Olympic Region, Area 2
Integrated Roadside Vegetation Management Plan
2014
# Table of Contents

Summary ......................................................... 1
Area Map .......................................................... 2
Roadside Maintenance Considerations .......................... 3-5
The Integrated Vegetation Management (IVM) Decision-Making Process ................................. 6
Area IVM Goals .................................................... 7-9
Olympic Region, Area 2 – Roadside Vegetation Management Plan ........................................... 10

1. ROUTINE MAINTENANCE ACTIVITIES ................................. 10
   1.1. Bareground Shoulder Maintenance (Zone 1) ........................ 10
       1.1.1. Guidelines .............................................. 10
       1.1.2. Methods ............................................... 10
       1.1.3. Locations .............................................. 10
   1.2. Mowing/Trimming (Zone 1 and 2) ................................. 10-11
       1.2.1. Guidelines .............................................. 11
       1.2.2. Methods ............................................... 11
       1.2.3. Locations by Milepost ................................ 11
   1.3. Hazard Tree Monitoring and Removal (Zone 3) ............... 11
       1.3.1. Guidelines .............................................. 11-12
       1.3.2. Methods ............................................... 12

2. INTEGRATED VEGETATION MANAGEMENT ACTIVITIES ................. 13
   2.1. Integrated Vegetation Management Planning and Tracking Database .......................... 13
       2.1.1. Guidelines .............................................. 13
       2.1.2. Sample Forms ......................................... 13
       2.1.3. Instructions for Use ................................... 13
   2.2. Noxious Weed Control ......................................... 13
       2.2.1. Guidelines .............................................. 13-15
       2.2.2. Methods ............................................... 15
       2.2.3. Locations .............................................. 15
   2.3. Nuisance Weed Control ......................................... 15
       2.3.1. Guidelines .............................................. 15
       2.3.2. Methods ............................................... 16
       2.3.3. Locations .............................................. 16
   2.4. Tree and Brush Control ......................................... 16
       2.4.1. Guidelines .............................................. 16
       2.4.2. Methods ............................................... 16-17

3. SPECIAL MAINTENANCE AREAS ........................................... 18
   3.1. Intersections .................................................. 18
       3.1.1. Guidelines .............................................. 18
       3.1.2. Locations .............................................. 18
   3.2. City Maintained Areas ......................................... 18
       3.2.1. Guidelines .............................................. 18
       3.2.2. Locations .............................................. 18
   3.3. Herbicide Sensitive Areas ...................................... 18
       3.3.1. Guidelines .............................................. 18
       3.3.2. Locations .............................................. 18-19
# Table of Contents, Continued

3.4. Adopt-a-Highway and Neighbor Maintained Agreements ........................................... 19
  3.4.1. Guidelines ............................................................................................................. 19
  3.4.2. Locations ............................................................................................................. 19
3.5. Pits Sites and Stockpile Sites ...................................................................................... 19
  3.5.1. Guidelines ........................................................................................................... 19
  3.5.2. Locations ............................................................................................................. 19
3.6. Storm Water Management Facilities ......................................................................... 19
  3.6.1. Guidelines ........................................................................................................... 19-20
  3.6.2. Locations ............................................................................................................. 20
3.7. Wetland Mitigation Sites ........................................................................................... 20
  3.7.1. Guidelines .......................................................................................................... 20
  3.7.2. Locations ............................................................................................................. 20
3.8. Protected Terrestrial Species ....................................................................................... 20
  3.8.1. Guidelines .......................................................................................................... 20
  3.8.2. Locations ............................................................................................................. 20-21
3.9. Railroad Crossing ....................................................................................................... 21
  3.9.1. Guidelines .......................................................................................................... 21
  3.9.2. Locations ............................................................................................................. 21
3.10. IVM Treatment Sites ................................................................................................. 21
  3.10.1. Guidelines ......................................................................................................... 21
  3.10.2. Locations .......................................................................................................... 21

Appendix A ....................................................................................................................... IVM Prescriptions
Appendix B ......................................................................................................................... Herbicide Use Guidelines
Appendix C ......................................................................................................................... Routine Mowing Plan (not included at this time)
Appendix D ......................................................................................................................... Weed Identification Photos
Appendix E ......................................................................................................................... Forms and Records
Appendix F ......................................................................................................................... Stakeholders List
Summary

This plan explains the Washington State Department of Transportation’s (WSDOT) policy and practice for maintenance of roadside vegetation for Maintenance Area 2 within the agency’s Olympic Region. This area manages vegetation within approximately 260 miles of state highway corridor, primarily in Kitsap and Mason Counties but with short sections in Pierce and Jefferson as well. The main corridor in the area is State Route (SR) 16 between Tacoma and Bremerton, but the area also maintains portions of other major limited access highways along SR 3 and US 101. There are many secondary routes in the area, mostly forested and rural in character, some are exceptionally high in scenic quality. A map of the area is included as Figure 1 on the following page.

The primary objectives in maintenance of roadside vegetation within the area are in relation to safety of the highway users, preservation of the highway infrastructure, and control of legally designated noxious weeds where they occur on the right-of-way. Other considerations include protection and preservation of natural environment, preserving and enhancing the natural scenic quality of the roadside, and being a good neighbor to the many adjoining property owners. In all cases, roadside vegetation maintenance activities are planned and conducted in a way that discourages or eliminates unwanted vegetation and promotes desirable vegetation. This is the basic premise of Integrated Vegetation Management (IVM) and the foundation of the program.

This document and associated information management tools serve as the primary reference for maintenance of roadside vegetation in the area. Included is detailed information on agency, region, and area policies along with locations for planned routine maintenance practices, reoccurring noxious weed infestations, sensitive areas, and other areas with special management considerations. Also included are guidelines and prescriptions for best management practices in dealing with roadside vegetation problems and opportunities. In effect, this plan supports WSDOT’s compliance with state law (RCW 17.15) by implementing the principles of Integrated Pest Management for the management of roadside vegetation. It also supports WSDOT’s long-range goals for the management of roadsides to:

- Create the most naturally stable, sustainable plant communities possible
- Improve effectiveness and efficiency in the control of weeds and unwanted trees and brush
- Reduce maintenance cost and herbicide use over time

This plan is organized around six major categories of roadside vegetation maintenance work. The major categories include: Zone 1 (or pavement edge maintenance), Routine Mowing, Noxious Weed Control, Nuisance Weed Control, Tree and Brush Control, and Special Maintenance Areas.

The management of roadside vegetation is a dynamic process and it is intended that this plan be continuously adapted over time based on input from a variety of sources. An integral component of the process is a database for recording IVM treatments for specific vegetation controls and locations, and to record information on follow up evaluation on these treatments. Annual area meetings are held to discuss what is learned each year and refine the plan over time.

WSDOT is also requesting that local public and private entities with an interest in weed control and roadside vegetation management provide input on the plan and cooperate in efforts where appropriate. Additional copies of the draft plan are available online: http://www.wsdot.wa.gov/Maintenance/Roadside/mgmt_plans.htm, hard copies can also be provided upon request. Please contact Duke Stryker or Ray Willard at the numbers listed below for questions or comments:

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Olympic Region, Area 2

Figure 1

Olympic Region, Area 2
Integrated Roadside Vegetation Management Plan

Page 2
2014
Roadside Management Considerations

The primary objectives for maintenance of roadside vegetation are to provide for safe highway operation and to comply with legal regulations for control of noxious weeds and protection of the environment. Overall WSDOT maintenance policy and procedures for roadside vegetation are defined in Chapter 6 of the WSDOT Maintenance Manual (M51-01, August 2014) http://www.wsdot.wa.gov/Publications/Manuals/M51-01.htm

Visual Quality

It is also important to maintain appropriate visual standards in the appearance of the roadside. This is particularly important in Area 2, with much of the local economy dependent on the tourist industry. All maintenance activities will be conducted in a way that minimizes visual impacts such as wide spread "brown-out" from herbicides or shattered limbs from side trimming. Roadsides should look as natural as possible throughout the year. Appropriate visual quality for roadsides throughout the state is defined in the WSDOT Roadside Classification Plan (November 2011) http://www.wsdot.wa.gov/Publications/Manuals/fulltext/M25-31/RCP.pdf

Operational Zones

WSDOT roadsides are divided into several zones for the purposes of assigning management objectives, maintenance needs, and thresholds for triggering vegetation maintenance actions. Noxious weed species designated for control by state and county law are controlled throughout all zones. Not all management zones occur along all state highways. In some cases the narrow width of the right-of-way or adjoining land-use, limits the operational zones to Zone 1 and/or a narrow Zone 2 only. Roadside vegetation management zones are illustrated in Figure 2 below and defined as follows:

Zone 1 – The pavement edge zone is maintained in a manner and width necessary to address highway operational functions and safety, pavement preservation, guardrail maintenance, and stormwater management. Zone 1 may include a vegetation-free band adjacent to the pavement edge, particularly when guardrail is present, or may consist of desirable vegetation up to the pavement edge depending on site specific needs. Vegetation-free Zone 1 is maintained using non-selective soil residual herbicides. Routine annual mowing is required in most cases where vegetation is established up to the edge of pavement; periodic grading may also be required to prevent excess edge build up.

Zone 2 – The operational zone extends from Zone 1 to a width necessary to provide for safe errant vehicular recovery, site distance at corners, intersections and for regulatory signs, and to provide for other operational, safety, and environmental protection functions. Zone 2 is typically maintained through periodic mowing and trimming and through selective removal of undesirable trees and brush as needed.

Zone 3 – In areas with sufficient right-of-way width, a buffer or transition zone extends from Zone 2 to the right-of-way line to provide a buffer or transitional area between the highway facility and adjacent land uses, or to accommodate large cut or fill slopes. This area is maintained selectively, and to the greatest degree possible as a self-sustaining plant community, to minimize erosion as well as the growth of weeds and undesirable trees and brush.

Roadside Maintenance Activities

All roadside maintenance activities are to be planned and conducted in a way that discourages or eliminates unwanted vegetation and promotes desirable vegetation. This is the basic premise of Integrated Vegetation Management. In every case it is essential that the results of maintenance activities are evaluated and adjusted as necessary to maximize efficiency and effectiveness, and to establish desirable plant communities that are as self-sustaining as possible. However, in some cases maintenance activities are planned and conducted on a regularly scheduled
repeating basis, such as maintenance of a vegetation-free Zone 1 and/or routine mowing cycles where appropriate.

**Routine Maintenance Activities** – When vegetation maintenance activities are required to keep the area of roadside being treated in an annually controlled condition, activities are considered routine. This is more critical for areas of vegetated roadside near the travel lanes, edge of pavement, and around guardrails. This plan provides prescriptions and gives locations for routine maintenance activities including maintenance of Zone 1 and annual mowing.

**Integrated Vegetation Management Activities** – Although all activities are to be planned and conducted in accordance with the principles of IVM, many vegetation maintenance activities are intended to target a specific type or types of unwanted plants. By carefully planning and carrying out these target specific activities it is possible over time to establish desirable vegetation, which will prevent the re-infestation of unwanted plants. The process for determining and carrying out IVM actions is illustrated in Figure 3 below. This plan provides information, locations, and gives prescriptions for selective control of weeds and other unwanted vegetation and the promotion and establishment of desirable vegetation. Further information and guidance on the application of IVM is available in the document *Integrated Vegetation Management for Roadsides* (WSDOT, July 1997). A copy of this document can be obtained by contacting the state roadside maintenance program manager.

**Special Maintenance Areas** – In some locations there are unique situations that require special consideration in determining appropriate vegetation maintenance actions. Examples of these are: environmentally sensitive areas, areas with special neighbor concerns, areas where a higher level of maintenance is expected such as gateway interchanges or formally landscaped areas, or along highways that cross tribal or federal lands. This plan provides information and guidance on the locations and unique requirements or restrictions on maintenance activities in all of these situations throughout the area.

**Herbicide Use** – WSDOT has conducted independent research on herbicide risk from toxicity and environmental fate, based specifically on agency application methods and use rates. Findings from this research have been used to establish an approved palette of herbicides and application limits for state highways. A complete summary of herbicides approved for use on WSDOT right-of-ways is included in Appendix B.

For all planned herbicide applications made on US Forest Service land WSDOT will submit a Pesticide Use Proposal Form (see Appendix H) to the Forest Service R6 Pesticide Use Coordinator at the start of each season, or at least one week prior to any scheduled application. At the end of each season the WSDOT HQ Maintenance Office will submit a report outlining herbicide use performed for highway sections in each National Forest.
Typical Roadside Vegetation Management Zones

Figure 2

**Pavement Edge Zone**
Low Growing or Routinely Mowed Vegetation and/or Vegetation-Free Strip
Maintained using mechanical and/or chemical methods for sight distance, stormwater drainage and filtration, noxious weed control, pavement preservation and roadside hardware maintenance.

**Operational Zone**
No Vegetation with Stem Diameter Greater than 4''
Maintained using IVM techniques for sign visibility, sight distance, errant vehicle recovery and weed control.

**Buffer Zone**
Native or Naturally Occurring Vegetation
Where adequate right of way exists, maintained using IVM techniques to encourage desirable, self-sustaining plant communities.
Continuously monitor roadside vegetation

Locate areas and situations where vegetation requires IVM treatment
Document location, situation and treatment plan

Apply initial IVM treatment

Monitor and document any significant observations

Were treatments effective?
Yes

Is follow-up treatment necessary?
No
Yes

Apply follow-up IVM treatments

Monitor and document any significant observations

Were treatments effective?
Yes

Adjust treatment plan

No

Adjust treatment plan

The IVM Decision-Making Process
Figure 3
2014 Area IVM Goals

The purpose of this section is to identify the highest priority roadside vegetation management needs in Olympic Region, Area 2 and to describe in general the approach the area will take in addressing these needs in the coming years. Information here is presented in relation to the three major groups for roadside vegetation maintenance performance: Control of Vegetative Obstructions, Noxious Weed Control, and Nuisance Weed Control. This section is intended to supplement the information in the following section, Olympic Region, Area 2 – Roadside Vegetation Management Plan which details the guidelines and methods for accomplishing the work of roadside vegetation management along the highways within this maintenance area.

Control of Vegetation Obstructions
The work of this group of maintenance activities relates to the safety and operation of the highway and these items are considered first priority in terms of overall roadside maintenance needs. Vegetation management goals in this category fall into two groups - Pavement Edge Maintenance/Zone 1, and Tree and Brush control Zone 2.

Pavement Edge Maintenance Zone 1
Both East and West sides
- Continue to utilize a snowplow with steel blade to cast off built up material on the shoulders where needed on an annual basis to correct/prevent channelization of water in all sections/SR’s.
- Additionally, will continue to utilize DOC crewmembers to manually remove buildup under hardware where possible.
- Deliver Zone 1 non selective and pre-emergent herbicide treatment in all sections except along the curb side, waterways and sensitive areas.

Tree and Brush Control/Zone 2
Both East and West sides
- Continue to mow vegetation obstructions as needed to maintain, increase or re-establish site distance where needed.
- Concentrate on removing woody species from around and behind hardware in all sections by mowing where necessary and treat hardware with herbicide to suppress regrowth.
- On both the east and west sides we will continue to identify and remove trees of concern throughout the year on all SR’s.

Westside/Shelton
- SR 101 MP 294.6 to 360 Plan to mow beyond one pass in areas that have or develop sight distance issues.
- SR 101 MP 314 to 317 Plan to conduct tree trimming in the MT Walker section where limbs are hanging over road starting to make a large canopy.
- SR 003 MP 1.0 to 25 Plan to continue our efforts to control scotch broom by selectively mowing in order to enhance the further re-establishment of native vegetation in the corridor.
- SR 106 MP 1.0 to 20 Plan to mow with sidearm beyond one pass in areas that have or develop sight distance issues.
- SR 106 MP 0.0 to 20 Plan to continue work trimming trees/brush for sight distance and encroachment issues.
- SR 003 MP 1.0 to 25 Plan to mow with sidearm beyond one pass in areas and intersections for sight distance.
- SR101, 106, 003, 119 Plan to use the bucket truck/man lift as it comes available to remove canopy shading roadway and clear sign sight distance for safety.
Eastside/Port Orchard
- SR 307 MP 0.2 to MP 5.2 Plan to mow beyond one pass as needed for sight distance and remove woody species crowding back of hardware.
- SR 305 MP 0.0 to MP 10.3 plan to mow beyond one pass as needed for sight distance and remove woody species behind hardware.
- SR 160 MP 1 to MP 7.1 Mow beyond one pass as needed for sight distance and remove woody species behind hardware.
- SR 016 MP 7.2 to 29 Plan to continue and finish removing trees/vegetation blocking sign site distance as the man lift/bucket truck becomes available.
- SR 016 MP 9 to 29, mow beyond one pass as needed for sight distance and to increase sign visibility.
- SR 003 MP 36.5 to 53, mow beyond one pass as needed for sight distance and to increase sign visibility.
- SR 003 MP 36 to 60 Plan to begin removing trees/vegetation blocking sign site distance if man lift/bucket truck is available.
- SR 300 MP 0.0 to 3.0 Plan to mow beyond one pass up to twice annually as needed to increase and maintain site distance/safety in this well vegetated and challenging section of roadway.
- Mow out Scotch broom at the Bremerton Airport to the right-of-way fence to address security concerns.

Noxious Weed Control
Noxious weeds are those species legally designated by state and county regulations for required control by all property owners. Because laws are enforced by fines and/or control work and billing of property owners by county administration, work under this group is considered second priority after critical safety related locations have been addressed. Control of designated noxious weed species is typically carried out on all highways on an as needed basis. However some locations merit more focused attention and effort to apply multi-year IVM treatments or coordinate with adjacent landowners. The general area wide approach and areas of focused attention for 2014 include:

Westside/Shelton
- SR 101 MP 360 to 295 Plan to treat noxious weeds as needed.
- SR 101 and SR 106 Skokomish Indian Reservation we will continue to work with the Department of Natural Resources to address noxious weeds and will monitor for reappearance of knotweed and treat as needed.
- SR 101 MP 335.7 Planned follow up treatment to inject giant hogweed patch for eradication.
- SR 003 MP 1-25 Plan to treat for noxious weeds and follow up treatment of tansy ragwort.
- SR 106 MP 2-20 Plan to treat for noxious weeds as needed.
- SR 119 and SR 102 Plan to treat as necessary on these routes with the intent to control and possibly eradicate the small populations present.

Eastside/Port Orchard
- SR 305 MP 0.27 to 6.8 Plan to treat noxious weeds including poison hemlock and tansy ragwort Bainbridge Island.
- SR 003 SB MP 37.8 Plan a follow up treatment of knotweed patches.
- SR 302 MP 15 Plan to treat knotweed patch for eradication.
- SR 016 MP 27.8 to 28.1 Plan a follow-up treatment of knotweed regrowth in the median.
- SR 016 MP 28.5 WB Plan a follow up treatment of knotweed on right shoulder.
- SR 300 MP 2.3 to 3.0 Plan to treat knotweed along shoulder between roadway and Hood Canal.
- SR 003 MP 35 to 36.5 Plan a follow up treatment to knapweed on right shoulder.
- SR 003 MP 53.38 Plan a follow up treatment of knapweed patch.
- SR 166 MP 0.0 to 2.0 Plan to work together with City of Port Orchard to address large patches of knotweed and butterfly bush in corridor and along waterway behind hardware.
Nuisance Vegetation Control

Nuisance vegetation control includes control/management of weed species that are recommended but not mandated by state or county law. It also includes work such as mowing of grass and weeds in areas where a more neatly maintained appearance is desired such as in gateway interchanges or highways in urbanized areas. Because nuisance vegetation control is lower priority after safety related and legally mandated activities, the location and work actions listed below may be postponed depending on availability of resources. For 2014, the overall approach to control of nuisance vegetation and locations where focused efforts will be applied if time and resources allow include:

**Westside/Shelton**
- SR 101 MP 360-295 Plan to treat with a fall brush application after Sept 1st.
- SR 106 MP 0.0 to 20.9 Plan to do some spot treatment where possible to suppress/eradicate small woody species breaking out of native vegetation.
- SR 003 MP 1-25 Plan to make fall application after Sept 1st to maintain gains made with prior treatments and mowing, encouraging native vegetation return.

**Eastside/Port Orchard**
- SR 003 MP 37 to 53 Plan to mow center median as it is on a 3-4 year rotation and is in need due to woody species reappearing.
- SR 003 MP 36 to 34.5 SB Plan to treat poison oak growing on rock face.
- SR 016 MP 10.8 to 26.95 and 27.75 to 28 Plan to remove non-native and unwanted fast growing native tree species out of planted median and stump treat.
- SR 003 MP 45.6 to 46.2 and MP 46.6 to 47.2 Plan to remove non-native and fast growing native tree species out of planted median and stump treat.
- SR 302 MP 10.5 to 12.5 Multi pass mowing for sight distance concerns.
- SR 104 MP 15.6 to 20.5 Multi pass mowing for sight distance concerns.
1. ROUTINE MAINTENANCE ACTIVITIES
Roadside maintenance activities are considered routine when a regularly occurring cycle of treatment is required to keep vegetative growth from interfering with highway operational and maintenance objectives. Routine maintenance activities include maintenance of a vegetation-free band at the edge of pavement where required, certain types of mowing and trimming operations, and removal of trees that pose an identifiable threat to the highway or neighboring property.

1.1. Bare Ground Shoulder Maintenance (Zone 1)
In some locations/situations it is most efficient and effective to maintain a vegetation free band of shoulder rock along the edge of pavement. In most cases this is achieved through the annual application of herbicides. Annual herbicide applications are required where a vegetation-free condition is specified.

1.1.1. Guidelines
- In Olympic Region, Area 2, Zone 1 is maintained as vegetation free under guardrails and in specific locations to facilitate surface drainage.
- A vegetation-free Zone 1 is not maintained along certain designated sections of highways due to environmental sensitivity, including all of SR 106, portions of SR 101 along the Hood Canal, and SR 305 on Bainbridge Island. Along 106 and 101 these sections Zone 1 will only be maintained under guardrail with the use of a non-selective, post-emergent herbicide labeled for aquatic applications. On Bainbridge, grass will be allowed to grow under guardrail and broad-leaf weeds and brush be managed in these locations with selective herbicides.
- Annual Zone 1 treatments where applied are intended to remove all vegetation growth in a solid band adjacent to the pavement edge. Limited regrowth of grasses and other non-weed species in the year following each treatment is acceptable in some cases.

1.1.2. Methods
- Zone 1 is maintained using an annual application of non-selective, post-emergent herbicides
- Applications typically occur beginning mid-May depending on weather patterns and plant growth.
- Pavement edges will be monitored for surface drainage problems resulting from sod build-up and will be graded in select locations as necessary to allow storm water flow off the roadway surface.
- See Appendix A, Zone 1 Maintenance – Bare Ground Treatment

1.1.3. Locations
- Delineation for Zone 1 maintenance can be found using a web base map viewer application at: IVM Map Viewer
Data and locations represented on this map are for general reference and planning purposes only and are subject to change without notice. WSDOT cannot guarantee complete accuracy.

1.2. Mowing/Trimming (Zones 1 and 2)
Regular mowing cycles are required in most locations where a vegetation-free Zone 1 is not maintained and grass is established up to the edge of pavement. Even in some locations where a vegetation-free Zone 1 is maintained, seasonal grass growth near the road edge is tall enough to interfere with traffic operations and safety. In addition, some locations, particularly on secondary highways with narrow right-of-ways, regular periodic
side trimming is required to prevent growth of shrubs/brush or side branches on trees from interfering with traffic operations and safety.

1.2.1. Guidelines
- Single pass mowing is conducted at least once per year on all shoulders where Zone 1 is not maintained and in other areas as required.
- Annual mowing or trimming beyond one pass is also conducted as needed for locations on all highways to preserve site distance at curves, intersections and any other highway entry points. However SR 3 MP 36.5 to 38.5 in both directions will receive a 30' mowing pass yearly to visually enhance gateway interchanges.
- Some areas and interchanges along limited access highways are mowed out for aesthetic purposes as described in Appendix C, Routine Mowing Plan (not included in the plan at this time).
- In all other areas mowing is only used occasionally as part of IVM treatments for weed and brush control as described below in Section 2.

1.2.2. Methods

Mowing
- Timing and mowing heights are set to encourage root development and health of the grass stands. Grass should be mowed at a minimum height of 6 inches. When one mowing per year is all that is required, timing should be any time after seed set typically around the middle of June at the earliest.
- Single pass mowing consists of one pass up to the maximum width of mowing equipment but may be as narrow as practical depending on mowing equipment, the presence of existing visual lines such as ditches, and the configuration of roadside cut and fill slopes.

Trimming
- Whenever possible, side arm brush trimming will be conducted as late in the season as possible or over winter months if time allows to avoid negative visual impacts during the tourist season. Early trimming in late winter or early spring, prior to leaf out is appropriate when soil and weather conditions permit.
- Chemical control methods on evergreen trees or foliar applications to other undesirable vegetation will occur after mid-September to avoid brown outs and potential contact with edible berries.
- See Appendix A, Routine Maintenance Prescriptions, Zone 2 Maintenance

1.2.3. Locations by Milepost
- Single pass routine mowing occurs on all roadsides in the area, except for inaccessible steep slopes behind Jersey barrier or guardrail
- Appendix C, Routine Mowing Plan (not included at this time) describes mowing priorities, timing and limits major limited corridors in the area.

1.3. Hazard Tree Monitoring and Removal (Zone 3)
In areas where there is adequate right-of-way width to accommodate Zone 3 the main objective is to establish vegetation that requires as little maintenance as possible. Activities conducted are targeted selectively at removal of unwanted vegetation and preservation of desirable vegetation. However, large trees with health or structural problems can pose a significant threat to the highway, therefore both monitoring for the presence of potential hazard trees and removal when necessary are consider routine and ongoing roadside maintenance activities.

1.3.1. Guidelines
• Hazard tree removal is considered a routine maintenance activity because maintenance is constantly on the lookout for any trees that pose an imminent threat to the highway or traffic and whenever hazard trees are identified they are routinely removed as soon as possible.

• Hazard trees may be dead, diseased, leaning, or structurally unsound. Best horticultural judgment will be used in evaluating trees that appear diseased or structurally unsound or are believed to pose a long-term threat to determine the best course of action.

• Another consideration in removal of trees is the contribution to shading in areas prone to frost and ice formation on the highway surface. When such areas are identified, the surrounding canopy may be thinned through selective removal of large trees on the right-of-way.

• In some cases trees threatening the highway may be growing on neighboring property. In these cases WSDOT has the legal right to remove the trees after informing and consulting with the neighboring property owner.

1.3.2. Methods

• Hazard trees are removed in such a manner to minimize damage and impact to the highway structure and to other healthy trees and under-story vegetation.
2. INTEGRATED VEGETATION MANAGEMENT ACTIVITIES

All roadside vegetation maintenance activities technically fall under IVM. IVM is a coordinated decision making process that uses the most appropriate vegetation management methods and strategy, along with a monitoring and evaluation system, to achieve long-term roadside maintenance goals and objectives in an environmentally and economically sound manner. Even routine activities should be evaluated for effectiveness and refined whenever possible to reduce annual maintenance requirements. However, for the following activities the ultimate goal is to eliminate and prevent the future growth of unwanted plants, and to promote and enhance desirable vegetation. Activities are planned and carried out using the decision making process diagrammed in Figure 3 on page 7. The goal in utilizing the IVM approach is the establishment of stable, low maintenance native or naturalized plant communities on the roadside that are compatible with:

- Highway maintenance and safety objectives
- Preservation of environmental quality
- Weed control requirements
- The concerns of WSDOT’s customers and neighbors

Long term, the use of the IVM approach can reduce the intensity and cost of maintenance as well as minimizing the need to use herbicides.

2.1. Integrated Vegetation Management Planning and Tracking Database

2.1.1. Guidelines

- An Integrated Vegetation Management Records database is available for use. This database is accessed through the same WSDOT network application as the Pesticide Application Records database.
- Any activities focused on treatment of a specific location and species infestation, or focused on treatment of any types of unwanted vegetation throughout the area will be documented with an initial IVM record outlining the long-term treatment plan. These same records will be updated over time whenever planned treatments are carried out, or when observations are made as to the success or failure of past treatments.
- Treatment records may be printed out and inserted into Appendix E of plan binders for reference.

2.1.2. Sample forms

- A copy of the Integrated Vegetation Management Record is included in Appendix E, Forms and Records.

2.1.3. Instructions for use

- Maintenance supervisors and technicians can access the IVM Record through the existing Pesticide Application Record Keeping system available over the computer network from the area office or maintenance sheds.

2.2. Noxious Weed Control

WSDOT defines noxious weeds as any species listed for mandatory control under state law (WAC 16-750) or by the local county codes. Other weed species that may be listed as noxious weeds on the state and county lists but not legally mandated for control are defined as nuisance weeds and managed as described under Section 2.3 in this plan.

2.2.1. Guidelines

- Noxious weed control is a high priority for WSDOT because of state law requiring control of designated species. Transportation rights-of-way are high priority locations for control of noxious weed species within the state because they cross and link so many adjacent properties and land uses.
- Whenever possible treatment of designated noxious weed species and infestations locations will be documented and treated following plans as defined by IVM record forms in the database.

- Washington State Law classifies noxious weeds in three classes: A, B, and C. All Class A species require eradication wherever they occur statewide. The law allows for individual county weed boards to designate individual Class B and C weeds for control (preventing seed production and spread) within the counties depending on how widespread and potentially harmful they are at the local level.

- For Olympic Region, Area 2 the following weeds designated for control are known to exist on state highway right-of-ways in Mason County:

**Class A**
Class A noxious weeds are non-native species with a limited distribution in the state. There is one Class A species found on the right-of-way in Olympic Region, Area 2, along US 101 on the Skokomish Reservation and in scattered occurrence along SR 106:

<table>
<thead>
<tr>
<th>Common Name/Botanical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giant hogweed/Heracleum mantegazzianum</td>
</tr>
</tbody>
</table>

**Class B**
Class B weeds are more widespread than Class A, with control mandated by law only if infestations are generally limited and the species are designated within the individual counties by the County Noxious Weed Control Boards. Olympic Region, Area 2 boundaries include highways in Kitsap and Mason Counties. The area also includes a portion of US 101 in Jefferson County in the north and several miles of SR 16 and 302 in Pierce County on the south. Designated control species known to exist on the right-of-way in Area 2 and designated as noxious weeds in this plan by county are described in the following table:

<table>
<thead>
<tr>
<th>Common Name/Botanical Name</th>
<th>Kitsap</th>
<th>Pierce</th>
<th>Jefferson</th>
<th>Mason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butterfly bush/Buddleha davidii</td>
<td>![ ]</td>
<td>![ ]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knotweed sp./Polygonum sp.</td>
<td>![ ]</td>
<td>![ ]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knapweed sp./Centaurea sp.</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Poison hemlock/Conium maculatum</td>
<td>![ ]</td>
<td>![ ]</td>
<td></td>
<td>![ ]</td>
</tr>
<tr>
<td>Tansy ragwort/Senecio jacobaea</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Wild chervil/Anthriscus sylvestris</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Yellow Hawkweed/Hieracium C.</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Orange Hawkweed/Hieracium a.</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Sulfur cinquefoil/Potentilla recta</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Purple Loosestrife/Lythrum salicaria</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Common Reed/Phragmites australis</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
</tbody>
</table>

Species listed above as designates in some counties but not others will be given highest priority for control as nuisance weeds as described in the following section for neighboring counties where they are not designated.

**Class C**
Class C noxious weeds are widely established throughout Washington and/or may impact the agricultural industry. Counties may require control of certain Class C weeds at their own discretion but none of the counties in Olympic Region, Area 2 have done so. Unless designated by the county weed boards for required control, WSDOT uses the term “nuisance weeds” Class C species.
Nuisance weeds and treatment options are described in Section 2.4 of this document.

- Pictures of designated control noxious weeds are included for reference in Appendix D.

2.2.2. Methods

- Because noxious weed species are often difficult to control, herbicides treatments are often the primary, initial means of control.
- If infestations are limited to a few plants, hand pulling is also effective when the entire root system is also removed. Maintenance employees are encouraged to be aware of and look for new noxious weed occurrences, and to stop and pull these plants whenever possible.
- In conjunction with weed control treatments, a variety of other measures may be taken to promote natural vegetative competition through seeding, planting, and soil enhancement. The IVM Record and database are essential to tracking the execution and success of these control measures.
- For recommended treatments specific to noxious weed species, see Appendix A, IVM Prescriptions, Noxious Weed Control

2.2.3. Locations

- Priority locations for control of designated noxious weed species in Olympic Region, Area 2 can be found by using a web base map viewer application at: IVM Map Viewer. Data and locations represented on this map are for general reference and planning purposes only and are subject to change without notice. WSDOT cannot guarantee complete accuracy.

2.3. Nuisance Weed Control

2.3.1. Guidelines

- For the purposes of this plan, nuisance weed species are defined as species listed as Class B and C weeds on the state noxious weed lists, but not required for control within individual counties.
- Nuisance weed control, while not required by state law, provides many positive benefits to the overall condition of the roadside, enhances ecological function by maintaining and enhancing native plant communities, reduces the potential for continuing spread of weed infestations, and enhances visual quality.
- Nuisance weed species will be controlled when time and budget allows.
- Priority will be given to locations with the highest chance for success including relatively new infestations and where there is potential for infestations to spread to un-infested areas of the right-of-way or to un-infested neighboring properties.
- Species listed above as designates in some counties but not others will be given highest priority for control as nuisance weeds in neighboring counties where they are not designated.
- Species designated as nuisance weeds in Olympic Region, Area 2 that are known to exist on the highway right-of-way include:

<table>
<thead>
<tr>
<th>Common Name/Botanical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Himalayan blackberry/Rubus discolor</td>
</tr>
<tr>
<td>Scotch broom/Cytisus scoparius</td>
</tr>
<tr>
<td>Common tansy/Tanacetum vulgare</td>
</tr>
<tr>
<td>St. Johnswort/Hypericum perforatum</td>
</tr>
<tr>
<td>Common mullein/Verbascum Thapsus</td>
</tr>
<tr>
<td>Bull Thistle/Cirsium vulgare</td>
</tr>
<tr>
<td>Canada thistle/Cirsium arvense</td>
</tr>
<tr>
<td>Musk thistle/Carduus nutans</td>
</tr>
<tr>
<td>Knotweed sp./Polygonum sp.</td>
</tr>
</tbody>
</table>
2.3.2. Methods

- Control measures for nuisance weed are dependent on the type of plant.
- Woody species such as Scotch broom and Himalayan blackberry are most effectively treated with a combination of cutting, herbicide treatments and encouragement of native vegetation.
- Perennial species such as Canada thistle are most effective controlled by succeeding years of properly timed herbicide applications.
- Annual or biennial species such as bull thistle and common tansy may also be effectively controlled with herbicide applications when plants are in the rosette stage in spring, or by hand pulling prior to seed set.
- See Appendix A, IVM Prescriptions, Nuisance Weed Control.
- Pictures of nuisance weeds are included for reference in Appendix D.

2.3.3. Locations

- Locations for nuisance weed control activities will be identified in the Area IVM Goals section of the plan beginning on Page 8.

2.4. Tree and Brush Control

2.4.1. Guidelines

- Trees and brush are controlled for safety reasons including preservation of sight distance at curves and intersections, and for visibility of signs, and preventing trees with large trunk diameter from growing too close to traffic lanes.
- Native shrub and small tree species should be allowed to grow and mature in Zone 2 and selectively trimmed if they begin to encroach on sight distance or other traffic operational requirements.
- Large tree species left to grow in Zone 2 and in some cases parts of Zone 3, can reach substantial size over a relatively short period of time and causing a hazard either to errant vehicle recovery, contributing to shading and winter ice formation.
- Fast-growing pioneer species such as big leaf maple, alder, or cottonwood, present a risk from falling on the road when mature. Wherever these trees emerge within 70' of the pavement on highway right-of-way, they should be removed within the first two to three years of growth or as soon as possible.
- Any tree with a trunk diameter of 4" or greater is considered a hazard for errant vehicles in Zone 2 and should be removed when young. The Design Clear Zone and is typically maintained to a width of 30' from the traffic lane edge where guardrail or concrete barrier does not exist. Actual minimum widths are determined by roadway alignment, traffic speed and volume, and cross-section of the roadside. Clear Zone widths are specified in the WSDOT Design Manual, Chapter 700.04. 
  [http://www.wsdot.wa.gov/Publications-Manuals/M22-01.htm](http://www.wsdot.wa.gov/Publications-Manuals/M22-01.htm)

2.4.2. Methods

- Removal of undesirable tree and brush species is typically accomplished by properly timed selective mowing, properly timed herbicide applications, hand cutting, hand pulling, or combinations thereof.
- In some locations it is most effective to mow back the majority of the existing vegetation and then selectively treat undesirable re-growth with herbicides in succeeding years, allowing desirable vegetation to grow up around and form a competitive cover.
- In some cases when tree and brush species are cut by hand, the debris can be fed through a chipper and placed back on the roadside in the form of mulch for soil enhancement and weed prevention.
Timing of activities has a significant effect on how the vegetation grows back. Herbicide applications made by hand, directly to the cut surfaces of undesirable plants may be used to reduce or eliminate grow back.

Chemical control methods will not be used on conifers greater than 2 feet in height and/or large dense patches of seedling trees, to avoid unnecessary negative visual impacts from “brown-out”.

Chemical control methods will not be used on deciduous trees and shrubs until after the first of September, except for as stump treatments in conjunction with mechanical cutting to eliminate grow-back.

When possible, safe and practical, seedling of desirable trees may be dug or pulled by hand and transplanted to areas where there growth will be beneficial and appropriate. Agreements may be signed to allow private citizens to collect seedlings for use as transplants.

See Appendix A, IVM Prescriptions, Tree and Brush Control.
3. SPECIAL MAINTENANCE AREAS

Special Maintenance Areas are any locations with unique maintenance requirements or special considerations for roadside management. These areas may include interchanges, community entrances or enhancement areas, areas maintained by cities, bicycle paths, storm water retention ponds, state park land, wellheads, environmentally sensitive areas, school zones and roadsides adjacent to individual properties with current or annual no-spray agreements.

3.1. Interchanges/Intersections

3.1.1. Guidelines

- Interchange areas are sometimes developed to a greater level than general roadside areas to include storm water management facilities, pedestrian areas, and permanent vegetation designed for screening, and visual enhancements for community entrances.

3.1.2. Locations (locations will be available in map viewer version 2)

- Mowing routines in designated limited access gateway interchanges are described in Appendix C, Routine Mowing Plan (not included in plan at this time).
- Interchanges and intersections with unique maintenance considerations and/or interchanges that are considered urban gateways along with a description of special maintenance activities can also be referenced using a web base map viewer application at: IVM Map Viewer

Data and locations represented on this map are for general reference and planning purposes only and are subject to change without notice. WSDOT cannot guarantee complete accuracy.

3.2. City Maintenance Areas

3.2.1. Guidelines

- In most cases where non-limited access highways exist within city limits, the roadside (all area outside the highway pavement and drainage systems) are maintained by the local city government.

3.2.2. Locations (locations will be available in map viewer version 2)

- Limits for city maintained roadsides can be referenced using a web base map viewer application at: IVM Map Viewer

Data and locations represented on this map are for general reference and planning purposes only and are subject to change without notice. WSDOT cannot guarantee complete accuracy.

3.3. Herbicide Sensitive Areas

3.3.1. Guidelines

- WSDOT has identified certain areas where herbicide use will be limited to reduce any potential risk to human health or the environment. In these areas, no residual herbicide will be applied to the shoulders and grasses will be allowed to establish to the edge of pavement.
- Herbicide applications made in these designated areas for noxious or nuisance weed control, or in combination with mechanical methods for control of undesirable trees will be made selectively by hand.

3.3.2. Locations (locations available in map viewer version 2)

- Herbicide sensitive areas and reason/type of limitations on herbicide use can be referenced using a web base map viewer application at: IVM Map Viewer
Data and locations represented on this map are for general reference and planning purposes only and are subject to change without notice. WSDOT cannot guarantee complete accuracy.

- The list of pesticide sensitive individuals change annually, supervisors and herbicide applicators should reference the most current list to see if any notifications are required prior to spraying in any location.

3.4. Adopt-a-Highway and Neighbor Maintained Agreements

3.4.1. Guidelines
- In some situations herbicide use is limited or restricted because of legal requirements, neighbor concerns, or WSDOT imposed environmental safety precautions.
- In these locations, vegetation must be managed without the use of herbicides or with only a limited palette of herbicide types.

3.4.2. Locations
- Areas with existing agreements for others to maintain a portion of the roadside, along with notes describing arrangements for each location can be referenced using a web base map viewer application at: IVM Map Viewer

3.5. Pit Sites and Stockpile Sites
WSDOT pit sites are often actively used for construction projects over an extended period of time and as maintenance stockpile sites. Other maintenance stockpile sites area found adjacent to the highway that are used to temporarily store maintenance sand, debris cleared from the roadway, and drainage components.

3.5.1. Guidelines
- Pit sites and maintenance stockpile sites will be managed for noxious and nuisance weeds as required.
- Maintenance stockpile sites immediately adjacent to the highway will be maintained as part of routine Zone 2 maintenance.
- For security and visual quality, vegetative screening will be used where possible to screen maintenance stockpile sites from the highway.

3.5.2. Locations (locations will be available in map viewer version 2)
- Pit locations can be referenced using a web base map viewer application at: IVM Map Viewer

3.6. Storm Water Management Facilities

3.6.1. Guidelines
- Storm water management facilities include bio-filtration swales, in-shoulder filtration systems, retention ponds and infiltration ponds.
- Storm water management facilities are managed for noxious and nuisance weeds, and vegetative obstructions following the same guidelines mentioned in previous sections. The primary objectives with regards to vegetation
management within these facilities are maintenance of the functionality in terms of the designed volume of retention and water flow, and the maintenance of the surrounding fence.

- Some facilities have special requirements for mowing thresholds and removal/disposal of cut vegetation.
- Trees and brush should be cleared along both sides of the perimeter fencing around ponds for a width of approximately 8 feet as needed.
- Inlets and outfalls should be kept clear of vegetation and debris.

3.6.2. Locations (locations will be available in map viewer version 2)
- Storm water management facilities, along with notes describing general maintenance requirements for each location can be referenced using a web base map viewer application at: IVM Map Viewer
Data and locations represented on this map are for general reference and planning purposes only and are subject to change without notice. WSDOT cannot guarantee complete accuracy.

3.7. Wetland Mitigation Sites

3.7.1. Guidelines
- Wetland mitigation sites are carefully monitored through WSDOT’s Environmental Services Office for up to 10 years following their creation to ensure compliance with environmental regulation.
- In most cases vegetation in these sites is planted and established through the construction and long-term monitoring process so that once they are turned over to maintenance, actions are not required unless noxious weeds or hazardous trees become an issue.
- In cases where mitigation sites have fulfilled their original permit requirements and have been turned back to maintenance, sites should be inspected on an annual basis to determine if any repairs or weed control is necessary.

3.7.2. Locations (locations will be available in map viewer version 2)
- All wetland mitigation sites within Olympic Region, Area 2 along with notes describing dates construction and permit requirements for each location can be referenced using a web base map viewer application at: IVM Map Viewer
Data and locations represented on this map are for general reference and planning purposes only and are subject to change without notice. WSDOT cannot guarantee complete accuracy.

3.8. Protected Terrestrial Species

3.8.1. Guidelines
- WSDOT is currently working with the Department of Fish and Wildlife to identify highway locations where known populations of federally listed threatened and endangered terrestrial species exist on or near the highway right-of-way. These locations are then being matched against maintenance activities with potential to have adverse impacts on the protected species so that necessary maintenance activities can timed to avoid impacts wherever possible.
- Methods and timing of roadside maintenance activities to avoid impacts on protected terrestrial species are described in the Region Maintenance Environmental Compliance Guidance for Protected Terrestrial Species.

3.8.2. Locations (locations will be available in map viewer version 2)
Once locations and guidelines have been finalized in the region compliance guide, locations and descriptions of limitations on vegetation maintenance activities will be added to a web base map viewer application at: [IVM Map Viewer](#)

Data and locations represented on this map are for general reference and planning purposes only and are subject to change without notice. WSDOT cannot guarantee complete accuracy.

3.9. Railroad Crossings

3.9.1. Guidelines
- State law requires that all trees and brush be kept clear on highway rights of way within 100’ of railroad crossings.
- To maximize safety at rail crossings, trees and brush should be cleared as far back as practical to maximize site distance.

3.9.2. Locations (locations will be available in map viewer version 2)
- Locations of all railroad crossing in Olympic Region, Area 2 can be referenced using a web base map viewer application at: [IVM Map Viewer](#)

Data and locations represented on this map are for general reference and planning purposes only and are subject to change without notice. WSDOT cannot guarantee complete accuracy.

3.10. IVM Treatment Sites

3.10.1. Guidelines
- As discussed in Section 2.1, selected sites are designated for planning, carrying out and monitoring multi-year IVM treatments for control of weeds or other unwanted vegetation.
- IVM treatment sites are documented with an initial record in the IVM Treatment Database, to identify the problem to be addressed, location(s), management goals, and integrated treatment plan.
- Records are updated each time a treatment is made, results observed, or when the treatment plan is modified based on observations.

3.10.2. Locations
All designated IVM treatment sites with Olympic Region, Area 2 can be referenced through records in the Statewide Pesticide Tracking Database.
## Zone 1 Maintenance - Bareground Treatment

<table>
<thead>
<tr>
<th>OPTION 1</th>
<th>OPTION 2</th>
<th>OPTION 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TREATMENT TYPE:</strong></td>
<td>Pavement Edge</td>
<td>Pavement Edge</td>
</tr>
<tr>
<td><strong>MANAGEMENT GOALS:</strong></td>
<td>Vegetation free</td>
<td>Vegetation free</td>
</tr>
<tr>
<td><strong>METHOD:</strong></td>
<td>Annual herbicide application</td>
<td>Annual herbicide application</td>
</tr>
<tr>
<td><strong>EQUIPMENT:</strong></td>
<td>Spray truck w/ boom mounted nozzles</td>
<td>Handgun</td>
</tr>
<tr>
<td><strong>MATERIALS:</strong></td>
<td>Frequency 4 ozl./acre + Sulfomet 3 ozd./acre + Ranger Pro 64 ozl./acre</td>
<td>Perspective 8 ozd./acre + Sulfomet 3 ozd./acre + Ranger Pro 64 ozl./acre</td>
</tr>
<tr>
<td><strong>TIMING:</strong></td>
<td>Spring</td>
<td>Spring</td>
</tr>
<tr>
<td><strong>IVM FOLLOW-UP:</strong></td>
<td>Evaluate control</td>
<td>Evaluate control</td>
</tr>
<tr>
<td><strong>REMARKS:</strong></td>
<td>Typically applied in a 2 to 3 ft. band.</td>
<td></td>
</tr>
</tbody>
</table>
### Appendix A

**IVM Prescriptions**

#### Zone 2 Maintenance - Tree and Brush

<table>
<thead>
<tr>
<th>OPTION 1</th>
<th>OPTION 2</th>
<th>OPTION 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TREATMENT TYPE:</strong></td>
<td>Tree and brush</td>
<td>Tree and brush</td>
</tr>
<tr>
<td><strong>MANAGEMENT GOALS:</strong></td>
<td>Control vegetation obstruction</td>
<td>Control vegetation obstruction</td>
</tr>
<tr>
<td><strong>METHOD:</strong></td>
<td>Herbicide treatment</td>
<td>Stump treatment</td>
</tr>
<tr>
<td><strong>EQUIPMENT:</strong></td>
<td>Handgun</td>
<td>Cut stump applicator</td>
</tr>
<tr>
<td><strong>MATERIALS:</strong></td>
<td>Element 3A 64ozl./acre</td>
<td>Element 3A non diluted or 1:1</td>
</tr>
<tr>
<td><strong>TIMING:</strong></td>
<td>During growing season</td>
<td>Anytime</td>
</tr>
<tr>
<td><strong>IVM FOLLOW-UP:</strong></td>
<td>Evaluate control</td>
<td>Evaluate control</td>
</tr>
<tr>
<td><strong>REMARKS:</strong></td>
<td>Avoid brown out by spraying late in the season and spray only to appropriate height.</td>
<td></td>
</tr>
</tbody>
</table>
### Noxious and Nuisance Weed Control - General

<table>
<thead>
<tr>
<th>OPTION 1</th>
<th>OPTION 2</th>
<th>OPTION 3</th>
<th>OPTION 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TREATMENT TYPE:</strong></td>
<td>Chemical application</td>
<td>Chemical application</td>
<td>Chemical application</td>
</tr>
<tr>
<td><strong>ACTION THRESHOLD:</strong></td>
<td>Where ever present</td>
<td>Where ever present</td>
<td>Where ever present</td>
</tr>
<tr>
<td><strong>MANAGEMENT GOALS:</strong></td>
<td>Eradication</td>
<td>Eradication</td>
<td>Eradication</td>
</tr>
<tr>
<td><strong>METHOD:</strong></td>
<td>Spot spray w/ herbicide</td>
<td>Spot spray w/ herbicide</td>
<td>Spot spray w/ herbicide</td>
</tr>
<tr>
<td><strong>EQUIPMENT:</strong></td>
<td>Backpack</td>
<td>Handgun</td>
<td>Handgun</td>
</tr>
<tr>
<td><strong>MATERIALS:</strong></td>
<td>Element 3A 64 ozl./acre</td>
<td>Milestone 7 ozl./acre</td>
<td>Element 3A 64 ozl./acre + Landmark XP 4ozd./acre</td>
</tr>
<tr>
<td><strong>TIMING:</strong></td>
<td>During growing season</td>
<td>During growing season</td>
<td>During growing season</td>
</tr>
<tr>
<td><strong>IVM FOLLOW-UP:</strong></td>
<td>Reapply if needed</td>
<td>Reapply if needed</td>
<td>Reapply if needed</td>
</tr>
<tr>
<td><strong>REMARKS:</strong></td>
<td>Option 1,2&amp;3: Poison Hemlock, Tansy Ragwort, Giant Hogweed, Blackberry, Scotch broom, Sulfur Cinquefoil, Wild Chervil</td>
<td></td>
<td>Option 4: Tansy Ragwort, Alder, Scotch broom</td>
</tr>
</tbody>
</table>
# Appendix B

## Herbicides Approved for Use on WSDOT Rights of Way

When making herbicide applications:
1. Always read and follow product labels
2. Always use personal protective equipment when mixing, loading, and applying

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Product Names</th>
<th>Mode of Action (WSSA Class)</th>
<th>Where Used</th>
<th>How/Why Used</th>
<th>Notes/Recommendations</th>
<th>WSDOT Restrictions</th>
<th>Cautions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2,4-D</strong></td>
<td>Agri Star 2, 4-D LV4, Basecamp Amine 4, Clean Amine, Crossbow, Curtail, ES, Escalade, Low Vol 4 Ester, Platoon, Rangestar, Savage, Solton, Veteran 720, Weedar 64, WeedDefend, Weedmaster, Weedone LV4</td>
<td>Growth regulator - phenoxy synthetic auxin (4)</td>
<td>Noxious and nuisance weed control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td>Ester and acid formulations of 2,4-D may provide a good alternative to amine formulations. A number of the 2,4-D products come premixed with other herbicides.</td>
<td>Amine formulations of 2,4-D are restricted for use within 60' of all water</td>
<td>Amine formulations cause irreversible eye damage and are highly toxic to rainbow trout. All 2,4-D products pose risks when applied near grapes and other sensitive crops.</td>
</tr>
<tr>
<td><strong>Aminocyclopyrachlor</strong></td>
<td>Perspective, Plainview, Streamline, Viewpoint</td>
<td>Growth regulator - mimics plant hormones, synthetic auxin (4)</td>
<td>Nuisance and noxious weed control, Zones 2 and 3, Plainview is a bare-ground mixture</td>
<td>Depending on which mixture, can be either selective broadleaf or non-selective pre-emergent control</td>
<td>Each product is premixed with other herbicide to achieve either selective or non-selective control</td>
<td>No WSDOT use restrictions beyond those specified on product labels</td>
<td>Refer to product labels</td>
</tr>
<tr>
<td><strong>Aminopyralid</strong></td>
<td>Milestone, Milestone VM, Milestone VM Plus, Capstone</td>
<td>Growth regulator - mimics plant hormones, synthetic auxin (4)</td>
<td>Noxious and nuisance weed control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td>Effective on many perennial weed species due to some amount of soil residual activity on suppressing seed germination</td>
<td>No WSDOT use restrictions beyond those specified on product labels</td>
<td>Refer to product labels</td>
</tr>
<tr>
<td><strong>Bromacil</strong></td>
<td>Krovar 1 DF, Hyvar</td>
<td>Photosynthetic inhibitor photosystem II, site A (5)</td>
<td>Zone 1 bare-ground</td>
<td>Nonselective pre-emergent grass and weed control</td>
<td>Krovar is premixed with diuron</td>
<td>Westside - Restricted use Eastside - Krovar restricted for use within 60' of all water</td>
<td>Bromacil is potentially mobile in soil, use caution if rain is possible.</td>
</tr>
<tr>
<td><strong>Bromoxynil</strong></td>
<td>Buctril 2EC, BroClean, Brox 2E, Maestro 2EC</td>
<td>Photosynthetic inhibitor photosystem II, site C (6)</td>
<td>Noxious and nuisance weed control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td>Effective broadleaf weed control without grass seed suppression</td>
<td>Westside - Restricted use Eastside - Restricted for use within 60' of all water</td>
<td>Can cause irreversible eye damage, highly toxic to fresh water fish</td>
</tr>
<tr>
<td><strong>Chlorsulfuron</strong></td>
<td>Telar XP, Landmark XP, Throttle XP, Perspective</td>
<td>Amino acid synthesis inhibitors - ALS inhibitor (2)</td>
<td>Noxious and nuisance weed control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td>Product highly effective on difficult perennials such as Canadian thistle and horsetail. Landmark is premixed with Oust.</td>
<td>No WSDOT use restrictions beyond those specified on product labels</td>
<td>Refer to product labels</td>
</tr>
<tr>
<td><strong>Clopyralid</strong></td>
<td>Transline, Curtail</td>
<td>Growth regulator - pyridinecarboxylic acid synthetic auxin (4)</td>
<td>Noxious and nuisance weed control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td>Curtail is premixed with 2,4-D, Pathfinder is premixed with triclopyr</td>
<td>Curtail and Pathfinder are restricted for use within 60' of all water because of mixture with other restricted herbicides.</td>
<td>Curtail contains 2,4-D amine which causes irreversible eye damage and is highly toxic to rainbow trout</td>
</tr>
</tbody>
</table>
## Herbicide Guidelines

### Herbicides Approved for Use on WSDOT Rights of Way

When making herbicide applications:
1. Always read and follow product labels
2. Always use personal protective equipment when mixing, loading, and applying

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Product Names</th>
<th>Mode of Action (WSSA Class)</th>
<th>Where Used</th>
<th>How/Why Used</th>
<th>Notes/ Recommendations</th>
<th>WSDOT Restrictions</th>
<th>Cautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dicamba</td>
<td>Vanquish</td>
<td>Growth regulator - benzoic acids synthetic auxin (4)</td>
<td>Noxious and nuisance weed control, and tree and brush control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td>Vanquish is the dicamba formulation without 2,4-D</td>
<td>Veteran 720 is restricted for use within 60’ of all water because of 2,4-D amine content</td>
<td>Veteran 720 contains 2-4-D amine which causes irreversible eye damage and is highly toxic to rainbow trout</td>
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<tr>
<td></td>
<td>Veteran 720</td>
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<tr>
<td>Dichlobenil</td>
<td>Norosac 4G</td>
<td>Cell wall (cellulose) synthesis inhibitor (20)</td>
<td>Ornamental planting beds</td>
<td>Pre-emergent weed control in ground cover beds. Post emergent control of grasses.</td>
<td>Highly effective for pre-emergent control of unwanted weeds in ornamentals</td>
<td>Restricted for use within 60’ of all water</td>
<td>Dichlobenil is highly toxic to aquatic insects</td>
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<tr>
<td></td>
<td>Casoron</td>
<td></td>
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<tr>
<td>Diflufenzopyr</td>
<td>Overdrive</td>
<td>Auxin transport inhibitor (19)</td>
<td>Noxious and nuisance weed control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td></td>
<td>No WSDOT use restrictions beyond those specified on labels</td>
<td>Refer to product label</td>
</tr>
<tr>
<td>Diuron</td>
<td>Karmex</td>
<td>Photosynthetic inhibitor photosystem II, site B (7)</td>
<td>Zone 1 bare-ground</td>
<td>Nonselective pre-emergent grass and weed control</td>
<td>Cost effective weed control for Zone 1 in Eastern Washington</td>
<td>Westside - Restricted use Eastside - Restricted for use within 60’ of all water</td>
<td>Highly toxic to fish.</td>
</tr>
<tr>
<td></td>
<td>Diuron 4 L</td>
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<tr>
<td></td>
<td>Diuron 80 DF</td>
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<td></td>
<td>Parrot</td>
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<td>Sahara DG</td>
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<tr>
<td>Flumioxazin</td>
<td>Payload</td>
<td>Cell membrane disrupter - PPO inhibitor (14)</td>
<td>Zone 1 bare-ground</td>
<td>Nonselective pre-emergent weed control</td>
<td>Requires constant agitation to keep in suspension</td>
<td>Restricted for use within 60’ of all salt water</td>
<td>Highly toxic to estuarine invertebrates</td>
</tr>
<tr>
<td>Fluroxypyr</td>
<td>Vista E2</td>
<td>Growth regulator - pyridine carboxylic acid synthetic auxin (4)</td>
<td>Noxious and nuisance weed control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td>Highly effective on Kochia</td>
<td>No WSDOT use restrictions beyond those specified on product labels</td>
<td>Highly toxic to Eastern Oyster, high surface runoff potential</td>
</tr>
<tr>
<td></td>
<td>Escalade</td>
<td></td>
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</tr>
<tr>
<td>Fosamine</td>
<td>Krenite S</td>
<td>Growth regulator - inhibits bud and leaf formation (27)</td>
<td>Tree and brush control in Zones 2 &amp; 3</td>
<td>Selective broadleaf treatment</td>
<td>Effective broadleaf tree control without visual impacts</td>
<td>No WSDOT use restrictions beyond those specified on labels</td>
<td>Refer to product labels</td>
</tr>
<tr>
<td>Glyphosate</td>
<td>Roundup Pro</td>
<td>Amino acid synthesis inhibitor - EPSP synthase inhibitor (9)</td>
<td>Zone 1, spot spray around shrub and tree plantings, aquatic weed control</td>
<td>Nonselective control of all vegetation</td>
<td>Rodeo, Aquamaster and Aquaneat are approved for use in or over water. Aquatic versions of glyphosate products are approved for use with NPDES permit.</td>
<td>No WSDOT use restrictions beyond those specified on product labels</td>
<td>Refer to product labels</td>
</tr>
<tr>
<td></td>
<td>Razor Pro</td>
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<td>Aquamaster</td>
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<td>Mad Dog Plus</td>
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<td>Ranger Pro</td>
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</tr>
</tbody>
</table>

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**Olympic Region, Area 2**

**Integrated Roadside Vegetation Management Plan**

Page - 2

2014
# Appendix B

## Herbicide Guidelines

### Herbicides Approved for Use on WSDOT Rights of Way

When making herbicide applications:

1. Always read and follow product labels
2. Always use personal protective equipment when mixing, loading, and applying

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Product Names</th>
<th>Mode of Action (WSSA Class)</th>
<th>Where Used</th>
<th>How/Why Used</th>
<th>Notes/Recommendations</th>
<th>WSDOT Restrictions</th>
<th>Cautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imazapic</td>
<td>Plateau</td>
<td>Amino acid synthesis inhibitors - ALS inhibitor (2)</td>
<td>All zones</td>
<td>Pre-emergent control of undesirable grasses</td>
<td>WSDOT tests plots show a significant impact on desirable perennial grasses at rates above 6 oz per acre.</td>
<td>Westside - Restricted use Eastside - Restricted for use within 60’ of all water</td>
<td>Moderate to high potential to leach into groundwater</td>
</tr>
<tr>
<td>Imazapyr</td>
<td>Arsenal</td>
<td>Amino acid synthesis inhibitors - ALS inhibitor (2)</td>
<td>All zones</td>
<td>Pre and post-emergent non-selective control of all vegetation</td>
<td>Habitat is an aquatic version of Arsenal - good alternative to glyphosate in certain cases, approved for use with NPDES permit.</td>
<td>No WSDOT use restrictions beyond those specified on product labels</td>
<td>High surface runoff potential</td>
</tr>
<tr>
<td>Indaziflam</td>
<td>Esplanade</td>
<td>Cellulose-biosynthesis inhibitor (21)</td>
<td>Zone 1 bare-ground</td>
<td>Nonselective pre-emergent weed control</td>
<td>Effective control of annual weeds such as marestail, kochia, and crab grass</td>
<td>Restricted for use within 60’ of all water</td>
<td>Toxic to fish and aquatic invertebrates</td>
</tr>
<tr>
<td>Isoxaben</td>
<td>Gallery 75DF</td>
<td>Cell wall (cellulose) synthesis inhibitor (20)</td>
<td>Turf &amp; Ornamental</td>
<td>Pre-emergent weed control in ground cover beds</td>
<td>Works well by itself or with Ronstar</td>
<td>Restricted for use within 60’ of all water</td>
<td>Moderate to high potential to leach into groundwater</td>
</tr>
<tr>
<td>Metsulfuron-methyl</td>
<td>Escort XP</td>
<td>Amino acid synthesis inhibitors - ALS inhibitor (2)</td>
<td>Noxious and nuisance weed control, and tree and brush control, Zones 2 and 3</td>
<td>Selective broadleaf and conifer treatment</td>
<td>Good control on many difficult perennials.</td>
<td>No WSDOT use restrictions beyond those specified on product labels</td>
<td>Refer to product labels</td>
</tr>
<tr>
<td>Norflurazon</td>
<td>Predict</td>
<td>Bleaching - carotenoid biosynthesis inhibitor (12)</td>
<td>Zone 1 bare-ground</td>
<td>Pre-emergent weed control in Zone 1 and ground cover beds</td>
<td>Good Zone 1 product but may be difficult to keep in suspension</td>
<td>Restricted for use within 60’ of all water</td>
<td>High surface runoff potential</td>
</tr>
<tr>
<td>Oryzalin</td>
<td>Oryzalin A.S.</td>
<td>Seeding growth inhibitor - microtubule assembly inhibitor (3)</td>
<td>Zone 1 Ornamental planting beds</td>
<td>Pre-emergent weed control in Zone 1 and ground cover beds</td>
<td>Product requires additional rinsing to thoroughly remove residues from empty container</td>
<td>Restricted for use within 60’ of all water</td>
<td>Highly toxic to fish</td>
</tr>
<tr>
<td>Oxadiazon</td>
<td>Ronstar G</td>
<td>Cell membrane disrupter - PPO inhibitor (14)</td>
<td>Turf &amp; Ornamental</td>
<td>Pre-emergent weed control in ground cover beds</td>
<td>Works well by itself or with Gallery</td>
<td>Restricted for use within 60’ of all water</td>
<td>Highly toxic to fish</td>
</tr>
<tr>
<td>Pendimethalin</td>
<td>Pendulum 2G</td>
<td>Seeding growth inhibitor - microtubule assembly inhibitor (3)</td>
<td>Zone 1 Turf &amp; Ornamental</td>
<td>Nonselective/Selective depending on rate, Pre-emergent grass and weed control</td>
<td></td>
<td>Restricted for use within 60’ of all water, gardens, plants bearing edible fruit</td>
<td>Highly toxic to fish, high potential for loss on eroded soil</td>
</tr>
<tr>
<td>Picloram</td>
<td>Tordon</td>
<td>Growth regulator - pyridinecarboxylic acid synthetic auxin (4)</td>
<td>Noxious and nuisance weed control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td>Highly effective for conifer and broadleaf weed control in Eastern Washington</td>
<td>Westside - Restricted use Eastside - Restricted for use within 60’ of all water</td>
<td>Highly mobile in soil and readily adsorbed through roots of desirable trees</td>
</tr>
</tbody>
</table>
**Appendix B**

**Herbicides Approved for Use on WSDOT Rights of Way**

When making herbicide applications:
1. Always read and follow product labels
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</tr>
</thead>
<tbody>
<tr>
<td>Pyraflufen</td>
<td>Edict</td>
<td>Cell membrane disrupter - PPO inhibitor (14)</td>
<td>Noxious and nuisance weed control, Zones 2 and 3</td>
<td>2,4-D substitute, effective on Kochia, Russian thistle</td>
<td>Effective with Roundup for Kochia control</td>
<td>Restricted for use within 60’ of all water</td>
<td>Irreversible eye damage, highly toxic to Rainbow Trout</td>
</tr>
<tr>
<td>Sulfentrazone</td>
<td>Throttle XP</td>
<td>Cell membrane disrupter - PPO inhibitor (14)</td>
<td>Zone 1 bare-ground</td>
<td>Nonselective pre/emergent grass and weed control</td>
<td>Use caution in sandy soils</td>
<td>Westside - Restricted use</td>
<td>Eastside - Restricted for use within 60’ of all water</td>
</tr>
<tr>
<td>Sulfometuron-methyl</td>
<td>Oust</td>
<td>Amino acid synthesis inhibitors - ALS inhibitor (2)</td>
<td>Zone 1 bare-ground</td>
<td>Nonselective pre/post emergent grass and weed control</td>
<td>Landmark is a premix with Oust and Telar</td>
<td>Refer to product labels</td>
<td>Oust has been proven to move with wind if not watered in to the ground</td>
</tr>
<tr>
<td>Tebuthiuron</td>
<td>Spike 80DF</td>
<td>Photosynthetic inhibitor photosystem II, site B (7)</td>
<td>Zone 1 bare-ground</td>
<td>Nonselective pre/emergent grass and weed control</td>
<td>Westside - Restricted use</td>
<td>Eastside - Restricted for use within 60’ of all water</td>
<td>High surface runoff potential, potentially mobile in soil if rain is possible.</td>
</tr>
<tr>
<td>Topramezone</td>
<td>Frequency</td>
<td>Bleaching - carotenoid biosynthesis inhibitor (12)</td>
<td>Zone 1 bare-ground</td>
<td>Nonselective pre/emergent grass and weed control</td>
<td>Use in combination with another bare-ground chemical</td>
<td>Refer to product label</td>
<td>Refer to product label</td>
</tr>
<tr>
<td>Triclopyr Amine</td>
<td>Capstone, Element 3A, Garlon 3A, Milestone VM Plus</td>
<td>Growth regulator - pyridinecarboxylic acid synthetic auxin (4)</td>
<td>Noxious and nuisance weed control, and tree and brush control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td>Works well for scotch broom control</td>
<td>Refer to product label</td>
<td>Can cause irreversible eye damage</td>
</tr>
<tr>
<td>Triclopyr Ester</td>
<td>Crossbow, Crossbow L, Element 4, Garlon, Pathfinder</td>
<td>Growth regulator - pyridinecarboxylic acid synthetic auxin (4)</td>
<td>Noxious and nuisance weed control, and tree and brush control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td>Works well for cut-stump or basal treatments applications. Crossbow is premixed with 2,4-D, Pathfinder with clopyralid</td>
<td>Restricted for use within 60’ of all water</td>
<td>Highly toxic to fish</td>
</tr>
</tbody>
</table>
Appendix D  Noxious Weed Identification

Designated for control in OL area 2:
(Jefferson, Pierce, Mason, and Kitsap County)

1. Giant Hogweed/
   Heracleum mantegazzianum

2. Knapweed sp./
   Centaurea sp.

1. Butterfly bush/
   Buddleha davidii

2. Knotweed sp./
   Polygonum sp.

3. Poison Hemlock/
   Conium maculatum

4. Tansy Ragwort/
   Senecio jacobaea

1. Nuisance in Mason County
2. Nuisance in Pierce, Mason Counties
Appendix D  Noxious Weed Identification

Designated for control in OL area 2:
(Jefferson, Pierce, Mason, and Kitsap County)

3. Wild Chervil/ *Athriscus sylvestris*

4. Yellow Hawkweed/ *Hieracium caespitosum*

5. Orange Hawkweed/ *Hieracium a.*

6. Sulfur Cinquefoil/ *Potentilla recta*

7. Purple Loosestrife/ *Lythrum salicaria*

3. Nuisance in Kitsap County  5. Nuisance in Kitsap County
Nuisance weeds in OL area 2:
(Jefferson, Pierce, Mason, and Kitsap County)

- Himalayan Blackberry/ Rubus discolor
- Scotch Broom/ Cytisus scoparius
- Musk Thistle/ Carduus nutans
- Common Tansy/ Tanacetum vulgare
- St. Johnswort/ Hypericum perforatum
- Canada Thistle/ Cirsium arvense
Nuisance weeds in OL area 2: (Jefferson, Pierce, Mason, and Kitsap County)

- Bull Thistle/ Cirsium vulgare
- Common Mullein/ Verbascum thapsus
- *Knotweed sp./ Polygonum sp.

*Noxious in Pierce and Mason Counties
# Integrated Vegetation Management Record

**Org Code** | **County** | **Date** | **Vegetation Management Zone(s)** | **Location**
--- | --- | --- | --- | ---
 | | 6/13/2007 | | |

<table>
<thead>
<tr>
<th>Area</th>
<th>MP to MP</th>
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</thead>
<tbody>
<tr>
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</tbody>
</table>

**Class/Appropriate Zones:**
- Roadside
- Landscaped Area
- Interchange
- Migration Site
- Third Party Damage
- Sensitive Sites
- Aquatic
- Wetlands

**Target:**
- Noxious Weeds
- Brush/Tree
- Other
- Nuisance Weeds
- Hazard Tree

**Reason for Action:**
- Nuisance Weeds
- Fire Prevention
- Restore Native Veg.
- Zone 1 Pilot
- Aesthetic
- Site Distance
- Hazard Vegetation
- Customer Request
- Balance Vegetation
- Slope Stabilization
- Other

**Long term IVM plan (Describe goals/objectives and a step-by-step approach over time):**

**Approximate Access to Accomplish:**

<table>
<thead>
<tr>
<th>Activities</th>
<th>Planned date of Treatment</th>
<th>Actual date of Treatment</th>
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</thead>
<tbody>
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</tbody>
</table>

**Manual:**
- Dug
- Pulling
- Plowing
- Other
- Leaping
- Cutting
- Other

**Mechanical:**
- Axle Saw Work
- Invasive Brush/Cutting
- Motor-Operated
- Manual Brush/Cutting
- Invasive Mowers
- Other

**Bio-Control:**
- Insect
- Parasite
- Type/Species

**Cultural:**
- Burning
- Grazing
- Seeding
- Rangeland
- Soil Amelioration
- Other

**Chemical**

| #1 Evaluation and Date |
| | |

| #2 Evaluation and Date |
| | |

| #3 Evaluation and Date |
| | |
# Pesticide Application

<table>
<thead>
<tr>
<th>Org. Code</th>
<th>County</th>
<th>Date of Application</th>
<th>Start</th>
<th>Finish</th>
<th>ICP</th>
<th>Stores Issue Ticket Number(s)</th>
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<td>6/13/2007</td>
<td>AM</td>
<td>PM</td>
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</tr>
</tbody>
</table>

**Area**
- [ ] SR
- [ ] MP
- [ ] zone
- [ ] MP
- [ ] zone
- [ ] MP
- [ ] zone
- [ ] MP
- [ ] zone

**Check Appropriate Box**
- [ ] Roadside
- [ ] landscaped Area
- [ ] interchange
- [ ] Yard/Stockpile
- [ ] Spot Spray
- [ ] Aquatic
- [ ] Blanket Spray
- [ ] Wetlands

- [ ] Weed
- [ ] Noxious Weed
- [ ] Disease
- [ ] 1
- [ ] yes
- [ ] no

**Start Weather Conditions**
- [ ] Temperature [°C]
- [ ] Wind (Direction From)
- [ ] Wind (Range)

**Finish Weather Conditions**
- [ ] Temperature [°C]
- [ ] Wind (Direction From)
- [ ] Wind (Range)

<table>
<thead>
<tr>
<th>Task No</th>
<th>Material Name</th>
<th>Material Type</th>
<th>EPA Reg. No.</th>
<th>Lot Number</th>
<th>Product Description</th>
<th>Unit</th>
<th>Total Daily Usage</th>
<th>Unit</th>
</tr>
</thead>
</table>

**Total Acreage (acres) Treated**
- [ ] Equipment Number
- [ ] Tool Size
- [ ] 1
- [ ] 2
- [ ] 3
- [ ] 4
- [ ] Calibration Date
- [ ] Vehicle Speed
- [ ] Pct of PS
- [ ] Width of Spray Pattern

**Buffer Zone**
- [ ] Name
- [ ] Address
- [ ] Phone

**Operator Name**
- [ ] Operator License No
- [ ] Operator Signature

**Emergency Management** (9-800-258-5930)

<table>
<thead>
<tr>
<th>DOI</th>
<th>Distribution</th>
<th>O&amp;M</th>
<th>Operator</th>
<th>EPA File</th>
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**Additional Notes**

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**Notes**: Additional notes for Pesticide Application form.
### Exhibit x

**PESTICIDE - USE PROPOSAL**

(Reference FSM 2150)

<table>
<thead>
<tr>
<th>DEPARTMENT/AGENCY</th>
<th>CONTACT/PHONE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>REGION</td>
<td>FOREST</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) **OBJECTIVE**
   - a) Project No.
   - b) Specific Target Pest
   - c) Purpose

2) **PESTICIDE**
   - a) Common Name
   - b) Formulation
   - c) % AI, AE, or lb / Gal.
   - d) Registration No.

3) **APPLICATION**
   - a) Form Applied
   - b) Use Strength (%) or Dilution Rate
   - c) Diluent

4) **lbs. AI Per Acre or Other Rate**

5) **APPLICATION**
   - a) Method
   - b) Equipment

6) **APPLICATION**
   - a) Acres or Other Unit to be Treated
   - b) Number of Applications
   - c) Number of Sites
   - d) Specific Description of Sites

7) **APPLICATION**
   - a) Month(s) of Year
   - b) States

8) **SENSITIVE AREAS**
   - a) Areas to be Avoided
   - b) Areas to be Treated with Caution

9) **REMARKS**
   - a) Precautions to be Taken
   - b) Use of Trained / Certified Personnel
   - c) State and Local Coordination
   - d) Other Pesticides Being Applied to Same Site
   - e) Monitoring
   - f) Other
<table>
<thead>
<tr>
<th>Entity</th>
<th>Mailing Address</th>
<th>Contact Person</th>
<th>Title</th>
<th>Phone</th>
<th>E-Mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Poulsbo</td>
<td>780 NE Iverson St. Poulsbo, WA 98337</td>
<td>Dan Wilson</td>
<td>Public Works Superintendent</td>
<td>(360) 779-4078 Fax (360) 779-6384</td>
<td><a href="mailto:publicworks@cityofpoulsbo.com">publicworks@cityofpoulsbo.com</a></td>
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<tr>
<td>City of Bainbridge Island</td>
<td>280 Madison Ave. N. Bainbridge Island, WA</td>
<td>Barry Loveless</td>
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<td>(206) 842-2016</td>
<td><a href="mailto:pnom@bainbridgewa.gov">pnom@bainbridgewa.gov</a></td>
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<tr>
<td>City of Bremerton</td>
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<td>Chal Martin</td>
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<td><a href="mailto:chal.martin@ci.bremerton.wa.us">chal.martin@ci.bremerton.wa.us</a></td>
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<tr>
<td>City of Port Orchard</td>
<td>216 Prospect St. Port Orchard</td>
<td>Mark Dorsey</td>
<td>Public Works Director</td>
<td>(360) 876-4991 Fax (360) 876-4980</td>
<td><a href="mailto:publicworksf@cityofportorchard.us">publicworksf@cityofportorchard.us</a></td>
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<tr>
<td>City of Gig Harbor</td>
<td>3510 Grandview St. Gig Harbor, WA 98335</td>
<td>Jeff Langhelm</td>
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<td>(253) 851-6170</td>
<td><a href="mailto:langhelmj@cityofgigharbor.net">langhelmj@cityofgigharbor.net</a></td>
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<td>City of Shelton</td>
<td>525 W. Cota St Shelton, WA 98584</td>
<td>Greg Clark</td>
<td>Public Works Director</td>
<td>(360) 426-9731</td>
<td><a href="mailto:publicworks@ci.shelton.wa.us">publicworks@ci.shelton.wa.us</a></td>
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<td>Jefferson County</td>
<td>201 W Patison Port Hadlock, WA 98339</td>
<td>Eve Dixon</td>
<td>Noxious Weed Coordinator</td>
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<td><a href="mailto:edixon@co.jefferson.wa.us">edixon@co.jefferson.wa.us</a></td>
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<tr>
<td>Mason County</td>
<td>303 N 4th Street Shelton, WA 98584</td>
<td>Pat Grover</td>
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<td>(360) 427-9670 Fax (360) 427-7264</td>
<td><a href="mailto:pgrover@wsu.edu">pgrover@wsu.edu</a></td>
</tr>
<tr>
<td>Kitsap County</td>
<td>345 6th St., Suite 550 Bremerton, WA 98337</td>
<td>Dana Coggan</td>
<td>Noxious Weed Coordinator</td>
<td>(360) 307-4242</td>
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</tbody>
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