted in the space below prior to going into field) :
Include information such as areas of pit that are clean and usable, distribution and location of weed species, a north arrow and scale bar, road numbers or landmarks to assist in finding pit and/or weeds of particular concern, etc. Comments are encouraged!

Beaver Falls Pit - 10 acres