CLALLAM COUNTY ROAD DEPARTMENT

Integrated Weed Management Plan

2017 Annual Report

Prepared by **Clallam County Noxious Weed Control Board**
Available online: http://www.clallam.net/Weed/iwmp.html
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Executive summary

Program Goal:

This program ensures Clallam County complies with noxious weed laws of Washington State. The goal of this project is to shift roadside vegetation to natural, site appropriate plant communities. The goal is implemented by reducing existing weed populations and preventing the establishment of new ones across the county.

Program Overview:

The Clallam County Integrated Weed Management Plan (IWM) was created to help the County efficiently comply with its noxious weed control obligations. Integrated Weed Management is a coordinated decision making process that uses the most appropriate weed management methods and strategies, along with a monitoring and evaluation system, to achieve roadside maintenance goals and objectives in an environmentally and economically sound manner. The project identifies high priority targets to contain the worst infestations and prevent the spread of noxious weeds. High priority targets also include county rock sources and spoil disposal sites (Pits) that act as sources/vectors for weed dispersal.

2017 Project Overview:

This is the first year of the fully integrated weed management plan and we spent considerable time focusing on developmental aspects of the program. The NWCB crew was experienced and able to efficiently react to situations in the field – most significantly, respond to concerns of the public and provide project information and program goals.

2017 Project Accomplishments:

Program Development:

- Facilitated communication between County departments to integrate effective weed management practices into both ongoing and planned projects. Met with road engineers, road crew and supervisors, parks, and DCD.
- Created monitoring program to be conducted by WSU Master Gardeners
- Developed County Pit weed management protocols to support Roads and implemented prevention strategies.
- Created and published documents to accommodate public concerns and respond to specific requests.
- Created desirable plant list and collaborated in the draft contract for Matt Albright Native Plant Center to grow and deliver plant material.
- Identified locations suitable for pilot native planting projects.

Roadsides:

- Treated a total of **62** county roads; **27** manual only, **7** combined herbicide and manual control, and **28** herbicide control only. **2** roads were surveyed only (see Appendix C, D for full details).
- Treated **102 miles** (**198.4 examined acres**) of county roadside comprised of: **39.9 miles** of manual treatment only, **15.9 miles** using combined herbicide and manual treatment, and **46.2 miles** herbicide treatment only
- Controlled an estimated **0.2 solid acres** manually
- Controlled an estimated **13.3 solid acres** chemically
- Treated a total of **33** weed species (See Appendix B for complete list)
- Interacted with over **100** individuals during treatment activities (likely underreported)

County Rock Sources/Spoil Disposal Sites (Pits):

- Controlled weeds in **12** County Pit Sites (see Appendix B for complete list)
- Controlled **25** weed species within **52.2** examined acres
- Controlled an estimated **2.76 solid acres** manually
- Controlled an estimated **2.12 solid acres** chemically

Program Monitoring, Evaluation and Reporting

- The Roadside Weed Monitoring Team completed treatment monitoring, environmental typing and native planting assessments on **43** treated Clallam County roads and provided a report (Appendix G).
- The Roadside Weed Monitoring Team report indicated treatments were effective and precise with no observed collateral damage from over spray or drift.

PROJECT SUMMARY

Program Goal:

This program ensures Clallam County complies with noxious weed laws of Washington State. The goal of this project is to shift roadside vegetation to natural, site appropriate plant communities. To accomplish the stated goal and be a responsible steward of county owned land, the County must ensure noxious and invasive weeds are effectively and efficiently controlled. The goal is implemented by reducing existing weed populations and preventing the establishment of new ones across the county. Invasive and noxious weeds negatively impact agricultural and forestry production, property value, as well as water flow and availability. Roadsides are high priorities for control of weed species because they cross and link many adjacent properties and land uses, and can act as conduits for the spread of weeds. County rock sources/soil disposal sites act as weed sources and are additional high priorities for control.

Program Overview:

The Clallam County Integrated Weed Management Plan (IWM) was created to help the County efficiently comply with its noxious weed control obligations. Integrated Weed Management is a coordinated decision making process that uses the most appropriate weed management methods and strategies, along with a monitoring and evaluation system, to achieve roadside maintenance goals and objectives in an environmentally and economically sound manner. The IWM plan dictates that each weed problem is addressed from the perspective of all available control options and that the selected control options represent the best treatment for the long term stability of the desired plant community.

Weed control methods include biological, chemical, cultural, physical and preventative. This project uses the most effective method or a combination of methods within the IWM decision-making framework to achieve greatest roadside service levels at the lowest life-cycle costs. With more than five hundred miles of country roads there are a variety of weed problems as well as control opportunities.

To successfully create the shift in roadside vegetation to natural, site appropriate communities, the project identifies high priority targets to contain the worst infestations and prevent the spread of noxious weeds. High priority targets include infestations of weeds that could not be successfully controlled prior to 2017 (knapweeds (sp.), knotweed), and county rock sources and spoil disposal sites (Pits) that act as sources/vectors for weed dispersal. The project aims to eliminate these significant weed pressures while systematically reducing weed abundance and promoting desirable vegetation. As the project matures and the number of high priority targets is reduced the number of chemical and physical treatments will also be reduced and balanced by cultural and preventative methods.

Weed control work on the County right-of-ways and pits is to be implemented by the Clallam County Noxious Weed Control Board (NWCB) and through partnerships with other county entities, non-governmental agencies, and volunteers. In 2017 working partnerships included the Clallam County Road Department, Clallam County Sheriff's Department Chain Gang, Makah Tribe, and the 10K Years Institute. Partnerships add efficiency and overall value to the project by promoting collaboration and public engagement, recruiting larger work forces, and reducing travel time across the county.

2017 Project Description:

This is the first year in which the Road department has utilized a fully integrated weed management plan. For this reason we spent considerable time focusing on interdepartmental communication and coordination, as well as training, and public engagement and other developmental aspects of the program.

NWCB staff was the primary crew implementing the 2017 Work Plan. The crew included two to three licensed applicators, all with previous noxious weed experience. Experienced staff greatly added to our efficiency and our capacity to react to situations in the field – most significantly, experience aided the crew's ability to respond to concerns of the public and provide project information and program goals.

Project monitoring and evaluation are essential to the long term success of the IWM program. The WSU Master Gardener Roadside Weed Management Monitoring Team (RWMT) provided independent data to assess project impacts and additional environmental data to be used in post treatment components of the program including native planting projects.

2017 PROJECT ACCOMPLISHMENTS:

Program Development

- Completed **45** of 50 outlined tasks in the IWM Work Plan necessary for program development and implementation. (Appendix A).
- Facilitated communication between County departments to integrate effective weed management practices into both ongoing and planned projects. Met with road engineers, road crew and supervisors, parks, and DCD.
- Created monitoring program to be conducted by WSU Master Gardeners, including documents, training sessions, and technical support.
- Developed County Pit weed management protocols to support Roads and implemented prevention strategies.
- Created and published documents to accommodate public concerns and respond to specific requests.
- Partnered with Clallam County Sheriff's Department Chain Gang, WSU Master Gardeners RWMT, Makah Tribal staff, 10,000 Years Institute for weed treatment and monitoring.
- Created desirable plant list and collaborated in the draft contract for Matt Albright Native Plant Center to grow and deliver plant material.
- Identified locations suitable for pilot native planting projects.

Program Implementation

2017 Work Plan Treatment Priorities:

- Selected county roads with high priority weed targets, specifically knapweed and knotweed.
- Selected county pits containing high priority weed targets.
- Early Detection, Rapid Response sites (EDRR) received via department, public sightings or found while treating.
- Selected county roads in Scotch-broom thistle focus area.
- County roads selected by public request.
- Non-road sites with high priority weed targets (category 1).
- High priority weed targets (category 1 or 2) suitable for manual control on county roads.

Roadsides:

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Maps: Project Areas and Target Roads

Map 1 shows an overview of all roadside and rock source treatment activities completed by Clallam County Noxious Weed Board and partners in 2017. Maps 2 – 9 show treatment activities in focus areas in East, Central and West Clallam County.

Clallam County

Map 1. Clallam County Roadside Treatment Overview 2017

East Clallam County

Map 2. Happy Valley-Blyn Treatment Area

Map 3. Sequim-Carlsborg Treatment Area

Port Angeles/Central Clallam County

Map 4. Port Angeles Treatment Area Map

Map 5. Lake Crescent-Elwha Valley Treatment Area

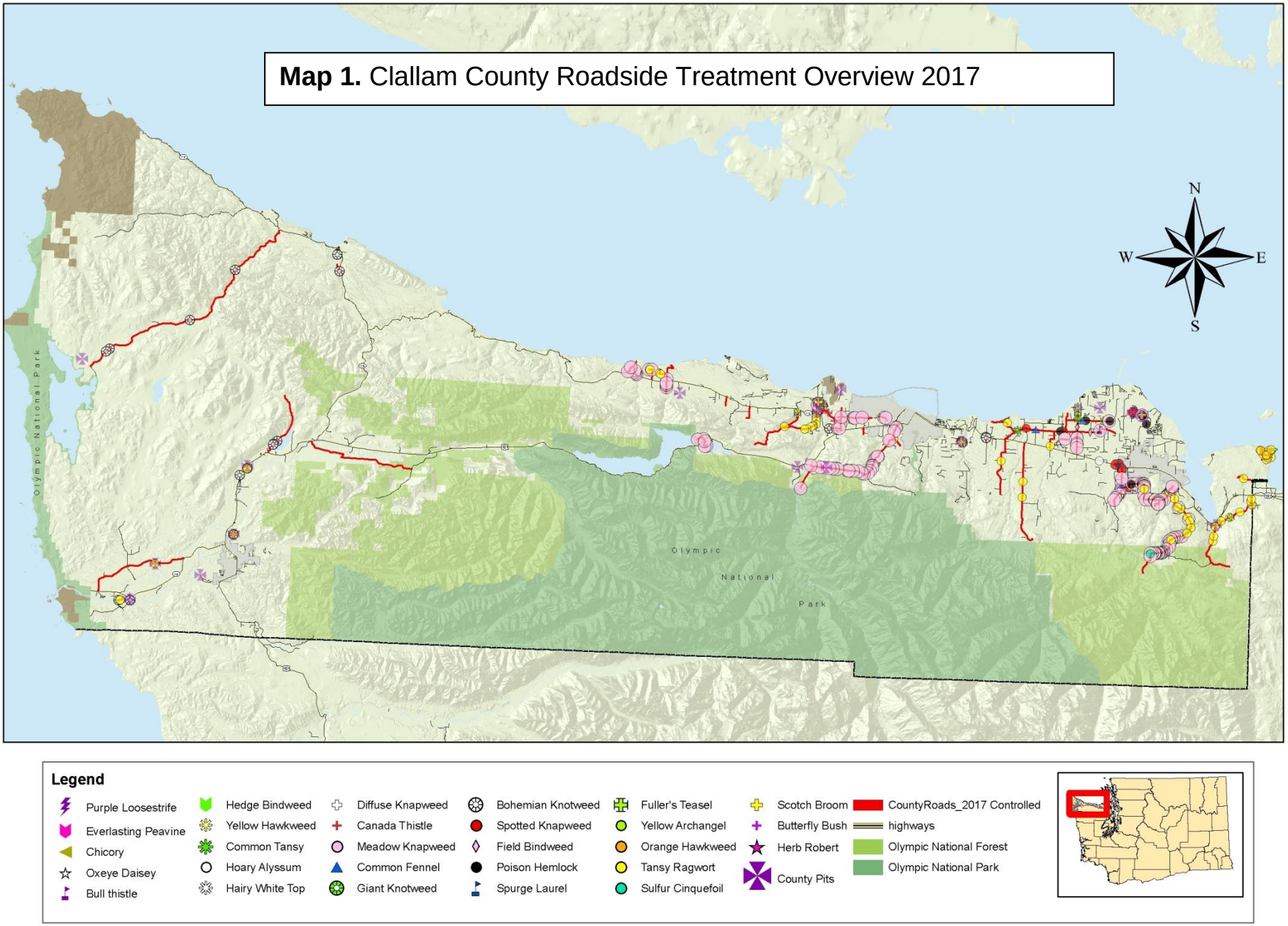
Map 6. Joyce Treatment Area

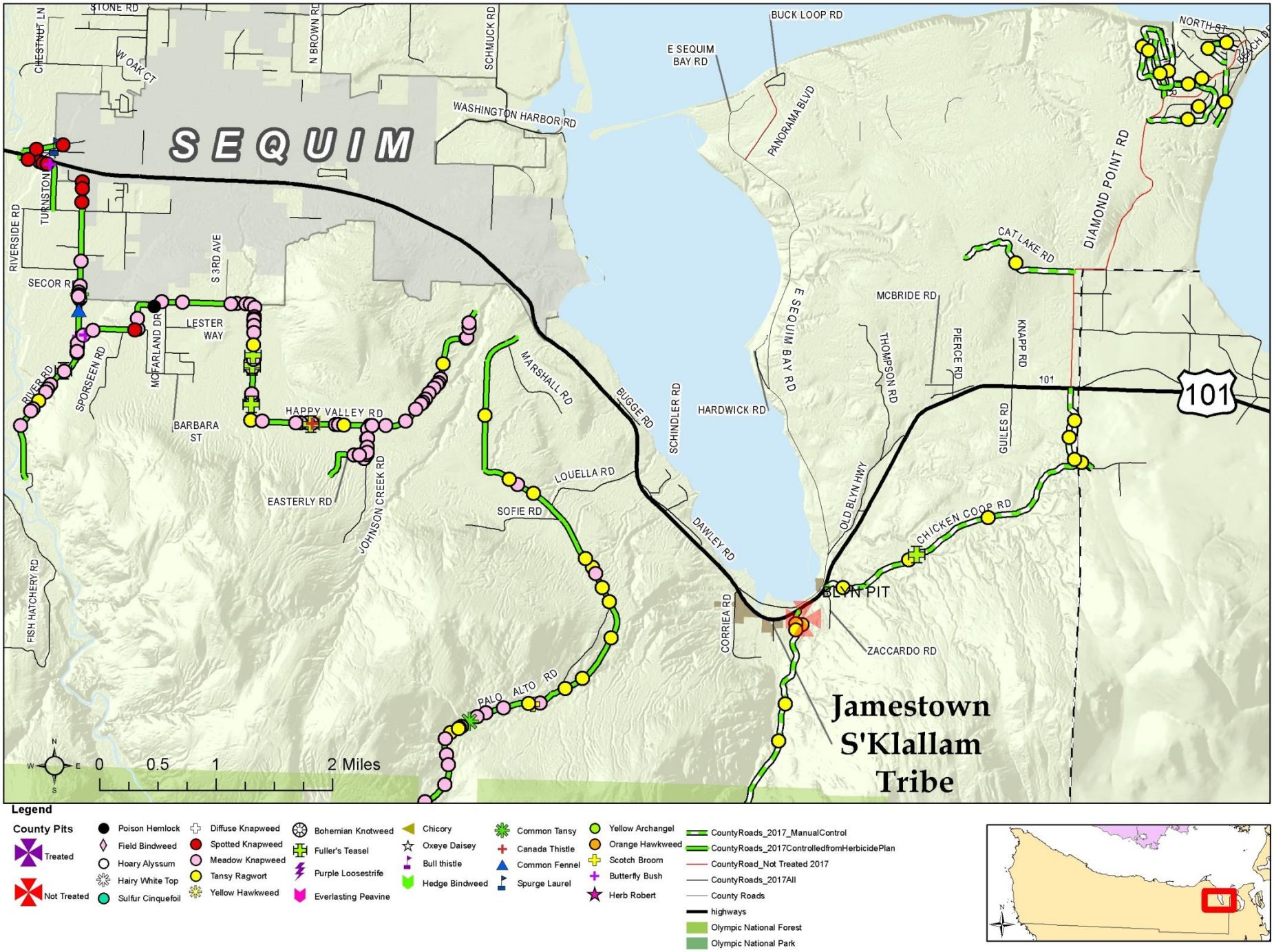
West Clallam County

Map 7. Lake Pleasant Treatment Area

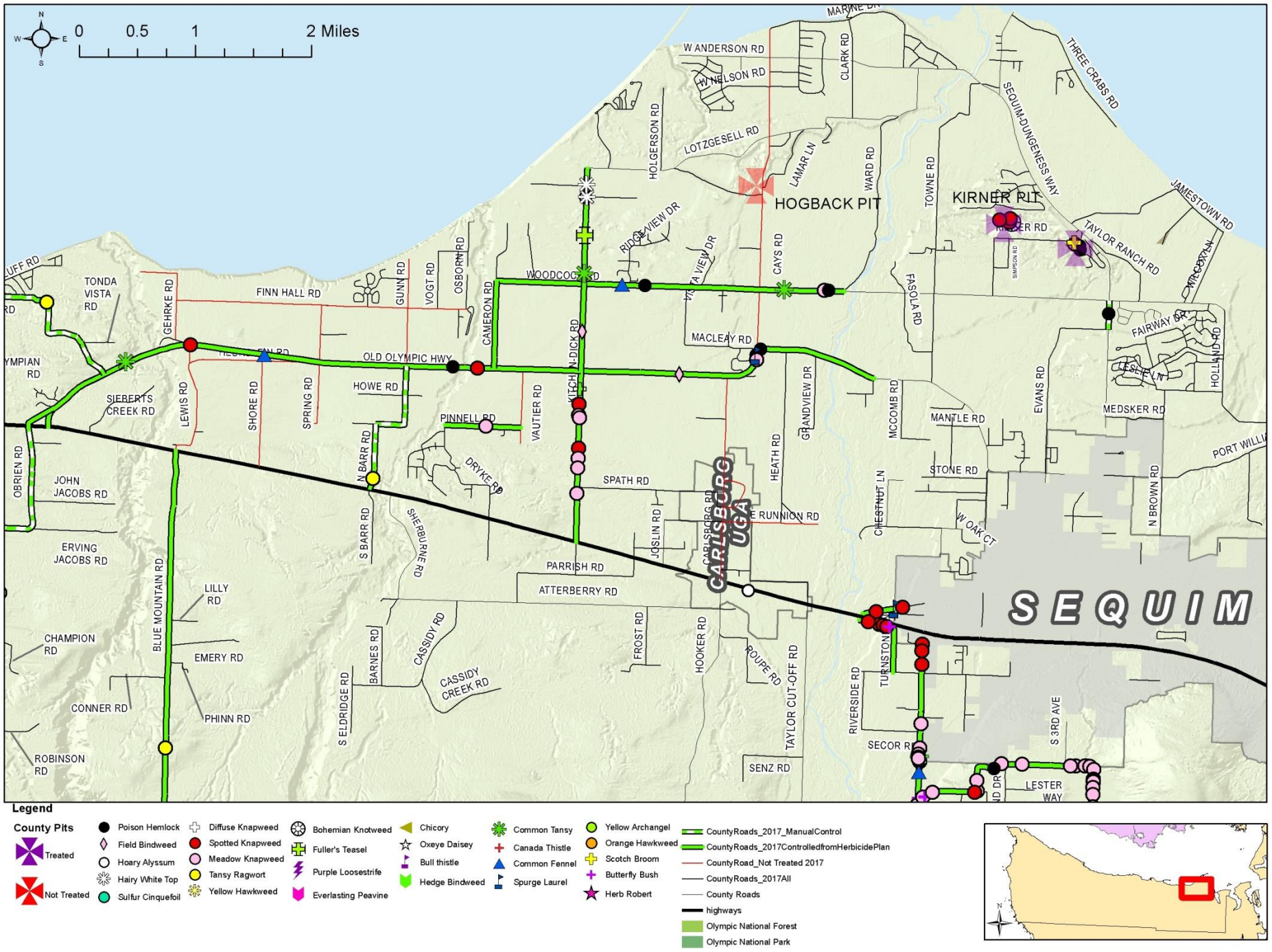
Map 8. Clallam Bay-Hoko Treatment Area

Map 9. Forks Treatment Area

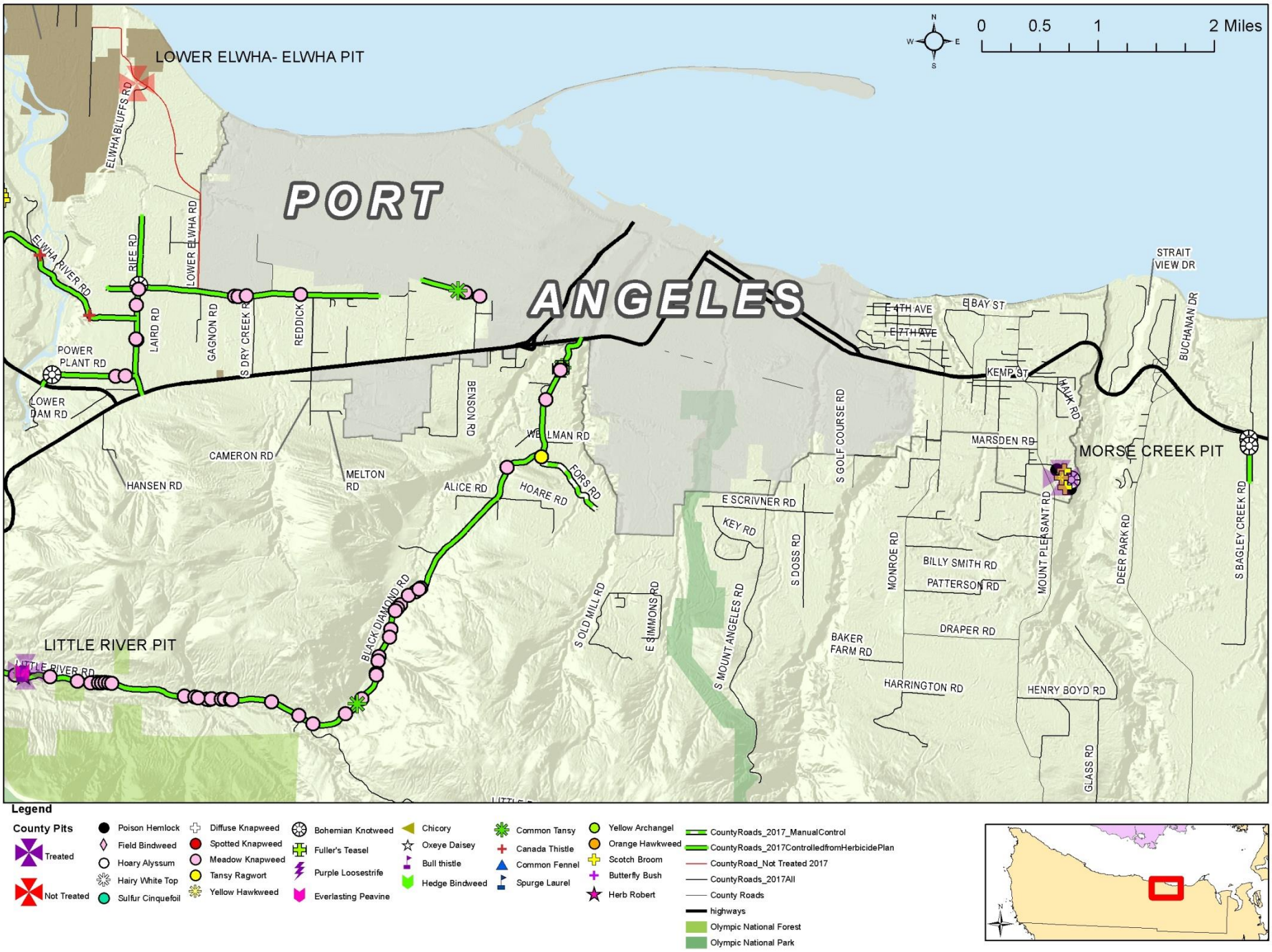

Map 1. Clallam County Roadside Treatment Overview 2017
N
W
E
S
Olympic National Park
Olympic
National
Park
Legend
Purple Loosestrife
Everlasting Peavine
Chicory
Oxeye Daisey
Bull thistle
Hedge Bindweed
Yellow Hawkweed
Common Tansy
Hoary Alyssum
Hairy White Top
Diffuse Knapweed
Canada Thistle
Meadow Knapweed
Common Fennel
Giant Knotweed
Bohemian Knotweed
Spotted Knapweed
Field Bindweed
Poison Hemlock
Spurge Laurel
Fuller's Teasel
Yellow Archangel
Orange Hawkweed
Tansy Ragwort
Sulfur Cinquefoil
Scotch Broom
Butterfly Bush
Herb Robert
County Pits
CountyRoads_2017 Controlled
highways
Olympic National Forest
Olympic National Park



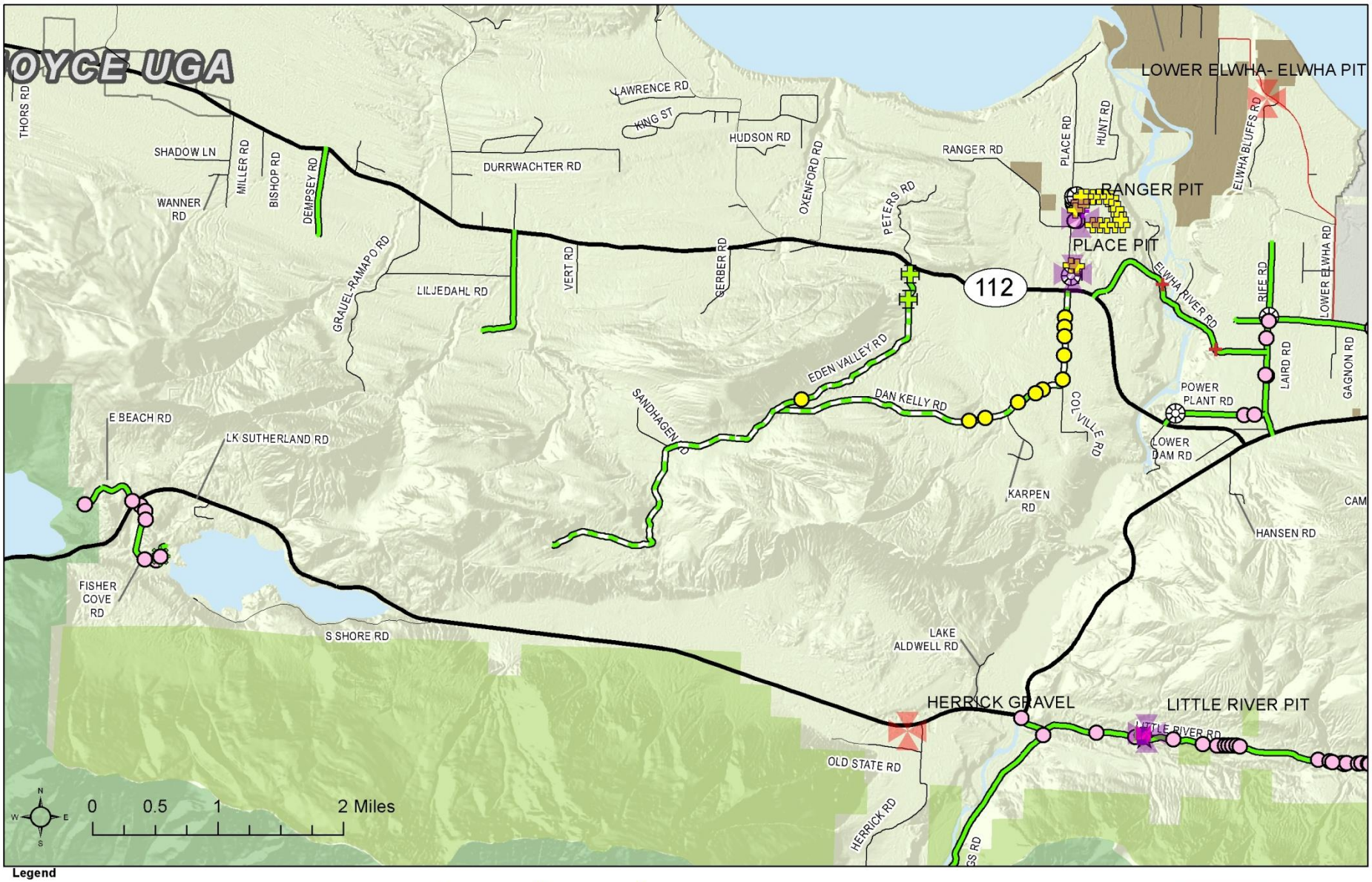
Map 2. Happy Valley-Blyn Treatment Area



Map 3. Sequim-Carlsborg Treatment Area



Map 4. Port Angeles Treatment Area

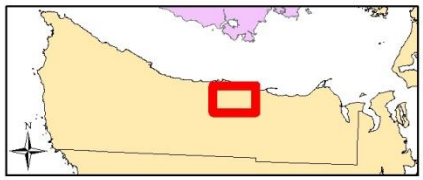


Legend

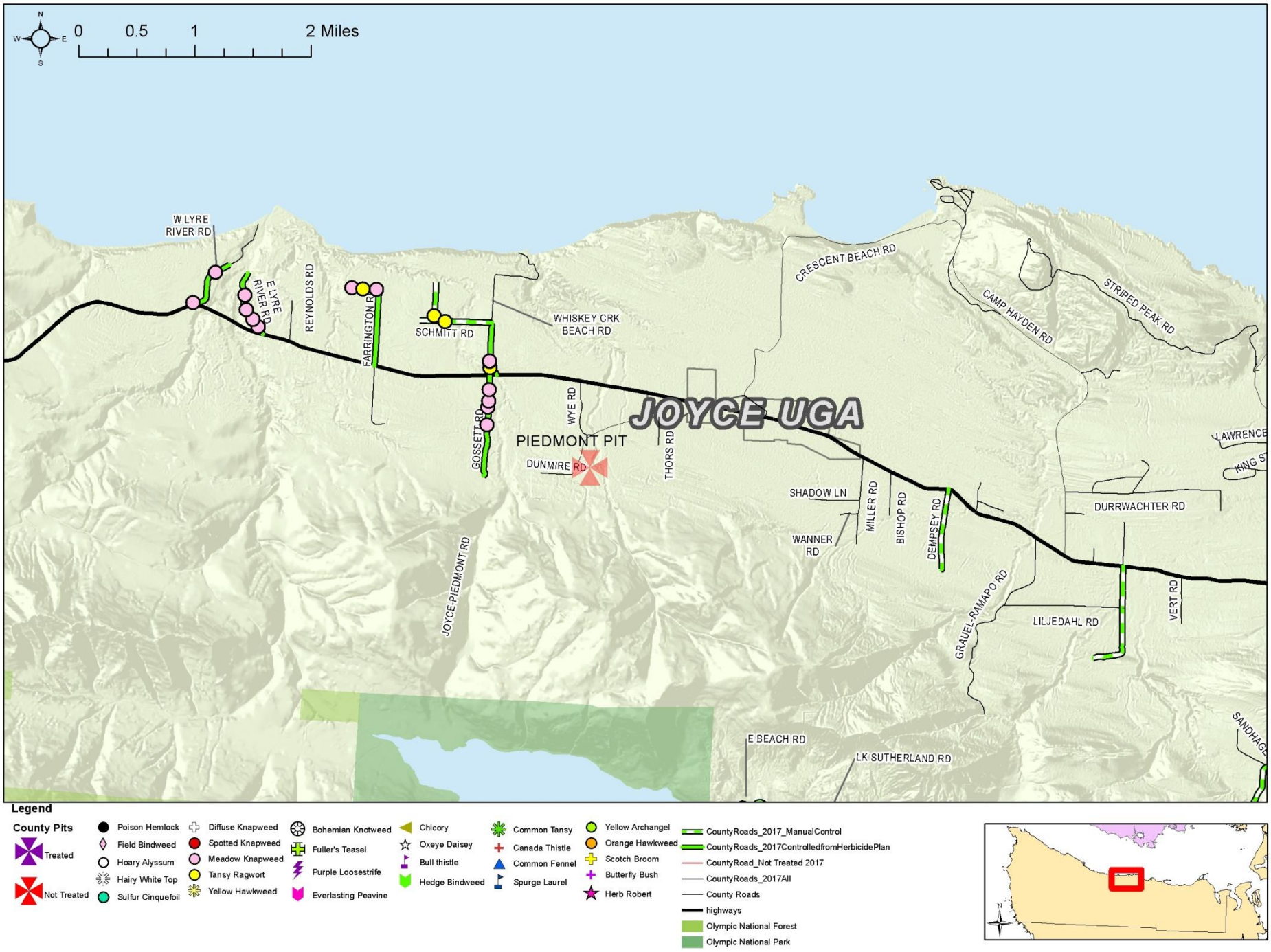
County Pits
- Treated
- Not Treated

- Poison Hemlock
- Field Bindweed
- Hoary Alyssum
- Hairy White Top
- Sulfur Cinquefoil
- Diffuse Knapweed
- Spotted Knapweed
- Meadow Knapweed
- Tansy Ragwort
- Yellow Hawkweed
- Bohemian Knotweed
- Fuller's Teasel
- Purple Loosestrife
- Everlasting Peavine
- Chicory
- Oxeye Daisey
- Bull thistle
- Hedge Bindweed
- Common Tansy
- Canada Thistle
- Common Fennel
- Spurge Laurel
- Yellow Archangel
- Orange Hawkweed
- Scotch Broom
- Butterfly Bush
- Herb Robert

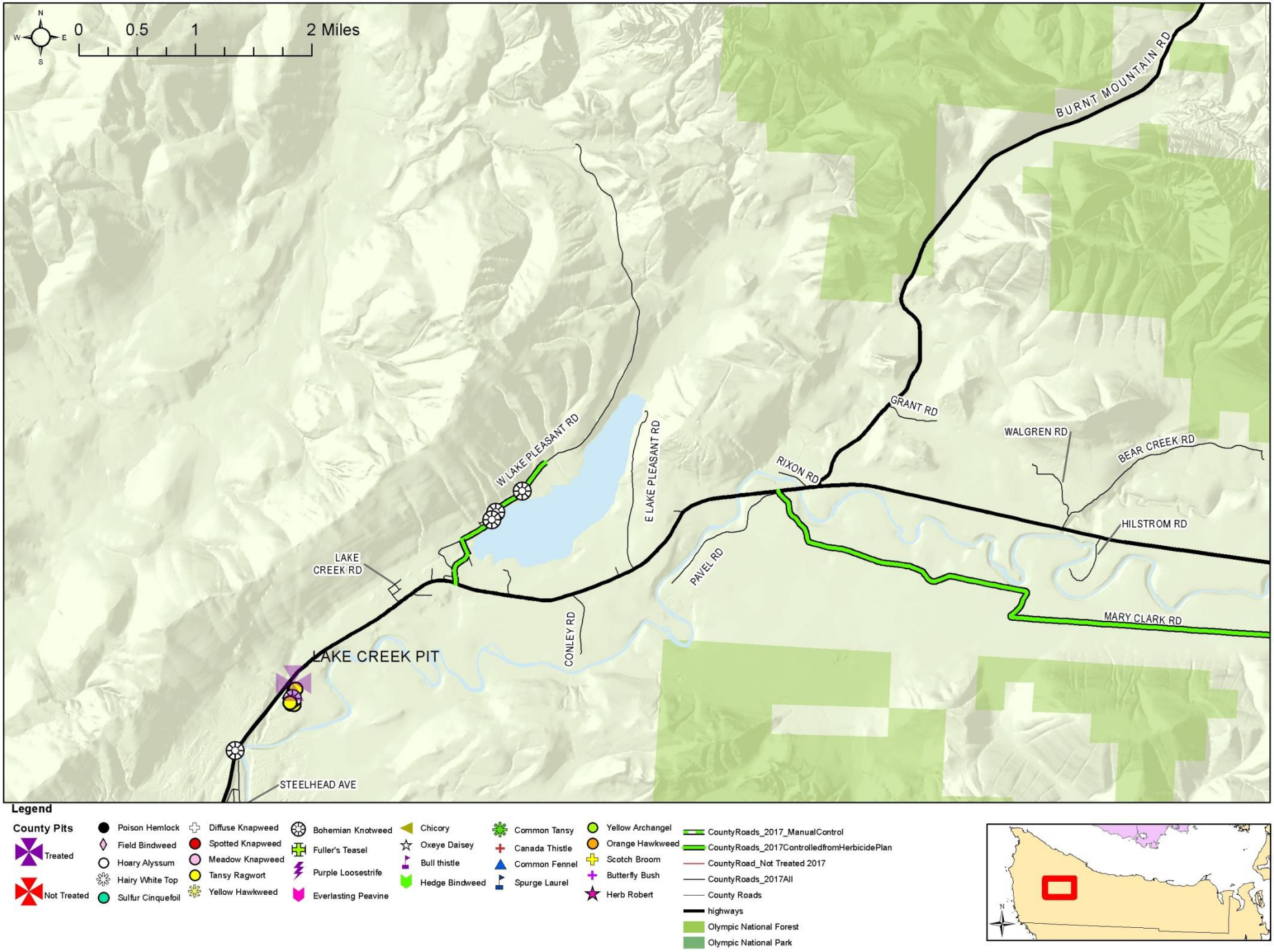
- CountyRoads_2017_ManualControl
- CountyRoads_2017ControlledfromHerbicidePlan
- CountyRoad_Not Treated 2017
- CountyRoads_2017All
- County Roads
- highways
- Olympic National Forest
- Olympic National Park



Map 5. Lake Crescent-Elwha Valley Treatment Area

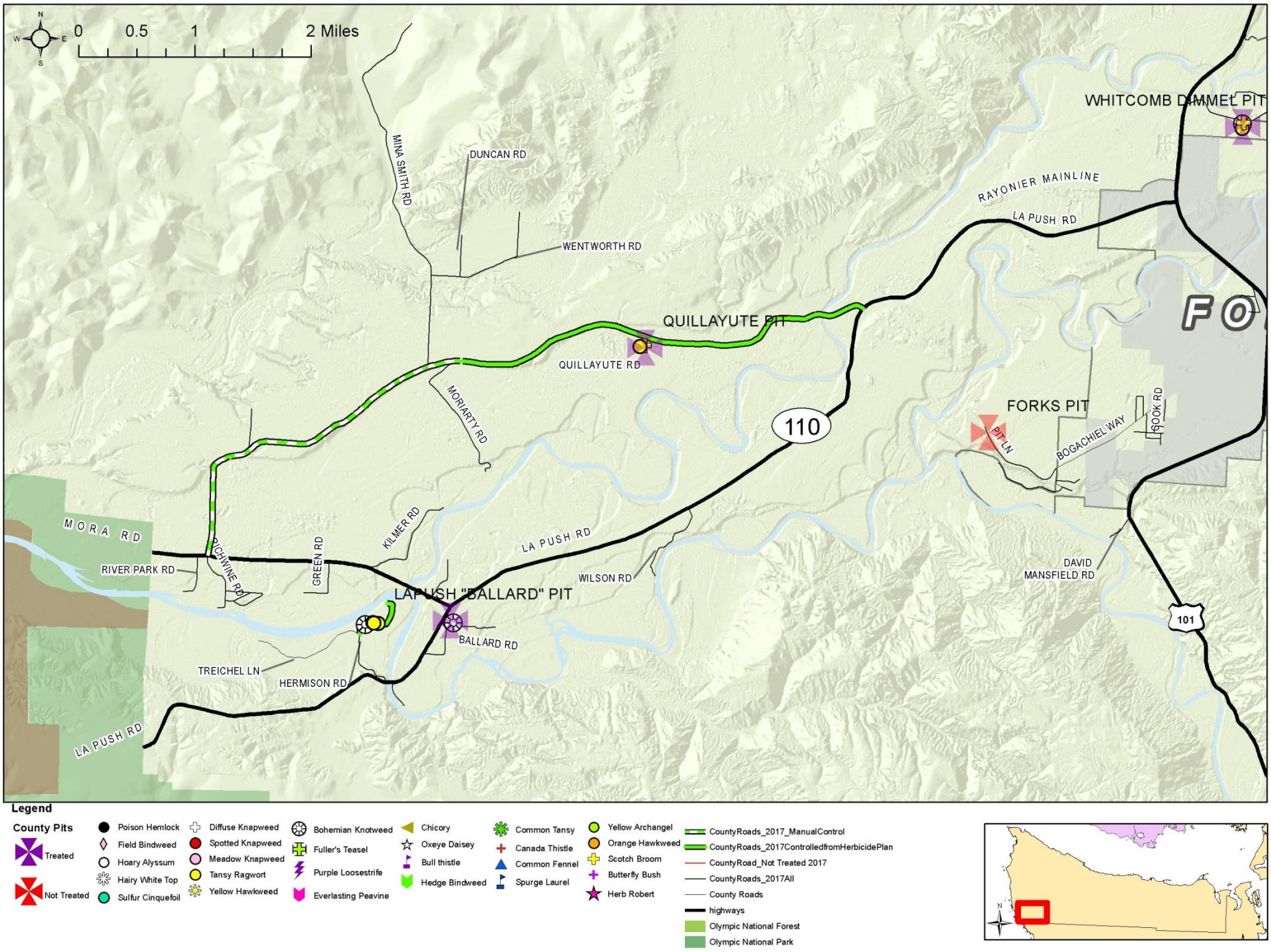


Map 6. Joyce Treatment area



Map 7. Lake Pleasant Treatment Area

Map 8. Clallam Bay-Hoko Treatment Area



Map 9. Forks Treatment Area

POST SEASON OBSERVATIONS:

Inaugural Year:

The Clallam County Road Department Integrated Weed Management plan adopted in 2017 is a strategic plan for the management of non-native, invasive plants on roadsides or Road Department- managed lands. The Noxious Weed Control Board invested substantial time and effort developing the many components necessary to execute this plan. Protocols, forms and record keeping material had to be finalized before any roadside treatment could begin. For example, the "Owner Will Control" and "Adopt-a-Patch" programs required the creation of multiple forms, much consultation with the legal department, and the publication online of the resulting documents and submission protocols. Staff conducted special surveys and compiled locations suitable for the "Adopt-a-Patch" program. The monitoring program required creating accompanying forms as well as the recruitment and training of Master Gardener volunteers. All these activities incurred substantial time investments that consumed the first half of the year. This was energy well spent because it lays the foundation for a solid, successful program.

This first year required the development of new and better interdepartmental relationships to effectively coordinate efforts. For example, implementing prevention measures required better communication about county rock sources and how they were being used. After meeting with county engineers to discuss their needs, we were able to promptly complete control work tailored specifically for upcoming projects. We also met with county shop supervisors and crew individually and encouraged them to call out high priority sites. This led us to control knotweed on Hermison Rd. which had been problematic for road crews for many years. WSU and Master Gardener volunteers played new roles by monitoring field work, and we envision new education roles as we move forward with a comprehensive training program to engage the public with planting and nurturing native vegetation on county roads. We strengthened our relationships with our federal neighbors and Tribal partners with the development of a native plant consortium.

We faced some uncertainties as we began our field work. We were unsure of what the public's response would be as we conducted our control activities. We were often met with concerned curiosity. Crew was very conscientious about responding to any and all question, explaining our work, and quite often, was drawn into yards to give advice or help. The vast majority gave us positive feedback and expressed appreciation for the work we were doing.

Because nearly two years had passed since work plan-specific surveys were conducted, we found both the diversity and level of infestation to be underreported. Conducting treatments on foot ensured that we found many unexpected, early infestations. However, expectations about what we could accomplish was somewhat thrown off by these ground conditions. We constantly adapted depending on the species we encountered, adjusting control methods and re-assessing time investments to incorporate both known and unknown priorities across the County.

As we worked through our list of road priorities, we continued to encounter a significant number of previously undocumented high priority species like small patches of poison hemlock, hairy nightshade and other toxic species. The prevalence of these small infestations (1-2 plants) or seedlings leads us to believe that many of our roadsides were at the end of a "lag" period prior to rapid, explosive expansion, a typical invasion pattern of many noxious weeds. The observed "movement" of priority species was of great concern to the crew and we were gratified to have the tools and resources to respond to early detected infestations before the impacts and costs are out of hand.

Specific observations:

- We went to great lengths to provide for public engagement ("Adopt-a-Patch" and "Owner Will Control"); however, we did not receive any applications for either program. This may indicate tacit approval by the general public of the IWM Program and the way in which it is conducted.
- The interdepartmental relationships and communications we created between county engineers, shop supervisors and crew, WSU and Master Gardeners were essential to progress and program successes this year.
- The coordination with county mowers was very positive and in some cases, extended the treatment window in areas where summer mowing reset a plant's biological clock.
- Treatments began later than we would have wished due to significant time dedicated to program development.

- We encountered a greater diversity of weed species and a greater number small infestations of category 1 than survey data had indicated; examples include:
  - field bindweed – treated previously undocumented and significant infestation (only 1 prior roadside infestation) and notified local farmer to the threat to his crops and best management strategies.
  - yellow archangel – treated undocumented infestation (no prior roadside infestations) while still small.
  - spurge laurel and hairy nightshade – treated previously undocumented infestations (plants not category 1 but limited distribution in Clallam County); both plants are toxic and pose significant public exposure risks.
- We could not treat all sites on the list before some species-specific treatment windows had lapsed. Late season treatments required additional time to cut and bag seeds and others sites were only partially treated due to seasonality.
- We were unable to treat many of the non-priority, widespread weeds (category 2 and 3) in lieu of completing all treatments of category 1 weeds on roads included in this year's Work Plan.
- We made considerable effort to accommodate those who had expressed specific concerns about potential herbicide treatments. We generated a "safe" route for one sensitive person, and contacted her repeatedly during the season to keep her apprised of our progress. No treatments occurred in her vicinity this year, and she was very appreciative of our communication and follow-up.
- Treatments benefited enormously from being conducted exclusively on foot. In many cases we were able to find and treat species that had not been noticed in the past. We were also more approachable to the public when on foot, increasing the likelihood that they would ask questions and become informed of the program.
- Our engagement with the public was a program priority and we feel it was extremely successful. We recorded 100 interactions with individuals during treatments.
- All crew had previous weed control experience and was extremely capable of working as a team and individually. The crew successfully made adjustments to daily plans and treatments in response to conditions.
- We were understaffed and would have benefited from additional crew members.
- Our partnership with the Clallam County Sheriff's Department Chain Gang was extremely beneficial in accomplishing our treatment goals for the County Pits.
- Development of the Chain Gang work schedule was delayed due to other program development tasks; however the deputies were flexible and accommodating to additional requests and adjustments.
- The Chain Gangs worked very diligently and were well-suited for large scale, manual removal projects, such as Scotch broom in pits.
- The 10K Years Institute and Coastal Restoration Crew provided much needed and greatly appreciated assistance in the West end through control of EDRR locations identified by their large work force. We were late in developing the partnership and should have provided additional information.
- The Master Gardeners Roadside Weed Monitoring Team (RWMT) was able to adapt as the season progressed and interpret the treatment results despite the diverse nature of treatments the NWCB employed in response to variables in the field.
- The RWMT provided excellent feedback (report) and they are eager to expand their work next year. They were a great asset to the program.
- We believe our treatments of the category 1 weeds were comprehensive in our target areas and monitoring results indicated successful control; however we will be unable to assess long term efficacy until next season.

RECOMMENDATIONS:

The Clallam County Integrated Weed Management Plan is intended to be annually evaluated and adapted over time in response to changing conditions and needs. Input and technical updates from federal and state agencies, tribes, universities and local partners and stakeholders are essential. For that reason the results of control activities are monitored, evaluated and the program activities adjusted as necessary.

Specific recommendations for the 2018 IWM Program:

- Continue to develop and utilize regional partnerships to assist in completing IWM tasks. Undertake planning and development of partner roles early.
- Continue to develop the plant consortium partnership with interested entities and agencies. (Appendix H)
- Review public involvement opportunities to ensure the available material meets program goals and is readily accessible online.
- Establish regular and more frequent communication between Roads department and field crews to efficiently pass pertinent information.
- Conduct early season Road department training that includes plant identification, a discussion of mowing and ditch maintenance strategies, and other vegetation management practices that will improve roadside resiliency to weed invasion.
- Provide the Chain Gang with additional training, work schedules and focus area maps.
- Recruit and train a larger crew for 2018 season.
- Begin treatments earlier in the season to optimize treatment windows, specifically where mowing does not occur and for early season species (ex. poison hemlock).
- Increase water carrying capacity of trucks and develop a strategy for refilling tanks in the field.
- Continue to diligently map and record all new infestations of high priority, target 1 species.
- Utilize data collection software from existing sources when available (ex. WDA, State Weed Board).
- Coordinate with Clallam County GIS department to support and utilize all technical upgrades for data collection.
- Ensure all partners record and submit data in compatible ways, including spatial data and treatment data forms.
- Implement the cultural control component of the program as soon as appropriate sites and native plant material are available.
- Spread native grass seed in county pits when material is available from other partners.
- Compile and map environmental typing for future plantings.
- Provide additional training to Master Gardeners including requested “ride along” to improve monitoring results.
- Provide additional safety equipment for Master Gardeners including vehicle identification signs and light.
- Develop additional monitoring protocols for county Pits.
- The Clallam County Road Department Integrated Weed Management – 2018 Report should evaluate treatments conducted in 2017 and analyze overall trend to asses treatment efficacy.

General 2018 Treatment Recommendations:

1. Repeat treatment on category 1, priority weeds on roads as listed in 2017 Work Plan
    a. Repeat treatments will be necessary for target species and further reduce impacts of category 2, 3 weeds
    b. Add Intersecting and directly adjacent roads to 2018 plan for complete control of category 1 weeds.
2. Increase treatment of species/areas that most impact local agriculture
    a. Meet with local farmers to identify important treatment areas and species adjacent to local agricultural land to minimize weed impact and maximize treatment utility.
    b. Identify lease agreements and proposed land-use by parcel in agricultural areas adjacent to road right-of-ways to ensure the program goals match the needs of adjacent properties
3. Increase treatment of species/areas that most impact local forestry
    a. Expand outreach to local timber interests to identify treatment areas and species adjacent to local forestry land to minimize weed impact and maximize treatment utility.
4. Solicit and incorporate public and local agency requests
    a. Ensure request includes specific treatment information (road locations, species and infestation extent).

Appendix A: 2017 IWM Task Table

The table below lists the tasks included in the IWM 2017 Work Plan and highlights the balanced approach to weed management. The specific tasks represent the best mix of control options chosen to address specific weed problems. The tasks are categorized by the weed management strategies: **Biological, Physical, Cultural, Preventative, and Chemical.** We completed **45** of 50 tasks listed below. The integral precept of the IWM Work Plan is that all control techniques are potentially applicable to the County's management of noxious weeds. The definition and color codes used in "task status" can be found at the end of this table. Complete 2017 Work Plan is online at: **http://www.clallam.net/Weed/iwmp.html**

Task Status[1]	Biological
✓	**Identify release appropriate sites adjacent to County right-of-way:** No new sites located, in consultation with WSU Biological Control Program
✓	**Coordinate with WSU Extension and Noxious Weed Control Board for Releases as they become available:** No additional biocontrols currently available; investigating possibility of new Canada thistle biocontrol – potential site located in East Sequim.
✓	A**ssist with research projects where possible:** County sites with active biocontrols include the Quilayute pit where seed eating weevils (*Exapion fuscirostre*) have been released; we used manual treatment only.
	Physical
✓	**Create a contact list to be shared between departments:** Shared list of contact information between Noxious Weed Control Board and Shop Supervisors (Forks, Port Angeles, and Sequim). Shared contacts between Road Engineers and NWCB to relay information regarding clean pit sites and material extraction.
✓	**Coordinate mowing schedule with weed treatments to avoid incompatible treatments:** NWCB regularly updated Shop Supervisors when working in their regions. Treatments were able to be effectively applied to all sites without interference of mowers or NWCB staff interfering with mowing schedule.
✓	**Provide mowers with map of planned weed treatment areas:** Pre-season focus maps were provided to all roads managers for distribution and inclusion into planning process.
✓	**Clearly mark areas, communicate location to field crews:** All treatment sections were posted with Herbicide Notice during and after treatments for at least 24 hours. Supervisors were notified when treatments were occurring in their district.
✓	**Schedule and oversee six weeks of chain gang time for large pulling projects:** Clallam County Chain Gang accomplished 5.75 weeks of weed control as directed by NWCB (based on a 5 person crew at 40 hour weeks)
✓	**Support volunteer opportunities for weed pulling projects as appropriate**: Coordinated and accomplished informational invasive weed night and ~10 person volunteer scotch broom pull event with Black Diamond Rd Community. The event cleared scotch broom from ~ 0.5 acre of county roadside in preparation for possibility of future native planting site. Supported "Weed Busters" volunteer group with removal equipment.
✓	**Identify "Adopt-a-Patch" locations appropriate for manual control that can be adopted by members of the public; post online before treatment season begins:** We selected a list of 20 adoptable roads based on the species present, severity of infestation, and location.
✓	**Develop online "Adopt-a-Patch" process and forms, including information about protocols, safety and required documentation:** We created protocols, agreement forms and posted an online process for the public to select from the list of 20 adoptable roads.
	Create *Report It!* forms so that road crews can report weed infestations: Did not create specific request form for internal requests from road crews. Public Request form published online for requesting weed treatment sites.
✓	**Discourage mowing of desirable native vegetation wherever possible:** Opened dialogue to incorporate native vegetation enhancement measures in mowing techniques.

✓	**Collaborate with mowing personnel to update mowing practices**: Opened dialogue with Supervisors and goals stated. Training scheduled in March.
✓	**Consult on road standards that maximize mowing effectiveness in regard to weed control:** Opened dialogue with Supervisors and goals stated.
	Cultural
✓	**Identify opportunities to use native plantings in the early stages of projects in the county's transport plan:** Opened dialogue with road engineers and supervisors. Potential sites located in Sequim and Port Angeles.
✓	**Develop roadside environmental typing system:** Master Gardner's Roadside Weed Monitoring Team completed environmental typing project of 40 county roads included in 2017 noxious weed treatments.
✓	**Compile list of plant material sources and needs from other government entities:** Began collaboration with local agencies including: USFS, Olympic National Park, DNR, and well as partner non-profit 10K Years Institute to address plant material needs and potential sources.
	Seek grant opportunities to implement pilot projects:
✓	**Foster partnership with Olympic National Park Matt Albright Native Plant Material Center to requisition native plant augmentation suitable for roadside needs:** Opened dialogue and draft contract exchanged with ONP as well as partner agencies/non-profits to coordinate native plant needs (Appendix H).
✓	**Compile roadside appropriate list of native or desirable grasses, forbs and shrubs from a literature search, WSDOT and Federal Highway System, and other entities with large right-of-way management responsibilities:** List created and distributed at Olympic Peninsula Invasive Working Group Meetings.
✓	**Partner with experts from local, state and federal agencies and entities including but not limited to: Clallam County Parks, Washington State University Extension, WSU Master Gardeners, local chapter of bee keepers, the native plant and Audubon societies, the Nature Conservancy, conservation districts, Olympic National Park, Olympic National Forest, USFW Marine Refuge System, Makah, Quileute, Lower Elwha Klallam, and Jamestown S'Klallam tribes, and others who have an interest in developing local native seed and plant resources for use in government projects:** Dialogue opened and topic discussed at Olympic Peninsula Invasive Working Group Meetings. Survey of county Parks, presentation with local beekeepers chapter, contact made with local Native Plant Society, discussing with each federal agency and local tribes. Meeting scheduled in January 2018 for local consortium.
✓	**Encourage landowners with "Owner Will Control" agreements to undertake adjacent roadside enhancement consistent with developing a low maintenance, self-sustaining plant community to prevent weed invasion. Include roadside appropriate list in "Owner Will Control" packet as it becomes available:** Created online protocols for "Owner Will Control" agreements - did not receive any applications in 2017.
	Preventative
✓	**Develop rock and gravel sources weed management protocols:** Developed rock and gravel source inspection protocols and created "Quarry Inspection Record for Invasive Plants" forms to provide standardized weed assessments for rock sources in the area. The record forms also include management strategies and requirements of use.
✓	**Inventory, develop and implement weed management plans for all county quarries, storage areas and spoil disposal sites:** Implemented weed management plans for 11 county sites.
✓	**Adopt weed free material requirements for all county projects:** Discussed with engineers and explained weed free requirement standards.
✓	**Develop clean equipment standards and requirements for all county projects:** Will submit, comments for new shoreline management may add requirement.
✓	**Provide inspection services for all privately sourced material for county projects that may be weed-contaminated:** Consulted with 5 private pits for 2017 season.
✓	C**ompile list of sources that meet weed-free standards:** Partial list included in NWCB USFS Report 2017

✓	**Facilitate annual department weed and native plant identification training in cooperation with weed board staff. Supply field crew with identification booklets. Provide plant identification services for field crew in cooperation with weed board staff:** Provided booklets, training scheduled March 2018
	Chemical
✓	**Implement project list based on tables 4-9 and planned reduction of category 2 weed sites:** Accomplished 2017 IWM Plan and began treatment on 65 county roadsides and 12 county rock sources/soil disposal sites. See Appendices C and D.
✓	**Complete treatment records:** Completed "Herbicide/Manual Treatment Record Form" for all noxious weed control activities (excluding manual treatments conducted by Chain Gang Only).
✓	**Enter data into Clallam county noxious weed control program (CCNWCB) database:** Complete
✓	**Post annual project list and treatments online. Update as often during season as resources allow:** NWCB periodically posted updated list of herbicide treatment locations to website.
✓	**Monitor at least 10% of all treatments, retreat as needed and as resources allow**: WSU Master Gardeners Roadside Weed Monitoring Team monitored 59% of roads treated 2017.
✓	**Conduct a weed inventory on at least 25% of all county roads annually**: In the course of treatment inventoried 20% of county road miles.
✓	**Identify, document and map additional species, location, size and density:** Mapped and recorded pertinent information on all species treated on county roadsides and rock sources in 2017.
✓	**Identify and compile a list of high priority infestations for following year. Create map:** In process.
✓	**Identify and compile a list of sites for revegetation appropriate opportunities:** WSU Master Gardeners RWMT provided list of sites suitable for revegetation projects after treatments (Appendix G).
✓	**Support four, volunteer-based projects either on or adjoining county property that protects county property from weed infestations. This may include monitoring, road-typing for revegetation, and revegetation projects:** Completed 2 volunteer-based projects - Master Gardeners Roadside Weed Monitoring Team carried out the independent monitoring, environmental typing and revegetation assessments. We also carried out a volunteer-based scotch broom pull event with the help of the Black Diamond Community.
✓	**Compile locations and instructions for special management areas. Include and update field maps as frequently as needed:** No special management areas identified in 2017; treatment areas were tailored in the field to avoid adjacent special management areas such as organic farms and sensitive persons.
✓	**Promptly respond to all public inquiries. Address any public concerns regarding applications:** Complete. Provided project information and specific activity information to over 100 individuals in the field.
✓	**Manage "Owner Will Control" agreements**: Complete.
✓	**Develop on-line self-serve, "Owner Will Control" application process and forms:** Complete.
✓	**Maintain current list and map of "Owner Will Control" locations for both office and field use:** Complete.
	Develop on-line Report It! Process and forms:
	Develop on-line Monitor it! Process and forms:
✓	**Compile annual report summarizing accomplishments, effectiveness, and recommendations for subsequent year. Brief the Road Department and County Commissioners by December 31st:** In process.
✓	**Draft IWM plan and submit to the Clallam County Noxious Weed Control Board and Road Department Supervisor for approval prior to the Weed Board's first meeting of the year. Submission of the IWM plan should occur 20 days before the meeting, and should be posted online. Provide public notice that plan will be discussed, with weed board meeting announcements. The finalized plan and a map of proposed treatment locations should be posted online and made available upon public request:** In process.

[1]Blue check marks indicate total completion of task; Yellow check marks indicate partial completion.

Appendix B: Weed Species Treated on County Roadsides and Rock Sources 2017

The table below alphabetically lists all weed species controlled in 2017 on County roadsides or rock sources/soil disposal sites (Pits). The species listed in Green were treated on **roadsides** only; species listed in Pink were treated in **Pits** only. Species without color coding were treated on both roadsides and pits. Definitions of headings can be found at the end of the table. Clallam County Noxious Weed List available online: **http://www.clallam.net/Weed/**

Common Name	4-Letter Weed Code	Scientific Name	Life Cycle[1]	Growth Form	Threat	Cate-gory	Status
alyssum, hoary	BEIN	*Berteroa incana*	A, B, P	Forb	Aggressive invader in fields of forage crops; toxic to horses	1	NCR
bindweed, field	COAR	Convolvulus arvensis	P	Forb	Seriously interferes with agriculture	1	NR
bindweed, hedge	CASE	*Calystegia sepium*	P	Forb - vine		3	WW
birdsrape mustard	BRRA	*Brassica rapa*	B	Forb	Can be toxic to livestock, can degrade agricultural seed production	2*	WW
blackberry, Himalayan	RUAR	*Rubus armeniacus*	P	Shrub	Dense canopies crowd out native species; impenetrable barrier	2	NW
broom, Scotch	CYSC	*Cytisus scoparius*	P	Shrub	Forms dense stands; unpalatable; interferes with forest regeneration; fire hazard; scent can exacerbate human grass allergies; seeds are toxic to horses and livestock	2	NW
burdock, common	ARLA	*Arctium lappa*	B	Forb	Forms large rosettes; hooked spines on seeds become entangled in fur of animals	2	WR
butterfly bush	BUDA	*Buddleia davidii*	P	shrub	Invades natural areas; dense stands crowd out native vegetation in riparian areas and interfere with natural succession	1	NR
canarygrass, reed	PHAR	*Phalaris arundinacea*	P	grass	Unpalatable unless young, forms dense stands that crowd out native plants; especially difficult to control; serious wetland invader; can stop the process of succession in riparian sites, impedes tree seedling establishment	2	NW
carrot, wild	DACA	*Daucus carota*	B	Forb	Damages agricultural commodity as it may cross pollinates with domestic carrot, seriously degrading the quality of commercial carrot seed production	2	NW
chicory	CIIN	*Cichorium intybus*	P	Forb	Only found in the Dungeness Valley where it is starting to spread	1	ISSC
cinquefoil, sulfur	PORE	*Potentilla recta*	P	Forb	Not readily grazed by livestock and wildlife; forms dense stands	1	NCR
common mullein	VETH	*Verbascum thapsus*	B	Forb		3*	WW
English hawthorn	CRMO	*Crataegus monogyna*	P	Shrub	English hawthorn is carried by birds into forests and open fields where it can form dense, thorny thickets that outcompete native species	2*	NR
English holly	ILAQ	*Ilex aquifolium*	P	Shrub	Dense thickets can dominate shrub layer and suppress desirable vegetation	3*	WW
fennel, common*	FOVU	*Foeniculum vulgare*	P	Forb	Dense stands exclude native vegetation	1	NCR
fox glove	DIPU	*Digitalis purpurea*	B	Forb	Can be toxic to livestock; spreads aggressively in disturbed areas	3	WW
nightshade, hairy	SOSA	*Solanum physalifolium*	P	Forb	Can be toxic to humans and livestock; limited distribution	1*	WR

Common Name	4-Letter Weed Code	Scientific Name	Life Cycle[1]	Growth Form	Threat	Cate-gory	Status
herb Robert	GERO	*Geranium robertianum*	A, B	Forb	Rapid spreading; displaces native herbaceous plants; allelopathic, inhibits the germination of small seeded forbs in forest understory	1	N
knapweed, diffuse	CEDI	*Centaurea diffusa*	B, P	Forb	Spreads seed by tumbling; prickly flower heads; unpalatable after early spring	1	NCR
knapweed, meadow	CEDE	*Centaurea x moncktonii*	P	Forb	Outcompetes pasture species; degrades wildlife habitat; interferes with agriculture	1	NCR
knapweed, spotted	CEST	*Centaurea stoebe*	B	Forb	Allelopathic plant that can inhibit the germination of grasses; forms dense stands that exclude desired plants and wildlife	1	NCR
knotweed, Bohemian	POBO	*Polygonum x bohemicum*	P	Subshrub	Easily spreads by disturbance; dense colonies eliminate other plant species and can degrade fish habitat; causes structural damage to human structures	1	NCR
laurel, spurge	DALA	*Daphne laureola*	P	Shrub	Toxic to humans and animals; contact with plants can cause dermatitis	1	NR
peavine, everlasting	LALA	*Lathyrus latifolius*,	P	Forb - vine	Forms dense thickets; seeds can be toxic to livestock; seriously interferes with forest regeneration where it invades from edges of timber units	2	ISSC
poison hemlock	COMA	*Conium maculatum*	B	Forb	Highly toxic to humans and animals; all parts of the plant are toxic; severe birth defects	1	NCR
St Johnswort, common	HYPE	*Hypericum perforatum*	P	Forb	Causes photo-sensitization when grazed; toxic at all stages of growth	3	NW
tansy ragwort	SEJA	*Senecio jacobaea*	B	Forb	Poisonous to horses, cattle, and pigs; animals grazing tansy can produce tainted milk, may result in potentially toxic residue in honey	1	NCR
tansy, common	TAVU	*Tanacetum vulgare*	P	Forb	Dense stands degrade forage value; toxicity issues for humans and livestock	1	NR
teasel, common	DIFU	*Dipsacus fullonum*	B	Forb	Forms dense stands of prickly, unpalatable plants; degrades habitat and reduces accessibility	1	NR
thistle, bull	CIVU	*Cirsium vulgare*	B	Forb	Aggressive competitor, unpalatable for cattle	2	NW
thistle, Canada	CIAR	*Cirsium arvense*	P	Forb	Aggressive competitor, unpalatable; decreases forage; host species for several agricultural pests	2	NW
whitetop, hairy	LEAP	*Lepidium appelianum*	P	Forb	Monocultures displace desirable plants; unpalatable; can be form toxic to cattle	1	NR
wormwood, absinth	ARAB	*Artemisia absinthium*	P	Shrub	Aggressive invader, will outcompete desirable forbs and grasses in pastures, fields and native grasslands; plants have a strong bitter taste and odor, may affect milk quality	1	NR
yellow archangel	LAGA	*Lamiastrum galeobdolon*	P	Forb-vine	Aggressive invader, competes understory species, degrades wildlife habitat	1*	NCR
white sweet clover	MEAL	*Melilotus albus*	A	Forb	Toxicity issues for livestock; aggressive invader. County piles cleared	3*	WW
yellow hawkweed	HICA	*Hieracium caespitosum*	P	Forb	Dense stands exclude other species; bitter and unpalatable, little forage for livestock and wildlife	1*	NCR

*Species of concern for treatment identified on County lands after 2017 IWM Plan was published

[1] A - annual; B - biennial; P - perennial

ISSC = **I**nvasive **S**pecies of **S**pecial **C**oncern, **NCR** = **N**oxious, **C**ontrol **R**equired**,** **NR** = **N**oxious**,** **R**are **NW** = **N**oxious, **W**idespread

WR = **W**eedy**,** **R**are, **WW** = **W**eedy**,** **W**idespread

Appendix C: 2017 Roadside Treatment Activities:

This table includes all county roadsides managed for noxious weeds in 2017 under the 2017 Clallam County Road Department Integrated Weed Management Plan. The table is sorted alphabetically by county road name. The table contains the **Species Treated**, **Examined Acres**, **Treated Acres**, **Manual Acres**, **and Solid Treated Acres** for each day a road was worked on; definitions of these headings can be found at the end of the table.

We completed a total of **102 miles (198.4 examined acres)** of county roadside comprised of: **46.2 miles** with herbicide treatment only, **15.9 miles** with herbicide and manual treatment and **39.9 miles** of manual treatment only. Herbicide treatment occurred within a total **129 acres** and encompassed an estimated **13.3 acres** of solid treated acres. We recorded a total of **0.2 acres** (9,000 square feet, including >651 plants) of manual control; however, when we used a combination of manual and herbicide control, manual area was included in the herbicide area and therefore underreported. Two roads were only surveyed and not treated due to inclement weather. The species names and relevant information related to the 4-letter code listed can be found in Appendix B.

Road Name	Treatment Method[1]	Date	Total Miles	Examined Acres[2]	Treated Acres[3]	[4]Solid Treated Acres (herbicide)	Manual Acres[5]	Species Treated[6] (4 – letter Code)
ASTER RD	M	8/30	0.01	0.50	0.00009	-	0.00006	**SEJA**
BLACK DIAMOND RD	H, M	8/21	4.81	4.23	4.23269	0.191	0.00052	**CEDE**, CIAR, **DIFU**, CIVU, CYSC
BLUE MOUNTAIN RD	M	7/19	5.40	6.42	0.00344	-	0.00019	**SEJA**
CAMERON RD	H	10/4	0.75	1.35	1.35000	0.086	0.00002	CIAR, CYSC, ***SOSA***
CAT LAKE RD	M	8/30	0.50	1.30	1.30000	-	0.00013	**SEJA**
CHARLEY CREEK RD	H	10/2	1.30	1.90	0.05000	0.023	-	**POBO**, ***LAGA***
CHICKEN COOP RD	M	6/1	3.50	4.40	4.40000	-	0.08843	**SEJA**, **DIFU**
DAN KELLY RD	M	7/20	3.14	3.75	0.57000	-	0.01148	**SEJA**
DEMPSEY RD	S	9/19	0.70	1.30	0.00000	-	-	GERO, CIAR
DISCOVERY VIEW DR	M	7/31	0.50	0.60	0.00184	-	0.00069	**SEJA**
DOROTHEA WAY	M	8/8	0.10	0.07	0.07117	-	0.00142	**BEIN**
DUNGENESS DIKE**	H	6/7	1.80	4.42	4.42000	0.413	-	**COMA**, CIAR, CIVU, GERO
EAST BEACH RD	H	8/31	0.20	0.40	0.40000	0.230	-	**CEDE**
		9/7	0.43	0.82	0.82000	0.580	-	**CEDE**
EAST LYRE RIVER RD	H	8/23	0.47	0.77	0.77000	0.161	-	**CEDE**, GERO, **SEJA**, CIVU, **DIPU**
EASTERLY RD	H	7/31	0.23	0.40	0.40000	0.021	-	CIAR, **CEDE**, HYPE, GERO, DACA, CYSC
EDEN VALLEY RD	M	7/20	1.80	3.60	0.00230	-	0.00063	**SEJA**, **DIFU**

Road Name	Treatment Method[1]	Date	Total Miles	Examined Acres[2]	Treated Acres[3]	[4]Solid Treated Acres (herbicide)	Manual Acres[5]	Species Treated[6] (4 – letter Code)
ELWHA RIVER RD	H	9/18	1.70	3.20	1.50000	0.069	-	CIAR, GERO
FARRINGTON RD	H	8/9	0.23	0.50	0.50000	0.069	-	CIAR, **SEJA**, **CEDE**, CASE, CYSC
	M	8/23	0.87	1.65	1.65289	-	0.00005	**SEJA**
FISHER COVE RD	H	8/23	0.80	1.20	1.20000	0.092	-	**CEDE**, HYPE, CIAR, ***TAVU***
FLEMING DR	M	8/30	0.50	0.60	0.00009	-	0.00007	**SEJA**
FORS RD	M	8/21	0.23	0.25	0.25000	-	0.00040	CYSC, CIVU, **SEJA**
GASMAN RD	M	7/19	2.00	1.80	0.00092	-	0.00016	**SEJA**
GOSSETT RD	H	8/23	1.20	2.30	2.30000	0.063	-	**CEDE**, CIAR, GERO
HAPPY VALLEY RD	H	8/2	0.90	2.10	2.10000	0.631	-	LALA, **CEDE**, DACA, CIAR, HYPE, CIIN, **DIFU**, CIVU
		8/10	2.00	2.60	2.60000	0.333	-	CIIN, **CEDE**, **CEST**, CYSC, BUDA, HYPE, CIAR, LALA
	H, M	7/31	1.70	3.30	2.52121	0.138	0.00075	**CEDE**, DACA, HYPE, **SEJA**
		8/7	1.30	3.78	3.78000	0.471	0.02000	**CEDE**, **DIFU**, CIAR, CIVU, CIIN, **SEJA**, HYPE
HERMISON RD - EDRR	H	7/25	0.25	0.60	0.60000	0.052	-	**POBO**, **SEJA**
HOKO-OZETTE RD	H	9/6	-	0.3325	0.33250	0.018	-	**POBO**
INDUSTRIAL PKWY	M	8/30	0.45	0.60	0.00080	-	0.00064	**SEJA**
JOHNSON CREEK RD	H	7/31	0.25	0.60	0.60000	0.156	-	**CEDE**, CIVU, DACA, CYSC, CIAR
KITCHEN-DICK RD	H	10/9	2.90	5.60	5.60000	1.102	-	CIAR, CIVU, CYSC, **DIFU**, ***TAVU***, **BEIN**, **SEJA**, VETH, CRMO, **CEDE**, **CEST**, **CEDI**, **COAR** , **LEAP**, **COMA**, RUAR, HYPE, ARAB
LAIRD RD	H	9/11	0.89	1.70	1.70000	0.103	0.00002	CYSC, **CEDE**, CIAR, HYPE, **SEJA**
LITTLE RIVER RD	H	8/16	2.70	4.10	4.10000	0.803	-	**CEDE**, CYSC, GERO, CIVU, LALA, **SEJA**
		8/21	0.19	0.37	0.36731	0.016	-	**CEDE**
LUPINE DR	M	8/30	0.50	0.80	0.00069	-	0.00005	**SEJA**
MADRONA WAY	M	8/30	1.10	1.60	0.01400	-	0.00245	**SEJA**
MARY CLARK RD	H, M	7/31	7.60	30.50	2.65000	0.132	-	PHAR, **SEJA**, HYPE
MCGARVIE RD	M	8/23	0.20	0.30	0.00230	-	0.00002	**SEJA**

Road Name	Treatment Method[1]	Date	Total Miles	Examined Acres[2]	Treated Acres[3]	[4]Solid Treated Acres (herbicide)	Manual Acres[5]	Species Treated[6] (4 – letter Code)
MORA RD	M	7/28	0.60	2.20	2.20000	-	2.2000*	**SEJA**, HYPE
N BARR RD	M	7/19	1.30	0.91	0.00138	-	0.00024	**SEJA**
O'BRIEN RD	M	7/19	3.80	4.50	0.00021	-	0.00013	**SEJA**
OLD OLYMPIC HIGHWAY	H	9/26	2.50	11.60	11.6000	1.492	-	CIAR, CYSC, ***TAVU***, HYPE, CIVU, **SEJA**, **CEST, *SOSA***
		9/27	4.20	10.20	10.2000	1.492	-	CIAR, CYSC, LALA, **CEST**, **CEDE**, **COMA**, BUDA, ***TAVU***, **SEJA**, ARAB, ***DALA***, VETH, ILAQ, **COAR**
	M	6/1	0.00	0.01	0.00600	-	0.00215	**COMA**
		6/28	0.20	0.60	0.01100	-	0.00201	**COMA**
OLYMPIC HOT SPRINGS RD	H	8/31	2.10	3.40	3.40000	0.815	-	**CEDE**, CIAR, GERO, CYSC, **SEJA**, ***TAVU***, LALA
PALO ALTO RD	H	8/14	5.75	8.40	8.40000	0.138	0.01000	**CEDE**, HYPE, CIAR, CYSC, ***PORE***, **SEJA**
	M	7/18	7.75	10.20	10.20000	-	0.05100	**SEJA**
PINNELL RD	H	8/28	0.50	0.25	0.25000	0.023	-	CIAR, **CEDE**, LALA
POPLAR CT	M	7/31	0.04	0.09	0.00287	-	0.00108	**SEJA**
POWER PLANT RD	H	9/18	0.80	1.50	1.50000	0.017	-	**POBO**, **CEDE**, **SEJA**
QUILLAYUTE RD - EDRR	M	7/28	0.31	1.10	1.10000	-	1.1000*	**SEJA**, HYPE
	H	7/24	-	0.2	0.05	0.200	-	PHAR, **SEJA**, CIAR
		8/1	3.00	2	2	0.161	-	PHAR, **SEJA**, CIAR
RHODODENDRON DR	M	7/31	0.85	0.90	0.00459	-	0.00172	**SEJA**
RIFE RD	H	9/18	0.01	1.00	0.00100	0.001	-	**POBO**
RIVER RD	H	8/28	2.70	5.23	5.23000	0.459	-	**CEST**, **CEDE**, CYSC, ***TAVU***, CIAR, ***PORE***, ***FOVU***
SALAL WAY	M	8/28	0.40	0.55	0.00009	-	0.00006	**SEJA**
SCHMITT RD	M	8/23	0.40	0.77	0.00115	-	0.00009	**SEJA**
SEQUIM-DUNGENESS WAY	M	7/11	0.25	1.30	0.00057	-	0.00022	**COMA**
SHERWOOD RD	M	8/28	0.30	0.45	0.00689	-	0.00052	**SEJA**

Road Name	Treatment Method[1]	Date	Total Miles	Examined Acres[2]	Treated Acres[3]	[4]Solid Treated Acres (herbicide)	Manual Acres[5]	Species Treated[6] (4 – letter Code)
S BAGLEY CREEK RD	H	9/20	0.15	0.50	0.50000	0.092	-	**POBO**
SUNSHINE PLZ	M	8/30	2.00	0.45	0.01033	-	0.00041	**SEJA**
TURNSTONE LANE	H	8/28	0.33	0.75	0.75000	0.161	-	**CEST**, BUDA, CYSC
W EDGEWOOD DR	H	9/11	2.20	4.20	3.80000	0.184	-	CYSC, **CEDE**, HYPE, CIAR, LALA, **SEJA**
W LAURIDSEN BLVD	H	9/18	0.50	1.95	1.95000	0.103	-	**CEDE**, ***TAVU***
		9/21	0.25	0.70	0.70000	0.275	-	**CEDE**, ***TAVU***
W WASHINGTON ST	H	8/28	0.47	0.80	0.80000	0.115	-	**CEST**, ***DALA***, CIAR
WEST LAKE PLEASANT RD	H	10/2	1.20	2.20	0.40000	0.006	-	**POBO**
WEST LYRE RIVER RD	H	8/23	0.60	1.20	1.20000	0.551	-	**CEDE**, **SEJA**
WASANKARI RD	S	9/19	0.60	1.20	0.00000	-	-	LALA, CYSC
WHISKEY CREEK BEACH RD	H, M	8/23	0.50	1.00	0.10000	0.006	0.00060	CIVU, **SEJA**, **CEDE**
WOODCOCK RD	H	10/4	2.80	5.85	5.85000	1.079	-	***TAVU***, CIAR, **COMA**, CYSC, HYPE, **CEDE**, LALA, ***FOVU***, ***SOSA***
WOODS RD	M	7/18	0.90	3.60	3.60000	-	0.00720	**SEJA**
Total Roads: **64**		Days: **36**	**102.0**	**198.4**	**129.0**	**13.3**	**0.2**	RUAR, **COAR**, CIAR, ***TAVU***, **POBO**, **CEDE**, GERO, LALA, CYSC, **CEST**, **SEJA**, CIVU, CIIN, PHAR, ***LAGA***, ***DALA***, **DIFU**, DACA, ***SOSA***, CASE, DIPU, ***PORE***, **BEIN**, ***FOVU***, VETH, CRMO, ARAB, **CEDI**, ILAQ, **LEAP,** BUDA, **COMA,** HYPE

[1]**M** – Manual Control; **H**- Herbicide Control; **H, M** – Both Manual and Herbicide Control; **S** – Survey Only

[2]**Examined Acres** – The total area searched for noxious weeds while crew was involved in treatment activities

[3]**Treated Acres** – The total area encompassing all herbicide treatments per road per day

[4]**Solid Treated Acres** – The estimated area that would be covered 100% with noxious weeds if the plants were "clumped" together; calculated using the tank mix volume applied and calibrated sprayer output.

[5]**Manual Acres** – The area controlled by any manual means (pulling, digging, cutting, etc.) that does not include the spaces between weeds; the area is either estimated in field and recorded on "Herbicide/Manual Treatment Data Form" or estimated using footage and infestation cover class

[6]**Species Treated** – The 4-Letter Weed codes correspond to the species scientific name and can be found in Appendix B. Codes in **Bold** indicate target species and ***Bold/Italicized*** codes indicate a target species not previously known on given road.

*Data reported did not include cover class information and could not be converted to comparable unit

**Dungeness Dike is included into IWM Plan under "land management responsibilities for... Non-roadside properties"

Appendix D: County Rock Sources/Soil Disposal Site Treatment Activities

The table lists all County rocks source/soil disposal sites (Pits) treated in 2017 and is organized by number of treatment days from (most to fewest). We accomplished control work in **12** Pits for a total of **25** weed species over **24 days** of treatment. We estimated at total of **52.2** examined acres. The Chain Gang partnered with the Noxious Weed Control Board staff to assist in weed control in pits. When NWCB staff was not present the Chain Gang complete manually controlled the pit corridors and strategic areas for scotch broom and tansy ragwort; they also removed all invasive vegetation from standing rock piles. The Chain Gang accomplished **12 days** of control for county pits without NWCB staff present and estimated they pulled **10920** Scotch Broom plants.

Quarry Name	Treatment Method[1]	Date	Examined Acres[2]	Treated Acres[3]	Solid Treated Acres[4] (Herbicide)	Manual Acres[5]	Scotch Broom Pulled (Estimated)	Species Treated[6] (4-letter sp code)
Morse Creek Pit	H	6/2	2.7	2.7	0.349	-	0	POBO, COMA, SEJA, RUAR, CYSC, CASE
		6/6	0.75	0.75	0.034	-	0	SEJA, COMA, CASE, HICA
		6/9	7.1	7.1	0.333	-	0	CYSC, HYPE, CIAR, COMA, CIVU, HYPE, DACA
		10/4	0.33	0.33	0.023	-	0	CYSC
	M	7/19	-	-	-	0.015	150	CYSC
		7/20	-	-	-	0.120	1200	CYSC
Kirner Pit	H	6/6	4.7	4.7	0.103	-	0	COMA, CEST, DIFU
		6/22	14	14	0.482	-	0	CEST, POBO, COMA, CYSC, HYPE, CIAR, ARLA, CASE, DIFU, CIIN, BRRA, CIVU, RUAR, LALA, VETH, ARAB, DIPU, BUDA
	M	9/12	-	-	-	0.042	420	CYSC
		9/19	-	-	-	0.015	150	CYSC
		9/20	-	-	-	0.040	400	CYSC
Quilayute Pit	M	8/1	-	-	-	0.120	1200	CYSC, SEJA
		8/7	-	-	-	0.135	1350	CYSC
		8/10	-	-	-	0.210	2100	CYSC
		8/22	-	-	-	0.100	1000	CYSC
Ranger Pit	H	9/6	2	2	0.080	-	0	CYSC, BUDA
		9/11	1	1	0.069	-	0	CYSC, CEDE, LALA, CIAR
	H, M	7/17	1.27	1.27	0.095	0.006	NA	CYSC, DIFU
		7/18	3.84	3.84	0.138	1.291	0	POBO, CYSC, PHAR, RUAR

Quarry Name	Treatment Method[1]	Date	Examined Acres[2]	Treated Acres[3]	Solid Treated Acres[4] (Herbicide)	Manual Acres[5]	Scotch Broom Pulled (Estimated)	Species Treated[6] (4-letter sp code)
Whitcomb-Dimmel	H	7/19	2	2	0.069	-	NA	POBO, SEJA, RUAR, CYSC
	M M	9/4	-	-	-	0.090	900	CYSC, SEJA
		9/6	-	-	-	0.180	1800	CYSC, SEJA
McInnes Pit	H, M	7/24	2.7	2.7	0.138	0.122	NA	CEDE, COMA, CIIN, CYSC
	M	6/26	0.142		-	0.142	0	COMA
County Shop (PA)	M	7/20	-	-	-	0.015	150	CYSC
		7/25	-	-	-	0.010	100	CYSC
No Name Pit	H, M	8/16	1	1	0.023	-	0	CEDE, SEJA
		8/21	1	1	0.092	0.003	0	GERO, CYSC, CIVU, CIAR, CASE, LALA, SEJA
La Push Ballard Pit	H, M	7/25	1.43	1.43	0.011	0.029	0	POBO, RUAR, CYSC, SEJA
Lake Creek/ Bedrock Pit	H, M	7/25	5	5	0.011	0.081	NA	CYSC, MEAL, RUAR, SEJA, POBO
Place Pit	H, M	9/19	1.2	1.2	0.069	0.001	0	CYSC, CIAR, POBO, DIFU
Hoko-Ozette Pit	H	9/6	0.05	0.05	0.0021	-	0	POBO
Total Pits: **12**		Days: **24**	**52.2***	**52.1**	**2.12**	**2.767**	**10920**	CYSC, COMA, CEST, POBO, CEDE, SEJA, GERO, RUAR, MEAL, BUDA, DIFU, CIAR, CIIN, CASE, HYPE, LALA, PHAR, CIVU, HICA, ARLA, DACA, BRRA, VETH, ARAB, DIPU

[1]**M** – Manual Control; **H**- Herbicide Control; **H, M** – Both Manual and Herbicide Control

[2]**Examined Acres** – The total area searched for noxious weeds during treatment; data not reported for dates with manual control ONLY when NWCB staff not present Searched areas of different dates in the same pit may have overlapped in examining for different weed species

[3]**Treated Acres** - The total area encompassing all herbicide treatments per pit per day

[4]**Solid Treated Acres** – The estimated area that would be covered 100% with noxious weeds if the plants were "clumped" together; calculated using the tank mix volume applied and calibrated sprayer output.

[5]**Manual Acres** – The area controlled by any manual means (pulling, digging, cutting, etc.) that does not include the spaces between weeds; the area is either estimated in field and recorded on "Herbicide/Manual Treatment Data Form" or calculated using the Chain Gang's estimated number of scotch broom pulled as follows:
1000 scotch broom pulled = 0.1 manual acres treated

[6]**Species Treated** – The 4-Letter Weed codes correspond to the species scientific name and can be found in Appendix B.

*Likely under reported due to chain gang officers did not report examined acres in their reporting and was only included when available.

Appendix E: Herbicide Volumes by County Road and Rock Source

The table alphabetically lists the county roads and rock sources that received herbicide treatment in 2017. The table includes the trade name of herbicides used and amounts applied in ounces per treated road section (Note: 1 oz equals 2 tablespoons). The **Treated Road Section** lists the portions for each road where herbicide application may have occurred. Herbicide applications within the listed boundaries were only made to noxious weeds and exact treatment locations varied with individual plant locations. We applied a total of **6.23 gallons** on County roadsides and used **2.08 gallons** for County rock sources. Milestone® was used on **27** of the **36** roads included in chemical treatment and was chosen for its extremely low rate (**0.125% solution**) and extremely low toxicity. Additional herbicides were included when necessary for specific weed species and infestation locations (Vastlan® or Element 3A® was added for efficacy with woody species e.g. scotches broom, butterfly bush, chicory; Polaris® was used for Knotweed (sp) only; and Aqua Neat® was only used on 3 select roads for treatment by West end partners – Makah Tribe and 10K Years Institute). Treatment dates and locations posted periodically during treatments is available online: **http://www.clallam.net/Weed/iwmp.html**

Road Name	Treated Road Section[6]	Total Miles	Milestone[1] (Oz)	Element 3A[2] (Oz)	Vastlan[3] (Oz)	Polaris[4] (Oz)	Aqua Neat[5] (Oz)
Black Diamond Rd	JCT w/ Littler River Rd to JCT w/ Hwy 101	4.81	1.4	-	-	-	-
Cameron Rd	JCT w/ Woodcock Rd to JCT w/ Hwy 101	0.75	0.6	8	-	-	-
Charley Creek Rd	JCT w/ Hwy 112 to Terminus	1.30	-	-	-	1	-
Dungeness Dike	NA	1.80	-	-	23	-	-
East Beach Rd	JCT w/ Hwy 101 to East Beach Day-Use Area	0.63	5.6	-	23	-	-
East Lyre River Rd	141 E lyre River Rd to 71 E Lyre River Rd	0.47	1.2	14	-	-	-
Easterly Rd	JCT w/ Johnson Creek Rd and Terminus	0.23	0.1	-	-	-	-
Elwha River Rd	JCT w/ Hwy 112 to JCT w/ Laird Rd	1.70	0.5	-	4	-	-
Farrington Rd	583 Farrington Rd to 890 Farrington Rd	0.23	0.5	-	4	-	-
Fisher Cove Rd	JCT w/ Hwy 101 to Terminus	0.80	0.6	8	-	-	-
Gossett Rd	JCT w/ Hwy 112 to Terminus	1.20	0.4	5	-	-	-
Happy Valley Rd	JCT w/ Hwy 101 to River Rd	5.90	11.3	-	3	-	-
Hermison Rd	182 Hermison Rd to 860 Hermison Rd	0.25	-	-	-	3	-
Hoko-Ozette Rd	JCT w/ Hwy 112 to Umbrella Creek	-	-	-	-	1	5
Johnson Creek Rd	JCT w/ Easterly Rd to JCT w/ Happy Valley Rd	0.25	1.1	-	-	-	-
Kitchen-Dick Rd	JCT w/ Hwy 101 to 2834 Kitchen-Dick Rd	2.90	7.7	96	-	-	-
Laird Rd	JCT w/ Hwy 101 to Edgewood Dr	0.89	0.8	-	6	-	-
Little River Rd	JCT w/ Olympic Hot Springs Rd to JCT w/ Black Diamond Rd	2.89	5.9	-	-	-	-
Mary Clark Rd	JCT w/ Hwy 101 to Cooper Ranch Rd	7.60	-	8	-	-	7
Old Olympic Highway	JCT w/ Hwy 101 to JCT w/ Grandview Rd	6.70	20.8	-	166	-	-
Olympic Hot Springs Rd	JCT w/ Hwy 101 to Madison Falls Trailhead	2.10	5.9	-	24	-	-
Palo Alto Rd	1883 Palo Alto Rd to 6825 Palo alto Rd	5.75	1.0	-	-	-	-
Pinnell Rd	JCT w/ Vautier Rd to 298 Pinnell Rd	0.50	0.2	2	-	-	-
Power Plant Rd	JCT w/ Laird Rd to JCT w/ Hwy 112	0.80	0.1	-	1	0.3*	-
Quillayute Rd	JCT w/ Hwy 112 to JCT w/ Moriarty Rd	3.00	-	-	-	-	49
Rife Rd	JCT w/ Edgewood Dr to 22 Rife Rd	0.01	-	-	-	0.01*	-
River Road	JCT w/ Hwy 101 to Kinkade rd	2.70	3.2	38	-	-	-
South Bagley Creek Rd	JCT w/ James Page Rd to 798 S Bagley Rd	0.15	-	-	-	5	-

Road Name	Treated Road Section[6]	Total Miles	Milestone[1] (Oz)	Element 3A[2] (Oz)	Vastlan[3] (Oz)	Polaris[4] (Oz)	Aqua Neat[5] (Oz)
Turnstone Ln	Terminus to 330 Turnstone Ln	0.33	1.0	14	-	-	-
W Edgewood Dr	JCT w/ Laird Rd to JCT w/ Airport Rd	2.20	1.6	-	6	-	-
W Lauridsen Blvd	JCT w/ S L st to JCT w/ S Bean St	0.75	2.2	-	18	-	-
W Washington St	JCT w/ River Rd to JCT w/ Kaiser Pl	0.47	0.8	10	-	-	-
West Lake Pleasant Rd	JCT w/ Hwy 101 to Terminus	1.20	-	-	-	0.3*	-
West Lyre River Rd	2 W Lyre River Rd to 536 W Lyre River Rd	0.60	9.0	48	-	-	-
Whiskey Creek Beach Rd	JCT w/ Hwy 112 to Schmitt Rd	0.50	0.04*	1	-	-	-
Woodcock Rd	JCT w/ Territory Rd to JCT w/ Cameron Rd	2.80	7.8	94	-	-	-
Total Roads: **36**		**62.2**	91.4 (oz)	345 (oz)	277 (oz)	11 (oz)	12 (oz)
			0.7 (gal)	**2.7 (gal)**	**2.1 (gal)**	**0.1 (gal)**	**0.1 (gal)**

County Rock Sources	Treated Road Section**		Milestone[1] (Oz)	Element 3A[2] (Oz)	Vastlan[3] (Oz)	Polaris[4] (Oz)	Aqua Neat[5] (Oz)
Kirner Pit	-	-	-	-	31	2.60	9
La Push Ballard Pit	-	-	-	-	-	0.66	-
Lake Creek/ Bedrock Pit	-	-	-	-	-	0.67	-
McInnes Pit	-	-	-	-	8	-	-
Morse Creek Pit	-	-	5.2	-	36	8	29
Whitcomb-Dimmel	-	-	-	-	-	4	-
Ranger Pit	-	-	0.5	-	110	12	-
No Name Little River Pit	-	-	0.8	4	-	-	-
Place Pit	-	-	0.2	-	1	3	-
Hoko-Ozette Pit	-	-	-	-	-	0.1*	-
Total Pits: **10**		**-**	6.7 (oz)	4 (oz)	187 (oz)	31 (oz)	38 (oz)
			0.1 (gal)	**0.03 (gal)**	**1.5 (gal)**	**0.2 (gal)**	**0.3 (gal)**

[1]**Milestone**® - Active ingredient: *aminopyralid*; in 0.125% solution
[2]**Element 3A**®- Active ingredient: *triclopyr*; in 1-2% solution on roadsides, 25-50% solution used in pits for cut stump ONLY
[3]**Vastlan**®**-** Active ingredient: *triclopyr*; in 0.5-1% solution
[4]**Polaris**® - Active ingredient: *imazapyr* in 1% solution
[5]**Aqua Neat**® - Active ingredient: *glyphosate* in 2% solution in Morse Creek Pit and by partner agencies (Makah Tribe, 10K Years Institute) on Mary Clark rd, Quilayute rd, and Hoko-Ozette rd
[6]**Treated Road Section** – the approximate linear extent of road where herbicide application may have occurred; herbicide was only applied to designated noxious weeds and exact locations of applications varied with individual plant locations.
*Herbicide amounts calculated and contain significant digits beyond what is measured in the field
**Treatment Extent not included in Count Rock Source table and treatment may have occurred anywhere within pit boundaries

Appendix F: Protocols

Project selection:

The focus of the Clallam County Road Department 2017 IWM was the control of state-listed noxious weeds and invasive, non-native weeds of special concern on Clallam County rights-of-way. The 2017 Work Plan's roads selected for herbicide treatment was the project outline. Prioritization and other project areas include:

- Roads selected for herbicide were prioritized by worst infestation of high priority weeds not successfully controlled through other practices and required for control under state law (knapweed (sp.) and knotweed infestations).
- Roads with high priority weeds suitable for manual control (biennials).
- County rock sources/soil disposal sites (Pits) most active or likely to contribute to spread of noxious weeds throughout the county. Pits suitable and effective for Chain Gang to work.
- Public and interagency requests for control, such as: Early Detection, Rapid Response (EDRR) sites, and Pit site preparation for upcoming County Road Engineer Projects.

Control Methods:

Chemical

- Used only EPA and WSDA approved aquatic formulation herbicides. The products chosen offered the greatest weed selectivity, maximized worker and public safety, offered lowest rates, and posed the lowest risk for wildlife and environment.
    - Milestone® - Active ingredient: aminopyralid; in 0.125% solution.
    - Element 3A®- Active ingredient: triclopyr; in 1-2% solution on roadsides, 25-50% solution used in pits for cut stump ONLY.
    - Vastlan®- Active ingredient: triclopyr; in 0.5-1% solution.
    - Polaris® - Active ingredient: imazapyr in 1% solution.
    - Aqua Neat® - Active ingredient: glyphosate in 2% solution in Morse Creek Pit and by partner agencies
- All proposed roadside application locations published online and notice listed in local newspaper in advance to treatments.
- Offered adjacent landowner agreements/volunteer alternatives to herbicide applications.
- All roadside applications completed by licensed applicators and were conducted on foot without the use of any mechanized equipment.
- Used spot treatments ONLY (no broadcast treatments), for specific weeds and included marker dye to aid in identification of treatment areas.
- Recorded complete herbicide application information on WSDA approved record form (Appendix J).
- Posted Herbicide Application Notices (Appendix I) to clearly mark treatment areas prior to all herbicide activity. Posted at all public intersections and at intervals of ½ mile or less.
- Mixed and loaded herbicides in locations that minimized risk of public exposure to concentrated chemicals and potential for spills.
- We observed strict compliance to product labels and to State and local regulations; including the use of appropriate personal protective equipment as described by product labels.

Physical

- Dug up newly established infestations of plants wherever practical and conditions favorable
- Cut and bagged heads of flowering biennial plants wherever feasible

Spatial Data collection and Mapping:

- NWCB staff carried a Garmin 78 pre-loaded with Montana Hunt Chip, which identified landowners (Meta data was set to NAD83 Harn, State Plane North 4601, and statue feet).
- GPS points were taken for significant events/weed sites, such as beginning/end of treatment areas or new weeds.
- Carried an Iphone 6 (provided by WDA) with ArcCollector Application with current Clallam County Parcel data
- Data was mapped and symbolized to Treatment Area Maps (Page 4).

Data Reporting and Monitoring:

- Supported WSU Master Gardener's RWMT with completed Herbicide/Manual Treatment Form and details.
- Published and routinely updated herbicide application information by road section to NWCB website

Detailed activity data published in the appendices to this report.

Appendix G: Clallam County Master Gardener Roadside Weed Management Monitoring Report 2017

The document below is a scanned copy of the report created by WSU Extension program's Master Gardeners. The report details the Master Gardener's role as independent monitoring team for the Clallam County Road Department Integrated Weed Management Plan. The report was written by Bruce Paper with the assistance of Brick Ayola and editing by the Roadside Weed Management Monitoring Team.

Clallam County Master Gardener
Roadside Weed Management Monitoring Report
2017

EXECUTIVE SUMMARY:

The Clallam County Master Gardeners Roadside Weed Management Monitoring Team (RWMMT) surveyed 43 of 45 road segments treated per Herbicide/Manual Treatment Data Forms (TDF). Per the Clallam County Integrated Weed Management Plan, knapweed and knotweed species were the 2017 high priority weed targets for herbicide application. Herbicide treatment efficacy for knapweed species ranges from marginal to complete, with an average efficacy rating of good. Knotweed species were only found at 2 of the 3 indicated sites and the herbicide treatment efficacy appeared to have no effect. Herbicide application was very precise. There was no collateral damage evident from over spraying or drift. The RWMMT documented live weeds during the monitoring process and provided GPS coordinates and/or street addresses.

BACKGROUND:

With the enactment of the new Clallam County Integrated Weed Management Plan in late 2016 it was deemed beneficial to have an impartial Monitor of the weed removal efficacy along Clallam County roadsides. Master Gardeners of Clallam County have been monitoring Clallam County road sides for the last 5 years noting specific noxious weeds and it was a natural to step into the role of Monitor for the new containment efforts on noxious weeds in Clallam County. The objective was to monitor the road sides that had been treated by the noxious weed staff primarily to evaluate the efficacy (the ability to produce a desired or intended result) of treatment. Also noted were certain site characteristics as well as the potential for roadside native plantings.

2017 RWMMT MONITORING:

Beginning in June, 5 Master Gardeners began the monitoring process. The team was given, over the course of the summer, completed 2017 Puget Sound Corps-CC-R Herbicide/Manual Treatment Data Forms (TDF) on treated sites (Appendix, Fig 1 A and B). The sites included not only Clallam County Roads but County Pits, a dike and a hiking trail. We confined our reporting activities to road sides using the Clallam County Integrated Weed Management Monitoring form [CCIWMMF] (Appendix, Fig 2 A and B). We attempted a non roadside monitoring session (Dungeness Dike) but were unsure of our boundaries and locations, so confined 2017 surveying to roadsides. Forty-five road side TDFs were given to us between June and September for monitoring purposes with the expectation that we could monitor a significant percentage of the treated sites. Several roads were treated more than once and some were done in segments which condensed to forty County roads. The team was able to monitor 38 of the 40 roads or 43 of the 45 roads noted on the TDFs. Of the two not done, we did not feel that it was efficient to go to west Clallam County near La Push for one small site and we did not get a definite location for the second (Wood) road. The treatment sites which the Master Gardeners monitored were in the east section of Clallam County clustered around and east of Sequim, on Diamond Point and the central portion of Clallam County clustered around and west of Port Angeles as far west as the Lyre River(Appendix, Table 1).

Twenty-five Clallam County listed noxious weed species were identified on the TDFs that we received (Appendix, Table 2). Primary attention was paid to meadow (CEDE) and spotted (CEST) knapweed species and tansy ragwort. Twenty-six of the 43 TDFs listed knapweed species and 27 indicated that tansy ragwort (SEJA) was present. The knapweed sites were sprayed and most of the tansy ragwort sites were manually treated. Interestingly, the knapweeds showed geographical preferences with the spotted clustered around Sequim while meadow knapweed was more common around and west of Port Angeles. Two other populous species that were found along the roadsides, as would be expected, were Scotch broom (CYSC) and Canada thistle (CIAR) which in some instances were treated, or surveyed and noted. The rest of the listed noxious weeds were much less frequent with a particular species being confined to less than 20% of the roadsides with limited presence along that specific road. Queen Anne's lace was widely distributed but rarely treated this year. Species such as bull thistle or St Johnswort were the other fairly frequent noxious weeds. About a third of the species monitored were found only along one or two roads.

The area along the roads, treated and then monitored for the more common noxious weeds, the knapweeds and tansy ragwort, was significant. Over a million and three/quarter square feet (41+acres) was treated for knapweed while the tansy ragwort treatment area included a million and a quarter square feet (28 acres). At the other end of the treatment scale several weeds occurred in less than a thousand square feet such as common tansy (TAVU). Density of weed coverage along a roadside was highly variable. As one would expect the smaller the area examined for a particular noxious weed the greater the coverage within that area although there were exceptions. This was noted with the bushes like St Johnswort or butterfly bushes or the bull thistle where 20 square feet of treatment area had a high coverage in that single area. While, if there was a treatment area of 100,000 sq. ft. the density of the coverage was usually lower. Again there were exceptions.

Our primary concern in the monitoring process was the efficacy of the noxious weed crews. The developed efficacy data, which resulted from our monitoring, corresponds to the prescribed code found on the CCIWMMF (Appendix, Fig 2B). Code numbers are stepped, related to percent of efficacy ratings. A code rating of zero to fifteen was not good. Sixty-five was considered a tipping point for success or failure at a site. Anything higher than 65 up to 95 was great and an evaluation of 100 was supposed to be complete. However, an evaluation of 100 by the monitor team has variable meanings. It could mean that the treatment was 100% effective or unknown or even 0%. Without specific locations of small infestations it was impossible to determine if the weed was gone or we couldn't find it. It is impossible to find a patch of a weed that has been manually removed without a location except that it was along that 3 mile stretch of road. There may have been a second patch of the weed if one was found that looked untreated. Monitoring was done from 2 weeks to 2 months after treatment.

With the abundance of knapweed along the roadsides there was usually the evidence of dead plants or healthy ones with a pinkish bloom or two. So the problem associated with the 100% codes when evaluating the knapweed populations was nonexistent. In looking at the data, it was noted that the efficacy ratings were high or for the most part, 65 or above but there was the noted distribution pattern with the spotted more commonly found around Sequim.

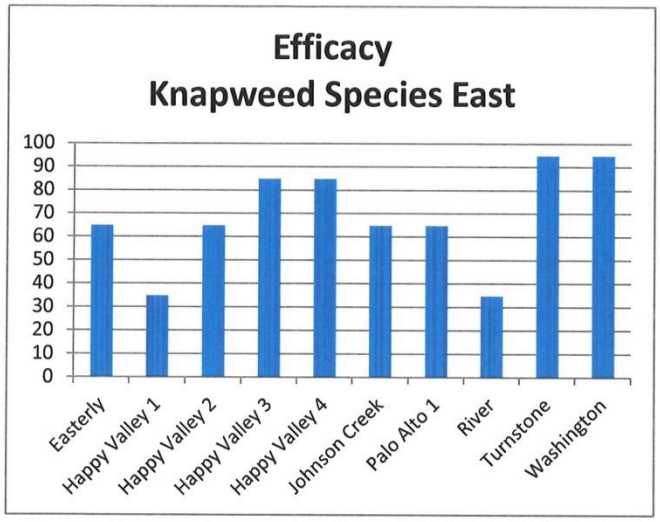


Fig .1 Efficacy Code Ratings for knapweed in the eastern portion of Clallam County

Also, the efficacy ratings tended to be lower around the Sequim area with the east portion of Happy Valley Road and River Road showing marginal results from spraying (Fig.1). The rest of the eastern knapweed sites varied from fair (65) to excellent for Washington and Turnstone. Around and west of Port Angeles the code ratings tended to be much higher, on

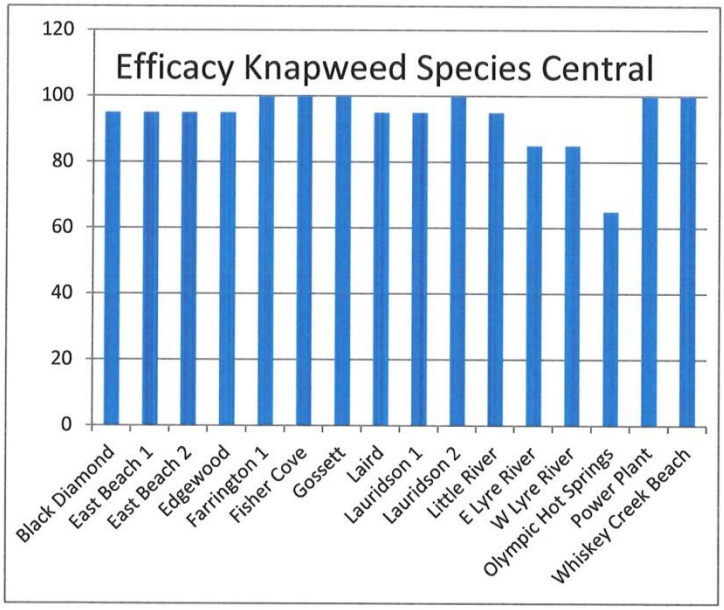


Fig. 2 Efficacy Code Ratings for knapweed in the central portion of Clallam County

average, with only Olympic Hot Springs Road having a code evaluation below 85. There was a specific reason for that low evaluation since one of the private property owners had a field adjacent to the right of way that was well populated with meadow knapweed which was apparently migrating onto the right of way. Otherwise the efficacy code ratings for central Clallam County in the area around and west of Port Angeles were, for the most part, excellent or complete (Fig. 2)

Tansy ragwort was the second noxious weed of concentration for 2017 with 27 of the 45 TDF sheets listing tansy ragwort (SEJA). Most of these sites were done manually with, quite often, a count of the plants removed. The search here was more for negative results rather than positive results since it is hard to locate where the weed once was but it was easy to spot the few remaining plants. Diamond point was an area of concern for Tansy Ragwort (Fig. 3). As would be expected most of the sites had complete removal or only one or two remaining.

Fig 3. Efficacy Code Ratings for Tansy Ragwort along Diamond Point Roads.

Tansy ragwort was the only noxious weed treated and evaluated in the Diamond Point area. Fleming Drive was the exception to the overall positive results in the area. Most roadside efficacy ratings were excellent or complete. Along other roads in the County,

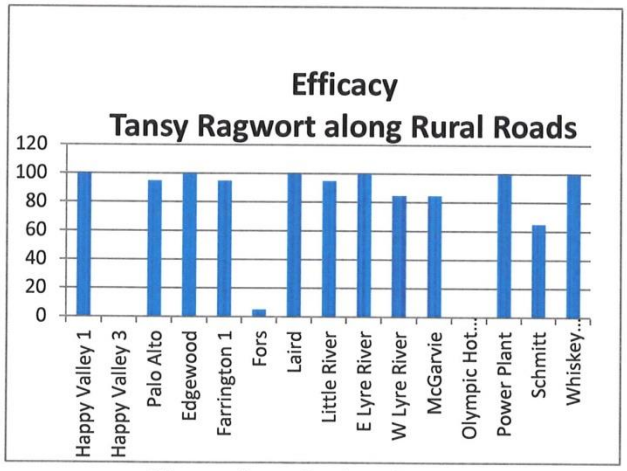


Fig 4. Efficacy Code Ratings for Tansy Ragwort

where tansy ragwort was treated, the success rate was also high with some exceptions (Fig. 4). Good to excellent efficacy ratings were common. Olympic Hot Springs Road was an herbicide treatment but there was no evidence of any dead or alive tansy ragwort. There was no evidence in Happy Valley segment 3 of any tansy ragwort either. No treatment method was indicated. Both TDF's indicated minimal coverage and the lapse time between treatment and evaluation was about a month. Fors Road, a short road off Black Diamond had a small patch of tansy ragwort covering about 10 sq. ft. that was manually removed but when evaluating the segment there were several small patches still in evidence. Probably the worst infestation of tansy ragwort was found along Farrington Road where there was a full field on the road's north side. Farrington Road was treated specifically for tansy ragwort and it received an excellent efficacy rating. However, the field was full at time of evaluation and this is a site for further efforts and is similar to the roadside knapweed field along Olympic Hot Springs Road.

Efficacy ratings for additional treated weeds were highly variable. Other common weeds along the roadsides on public and private land such as Queen Anne's Lace (DACA), Scotch broom (CYSC) and the thistles, both Canada (CIAR) and bull (CIVU) were sometimes treated with herbicide, sometimes surveyed and other times passed by. Of the treated sites, most results were marginal to a complete failure. Some of the sprayed plants looked as healthy as non treated plants. It helps for the County to be a good neighbor but trying to eliminate especially these four weeds can be a daunting task when there is a greater population on the adjacent private property. Queen Anne's lace was treated only in Happy Valley but found in most other areas evaluated. It is not a high priority weed. Scotch broom is one of the people's pests but is difficult to control since it is widespread and hard to remove manually. In most places it was either surveyed or noted. On Johnson Road it was surveyed but it sure appeared as if someone had sprayed the broom or something was wrong with the plant. Several spray sites were seen by the evaluation team along the roadsides that were not a result of the noxious weed crew activities. Canada thistle and bull thistle had mixed results with about 50/50 positive evaluations. Everlasting pea vine in most cases did not look severely affected by treatment and again when, in a small area, was passed over by the weed crews for future treatment. The sprays did not seem to have much effect after a month to 6 weeks. Himalayan knotweed (POBO) was another weed that seemed not to be affected by the sprays unless they were slow acting. There were three roads where the knotweed was found by the spray crews but only 2 of the sites could be found by the evaluation team. At those two sites the knotweed looked unaffected by the treatment. Both S. Bagley Road and Power Plant roads had healthy specimens. See Appendix (Table 3) for other efficacy ratings.

HERBICIDE RETREATMENT NEEDS:

Other data gathered by the monitoring team included retreatment needs in 2018, native planting potential and specified site characteristics. Retreatment for 2018 was deemed necessary if there were live healthy weeds, in number, that were noticed along the roadside. Some roadsides had been recently mowed which made it difficult to see younger plants or mature plants in the cut grass. Tansy ragwort in Diamond Point was visually eliminated along most of the roads but Madrona and Fleming were recommended for retreatment. Happy Valley Road and its branches, Johnson Creek Rd. and Easterly, as well as River Road are recommended for retreatment next year. In the west, around Port Angeles, S. Bagley Creek Road was treated only for knotweed but is blanketed in other listed noxious weeds and should be a high priority for 2018. Seven other roads west of Port Angeles will need retreatment including Black Diamond, Little River and Fors Roads. Further west Fisher Cove, Farrington, E Lyre River and Olympic Hot Springs round out the retreatment list.

NATIVE PLANTING:

The idea of establishing native plants along roadsides will mean lower maintenance costs and will provide pollinators a route from main human transportation lines to larger natural habitat areas. The selection criteria for establishing native plantings along roadsides are still in the preliminary stage but several roads were thought to be possible pollinator routes. The one possibility noted around Sequim was Palo Alto Road. Little River Road and Black Diamond look to have great potential. East Lyle River Road leads to a campground and the shoreline. Olympic Hot Springs Road leads to Olympic National Park and Fisher Cove Road leads from U. S. 101 to Lake Sutherland and the wilderness.

ENVIRONMENTAL SITE TYPING:

Environmental site typing does include a number of classifications but, of the roadsides monitored, only two types were noted – open, being most commonly used, and forest. Open is a treeless area and where woods occur with less than 50% canopy cover. Forest is a wooded area with more than 50% canopy cover and includes forest edges which one would expect along roadsides. Other than the Diamond Point area where there were open habitats it was difficult to classify most of the roads as exclusively open or forest since the two tend to intermix along rural roadsides. Twelve sites were classified as open while 24 sites fell into intermixed open and forest. Percentage approximations were made as to the amount of open habitat and forest habitat along the roadsides of each monitored segment (Appendix, Table 4).

RWMMT:

The five Clallam County Master Gardeners, Brick Ayola, Beverly Hetrick, Brenda Lasorsa, John Viada and Bruce Pape, reached consensus on the vast majority of decisions. As viewed, herbicide application was very precise. There was no collateral damage evident from over spraying or drift. The RWMMT documented live noxious weeds during the monitoring process and provided GPS coordinates and/or street addresses for those locations.

Monitoring commenced in late June and ended in early October with the coming of the fall season. Roadside monitoring activity occurred on 6/20, 8/24, 9/12, 9/20, 9/22, 9/26, 10/3, and 10/13 with a total of 87 hours devoted to the survey. Additionally, 17 hours were directed to training and at least 40 hours applied to education. Coordination, administrative activity and report writing encompassed approximately 35 hours.

The above report was written mainly by Bruce Pape, aided by Brick Ayola and edited by the above named Master Gardeners.

2017 Puget Sound Corps-CC-R
Herbicide/Manual Treatment Data Form

Project ID #:

Project Complete? (Y) or N (add notes)

Name of Entity/Person for whom Treatment was applied: Clallam County

Street Address: 223 E 4th St City: Port Angeles State: WA Zip: 98362

Address or Exact Location of Site: Chicken coop Rd

PIN#:

General Activity Fields

County (circle one)	WRIA (circle one)	Project Name (from project list)	Department (circle one)	Workforce**
Clallam	15 (16) 17 18 19		Roads DCD Parks Other	CC NCB

**Workforce: County Name, WCC Crew Name, County Weed Board

Crew Members Present: Rachel Bowen, Jim Knapp

Site/Inventory Fields

Start Date	Stop Date	acres examined for weeds	Treatment Site (circle one)		Total Manual Infested Area Treated: (DO NOT lump plants together)	
6/1/17	6/1/17	4.4	Road edge/ROW	Park Other	4.4	acres

Weeds Treated (Just the PLANTS code is OK)	Infested Area Treated (DO NOT lump plants together)		% of area examined for weeds infested with this species (lump plants together – use cover classes 1 - 9 listed below)	Manual/Herbicide or Survey
SESA	4.4 acres	sq ft	2	M
DIFU	50	sq ft	6	M
		sq ft		
		sq ft		
		sq ft		

*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*.

Figure 1 A: Herbicide/Manual Treatment Data Form Page 1

All Licensed Applicators: Name and License # _____

Firm Name: Clallam County Noxious Weed Control Board Phone # 360-417-2442

Firm Address: 223 E 4th St. Suite 15 City: Port Angeles State: WA Zip: 98362

Application Date	Time Start	Time Stop	Temp (F)	Wind Speed (MPH)	Wind Direction	Cloud Cover	Remarks – Weather forecast

Application Area (acre)	Total Volume of Mix Applied (gal)	Diluent	Special comment
		Water	

Product Name	EPA Registration #	Amount of herbicide used (oz)	Herbicide Applied/Acre or other measure	Concentration Applied

Was this application made as a result of a permit? Yes No

If yes, Permit # _____

WA State NPDES Acres:

Notes: Scotch Broom at W end of road could be treated. Tansy ; teasel found and manually controlled (dug) from vehicle. All seen rosettes and bolting plants on right-of-way treated, but early season. (Chicken coop Rd 3.6 mi x 5 ft on each side)

Page 2

Figure 1 B: Herbicide/Manual Treatment Data Form Page 2

Clallam County
Integrated Weed Management Monitoring

Examiner name:_____

Evaluation Date:_____

Project ID #	
Road Name	
From "Comments": Min Address, Max Address OR Project Area Descriptor	WP#
Date(s) of treatment	
Herbicide or Manual treatment (circle one)	

Weeds Treated (Scientific name or code)	Infested Area Treated (sq ft))	Cover class from "% area examined for weeds infested with this species"	Percent efficacy of treatment (use codes on next page)

Needs re-treatment this year? Yes / No High priority for re-treatment next year? Yes / No

High priority for native planting? Yes / No If yes, Why?_____

Estimated Recommended Planting Size: _____

Site Type: open wet/ dry, forest other:_____

Please provide comments on the next page, if you have any.

Figure 2 A: Clallam County Integrated Weed Management Monitoring Form. Page 1

All information on page 1 of this datasheet comes from the "Herbicide/Manual Treatment Data Form", except for:

- **Examiner name**
- **Evaluation Date**
- **Percent efficacy of treatment**

For Percent efficacy of treatment, enter the code that best approximates the percent of the treated weed population:

Code	% Efficacy	Rating	Description
0	0	No effect	No effect can be detected on the target species population
03	1 – 5	Failure	Little to no effect can be detected on the target species population.
15	6 – 25	Poor	Treatment killed less than a quarter of the target species population.
35	26 – 50	Marginal	Less than half of the target species population was controlled.
65	51 – 75	Fair	Over half of the target species population was controlled.
85	76 – 90	Good	Treatment was successful in killing most of the target species population
95	91 – 99	Excellent	Over 95% of the target species population has been killed with the treatment.
100	100	Complete	Not a single individual of the target species population was found after a complete survey of the site. The infestation was eradicated.
UN	UNK	Unknown	Treatment efficacy/success can not be determined.

Comments:_____

Figure 2B: Clallam County Integrated Weed Management Monitoring Form Page 2

Roadsides Monitored Table 1

East

Chicken Coop
Dorothea Way
Easterly
Happy Valley
Johnson Creek
Palo Alto
River
Turnstone
Washington

Diamond Point

Aster
Cat Lake
Fleming
Industrial Way
Lupine
Madrona
Salal
Sherwood
Sunshine Plaza

Central

Bagley Creek S
Black Diamond
East Beach
Edgewood
Elwha River
Farrington
Fisher Cove
Fors
Gossett
Laird
Lauridsen
Little River
E Lyre River
W Lyre River
McGarvie
Olympic Hot Springs
Power plant
Rife
Schmitt
Whiskey Creek Beach

Happy Valley Road was done in 4 segments: Section 1 went from U. S. 101 to Johnson Creek Rd. Sec 2 west to Haven Heights Dr. Section 3 was the north - south stretch. Section 4. Tozzer Lane to River Rd.
East Beach, Farrington and Palo Alto were treated twice. Lauridsen was treated in two sections.

Noxious Weeds Monitored Table 2

BEIN	*Berteroa incant*	hoary alyssum
BOOF	*Borago officinalis*	common borage
BUDA	*Buddleja davidii*	butterfly bush
CASE	*Calystegia sepium*	hedge bindweed
CEDE(S)	*Centaurea debeauxii*	meadow knapweed
CEST	*Centaurea stoebe spp micranthos*	spotted knapweed
CIAR(4)	*Cirsium arvense*	Canada thistle
COMA	*Conium maculatum*	hemlock
CIVU	*Cirsium vulgare*	bull thistle
CYSC	*Cytisus scoparius*	scotch broom
CIIN	*Cichorium intybus*	chicory
DACA	*Dacus carota*	Queen Anne's lace
DALA	*Daphne laureola*	spurge laurel
DIFU	*Dipsacus fullonum*	Fuller's teasel
DIPU	*Digitalis purpurea*	purple foxglove
FOVU	*Foeniculum vulgare*	common Fennel
GERO	*Geranium robertianum*	Herb Robert
HYPE	*Hypericum perforatum*	common St Johnswort
LALA	*Lathyrus latifolius*	everlasting pea vine
POBO(10)	*Polygonum x bohemicum*	bohemian knotweed
PORE(S)	*Potentilla recta*	sulfur cinquefoil
RUAR(9)	*Rubus armeniacus*	Himalayan blackberry
SEJA	*Senecio jacobaea*	tansy ragwort
SILA(A3)	*Silene latifolia*	bladder Campion
TAVU	*Tanacetum vulgare*	common tansy

Efficacy Ratings Table 3

BEIN	85	Dorothea Way
BOOF	M*	Dungeness Dike
BUDA	00	Happy Valley Rd section 4
	100	Turnstone
CASE	100	Farrington
CEDE	95	East Beach
	95	Edgewood
	100	Fisher Cove
	100	Gossett
	95	Laird
	95	Lauridsen 1
	100	Lauridsen 2
	95	Little River
	85	E Lyle River
	85	W Lyre River
	65	Olympic Hot Springs
	100	Power Plant
	100	Whiskey Cree Beach
	85	Happy Valley 4
	35	River
	65	Easterly
	35	Happy Valley 1
	65	Happy Valley 2
	85	Happy Valley 3
	65	Johnson Creek
	65	Palo Alto
	95	Black Diamond
	95	East Beech
	100	Farrington
CEST	M	Happy Valley 4
	65	River
	95	Turnstone
	95	Washington
CIAR	65	Easterly
	35	Happy Valley 2
	35	Happy Valley 3
	65	Johnson Creek
	35	Palo Alto
	95	Washington
	35	Black Diamond
	85	Edgewood
	35	Elwha River
	85	Farrington

	M	Fisher Cove
	35	Laird
	85	Olympic Hot Springs
CIVU	35	Happy Valley 2
	0	Happy Valley 3
	35	Johnson Creek
	35	Black Diamond
	95	Fors
CIVU	35	Little River
	100	E Lyre River
	85	Whiskey Creek Beach
CYSC	35	Happy Valley 4
	65	Palo Alto
	35	River
	95	Turnstone
	0	Black Diamond
	35	Edgewood
	35	Laird
	0	Little River
	95	Olympic Hot Springs
CIIN	65	Happy Valley 2
	85	Happy Valley 3
	84	Happy Valley 4
DACA	35	Easterly
	35	Happy Valley 1
	15	Happy Valley 2
	35	Johnson Creek
DALA	95	Washington
DIFU	95	Chicken Coop
	M	Happy Valley 2
	85	Happy Valley 3
	95	Black Diamond
DIPU	M	E Lyre River
FOVU	M	River
GERO	M	Easterly
	N	Elwha River
	85	Gossett
	0	Little River
	85	E Lyre River
	0	Olympic Hot Springs
HYPE	M	Easterly
	100	Happy Valley 1
	M	Happy Valley 2
	M	Happy Valley 3
	85	Happy Valley 4
	M	Palo Alto
	M	Edgewood

	M	Fisher Cove
	100	Laird
LALA	M	Happy Valley 2
	15	Happy Valley 4
	95	Edgewood
	15	Little River
	35	Olympic Hot Springs
POBO	0	S Bagley Creek
	100	Power Plant
	M	Rife
PORE	M	Palo Alto
RUAR	S	Rife
SEJA	M	Chicken Coop
	100	Happy Valley 1
	95	Palo Alto
	100	Alder
	100	Cat Lake
	35	Fleming
	95	Industrial Way
	95	Lupine
	85	Madrona
	100	Salal
	100	Sherwood
	95	Sunshine Plaza
	100	Edgewood
	95	Farrington
	0	Fors
	100	Laird
	95	Little River
	100	E Lyre River
	85	McGarvie
	85	W Lyre River
	?	Olympic Hot Springs
	100	Power Plant
	65	Schmitt
	100	Whiskey Creek Beach
SILA	100	Dungeness Dike
TAVU	95	River
	M	Fisher Cove
	M	Fors
	100	Lauridsen 1
	100	Lauridsen 2
	M	Olympic Hot Springs

*M didn't see or couldn't find N mowed and late in season ? There but

Site Analysis Table 4

Road	Site Analysis*
Chicken Coop	25/75
Dorothea Way	Open
Easterly	50/50
Happy Valley 1	Open
Happy Valley 2	70/30
Happy Valley 3	Open
Happy Valley 4	80/20
Johnson Creek	50/50
Palo Alto	50/50
River	30/70
Turnstone	Open
Washington	Open
Aster	Open
Cat Lake	Open
Fleming	Open
Industrial Way	Open
Lupine	Open
Madrona	Open
Salal	Open
Sherwood	Open
Sunshine Plaza	Open
S Bagley Creek	Open
Black Diamond	60/40
East Beach	50/50
Edgewood	Open
Elwha River	30/70
Farrington	70/30
Fisher Cove	50/50
Fors	50/50
Gossett	80/20
Laird	Open
Lauridsen	Open
Little River	30/70
E Lyre River	30/70
W Lyre River	50/50
McGarvie	50/50
Olympic Hot Springs	30/70
Power Plant	Open
Schmitt	50/50
Whiskey Creek Beach	50/50

Site analysis numbers – first is open/second is forest

Appendix H: Native Plant Species

The table lists the species to be grown at the Matt Albright Native Plant nursery. Not all these species may be grown in any given year, and species may be added or subtracted from the list by mutual agreement.

Herbaceous Perennials		Shrubs	
Scientific Name	**Common Name**	**Scientific Name**	**Common Name**
Angelica lucida	sea-watch	*Berberis nervosa*	short Oregon grape
Aquilegia formosa	red columbine	*Berberis aquifolium*	tall Oregon grape
Arctostaphylos uva-ursi	kinnick kinnick	*Gaultheria shallon*	salal
Aster subspicatus or chilensis	Douglas aster	*Holodiscus discolor*	ocean spray
Aruncus dioicus	goats beard	*Paxistima myrsinites*	Oregon box
Chamaenerion angustifolium	fireweed	*Philadelphus lewisii*	mock orange
Eriophyllum lanatum	Oregon sunshine	*Physocarpus capitatus*	Pacific nine bark
Erythronium oregonum	white fawn lily	*Rhododendron macrophyllum*	Pacific Rhododendron
Fragaria virginiana	wild strawberry	*Ribes sanguineum*	red flowering currant
Fritillaria affinis	chocolate lily	*Rosa gymnocarpa*	baldhip rose
Lilium columbianum	tiger lily	*Symphoricarpos albus*	snowberry
Lupinus rivularus	river lupine	*Vaccinium ovatum*	evergreen huckleberry
Penstemon serrulatus	coast penstemon		
Sidalcea hendersonii	Henderson's checker mallow		
Solidago canadensis	goldenrod		
Xerophyllum tenax	beargrass		

Appendix I: Peninsula Daily News Legal Notice of Herbicide Use 2017

PUBLIC NOTICE

Clallam County is beginning the 2017 Integrated Weed Control program which may include spot treatments of herbicide to control specific noxious weeds and invasive species of special concern along selected portions of county right-of-way. Notices indicating which herbicide has been applied, the application date, and the target weed species will be posted onsite. The Integrated Weed Management Plan, which contains information about target weeds, locations, and treatment methods can be viewed online at http://www.clallam.net/weed/iwmp.html

Property owners who do not wish to have their adjoining right-of-way treated with herbicide have the option of keeping the right-of-way abutting their property weed free by applying for an Owner Will Control Agreement with Clallam County. Contact the County for further information at 360-417-2442.

PUB: June 2, 2017
Legal No. 760475

Appendix I: Sample Herbicide Notice

NOTICE

The herbicides aminopyralid, glyphosate, imazapyr, triclopyr, or clopyralid will be applied to this site to control noxious weeds, which threaten native vegetation and habitat 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.

Clallam County Noxious Weed Control Board
Jim Knape, noxious weed control specialist
223 East Fourth Street, Suite 15
Port Angeles, WA 98362
(360) 417-2000 ext 2703
(360) 999-6734

Appendix J: Sample Herbicide/Manual Treatment Data Form (Side 1)

2017 Puget Sound Corps-CC-R
Herbicide/Manual Treatment Data Form

Project ID #:

Project Complete? **Y** or **N** (add notes)

Name of Entity/Person for whom Treatment was applied: Clallam County

Street Address: 223 E 4 th St City: Port Angeles State: WA Zip: 98362

Address or Exact Location of Site: Laird Rd - from Elgwood Drive to Hwy 101

PIN#:

General Activity Fields

County (circle one)	WRIA (circle one)	Project Name (from project list)	Department (circle one)	Workforce**
Clallam	15 16 (17) 18 19	Laird Rd	(Roads) Parks DCD Other	CCNWCB-3

**Workforce: County Name, WCC Crew Name, County Weed Board

Crew Members Present: Jim Knapp, Cathy Lucero, Rachel Bowen

Site/Inventory Fields

Start Date	Stop Date	acres examined for weeds	Treatment Site (circle one)	Total Manual Infested Area Treated: (DO NOT lump plants together)
9/11/17	9/11/17	1.7	(Road edge/ROW) Park Other	acres

Weeds Treated (Just the PLANTS code is OK)	Infested Area Treated (DO NOT lump plants together)		% of area examined for weeds infested with this species (lump plants together – use cover classes 1 - 9 listed below)	Manual/Herbicide or Survey
CYSC	200	sq ft	5	H
CEDE	500	sq ft	3	H
CIAR	500	sq ft	6	H
HYPE	10	sq ft	6	H
SEJA	1	sq ft	1 plant	M

[1] 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.*

Appendix J: Sample Herbicide/Manual Treatment Data Form (Side 2)

All Licensed Applicators: Name and License # James Knape 87945, Rachel Bowen 92120
Cathleen Lueers 56527

Firm Name: Clallam County Noxious Weed Control Board Phone # 360-417-2442

Firm Address: 223 E 4th St, Suite 15 City: Port Angeles State: WA Zip: 98362

Application Date	Time Start	Time Stop	Temp (F)	Wind Speed (MPH)	Wind Direction	Cloud Cover	Remarks – Weather forecast
9/11/17	4:00pm	5:00pm	70°	12mph	W	Sun	

Application Area (acre)	Total Volume of Mix Applied (gal)	Diluent	Special comment
1.7	4.5 gal	Water	

Product Name	EPA Registration #	Amount of herbicide used (oz)	Herbicide Applied/Acre or other measure	Concentration Applied
Milestone	62719-519	0.75 oz	0.4 oz/acre	.125 %
Vastlan	62719-687	6 oz	3.5 oz/acre	1 %
Competitor WA	2935-04001	3 oz	1.8 oz/acre	.5 %
Blazon		1.5 oz	0.9 oz/acre	.25 %

Was this application made as a result of a permit? Yes **No**
If yes, Permit # _____

WA State NPDES Acres: Ø

Notes: · Inspected entire length of road from Hwy 101 to where Laird Rd becomes W Edgewood Dr. Only species treated completely was Meadow knapweed. Two substantial patches treated just South of Elwha River Rd on the West side of Laird Rd. However, other individual knapweed treated North of Elwha River Rd on West side of Laird Rd. Total Rd distance ~ 4700 ft, solid amount of Broom that could be treated at later date.

Page 2

OWNER WILL CONTROL AGREEMENT

By entering into this agreement an adjacent property owner (hereinafter referred to as "Owner") will agree to control noxious weeds and other weeds of concern as described in Appendix A of this agreement on county right-of-way adjacent to property located at:

_____

(Street) (City) (Zip)

The County will send a confirmation email upon receiving a completed application and return a copy of the finalized Owner Will Control Agreement (hereinafter referred to as "Agreement").

For the purpose of this Agreement, 'control' will consist of complete removal of all above ground biomass and as much of the root system as is feasible of weeds listed in your packet, as well as any additional weeds of concern as determined by the County.

If noxious or other weeds of concern are observed on right-of-way adjacent to above named address, County will notify property owner of their presence. Owner will then have ten (10) days to completely remove weeds as required by this Agreement. If Owner fails to control weeds in that timeframe, this Agreement will be terminated and weeds will be controlled as determined by the County, including the use of herbicides.

This Agreement is valid from the date signed by both parties until December 31 of the same year.

If the Owner Will Control Agreement is terminated as described above the Owner may apply to re-enter into a new Owner Will Control Agreement the following calendar year.

*_____ *_____ *_____

Owner Name (Print) (Signature) Date

*_____ *_____

(Owner Email) (Owner Phone #)

Interested in Native Plant Enhancement Program? (circle one) **YES** **NO**

*_____ *_____ *_____

County Representative (Signature) Date

*Required Field

Clallam County Public Works Department
223 East Fourth Street, Suite 15 Port Angeles, WA 98362
360- 417-2703 Phone 360-417-2414 Fax

$160 plus all costs beyond public use**
****See C.C.C. 5.100.245 – Fee Schedule 245-A**

PROJECT NO._____
ROAD NAME _____
PERMIT NO. _____
COUNTY USE ONLY

APPLICATION FOR SPECIAL USE OR EVENT ALONG CLALLAM COUNTY RIGHT OF WAY

In Clallam County, a "Right-of-Way" permit is required to work along a county-owned road within the county right of way.

PLEASE PRINT

Name of Applicant:	County Road:
Mailing Address:_____ _____ _____ Phone:_____ Cell Phone:_____ Fax:_____	Address/ Milepost of Project Site: _____ **When the project is approved:** (check one item below) ☐ Mail permit when approved ☐ Call when approved ☐ Fax when approved

USE PROPOSED & PURPOSE

Special Use: _____**NOXIOUS WEED CONTROL**_____
_____

Name of Event Coordinator:
_____
Start Date _____
End. Date _____

IMPORTANT:

Project Location Description:_____
(Reference "Adopt-A-Patch Site List" for location"

THE EXACT LOCATION OF THE ENTIRE EVENT/USE AREA MUST BE CLEARLY MARKED SO AS TO BE EVIDENT TO COUNTY PERSONNEL. FAILURE TO COMPLY WILL RESULT IN A DELAY OF THE PROCESSING OF THIS PERMIT.
It is the responsibility of the applicant to notify all utilities and private property owners when such property is liable to injury or damage through the performance of the permitted work. The applicant shall make all necessary arrangements relative to the protection of such property and/or utilities.

By signing this permit, the applicant agrees to comply with all conditions as stated on the PERMIT, Form RWPCOND041604, Permit Conditions Addendum and C.C.C. 5.100.245 – Fee Schedule 245-A. Applicant has 10 days from permit approval date to request clarification or modification to permit conditions attached.

Signed_____ Date_____

**********COUNTY USE ONLY**********

PERMISSION IS HEREBY ☐ GRANTED ☐ DENIED
Call 360-417-2703 for the following:
☑ **Start Date** ☐_____ ☐_____ ☑ **Final**
The Approved Permit Must be Posted on Site Until Final Inspection.

COMMENTS:_____
_____
_____
_____

FEE CALCULATION
_____
_____
_____
AMT WAIVED:_____
NET FEE:_____
DATE:_____
RECEIPT#_____
CHECK#_____
REC'D BY:_____

This permit shall be void unless the work herein contemplated is completed before the following date:_____

_____
Area Supervisor/Design Review Engineer Date

Final Inspection By: _____
Date:_____

Adopt-a-Patch_Permit_2017 05/21/17

Adopt-A-Patch Activity Report

Permit#:_____ **Permittee Name:**_____
Permittee Phone #:_____
Dates included in this report:_____ (mm/dd/yy)

_____ (mm/dd/yy)

_____ (mm/dd/yy)

_____ (mm/dd/yy)

Target Species:_____

Estimated Total Removed:
Species 1 _____ _____**#plants** ____**lbs of flowers/seeds**

Species 2 _____ _____**#plants** ____**lbs of flowers/seeds**

Species 3 _____ _____**#plants** ____**lbs of flowers/seeds**

Species 4 _____ _____**#plants** ____**lbs of flowers/seeds**

Total Distance Covered: shoulder 1_____ **miles/feet shoulder 2**_____ **miles/feet**

Total # in Workforce:_____ **Total # Hours Worked:**_____

Comments?_____
_____
_____
_____
_____

Submit reports as often as desired but no later than October 31.

Email to jknape@co.clallam.wa.us or Mail to Adopt-A-Patch Coordinator
223 E Fourth St, Suite 15
Port Angeles, WA 98362

Adopt-A-Patch Waiver

Name of Grantee		Permit #	
Name of Volunteer/Assignee			
Address	City	Zip Code	Telephone Number
Person to notify in case of emergency		Relationship	
Address	City	Zip Code	Telephone Number

Clallam County's Adopt-a-Patch Program issues permits that allow permit holders, hereinafter known as "Grantees" to enter onto County owned lands for the purpose of controlling noxious and invasive plants of special concern. Grantees and their participants, hereinafter known as "Volunteers" or "Assignees" are advised that working adjacent to a county road can be hazardous and shall exercise due care in performing weed control activities. Grantees and their Assignees must receive safety training prior to participating in any weed control activities.

1. I understand that working within right-of-ways and performing noxious weed control can be hazardous.

2. I hereby verify that I am 18 years of age or older, have viewed the Adopt-a-Highway Safety Video and read the Adopt-a-Patch Safety Tips. I understand the conditions, responsibilities, and privileges of participation in the Adopt-a-Patch Program.

3. By signature below I verify that I am operating on Clallam County right-of-way as a Volunteer/Assignee for Grantee _____ under a valid Clallam County permit and therefore agree to defend, indemnify, and save harmless the County from all claims, actions or damages of every kind and description which may accrue to or be suffered by any person or persons, corporation or property by reason of the performance of any such work, character of materials used or manner of installation, maintenance and operation or by the improper occupancy of rights of way or public place or public structure, and in case any such suit or action is brought against said County for damages arising out of or by reason of any of the above causes, the grantee, his agents, successors, assigns, or volunteers will upon written notice to him or them or commencement of such action defend the same at his or their sole cost and expense and will fully satisfy any judgment after the said suit or action shall have finally been determined if adversely to the County.

Signature of Assignee	Date
Number of hours worked	