

South Central Region, Area 4

Integrated Roadside Vegetation Management Plan

2012



**Washington State
Department of Transportation**

Maintenance and Operations Division

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Summary

The Washington State Department of Transportation (WSDOT) South Central Region, Area 4 manages approximately 450 miles of roadside right-of-way throughout Walla Walla, Columbia, Garfield, and Asotin counties. This right-of-way is part of the state highway system including US 12, SR 124, 125, 129 as well as a number of other state routes in the area.

As a landowner in this area WSDOT is required to control all listed noxious weeds that occur on this right-of-way by state law (RCW 17.10 and 15.15.010). It is important to WSDOT to not only meet the legal requirements, but also to consider the needs and concerns of adjacent landowners in this area.

In order to better manage these roadsides WSDOT is in the process of developing an Integrated Vegetation Management Plan (IRVM) for this area. This plan will serve as the primary guidance document for maintenance of roadsides in this area and will provide detailed weed control and planting guidance as well as overall policy and procedures. This plan supports WSDOT's long-range goals of managing these roadsides to:

- Enhance roadside vegetation by providing stable, sustainable plant communities
- Reduce maintenance costs
- Improve weed control

The attached plan consists of three main sections:

1. **Introduction:** This section provides an overview of the maintenance area discussed in the plan. This section also provides contacts, pertinent links and references and the annual work plan while giving the reader a general understanding of the WSDOT roadside program.
2. **Plan:** This is the main body of the document and includes detailed descriptions of specific maintenance activities, policies and objectives.
3. **Appendices:** This section contains prescriptions for weed control and revegetation, noxious and nuisance weed locations, locations of special maintenance areas, forms and records, and a list of local public and private stakeholders.

This plan is a dynamic document that will be developed and updated over time with input from a variety of sources. WSDOT welcomes comments and suggestions from local private and public entities. An electronic version of the South Central Region, Area 4 Plan is available at <http://www.wsdot.wa.gov/Maintenance/Roadside> or available in hard copy upon request. Please contact Steve Underwood or James Morin at the numbers listed below for questions or comments.

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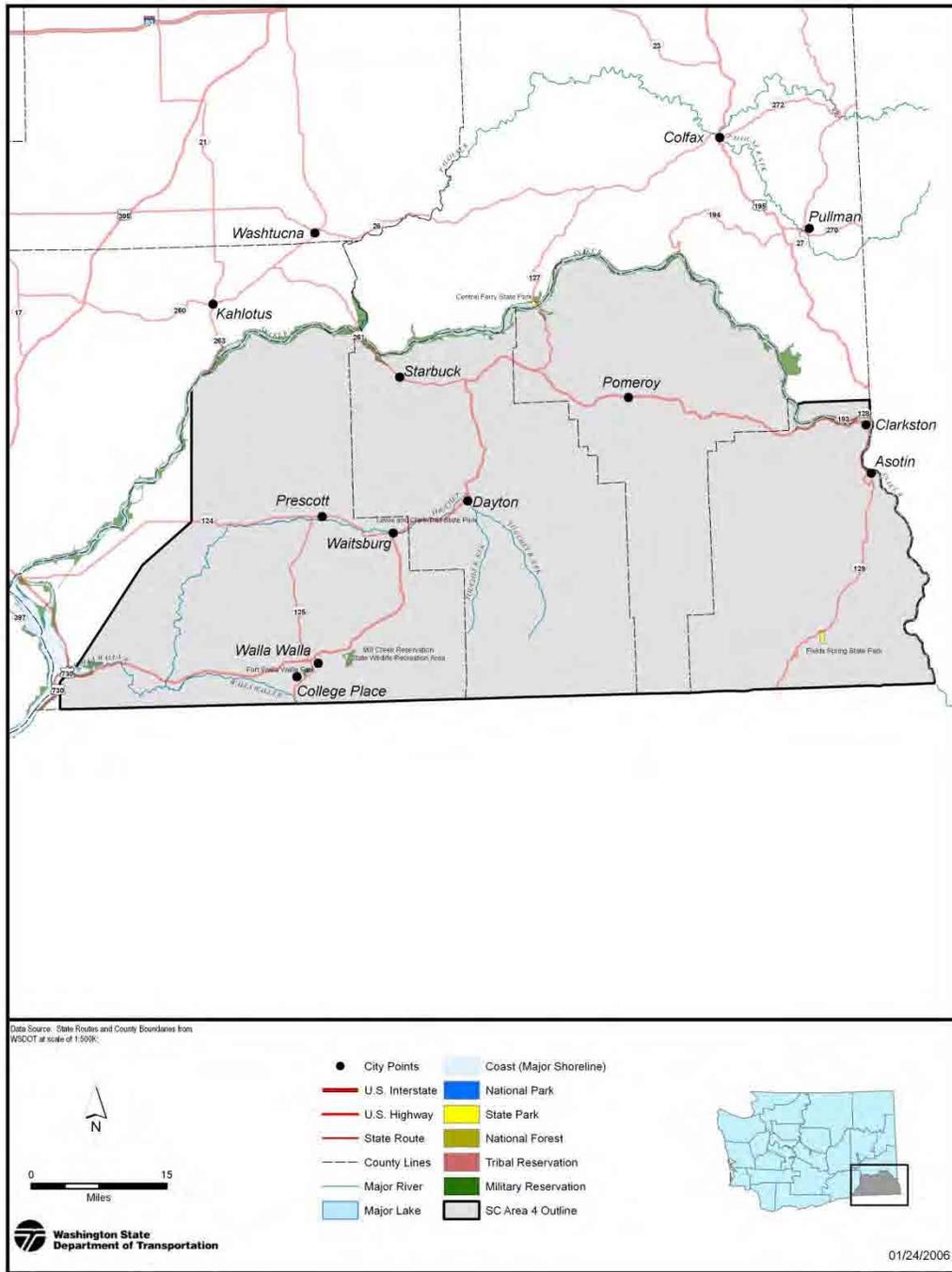
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South Central Region, Area 4 Vicinity Map

2009 Program Goals

The purpose of this section is to identify short and long term operational goals within SC Region, Area 4. These goals will help direct decisions that affect roadside management and the construction of roadside. These goals will be updated and evaluated on a yearly basis during the annual Winter Planning Meeting.

Long-Term Goals (2006-2010)

Long-term goals should be achievable within a 5 year period of time and have clearly stated objectives. Long-term goals may be general in nature and should provide direction for short term operational goals.

- 1) Eliminate zone 1 bareground as the standard roadside practice throughout Area 4 with the exception of special site specific areas and facilities. *Accomplished*
- 2) Improve roadside vegetation by planning and carrying out yearly planting projects to equal a minimum of 40 acres of right-of-way per year through 2010. *Only accomplished 5-10 acres*
- 3) Eliminate Rush Skeleton Weed on SR 124 between milepost 10 and milepost 18. *Did not accomplish*
- 4) Designate and maintain gateways at a higher standard *Accomplished*
- 5) Continue to focus on bio-control as a viable weed control option *Accomplished*
- 6) Work proactively with county weed boards and local CWMA *Accomplished*

Short-Term Goals (2009)

Short-term goals should be attainable within a 1-2 year period of time. Short-term goals should be specific goals with clear objectives that can be measured and reported.

- 1) Reseed where vegetative indicators are favorable to equal at least 40 acres per year. *Did not Accomplish, only 5-10 acres*
- 2) Improve cheat grass control and broadleaf weeds in bypass gateway areas by applying casoron. *Accomplished*
- 3) Apply approximately 200 acres of bare-ground annually *Accomplished 129 acres which was adequate*
- 4) Apply approximately 900 acres of selective herbicide area-wide to control noxious weed infestations *Accomplished 999 acres*
- 5) Mow by-pass gateway areas as needed *Accomplished*
- 6) Mow SR 129 MP. 33 to 17 12-16' wide to improve sight distance, reduce obstructions and reduce drifting. *Accomplished 300 acres*

Long-Range Work Plan (2011-2016)

The purpose of this section is to identify long term goals and an annual work plan for SC Region, Area 4. The long term goals will help direct decisions that affect roadside management and the construction of roadside while the work plan will identify specific activities scheduled for the current year. This section will be updated and evaluated on a yearly basis during the annual Winter Planning Meeting.

Long-Term Goals

Long-term goals should be achievable within a 5 year period of time and have clearly stated objectives. Long-term goals may be general in nature and should provide direction for the annual work plan.

- **General Weed Control**
 1. Improve consistency and predictability in Vegetation Management (VM) throughout the areas.
 2. Maintain good communication with County Weed Boards in the area
 3. Improve roadside vegetation by planning and carrying out yearly planting projects to equal a minimum of 20 acres of right-of-way per year through 2015
 4. Maintain designated gateways at a consistently high standard for weed control and visual quality
 5. Control all weeds in US-12 phase 6 to allow establishment of desirable vegetation
 6. Establish vegetation in US-12 phase 6 zone 1 and zone 3

- **Noxious Weed Control 3A2**
 1. Control all listed designate weeds throughout area , keep these weeds from spreading and make steady progress in reducing infestations
 2. Continue to focus on bio-control as a viable weed control option

- **Nuisance Weed Control 3A3**
 1. Control nuisance weeds on an "as needed" basis in support of noxious weed control and establishment of desirable vegetation.

- **Obstructions 3A4-**
 1. Maintain hardware, intersections and low site distance locations to be free of vegetation obstructions.

Work Plan (2010)

The work plan is updated on an annual basis and should reflect the priorities in the long-term goals.

- **Noxious Weed Control 3A2-**
 1. Treat approximately 1200 acres of roadside with selective herbicides for the control of designated noxious weeds. *Accomplished 2308*
 2. Mow approximately 50 acres of roadside in support of for the control of designated noxious weeds. *Accomplished 38*
 3. Increase fall applications to improve control of perennial weeds, particularly thistles, Russian knapweed and rush skeleton weed. *Accomplished only on US-12 Phase 6...used all available resources*
 4. Focus on complete control of designate species within US-12 Phase 6 project limits. *Partially Accomplished*
 5. Reseed US-12 Phase 6 zone 3 ROW *Accomplished*

- **Nuisance Weed Control 3A3-**
 1. Treat approximately 50 acres of nuisance vegetation *Accomplished 676 acres*
 2. Mow approximately 150 acres of nuisance vegetation *Accomplished 532 acres*
 3. US-12 phase 6- control kochia, Russian thistle and mustard species in support of establishing new grasses. *Partially Accomplished*

- **Obstructions 3A4-**
 1. Apply approximately 100 acres of bare-ground *Accomplished 70 acres*
 2. Mow approximately 50 acres of weeds for control of visual obstructions as per plan *Accomplished 37 acres*
 3. Remove approximately 20-30 hazard trees *Accomplished*

Annual Work Plan (2011)

The work plan is updated on an annual basis and should reflect the priorities in the long-term goals.

- **Noxious Weed Control 3A2-**
 1. Treat approximately 2000 acres of roadside with selective herbicides for the control of designated noxious weeds. *Accomplished 2148 acres*
 2. Mow approximately 50 acres of roadside in support of for the control of designated noxious weeds. *Accomplished 0 acres*
 3. Increase fall applications to improve control of perennial weeds, particularly thistles, Russian knapweed and rush skeleton weed *Partially Accomplished*
 4. Focus on complete control of designate species within US-12 Phase 6 project limits. *Did not Accomplish*
 5. Treat Phase 6 reseed areas with glyphosate *Partially Accomplished*

- **Nuisance Weed Control 3A3-**
 1. Treat approximately 300 acres of nuisance vegetation *Accomplished*
 2. Mow approximately 400 acres of nuisance vegetation *Accomplished 13 acres*
 3. US-12 phase 6- control kochia, Russian thistle and mustard species in support of establishing new grasses. *Partially Accomplished*

- **Obstructions 3A4-**
 1. Apply approximately 100 acres of bare-ground *Accomplished 78 acres*
 2. Mow approximately 50-100 acres of weeds for control of visual obstructions as per plan *Accomplished 132 acres*
 3. Remove approximately 50-100 hazard trees *Accomplished 23 trees*

Annual Work Plan (2012)

The work plan is updated on an annual basis and should reflect the priorities in the long-term goals.

- **Noxious Weed Control 3A2-**
 1. Treat approximately 2000 acres of roadside with selective herbicides for the control of designated noxious weeds.
 2. Mow approximately 50 acres of roadside in support of for the control of designated noxious weeds.
 3. Increase fall applications to improve control of perennial weeds, particularly thistles, Russian knapweed and rush skeleton weed
 4. Focus on complete control of designate species within US-12 Phase 6 project limits.
 5. Treat Phase 6 reseed areas with glyphosate

- **Nuisance Weed Control 3A3-**
 1. Treat approximately 300 acres of nuisance vegetation
 2. Mow approximately 400 acres of nuisance vegetation
 3. US-12 phase 6- control kochia, Russian thistle and mustard species in support of establishing new grasses.

- **Obstructions 3A4-**
 1. Apply approximately 100 acres of bare-ground
 2. Mow approximately 50-100 acres of weeds for control of visual obstructions as per plan
 3. Remove approximately 50-100 hazard trees

Roadside Maintenance Considerations

The primary objectives for maintenance of roadside vegetation are:

- Provide safe highway operation
- Comply with legal regulations for control of noxious weeds
- Protection of the environment

Visual Quality

All maintenance activities should be conducted in a way that minimizes visual impacts such as wide spread “brown-out” from herbicides or shattered limbs from side trimming. Roadside 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/M25-31.htm>

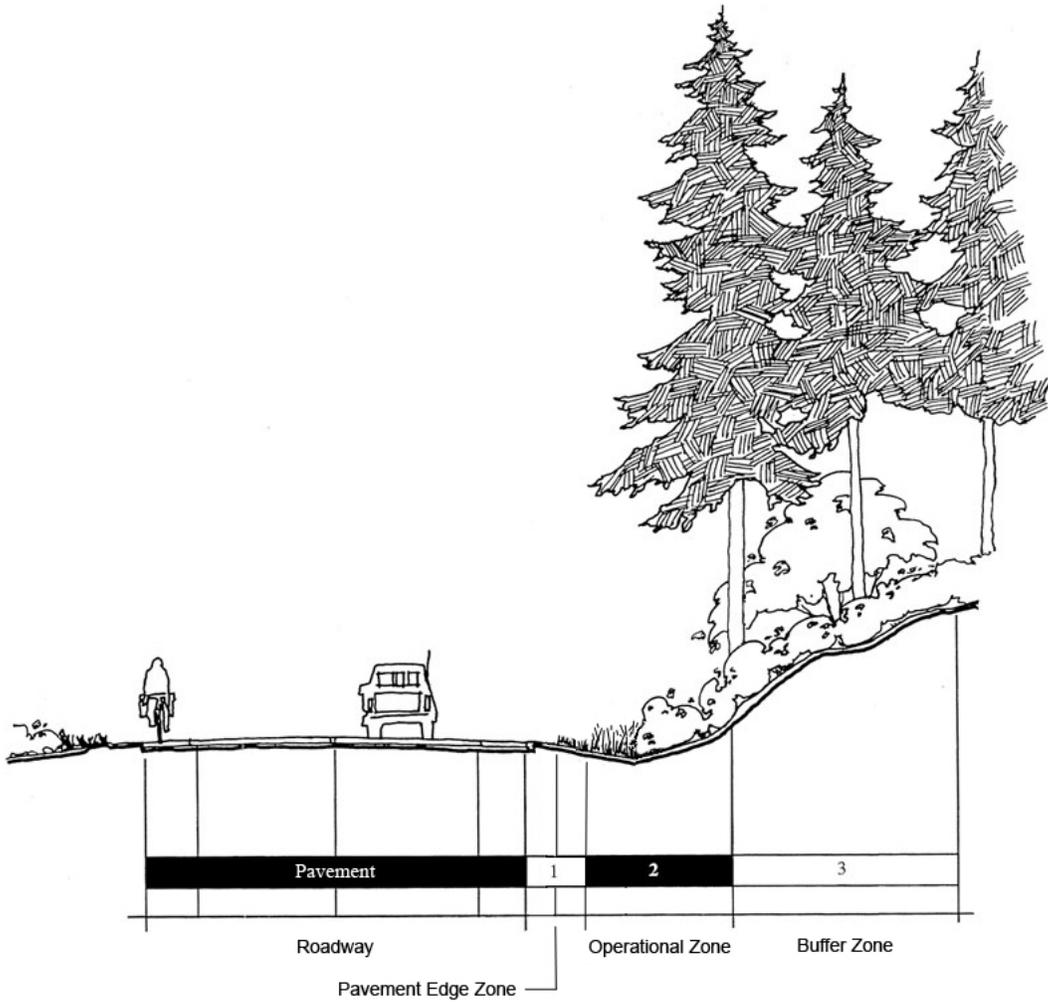
Operational Zones

WSDOT roadsides are divided into several zones for the purposes of assigning management objectives, maintenance intensities, 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 maintenance zones will occur along state highways in South Central Region, Area 4. In many cases the narrow width of the right-of-way or adjoining land-use, limits the operational zones to Zone 1 and a narrow Zone 2 only. Roadside vegetation management zones are as follows:

Zone 1 – The pavement edge zone is maintained in a manner and width necessary to address highway operations and safety, pavement preservation, guardrail maintenance, and storm water 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. A vegetation-free Zone 1 is maintained using non-selective soil residual herbicides. Routine annual mowing may be necessary in some cases where vegetation is established up to the edge of pavement.

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, trimming and/or herbicide treatment as necessary to selectively remove undesirable trees, brush and weeds and encourage desirable vegetation. Any plant with an existing or potential trunk diameter of 4” or greater is considered undesirable in Zone 2.

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. 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.



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.

Typical Roadside Vegetation Management Zones
Figure 2

Special Considerations

Herbicide Sensitive Areas

An Herbicide Sensitive Areas consist of all locations within 60' of jurisdictional water bodies. WSDOT limits the use of herbicides in these areas to reduce the potential risk of environmental impact to these sensitive resources. Only products that have successfully undergone an internal risk assessment process will be used in these areas (See Herbicide Safety below).

Special Maintenance Areas

This plan also defines and identifies areas with unique roadside maintenance requirements or where arrangements exist due to the surrounding land use, neighbor concerns or specific highway related functions. Special maintenance areas include highway roadsides sections with agreements for maintenance by neighbors. These areas are further defined in **Special Maintenance Areas, Section 3**.

Public Notification of Herbicide Applications

WSDOT is required by law to notify chemically sensitive individuals on file with Washington State Department of Agriculture, where the residing property abuts the highway right-of-way and the residence is within ½ mile of the property line. Notification to chemically sensitive individuals is accomplished by letter and/or phone conversation prior to each application. For specific herbicide application schedules, the roadside vegetation maintenance personnel can be reached at 509.577.1933.

Herbicide Safety

When applying herbicides WSDOT takes precaution to avoid any impact on human and environmental health, and to ensure herbicides do not move off target. Applications are made only by trained and licensed employees following all state and federal regulations as well as all recommendations and restrictions given on the individual product labels as approved by the US Environmental Protection Agency.

WSDOT has also conducted a risk assessment for the herbicide products and application methods used on state highways. Toxicological impacts of WSDOT practices were evaluated for human health (both operators and the general public), for aquatic ecosystems, and terrestrial wildlife. The findings of this assessment are summarized in a series of fact sheets for the individual herbicides used by WSDOT. These fact sheets can be viewed and downloaded through the Internet at: http://www.wsdot.wa.gov/Maintenance/Roadside/herbicide_use.htm or copies may be obtained by calling the WSDOT Headquarters Maintenance Office at 509.577.1912.

Roadside Design and Construction Considerations

Highway and utility construction in many cases has a significant impact on drainage, soils and vegetation adjacent to the paved roadway. WSDOT policy and practice for restoring the operational, environmental and visual functions disturbed by construction is based on the guidelines found in the Roadside Classification Plan (RCP) (WSDOT 2011), and the Roadside Manual (WSDOT M25-30, July 2003).

Coordination between Design, Construction, and Maintenance Programs is imperative to a comprehensive roadside vegetation management plan. A commitment to improving communication in this area is an important component in an ongoing effort to reduce lifecycle costs and improve roadside vegetation. This commitment has been recognized and agreed to by the regional executive management team.

Below is a list of design/construction projects that may have impacts to roadsides in the next 2-4 years:

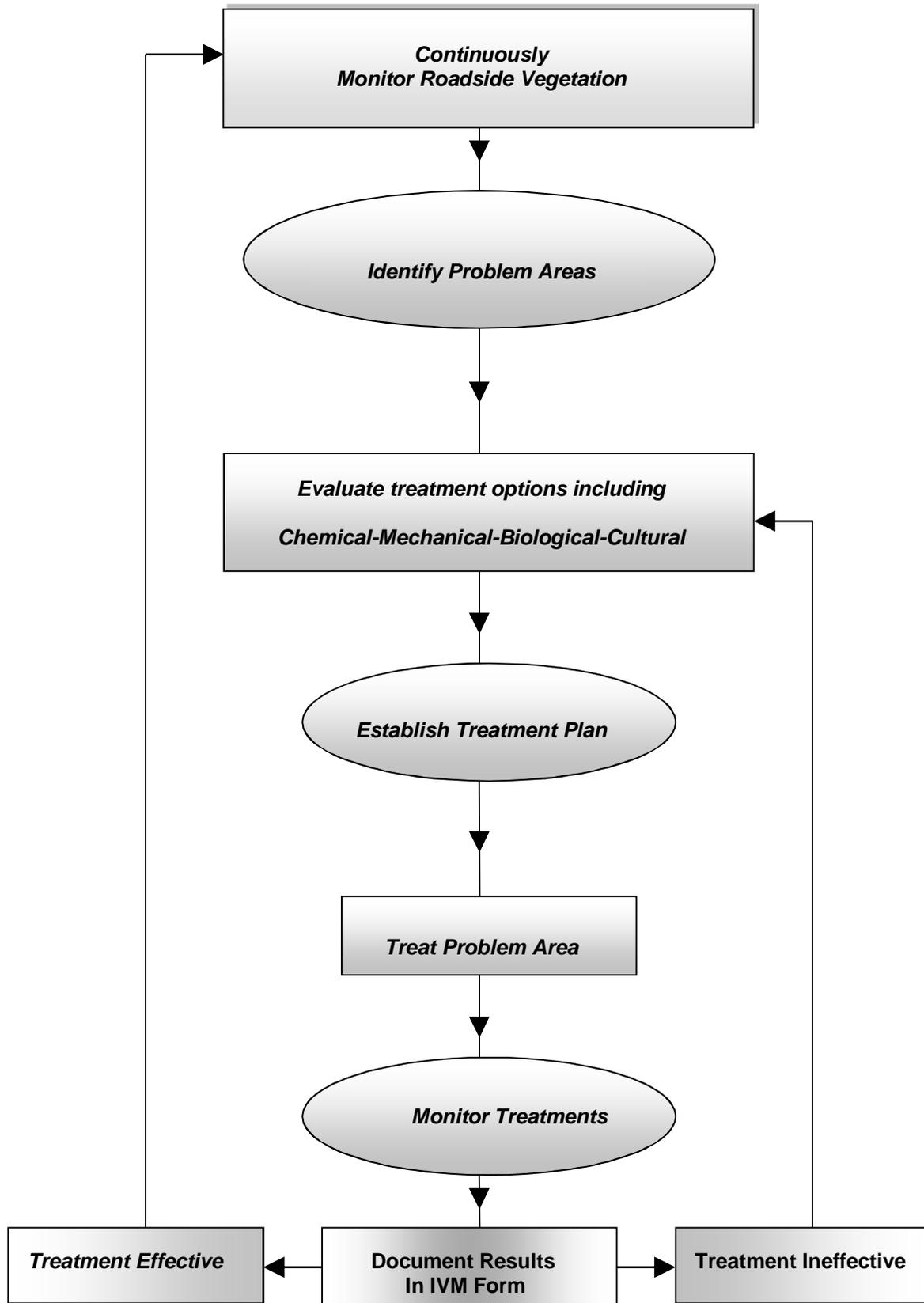
- **US-12 Four-lane Project Phase 7 Nine Mile Hill to Woodard Canyon:** This project is partially funded and currently in design and environmental documentation phase.
- **US-12 Four-lane Project Phase 8 Wallula Junction to Nine Mile Hill:** This project is currently in early environmental documentation phase and do not have a construction schedule at this time.

WSDOT South Central Region Projects Link:

<http://www.wsdot.wa.gov/regions/SouthCentral/> (Click on the Projects Tab)

Below is a list of permitted utility projects in the South Central Region, Area 4 that are scheduled for construction within the next 2-4 years.

- There is currently no utility construction contracts planned for this area.



The IVM Decision-Making Process
Figure 3

Roadside Vegetation Management Plan

1. INTEGRATED VEGETATION MANAGEMENT

Vegetation management activities are planned and carried out using the principles of Integrated Vegetation Management (IVM) and the decision making process described in Figure 3 (page 14). The goals of the IVM program are to:

- Provide effective control of noxious weeds
- Reduce maintenance life cycle costs
- Establish stable roadsides with desirable vegetation
- Preserve and enhance environmental quality

1.1. Integrated Vegetation Management Planning and Tracking Database

One of the keys to the successful use of IVM is carrying out activities in accordance with a long-range plan and to follow up with monitoring and evaluation of treatment results. To facilitate this, IVM forms and a database have been created for statewide use by WSDOT maintenance. This system is being tested as part of the initial development of Roadside Vegetation Management Plans and will be modified and refined as technology in this area continues to develop over the coming years.

1.1.1. Sample Forms

A copy of the Integrated Vegetation Management Form and Application Record are included in **Appendix F, Forms and Records**.

1.1.2. Instructions for Use

Maintenance supervisors and technicians can access the IVM Record through the existing pesticide application record keeping system available from the area office. The IVM form should be used whenever evaluation of a method or product is desired. Entries should include future evaluation dates as well as a description of the site and current conditions.

1.2. Routine Shoulder Maintenance (Zone 1 Bare-Ground)

1.2.1. Policy and Objectives

Zone 1 bare-ground is not present in most locations in SC Region, Area 4. Where required it is maintained free of vegetation to promote positive surface and subsurface drainage, protect asphalt shoulders from deterioration due to vegetation growth, facilitate preservation and maintenance of roadside hardware (guardrails and delineators), and to minimize fire starts.

In SC Region, Area 4, zone 1 bare-ground is routinely maintained on guard-rail sections only. Zone 1 is maintained with desirable vegetation to the edge of pavement unless specific safety or operational concerns exist. The typical bare-ground width is approximately 2' as measured from the edge of pavement along the slope of the shoulder and 3' in guardrail sections. This may include the area behind barrier associated with bridge ends, but does not in any case extend down-slope beyond the edge of the bridge abutment.

Zone 1 may be greater or less than the 2' standard width under some circumstances for certain operational functions. Prior to application, the area maintenance superintendent must approve all exceptions to standard width applications. These locations will be included on future updates to the area maps and plan documents.

1.2.2. Action Thresholds (Zone 1 Bare-Ground)

An action threshold refers to the point at which action must be taken to control an infestation of weeds. The action thresholds for treatment of zone 1 are listed below.

- Sight distance limited by vegetation within zone 1
- Special safety considerations as approved by the Area Superintendent

1.2.3. Methods (Timing and Procedures)

Zone 1 residual applications, where needed, will occur in the spring, typically beginning in early March. Herbicide Sensitive Areas will be maintained with a chemical that has been approved for use within this 60-foot buffer or by alternative mechanical applications. Special care will be given to these sensitive areas to insure that there are no impacts to the aquatic environment.

1.2.4. Prescriptions

See Appendix A, IVM Mowing Prescriptions

1.2.5. Locations by Milepost,

See Appendix C, Routine Maintenance

1.3. Mowing Operations

1.3.1. Policy and Objectives

Mowing will be accomplished throughout the South Central Region, Area 4 on an as needed basis. Mowing needs and prescriptions will vary by location. Mowing can be an effective form of weed control, but done incorrectly can cause damage to desirable vegetation and enhance the growing environment for unwanted weeds. It's important when conducting a mowing operation to consider a number of factors including goals, timing, target species, deck height and frequency.

1.3.2. Methods (Timing and Procedures)

Prior to conducting a mowing operation consider the following elements. Review items 1-7 below, then review and follow the appropriate prescriptions in Appendix A. There will be no mowing of desirable vegetation including grass, forbs, shrubs or woody species without prior authorization of the Maintenance Area Superintendent.

- 1. Identify Goals Of Mowing Operation:** Before prescribing mowing as a preferred alternative it is important to clearly understand what the goals of the operation are. These goals should not only be understood by the manager or decision maker, but also must be clearly communicated and understood by the operator as well. Goals may include; control of seed production, maintenance of sight distance, control of vegetation around hardware features, control of noxious or nuisance weeds in an environmental or crop sensitive area or the removal of weed skeletons for the control of newly emerging weeds.
- 2. Identify Appropriate Timing:** When mowing in a stand of established dry land perennial grass, particularly native varieties, it is important to consider timing. Mowing shall not occur until after desirable grasses have reached dormancy or set seed, typically in July-August. If the goal is control of weed seed production in an area where no desirable

vegetation is present, mowing should take place as late as possible but prior to seed development. This will increase the likelihood that the target plant will not produce seed.

3. **Identify Target:** Identify target plant or plants to be controlled and ensure that the mowing operation will not spread these weed or exacerbate the existing problem. Some weeds, such as Japanese knotweed, can be easily spread through mowing. Ensure that the operator understands the target species and any desirable species in the area.
4. **Deck Height:** The mower deck height must be maintained at least 6-8 inches from the ground to reduce the likelihood of exposing bare soil. It is also important to maintain this deck height if the mowing operation will include desirable grasses. Close mowing may be allowed in special cases where no desirable species occurs and restoration work will immediately follow.
5. **Clean Mower:** Mowing can easily spread weed seed from infested areas to uninfested areas. It is important to clean the mower after each operation to ensure that mowing operation is not contributing to the spread of noxious and nuisance weeds.
6. **Consider Alternatives:** As with all IVM operations it is important to consider alternative methods. Mowing in South Central Region, Area 4 is not a routine maintenance activity. It is a secondary form of weed control to be used on an as needed basis.
7. **Communicate:** Communication with the mower operator is critical to a successful mowing operation. The operator must understand the goals, timing, target species and desirable species before the mowing operation begins.

1.3.3. Prescriptions

See **Appendix A, IVM Mowing Prescriptions**

1.4. Noxious Weed Control

1.4.1. Policy and Objectives

As defined by RCW 17.10, all property owners including state agencies, are required to control noxious weeds on lands that they own and manage. Noxious weed control is a high priority for WSDOT as a result of this legal mandate as well as the fact that if they are left unchecked, levels of infestation can begin to spread at exponential rates from year to year. Noxious weeds are invasive, non-native plant species that can quickly dominate native plant communities and spread to other areas or regions. New infestations of noxious weeds often appear first in highway corridors after being transported from other areas by vehicles or transportation of agricultural products. Without timely control, these new infestations can further spread along transportation corridors and to adjacent property. The overall cost and impact to the economic viability of the agricultural community and the health of native ecosystems can be significant. Also some of these plants are toxic to livestock and/or humans.

WSDOT prioritizes weed control based on three legally defined weed species classification categories. Chapter 16-750 of the Washington

Administrative Code lists weed species in classes A through C. Noxious weeds include all plants listed as class A, and those in classes B and C that are designated for control within each individual county.

Class A

Class A noxious weeds are non-native species with a limited distribution in the state. Immediate treatment of these new infestations is required by State law and is the top weed control priority to prevent spread into adjacent areas.

Currently there are no known Class A weeds identified within the WSDOT operating right of way in South Central Region, Area 4.

Class B & C Designate Weeds

Class B and C weeds are more widespread than Class A weeds, 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. Containment, gradual reduction, and prevention of further spread are the chief management concerns of Designate species. Class B and C noxious weeds designated for control within Asotin, Garfield, Columbia and Walla Walla and Whitman counties and currently present within WSDOT right-of-way include:

Asotin County:

- Buffalobur (*Solanum rostratum*)
- Dyers Woad (*Isatis tinctoria*)
- Hawkweed, European (*Hieracium sabaudum*)
- Hoary Cress (*Cardaria draba*)
- Houndstongue (*Cynoglossum officinale*)
- Iris, Yellow flag (*Iris pseudacorus*)
- Knapweed, Diffuse (*centaurea diffusa*)
- Knotweed , Japanese (*Polygonum cucpidatum*)
- Kochia (*Kochia scoparia*)
- Longspine Sandbur (*Cenchrus longispinus*)
- Oxeye Daisy (*Leucanthemum vulgare*)
- Perennial Pepperweed (*Lepidium latifolium*)
- Poison Hemlock (*conium maculatum*)
- Puncturevine (*Tribulus terrestris*)
- Rush Skeletonweed (*Chondrilla juncea*)
- Sulfur Cinquefoil (*Potentilla recta*)
- Thistle, Scotch (*Onopordum acanthium*)
- Toadflax, Dalmatian (*Linaria dalmatica*)
- Toadflax, Yellow (*Linaria vulgaris*)
- White Bryony (*Bryonia alba*)
- Wild Carrot (*Daucus carota*)
- Wild four o'clock (*Mirabilis nyctaginea*)
- Yellow Starthistle (*Centaurea solstitialis*)

Garfield/Columbia Counties:

- Blueweed (*Echium vulgare*)
- Buffalobur (*Solanum rostratum*)
- Bugloss, Common (*Anchusa officinalis*)
- Camel thorn (*Alhagi maurorum*)

- Cereal rye (*Secale cereale*)
- Common catsear (*Hypochaeris radicata*)
- Dyers woad (*Isatis tinctoria*)
- Field bindweed (*Convolvulus arvensis*)
- Hawkweed, European (*Hieracium sabaudum*)
- Hawkweed, Orange (*Hieracium aurantiacum*)
- Herb Robert (*Geranium robertianum*)
- Hoary Alyssum (*Berteroa incana*)
- Hoary Cress (*Cardaria draba*)
- Jointed goatgrass (*Aegilops cylindrical*)
- Knapweed, Diffuse (*Centaurea diffusa*)
- Knapweed, Meadow (*Centaurea jacea x nigra*)
- Knapweed, Russian (*Acroptilon repens*)
- Kochia (*Kochia scoparia*)
- Longspine Sandbur (*Cenchrus longispinus*)
- Oxeye Daisy (*Leucanthemum vulgare*)
- Perennial Pepperweed (*Lepidium latifolium*)
- Perennial Sowthistle (*Sonchus arvensis ssp. Arvensis*)
- Poison Hemlock (*Conium maculatum*)
- Policeman's Helmet (*Impatiens glandulifera*)
- Puncturevine (*Tribulus terrestris*)
- Rush Skeletonweed (*Chondrilla juncea*)
- Saltcedar (*Tamarix ramossima*)
- Scotch Broom (*Cytisus scoparius*)
- Spurge, Leafy (*Euphorbia esula*)
- Sulfur Cinquefoil (*Potentilla recta*)
- Swainsonpea (*Sphaerophysa salsula*)
- Tansy Ragwort (*Senecio jacobaea*)
- Thistle, Musk (*Carduus nutans*)
- Thistle, Plumeless (*Carduus acanthoides*)
- Thistle, Scotch (*Onopordum acanthium*)
- Toadflax, Dalmatian (*Linaria dalmatica*)
- White Bryony (*Bryonia alba*)
- Wild Carrot (*Daucus carota*)
- Wild four o'clock (*Mirabilis nyctaginea*)
- Yellow Starthistle (*Centaurea solstitialis*)

Walla Walla County:

- Blueweed (*Echium vulgare*)
- Buffalobur (*Solanum rostratum*)
- Bugloss, Common (*Anchusa officinalis*)
- Camel thorn (*Alhagi maurorum*)
- Common catsear (*Hypochaeris radicata*)
- Common fennel (*Foeniculum vulgare*)
- Dyers woad (*Isatis tinctoria*)
- Field bindweed (*Convolvulus arvensis*)
- Hawkweed, European (*Hieracium sabaudum*)
- Hawkweed, Orange (*Hieracium aurantiacum*)
- Herb Robert (*Geranium robertianum*)
- Knapweed, Meadow (*Centaurea jacea x nigra*)
- Knapweed, Russian (*Acroptilon repens*)
- Knapweed, Spotted (*Centaurea biebersteinii*)
- Oxeye Daisy (*Leucanthemum vulgare*)

- Perennial Pepperweed (*Lepidium latifolium*)
- Perennial Sowthistle (*Sonchus arvensis* ssp. *Arvensis*)
- Policeman's Helmet (*Impatiens glandulifera*)
- Scotch Broom (*Cytisus scoparius*)
- Spurge, Leafy (*Euphorbia esula*)
- Sulfur Cinquefoil (*Potentilla recta*)
- Swainsonpea (*Sphaerophysa salsula*)
- Tansy Ragwort (*Senecio jacobaea*)
- Thistle, Musk (*Carduus nutans*)
- Thistle, Plumeless (*Carduus acanthoides*)
- Thistle, Scotch (*Onopordum acanthium*)
- Toadflax, Dalmatian (*Linaria dalmatica*)
- Wild four o'clock (*Mirabilis nyctaginea*)

Whitman County

- Blueweed (*Echium vulgare*)
- Buffalobur (*Solanum rostratum*)
- Bugloss, Annual (*Anchusa arvensis*)
- Bugloss, Common (*Anchusa officinalis*)
- Camel thorn (*Alhagi maurorum*)
- Common catsear (*Hypochaeris radicata*)
- Common Tansy (*Tanacetum vulgare*)
- Dyers woad (*Isatis tinctoria*)
- Hawkweed, European (*Hieracium sabaudum*)
- Hawkweed, Orange (*Hieracium aurantiacum*)
- Herb Robert (*Geranium robertianum*)
- Hoary Alyssum (*Berteroa incana*)
- Hoary Cress (*Cardaria draba*)
- Knapweed, Diffuse (*Centauria diffusa*)
- Knapweed, Meadow (*Centauria jacea* x *nigra*)
- Knapweed, Russian (*Acroptilon repens*)
- Knapweed, Spotted (*Centauria biebersteinii*)
- Kochia (*Kochia scoparia*)
- Longspine Sandbur (*Cenchrus longispinus*)
- Oxeye Daisy (*Leucanthemum vulgare*)
- Perennial Pepperweed (*Lepidium latifolium*)
- Perennial Sowthistle (*Sonchus arvensis* ssp. *Arvensis*)
- Poison Hemlock (*Conium maculatum*)
- Policeman's Helmet (*Impatiens glandulifera*)
- Puncturevine (*Tribulus terrestris*)
- Rush Skeletonweed (*Chondrilla juncea*)
- Saltcedar (*Tamarix ramosissima*)
- Scotch Broom (*Cytisus scoparius*)
- Spurge, Leafy (*Euphorbia esula*)
- St. Johnswort (*Hypericum perforatum*)
- Sulfur Cinquefoil (*Potentilla recta*)
- Swainsonpea (*Sphaerophysa salsula*)
- Tansy Ragwort (*Senecio jacobaea*)
- Thistle, Canada (*Cirsium arvense*)
- Thistle, Musk (*Carduus nutans*)
- Thistle, Plumeless (*Carduus acanthoides*)

- Thistle, Scotch (*Onopordum acanthium*)
- Toadflax, Dalmatian (*Linaria dalmatica*)
- Toadflax, Yellow (*Linaria vulgaris*)
- White Bryony (*Bryonia alba*)
- Wild Carrot (*Daucus carota*)
- Wild four o'clock (*Mirabilis nyctaginea*)
- Yellow Starthistle (*Centaurea solstitialis*)

1.4.2. Methods

Control of noxious weed species can be very difficult; therefore it is important to incorporate the concepts of IVM. Regardless of the specific method used to control noxious weeds it is important to fully understand the life cycle of the weeds that are being controlled.

- Chemical: In many cases herbicides are used as a means of early control due to levels of infestations and area requiring control. Timing of herbicide treatments within the growth stage of the weed species is critical to achieving complete control of perennial species.
- Mechanical: Mowing, blading, disking and hand pulling are often used in conjunction with other control methods. Mowing considerations are covered in section 2.2 of this document.
- Biological: Biological controls are being used widely throughout WSDOT within the operating right of way. It is important to consider climate, level of infestation and available control species when selecting an appropriate biological control. It is also imperative that biocontrols be placed in an area that won't be adversely effected by mechanical or chemical control methods.
- Revegetation/Enhancement: A variety of other measures may be taken to promote natural vegetative competition through seeding, planting, and soil enhancement. Documentation of these methods and related success is essential to the success of long-term control measures. IVM forms will be completed for each of these sites and are located in **Appendix F**.

1.4.3. Action Thresholds, Noxious Weed Control

The action threshold for noxious weed control is met whenever a noxious weed is present on WSDOT right of way. WSDOT is required by state law to control and prevent the spread of all noxious weeds on WSDOT right-of-way (RCW 17.10.040). Control efforts will be initiated prior to the noxious weed producing seed.

1.4.4. Prescriptions

See **Appendix A, IVM Prescriptions, Noxious Weed Control**

1.5. Nuisance Weed Control

1.5.1. Policy and Objectives

Nuisance weed control, while not required by state law, provides many positive benefits to the overall condition of the roadside including:

- Stabilization of shoulders and banks
- Improved storm water treatment

- Protection and enhancement of native plant communities
- Reduces spread of weeds
- Enhances visual quality

Depending on crew availability and budget, nuisance weeds will be controlled throughout the roadsides of South Central Region, Area 4 as part of the overall Integrated Vegetation Management process. Priority control measures will be given to new infestations or those infestations that threaten desirable roadside vegetation. In some cases, where practical, nuisance weed infestations may be treated in conjunction with of noxious weed.

For established infestations currently identified in this plan, weed populations will be contained and gradually reduced by applying appropriate vegetation management prescriptions as funds and resources are available. Control options range from manual cutting, mechanical removal, revegetation and biological control, to targeted selective herbicide application, or combinations thereof.

1.5.2. List of species currently present

Numerous class B and C nuisance weeds occur throughout South Central Region, Area 4 within WSDOT right of way that is not targeted for control. In some cases they are controlled incidentally or for site-specific reasons, however, WSDOT is not required to control these plants.

- Babies Breath (*Gypsophila paniculata*)
- Common Mullen (*Verbascum thapus*)
- Cereal Rye (*Secale cereale*)
- China Lettuce (*Lactuca serriola*)
- Maretail (*Conyza canadensis*)
- Milk Weed (*Asclepiadaceae*)
- Mustard Species
- Pepperweed (*Lepidium* species)
- Teasel (*Dipsacus sylvestris*)

There are many other weed species present in the area that are too common and widespread to justify treatment or attempt control. There are also some new species that have only shown up in recent years and are not yet listed as nuisance or noxious weeds. Other species may be added to this list as they are identified or become priorities for control.

1.5.3. Methods

Control measures for nuisance weeds are very similar to those of noxious weeds, see Section 2.3.2 and are dependent on available resources. Species that are wide spread are treated routinely throughout the season, often controlled incidental to noxious weeds.

1.5.4. Action Threshold, Nuisance Weed Control

Action will be taken at the discretion of the area superintendent. WSDOT is not required to control nuisance weeds, however, action is advised where funding is available and one or more of the following instances occur as a result of a nuisance weed infestation.

- Impact to adjacent land owners
- Impact to desirable vegetation

- Nuisance weed presence reduces effectiveness of noxious weed control due to height or density

1.5.5. Prescriptions

See **Appendix A, IVM Prescriptions, Nuisance Weed Control**

1.6. Tree and Brush Control

1.6.1. Policy and Objectives

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 large shrub and small tree species should be allowed to grow and mature in Zone 2 and 3 and side trimmed if they encroach on site distance or other traffic operational requirements.
- Large coniferous or deciduous tree species such as Douglas fir, bigleaf maple, alder, or cottonwood left to grow in Zone 2, can reach substantial size over a relatively short period of time and should be removed when young.

1.6.2. Methods

Removal of undesirable tree and brush species is accomplished in a variety of manners including hand cutting, herbicide applications, hand pulling, mowing or combinations thereof. A thorough understanding of the species to be controlled and consideration of proper timing is important with any of these control methods to reduce damage, minimize visual impact and be cost effective. Below are specific considerations for the various control methods:

- Mowing: In many cases it is effective to mow back the majority of the existing vegetation to the outside edge of zone 2, then follow with spot mowing or herbicide treatments of undesirable species as needed, leaving desirable species to form a competitive cover.
- Hand Cutting: When possible, hand cuttings can be chipped in place and applied to the roadside as mulch where needed. In many cases this can be used to improve soils, reduce erosion and improve vegetation.
- Timing: Consideration should be given to the visual impact of trimming as well as effectiveness of the operation. Chemical control will not be used on deciduous trees and shrubs until after the first of September, except for cut stump treatments.
- Chemical Control: Chemical control will not be used on conifers greater than 2' in height.
- Transplanting: Whenever possible, safe and practical, seedling trees will be dug or pulled by hand and transplanted to areas where their growth will be beneficial and appropriate. Agreements may be signed to allow private citizens or groups to collect seedlings for use as transplants.
- Prescriptions: See **Appendix A, IVM Prescriptions, Tree and Brush Control**

1.6.3. Prescriptions

See **Appendix A, IVM Prescriptions, Tree and Brush Control**

1.7. Hazard Tree Removal

1.7.1. Policy and Practices

Trees within the right-of-way are routinely monitored by maintenance staff.

Hazard trees may be:

- Dead
- Diseased
- Leaning or
- Structurally damaged or unsound
- Shading, in some cases trees cause shading and create excessive frost problems on the roadway. In these cases canopy thinning or removal may take place to mitigate the risk.

Trees that are identified as an imminent threat to the highway or traffic will be evaluated using best horticultural judgment and removed as soon as possible.

2. SPECIAL CONSIDERATIONS

Special Maintenance Areas include any sections of roadside where there are unique maintenance requirements or existing arrangements with any external organizations. Special Maintenance Areas may include interchanges, community entrances or enhancement areas, areas maintained by cities, bicycle paths, storm water retention ponds, state parks, wellheads, environmentally sensitive areas, school zones, roadsides adjacent to individual properties with current or annual no-spray agreements and new technologies.

2.1. Herbicide Sensitive Areas

2.1.1. Policy and Objectives

There are a number of herbicide sensitive areas located within the region where herbicide use will be limited or restricted in order to reduce the potential of environmental impact. In these locations vegetation will be managed using limited herbicides or non-chemical alternatives.

The Washington State Department of Agriculture maintains a list of individuals who have been diagnosed with Multiple Chemical Sensitivity (MCS). WSDOT is required by law to notify these individuals when making herbicide applications to roadside locations if the highway right of way is adjacent to their property and their principle residence is within one-half mile of the application. Concerned individuals can obtain further information by contacting the area maintenance office in Walla Walla at **509.527.4548**.

2.1.2. Locations by Milepost, See Appendix E, Special Maintenance Areas

2.2. Adopt-a-Highway and Owner Will Maintain Agreements

2.2.1. Policy and objectives

The Adopt-a-Highway Program is a program that allows private citizens, volunteer groups, and businesses an opportunity to contribute to an enhanced roadside appearance through direct partnership with WSDOT. The program improves the overall appearance of the roadside primarily through litter control, although other activities that improve the visual and environmental condition of the roadside are permitted as well including limited planting and maintenance of specific areas. Other partnership opportunities are possible through general permits and agreements. Volunteer groups that do enhancement planting on WSDOT roadsides are typically required to establish and maintain the plantings. Communities may partner with WSDOT to develop and maintain selected Community Enhancement Areas as described in the Roadside Classification Plan.

Neighboring property owners may enter into an agreement with WSDOT where they take responsibility for the vegetation management activities along the area where their property abuts state right of way. These "owner will maintain" agreements are established through a General Permit and are required to be renewed on an annual basis. These agreements are typically implemented in cases where a neighboring property owner desires a higher level of care in front of their business or residence, or prefers maintaining the area to avoid WSDOT herbicide applications near their home or business.

2.2.2. Locations by Milepost

Locations where partnership agreements exist for accomplishment of roadside maintenance are listed in **Appendix E, Special Maintenance Areas, Table 3.0.**

2.3. Environmentally Sensitive Areas

2.3.1. Policy and Objectives

As a state agency, WSDOT is committed to conducting its activities in accordance with the dictates of sound environmental protection practices, including pollution prevention, work to avoid, minimize and appropriately mitigate adverse environmental impacts, and to comply with all environmental laws and regulations applicable to our business and activities.

Numerous environmentally sensitive areas such as streams, rivers, wetlands, lakes, and salt-water beaches containing habitat and species protected by the Endangered Species Act, as well as wellhead areas occur within close proximity to the highway system and sometimes require alternative management techniques or specialized emergency response plans, in order to reasonably avoid or minimize environmental or water quality impacts. Since Integrated Vegetation Management (IVM) techniques will be used along all state highways in the SC Region, Area 4 to mitigate impacts from highway operation through the establishment of naturally self-sustaining plant communities in these areas, practices will not vary within these designated areas.

In compliance with the Regional Road Maintenance Endangered Species Act Program Guidelines, as agreed upon with the National Marine Fisheries Service, WSDOT has identified, mapped and located in the field all highway sections within 300 feet of rivers, wetlands and water bodies.

2.3.2. Locations

Environmentally sensitive areas are identified in the field with green guideposts and identified in an area atlas. For more information on the Regional Road Maintenance ESA Program Guidelines refer to: <http://www.wsdot.wa.gov/maintenance/roadside/esa.htm> or contact Gregor Meyer at 360.705.7853.

2.4. Storm Water Management Facilities

2.4.1. Policy and Objectives

Storm water management facilities include bio-filtration swales, retention ponds and infiltration ponds.

Storm water management facilities will be managed for noxious and nuisance weeds following the same guidelines mentioned in previous sections. The primary objectives with regard to vegetation management within these facilities are to maintain retention and detention functions to improve water quality.

2.4.2. Methods

Noxious weed control will be conducted at all storm water management facilities as necessary. Control of nuisance weeds will be coordinated with nuisance weed control along the adjacent roadside. Trees and brush should be cleared along both sides of the perimeter fencing for a width of approximately 8 feet as needed. Inlets and outfalls should be kept clear of unwanted vegetation and debris as well.

Refer to vegetation management prescriptions for specific weed, tree and brush species in Sections 1 and 2 of this document for timing and control methods.

Currently there are no active storm water management facilities in South Central region, Area 4.

2.5. Wetland Mitigation Sites

2.5.1. Policy and Objectives

Wetland mitigation results from unavoidable impacts to naturally occurring wetlands from highway construction. In these cases new wetlands are created on WSDOT right of way and vegetation is managed to provide environmental functions similar to those eliminated in other areas by the highway's presence.

Wetland mitigation sites are carefully monitored 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 process so the maintenance actions are not required unless noxious weeds or hazardous trees become an issue. However, it is important that maintenance be aware of the locations of wetland mitigation sites to avoid impacting the required environmental functions of the sites.

2.5.2. Locations table by Milepost

See **Appendix E, Special Maintenance Areas**, Table 3.0

Appendix A

Routine Vegetation Management Prescriptions

SC Region, Area 4 - Bare-ground Prescriptions

Bare-Ground Applications

Bare-ground Maintenance - Annual Cycle (Option A)

Location Type	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Special Areas Designated for Bareground Treatment	1-2' area free of vegetation	annual herbicide application In Selected Areas	spray truck w/ fixed nozzle mounted 18" from ground	Non-selective residual herbicide Krovar @ 8lbs <u>No spray w/in 60' of water</u>	Spring March/April	Monitor

Bare-ground Maintenance - Annual Cycle (Option B)

Location Type	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Special Areas Designated for Bareground Treatment	1-2' area free of vegetation	annual herbicide application In Selected Areas	spray truck w/ fixed nozzle mounted 18" from ground	Payload @ 8 ozd Oust XP @ 3 ozd Support @ 20 ozl <u>No Buffer Limitations</u>	Spring & Fall	Monitor

Zone 1 Bare-Ground Maintenance - Annual Cycle (Option C)

Location Type	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Where needed on site specific areas or guardrail sections	1'-6' area free of vegetation	annual herbicide application	spray truck w/ fixed nozzle mounted 18" from ground	Non-selective residual herbicide Prespective @ 10 ozd Oust/SFM 75 @ 3 ozd Surfactant if needed <u>No Buffer Limitations</u>	Spring March/April	Monitor

Zone 1 Bare-Ground Maintenance - Annual Cycle (Option D)

Location Type	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Where needed on site specific areas or guardrail sections	1'-6' area free of vegetation	annual herbicide application	spray truck w/ fixed nozzle mounted 18" from ground	Non-selective residual herbicide <u>No Buffer Limitations</u>	Spring March/April	Monitor

Zone 1 Maintenance - Bare-ground (Option E)

Location Type	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Where needed on gravel shoulder or guardrail sections	1-3' area free of vegetation	annual herbicide application	spray truck w/ fixed nozzle mounted 18" from ground	Non-selective residual herbicide Payload @ 12 ozl Oust XP @ 3 ozd <u>No 60' Buffer Limitations</u>	Spring March/April	Monitor

SC Region Area 4 - IVM Prescriptions

Noxious Weed Control

Chemical Control

Noxious Weed Control - *General Weed Control (Option A)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	Shortly after emergence-bolting	Eradication and control of listed noxious weeds.	Spot/broadcast Spray	Truck mounted injection sprayer	E-2 @ 32-48 ozl Spreader 90 @ 32 oz per 100 gallons Carrier No spray w/in 60' of water	Early growing season first/second flush	Reapply as necessary. Seed and fertilize to reduce weed competition

Noxious Weed Control - *General Weed Control (Option B)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	Shortly after emergence-bolting	Eradication and control of listed noxious weeds.	Spot/broadcast Spray	Truck mounted injection sprayer	Vista XRT @ 12 ozl Vanquish @ 24 ozl Spreader 90 @ 32 oz per 100 gallons Carrier No Buffer Limitations	Early growing season first/second flush	Reapply as necessary. Seed and fertilize to reduce weed competition

Noxious Weed Control - *General Weed Control (Option C)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	After emergence	eradication and control of listed noxious weeds.	Spot/Band	Truck mounted sprayer	Perspective @ 4.75 oz Spreader 90 @ 32 oz per 100 gallons carrier No Buffer Limitations	Early growing season first/second flush	Reapply as necessary. Seed and fertilize to reduce weed competition.

Noxious Weed Control - *Kochia*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	Early Season	Eradication and control of listed noxious weeds.	Spot/broadcast Spray	Truck mounted injection sprayer	Escalade @ 32-48 ozl Spreader 90 @ 32 oz per 100 gallons Carrier No spray w/in 60' of water	Early growing season first/second flush	Reapply as necessary. Seed and fertilize to reduce weed competition

Appendix A

Integrated Vegetation Management Prescriptions

SC Region Area 4 - IVM Prescriptions

Noxious Weed Control

Noxious Weed Control - *Dalmation Toadflax (Bolting/Flowering/Fall Greenup)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	As soon as plants appear	Eradication and control of listed noxious weeds.	Spot/broadcast spray	Power sprayer or backpack sprayer	Tordon 22k @ 32 ozl Telar @ 2 oz Phase @ 32 oz per 100 gallons carrier No spray w/in 60' of water	Early growing season	Reapply as necessary. Seed and fertilize to reduce weed competition

Noxious Weed Control - *Rush Skeletonweed (Rosette/Bolting) (A)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	As soon as plants appear	Eradication and control of listed noxious weeds.	Spot treatment w/ herbicide	Power sprayer or backpack sprayer	Tordon 22k @ 32 ozl Phase @ 64 oz per 100 gallons Carrier No spray w/in 60' of water	Early growing season	Reapply as necessary. Seed and fertilize to reduce weed competition.

Noxious Weed Control - *Rush Skeletonweed (Rosette/Bolting) (B)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	As soon as plants appear	Eradication and control of listed noxious weeds.	Spot treatment w/ herbicide	Power sprayer or backpack sprayer	Milestone VM @ 7 oz Phase @ 64 oz per 100 gallons Carrier No Buffer Limitations	Early growing season	Reapply as necessary. Seed and fertilize to reduce weed competition.

Noxious Weed Control - *Canada Thistle (Bolting/Flowering Stage) (A)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	As soon as plants appear	Eradication and control of listed noxious weeds.		Power sprayer or backpack sprayer	Escalade @ 32-48 ozl Spreader 90 @ 32 oz per 100 gallons Carrier No spray w/in 60' of water	Early growing season	Repeat as necessary. Seed and fertilize to reduce weed competition

Noxious Weed Control - *Canada Thistle (Rosette/Bolting/Flowering) (B)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	As soon as plants appear	Eradication and control of listed noxious weeds.	Spot treatment w/ herbicide	Power sprayer or backpack sprayer	Milestone VM @ 7 oz Spreader 90 @ 32 oz per 100 gallons Carrier No Buffer Limitations	Early or Late best control will occur when applied in late fall	Reapply as necessary. Seed and fertilize to reduce weed competition.

Appendix A

Integrated Vegetation Management Prescriptions

SC Region Area 4 - IVM Prescriptions

Noxious Weed Control

Noxious Weed Control - *Canada Thistle (Backpack) (C)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	After seed set	Eradication	Cut and bag seed heads, spot treatment of plants w/ herbicide	Scissors/loppers, backpack sprayer	Glyphosate @ 3.2 ozl/gal Spreader 90 @ 1 ozl/gal No Buffer Limitations	After seed set	Monitor results in Spring

Noxious Weed Control - *Scotch Thistle*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	As soon as plants appear	Eradication and control of listed noxious weeds.	Spot treatment w/ herbicide	Backpack sprayer, pump sprayer	Escalade @ 48 ozl Spreader 90 @ 1 ozl/gal No spray w/in 60' of water	Early to mid season	Repeat as necessary. Seed and fertilize to reduce weed competition.

Noxious Weed Control - *Knapweeds (Bolting/Flowering Stage)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	As soon as plants appear	Eradication and control of listed noxious weeds	Spot treatment w/ herbicide	Backpack sprayer or spray bottle, pickup, etc.	Milestone VM @ 7ozl Spreader 90 @ 32 oz per 100 gallons Carrier No Buffer limitations	Early season	Reapply as necessary. Seed and fertilize to reduce weed competition.

Noxious Weed Control - *Yellow Starthistle (Rosette Stage) (A)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	As soon as plants appear	Eradication and control of listed noxious weeds.	Spot treatment w/ herbicide	Backpack sprayer or spray bottle, pickup, etc.	Milestone @ 7 ozl Spreader 90 @ 32 oz per 100 gallons Carrier No Buffer limitations	Early season	Repeat as necessary. Seed and fertilize to reduce weed competition.

Noxious Weed Control - *Yellow Starthistle (Bolting/Flowering Stage) (B)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	As soon as plants appear	Eradication and control of listed noxious weeds.	Spot treatment w/ herbicide	Backpack sprayer or spray bottle, pickup, etc.	Tordon 22k @ 32 ozl Spreader 90 @ 32 oz per 100 gallons Carrier No spray w/in 60' of water	Early season	Repeat as necessary. Seed and fertilize to reduce weed competition.

Appendix A

Integrated Vegetation Management Prescriptions

SC Region Area 4 - IVM Prescriptions

Noxious Weed Control

Noxious Weed Control - *Broadleaves in Reseeded Areas - Under 2" (A)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	As soon as plants appear	Eradication and control of listed noxious weeds.	Band application	Tank sprayer	Buctril @ 16 oz or generic equivalent Spreader 90 @ 32 oz per 100 gallons Carrier <u>No spray w/in 60' of water</u>	Early season	Repeat as necessary. Seed and fertilize to reduce weed competition.

Noxious Weed Control - *Broadleaves in Reseeded Areas - Over 2" (B)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	As soon as plants appear	Eradication and control of listed noxious weeds.	Broadcast application	Tank sprayer	Buctril @ 20 ozl Vista @ 12ozl Vanquish @ 4 ozl Spreader 90 @ 32 oz per 100 <u>No spray w/in 60' of water</u>	Early season	Repeat as necessary. Seed and fertilize to reduce weed competition.

Mechanical Control

Noxious Weed Control - *Kochia (Mechanical Control)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	Before seed	Reduce seed production listed noxious weeds.	mow	Mower	None <u>No Buffer Limitations</u>	Late fall	Repeat as necessary

Noxious Weed Control - *Scotch Thistle (Mechanical)*

with herbicide

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	2' to 6'	eradication	dig up plant	shovel	N/A	all season	monitor for reemergence

Biological Control

Noxious Weed Control - *Diffuse Knapweed (Biological Control)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	flowering	Reduce/control host plant	Biological	None	Larinus minutus <u>No Buffer Limitations</u>	Spring Summer	Monitor and repeat or redeploy as needed

SC Region Area 4 - IVM Prescriptions

Noxious Weed Control

Noxious Weed Control - **Yellow Starthistle** (Biological Control)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	as soon as plants appear	Reduce/control host plant	Biological	None	Eustenopus villosus <u>No Buffer Limitations</u>	Spring Summer	Monitor and repeat or redeploy as needed

Noxious Weed Control - **Poison Hemlock** (Biological Control)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	as soon as plants appear	Reduce/control host plant	Biological	None	Agonopterix alstroemeriana <u>No Buffer Limitations</u>	Spring Summer	Monitor and repeat or redeploy as needed

Noxious Weed Control - **Dalmation Toadflax** (Biological Control)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	as soon as plants appear	Reduce/control host plant	Biological	None	Macinus Jenthus <u>No Buffer Limitations</u>	Spring Summer	Monitor and repeat or redeploy as needed

Noxious Weed Control - **Purple Loosestrife** (Biological Control)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	as soon as plants appear	Reduce/control host plant	Biological	None	Galerucella Beetle <u>No Buffer Limitations</u>	Spring Summer	Monitor and repeat or redeploy as needed

Appendix A

Integrated Vegetation Management Prescriptions

SC Region Area 4- IVM Prescriptions

Tree and Brush Control

Tree and Brush Control - *Locust, Russian Olive, Choke Cherry, Black Berry (A)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
zone 2	as soon as seedlings become visible w/in 30' of fog line (no guardrail present)	control of seedling trees that may impact roadside function if allowed to grow.	selective foliar treatment w/ herbicide	truck mounted sprayer where possible, backpack sprayer where necessary	Garlon 4 @ 64 oz Spreader 90 @ 32 oz per 100 gallons No spray w/in 60' of water	late fall to avoid brown out	Seed and fertilize or plant to establish low growing native plant community.

Tree and Brush Control - *Locust, Russian Olive, Choke Cherry, Black Berry (B)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
zone 2	as soon as seedlings become visible w/in 30' of fog line (no guardrail present)	control of seedling trees that may impact roadside function if allowed to grow.	selective foliar treatment w/ herbicide	truck mounted sprayer where possible, backpack sprayer where necessary	Garlon 3A @ 256 oz Spreader 90 @ 32 oz per 100 gallons No Buffer Limitations	late fall to avoid brown out	Seed and fertilize or plant to establish low growing native plant community.

Tree and Brush Control - *Locust, Russian Olive, Choke Cherry, Black Berry (C)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
zone 2	as soon as seedlings become visible w/in 30' of fog line (no guardrail present)	control of seedling trees that may impact roadside function if allowed to grow.	selective foliar treatment w/ herbicide	Truck, atv or backpack sprayer	Capstone @ 96-144 oz Spreader 90 @ 32 oz per 100 gallons No Buffer Limitations	Early spring or late fall to avoid brown out	Seed and fertilize or plant to establish low growing native plant community.

Tree and Brush Control - *Locust, Russian Olive, Choke Cherry, Black Berry (Cut-stump)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
zone 2-3	as soon as seedlings become visible w/in 30' of fog line (no guardrail present)	control of seedling trees that may impact roadside function if allowed to grow.	Cut stump	backpack sprayer	20-30% Garlon 4 with oil No spray w/in 60' of water	Early spring or late fall to avoid brown out	Seed and fertilize or plant to establish low growing native plant community.

Tree and Brush Control - *Locust, Russian Olive, Tree of Paradise, Poplar, Choke Cherry (Basal Bark Treatment)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
zone 2	whenever trees are likely or have potential to grow and fall on the highway	control of young trees that may impact roadside function if allowed to grow.	Basal Bark Treatment	backpack or hand-held sprayer	backpack sprayer-50/50 mix of Garlon 4 and Basal oil No spray w/in 60' of water	anytime	Seed and fertilize or plant to establish low growing native plant community.

Nuisance Weed Control

Nuisance Weed Control - *General Weed Control*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones new or limited infestations	whenever new infestations occur (dependent on available resources)	minimize populations and prevent further spread of nuisance weeds	foliar treatment w/ herbicide	truck mounted sprayer where possible, backpack sprayer where necessary	Escalade @ 48 ozl Spreader 90 @ 32 oz per 100 gallons No spray w/in 60' of water	prior to seed	Reapply as necessary. Seed and fertilize or plant to restore native plant community.

Appendix A

Integrated Vegetation Management Prescriptions

SC Region Area 4- IVM Prescriptions

Nuisance Weed Control - *Common Spikeweed*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	wherever present (dependent on available resources)	minimize populations and prevent further spread of nuisance weeds	foliar treatment with herbicide for control Under 8"	Tank sprayer where possible backpack sprayer where necessary	Vanquish @ 16 ozl Telar @.5 ozd Spreader 90 @ 32 oz per 100 gallons No Buffer Limitations	anytime	Reapply as necessary. Seed and fertilize or plant to restore native plant community.

Nuisance Weed Control - *Tumble Mustard, Jim Hill Mustard after plant bolts (B)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones new or limited Infestations	wherever present (dependent on available resources)	control and eradication	foliar treatment with herbicide	truck mounted sprayer where possible, backpack sprayer where necessary	Veteran 720 @ 48 ozl Spreader 90 @ 32 oz per 100 gallons No spray w/in 60' of water	rosette stage	Reapply as necessary. Seed and fertilize or plant to restore native

Nuisance Weed Control - *Tumble Mustard, Jim Hill Mustard at Rosette Stage (A)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones new or limited infestations	whenever present (dependent on available resources)	control and eradication	foliar treatment with herbicide	truck mounted sprayer where possible, backpack sprayer where necessary	Amine 4 @ 32-48 oz Spreader 90 @ 32 oz per 100 gallons No spray w/in 60' of water	Early season rosette	Reapply as necessary. Seed and fertilize or plant to restore native

Nuisance Weed Control - *Catchweed Bedstraw*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	when resources are available	minimize populations and prevent further spread of nuisance weeds	foliar treatment with herbicide	truck mounted sprayer where possible, backpack sprayer where necessary	Vista @ 21 ozl Spreader 90 @ 32 oz per 100 gallons No Buffer Limitations	after mowing in fall	Re-cut/treat as necessary Seed and fertilize or plant to restore native plant community

Nuisance Weed Control - *Common Cattail - Up to 4' in Height (A)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones older established infestations	when resources are available	control and eradication of cattails in drainage ditches	foliar treatment with herbicide	truck mounted sprayer where possible, backpack sprayer where necessary	Rodeo @ 72-96 ozl LI-700 @ 128 oz per 100 gallons No Buffer Limitations	summer and fall months	Re-treat green stems as necessary.

Nuisance Weed Control - *Rattail Fescue*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
landscape areas	wherever present	control and eradication of rattail fescue in lawns	foliar treatment w/ herbicide	tractor mounted sprayer backpack sprayer where necessary	Roundup @ 3.2 oz per gallon Before Plant Maturity No Buffer Limitations	spring to fall	reseed grass areas as necessary

Mowing Prescriptions

Note: Mowing should be accomplished to meet specific goals and objectives specified in the "Management Goal" section below.

Zone 2 Maintenance - Weed seed Control

Location Type	Management Goals	Method	Equipment	Timing	Planning and Follow-up
As needed in Zone 2 or 3	<ol style="list-style-type: none"> 1) Limit noxious weed seed production 2) Improve roadside vegetation 3) Control of annual weeds 5) Improve conditions for desirable species 	Mow single pass at 10-12 inches	mower, attenuator	Mowing should take place late in the growth cycle of the target plant species but prior to seed development. This will limit regrowth and potential seed production.	<ol style="list-style-type: none"> 1) Communicate goals with operator prior to undertaking operation 2) Inspect after operation is complete to ensure target species are controlled and seeds have not developed

Zone 2 Maintenance - Crop/Sensitive Area

Location Type	Management Goals	Method	Equipment	Timing	IVM Follow-up
As needed in Zone 2 or 3	<ol style="list-style-type: none"> 1) Limit noxious weed seed production 2) Improve roadside vegetation 3) Control of annual weeds 4) eliminate potential risk of herbicide application. 5) Improve conditions for desirable species 	Mow single pass at 10-12 inches	mower, attenuator	Mowing should take place late in the growth cycle of the target plant species but prior to seed development. This will limit regrowth and potential seed production.	<ol style="list-style-type: none"> 1) Communicate goals with operator prior to undertaking operation 2) Inspect after operation is complete to ensure target species are controlled and seeds have not developed

Zone 2 Maintenance-Safety/Sight Distance

Location Type	Management Goals	Method	Equipment	Timing	IVM Follow-up
As needed in zone 1, 2 or 3	<ol style="list-style-type: none"> 1) Improve sight distance for safety 2) Incidental control of annual noxious weeds 3) Incidental control of seed production 5) Improve conditions for desirable species 	Mow single pass at 10-12 inches	mower, attenuator	Mowing should take place as late in the growing season as possible while still maintaining good sight distance	<ol style="list-style-type: none"> 1) Communicate goals with operator prior to undertaking operation 2) Monitor area for regrowth and adequate sight distance 3) re-mow as necessary to provide safe sight distance

Zone 2 Maintenance- Remove Overstory (old weed debris)

Location Type	Management Goals	Method	Equipment	Timing	IVM Follow-up
As needed in Zone 2 or 3	<ol style="list-style-type: none"> 1) Remove old vegetation debris in order to control emerging weeds 2) Remove old vegetation debris that may be restricting desirable grasses 3) Improve conditions for desirable species 	Mow single pass at 10-12 inches	mower, attenuator	Mowing should take place late fall/winter after grass is dormant	<ol style="list-style-type: none"> 1) Communicate goals with operator prior to undertaking operation

Zone 2 Maintenance- New Seeding

Location Type	Management Goals	Method	Equipment	Timing	IVM Follow-up
As needed in Zone 1, 2 or 3	<ol style="list-style-type: none"> 1) Reduce weed pressure 2) Improve roadside vegetation 3) Eliminate weed seed source 	Mow single pass maintaining deck height above desirable grass	mower, attenuator	Prior to seed set of weed species or when needed to reduce competition with desirable species	<ol style="list-style-type: none"> 1) Communicate goals with operator prior to undertaking operation 2) Inspect after operation is complete to ensure target species are controlled

Add specific locations

8-12 Inch Precipitation Zone

Planting Prescriptions

Seed Mix 1 (Compost Mix)

	Species and Variety of Seed in Mixture by Common Name and (Botanical name)	Pounds Pure Live Seed (PLS) Per Acre
	Idaho Fescue "Joseph/Nezpurs/Winchester" (<i>Festuca idahoensis</i>)	2.59
	Sand dropseed (<i>Sporobolus cryptandrus</i>)	0.15
	Bluebunch Wheatgrass "Duffy Creek" (<i>Pseudoroegneria spicata</i>)	3.66
	Thickspike Wheatgrass "Schwindemar" (<i>Agropyron trachycaulum</i>)	4.25
	Sandberg Bluegrass "Duffy Creek" (<i>Poa sandbergii</i>)	0.62
	Crested Wheatgrass "Siberian Vavilov" (<i>Agropyron Cristatum</i>)	1.72
	Crested Wheatgrass "Nordan" (<i>Agropyron Cristatum</i>)	1.72
	Sheep Fescue "Covar" (<i>Festuca valesiaca</i>)	0.29
	Total Lbs PLS/Acre	15
	Bulk Rate (applied) Lbs/Acre	20

8-12 Inch Precipitation Zone

Planting Prescriptions

Seed Mix 2 (Cultivar Mix)

	Species and Variety of Seed in Mixture by Common Name and (Botanical name)	Seed PLS Percentage
	Sheep Fescue "Covar" (<i>Festuca valesiaca</i>)	32.15%
	Idaho Fescue "Joseph/Nezpurs/Winchester" (<i>Festuca idahoensis</i>)	19.33%
	Crested Wheatgrass "Douglas" (<i>Agropyron cristatum</i>)	18.86%
	Sherman Big Bluegrass (<i>Poa secunda</i>)	12.66%
	Siberian Wheatgrass (<i>Agropyron sibericum</i>)	12.66%
	Sand Dropseed (<i>Sporobolus cryptandrus</i>)	1.56%
	Other Crop	0.01%
	Inert Matter	2.66%
	Weed Seed	0.11%
	Total Lbs PLS/Acre	100.00%

8-12 Inch Precipitation Zone

Planting Prescriptions

Seed Mix 3 (Native Mix)

	Species and Variety of Seed in Mixture by Common Name and (Botanical name)	Pounds Pure Live Seed (PLS) Per Acre
	Thickspike Wheatgrass "Schwindemar" (<i>Agropyron trachycaulum</i>)	4.25
	Bluebunch Wheatgrass "Duffy Creek" (<i>Pseudoroegneria spicata</i>)	3.66
	Sand dropseed (<i>Sporobolus cryptandrus</i>)	0.15
	Sandberg Bluegrass "Duffy Creek" (<i>Poa sandbergii</i>)	0.62
	Indian Ricegrass (<i>Achnatherum Hymenoides</i>)	4.75
	Total Lbs PLS/Acre	13.43
	Bulk Rate (applied) Lbs/Acre	20

Planting Area -Walla Walla, Dayton, Pomeroy 12" to 16" Precipitation Zone

Planting Prescriptions

Seed Mix 1 (Compost Mix)

	Species and Variety of Seed in Mixture by Common Name and (Botanical name)	Pounds Pure Live Seed (PLS) Per Acre
	Crested Wheatgrass "Douglas" (<i>Agropyron Cristatum</i>)	1.72
	Crested Wheatgrass "Hycrest" (<i>Agropyron Cristatum</i>)	1.72
	Hard Fescue "Durar" (<i>Festuca trachyphylla</i>)	0.67
	Sheep Fescue "Covar" (<i>Festuca valesiaca</i>)	0.29
	Bluebunch Wheatgrass "Anatone/Witmar" (<i>Pseudoroegneria spicata</i>)	5.8
	Idaho Fescue "Joseph/Nezpurs/Winchester" (<i>Festuca idahoensis</i>)	2.59
	Sandberg Bluegrass "Wallowa" (<i>Poa sandbergii</i>)	0.21
	Total Lbs PLS/Acre	13
	Bulk Rate (applied) Lbs/Acre	20

Planting Area -Walla Walla, Dayton, Pomeroy 12" to 16" Precipitation Zone

Planting Prescriptions

Seed Mix 2 (Cultivar Mix)

	Species and Variety of Seed in Mixture by Common Name and (Botanical name)	Seed PLS Percentage
	Crested Wheatgrass "Douglas" (<i>Agropyron Cristatum</i>)	28.67%
	Sheep Fescue "Covar" (<i>Festuca valesiaca</i>)	24.41%
	Hard Fescue "Durar" (<i>Festuca trachyphylla</i>)	22.82%
	Sherman Big Bluegrass (<i>Poa secunda</i>)	19.64%
	Other Crop	0.01%
	Inert Matter	4.35%
	Weed Seed	0.10%
	Total Lbs PLS/Acre	100.00%

Planting Area -Walla Walla, Dayton, Pomeroy 12" to 16" Precipitation Zone

Planting Prescriptions

Seed Mix 3 (Native Mix)

	Species and Variety of Seed in Mixture by Common Name and (Botanical name)	Pounds Pure Live Seed (PLS) Per Acre
	Idaho Fescue "Nespar" (<i>Festuca Idahoensis</i>)	6.50
	Bluebunch Wheatgrass "Anitone/Witmar" (<i>Pseudoroegneria spicata</i>)	6.50
	Sandberg Bluegrass "Wallowa" (<i>Poa sandbergii</i>)	1.00
	Prairie Junegrass (<i>Koeleria macrantha</i>)	1.00
	Total Lbs PLS/Acre	15
	Bulk Rate (applied) Lbs/Acre	20

Over 16" of Precipitation

Planting Prescriptions

Seed Mix 1 (Compost Mix)

	Species and Variety of Seed in Mixture by Common Name and (Botanical name)	Pounds Pure Live Seed (PLS) Per Acre
	Crested Wheatgrass "Douglas" (<i>Agropyron Cristatum</i>)	1.72
	Crested Wheatgrass "Hycrest" (<i>Agropyron Cristatum</i>)	1.72
	Sandberg Bluegrass "Wallowa" (<i>Poa sandbergii</i>)	0.21
	Durar Hard Fescue "Durar" (<i>Festuca trachyphylla</i>)	0.66
	Prairie Junegrass (<i>Koeleria macrantha</i>)	0.04
	Idaho Fescue "Nespar" (<i>Festuca Idahoensis</i>)	2.55
	Bluebunch Wheatgrass "Anatone/Witmar" (<i>Pseudoroegneria spicata</i>)	5.71
	Total Lbs PLS/Acre	12.61
	Bulk Rate (applied) Lbs/Acre	20

Over 16" of Precipitation

Planting Prescriptions

Seed Mix 2 (Cultivar Mix)

	Species and Variety of Seed in Mixture by Common Name and (Botanical name)	Seed PLS Percentage
	Crested Wheatgrass "Douglas" (<i>Agropyron Cristatum</i>)	63.76%
	Durar Hard Fescue "Durar" (<i>Festuca trachyphylla</i>)	26.14%
	Bluebunch Wheatgrass "Anitone/Witmar" (<i>Pseudoroegneria spicata</i>)	5.64%
	Other Crop	0.01%
	Inert Matter	4.35%
	Weed Seed	0.10%
	Total Bulk Per Acre	100.00%

Over 16" of Precipitation

Planting Prescriptions

Seed Mix 3 (Native Mix)

	Species and Variety of Seed in Mixture by Common Name and (Botanical name)	Pounds Pure Live Seed (PLS) Per Acre
	Idaho Fescue "Nespar" (<i>Festuca Idahoensis</i>)	6.50
	Bluebunch Wheatgrass "Anitone/Witmar" (<i>Pseudoroegneria spicata</i>)	6.50
	Sandberg Bluegrass "Wallowa" (<i>Poa sandbergii</i>)	1.00
	Prairie Junegrass (<i>Koeleria macrantha</i>)	1.00
	Total Lbs PLS/Acre	15
	Bulk Rate (applied) Lbs/Acre	20

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

Chemical Name	Product Names	Mode of Action (WSSA Class)	Where Used	How/Why Used	Notes/ Recommendations	WSDOT Restrictions	Cautions
2,4-D	Weedar 64 Amine 4 Veteran 720 Curtail WeedDestroy Platoon Crossbow Escalade Weedmaster Solution Savage Weedone LV4	Growth regulator - phenoxy synthetic auxin (4)	Noxious and nuisance weed control, and tree and brush control, Zones 2 and 3	Selective broadleaf treatment	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.	Amine formulations of 2,4-D are restricted for use within 60' of all water	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.
Aminocyclopyrachlor	Perspective Plainview Streamline Viewpoint	Growth regulator - mimics plant hormones, synthetic auxin (4)	Nuisance and noxious weed control Zones 2 and 3, Plainview is a bare-ground mixture	Depending on which mixture, can be either selective broadleaf or non-selective pre-emergent control	Each product is premixed with other herbicide to achieve either selective or non-selective control	No WSDOT use restrictions beyond those specified on product labels	Refer to product labels
Aminopyralid	Milestone VM	Growth regulator - mimics plant hormones, synthetic auxin (4)	Nuisance and noxious weed control Zones 2 and 3	Selective broadleaf treatment	Effective on many perennial weed species due to some amount of soil residual activity on suppressing seed germination	No WSDOT use restrictions beyond those specified on product labels	Refer to product label
Bromacil	Krovar 1 DF Hyvar	Photosynthetic inhibitor - photosystem II, site A (5)	Zone 1 bare-ground	Nonselective pre-emergent grass and weed control	Krovar is premixed with diuron	<u>Westside</u> - Restricted use <u>Eastside</u> - Krovar restricted for use within 60' of all water	Bromacil is potentially mobile in soil, use caution if rain is possible.
Bromoxynil	Buctril 2EC BroClean Brox 2E	Photosynthetic inhibitor - photosystem II, site C (6)	Noxious and nuisance weed control, Zones 2 and 3	Selective broadleaf treatment	Effective broadleaf weed control without grass seed suppression	<u>Westside</u> - Restricted use <u>Eastside</u> - Restricted for use within 60' of all water	Can cause irreversible eye damage, highly toxic to fresh water fish
Chlorsulfuron	Telar XP Landmark XP	Amino acid synthesis inhibitors - ALS inhibitor (2)	Noxious and nuisance weed control, Zones 2 and 3	Selective broadleaf treatment	Product highly effective on difficult perennials such as Canadian thistle and horsetail. Landmark is premixed with Oust.	No WSDOT use restrictions beyond those specified on product labels	Refer to product labels

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

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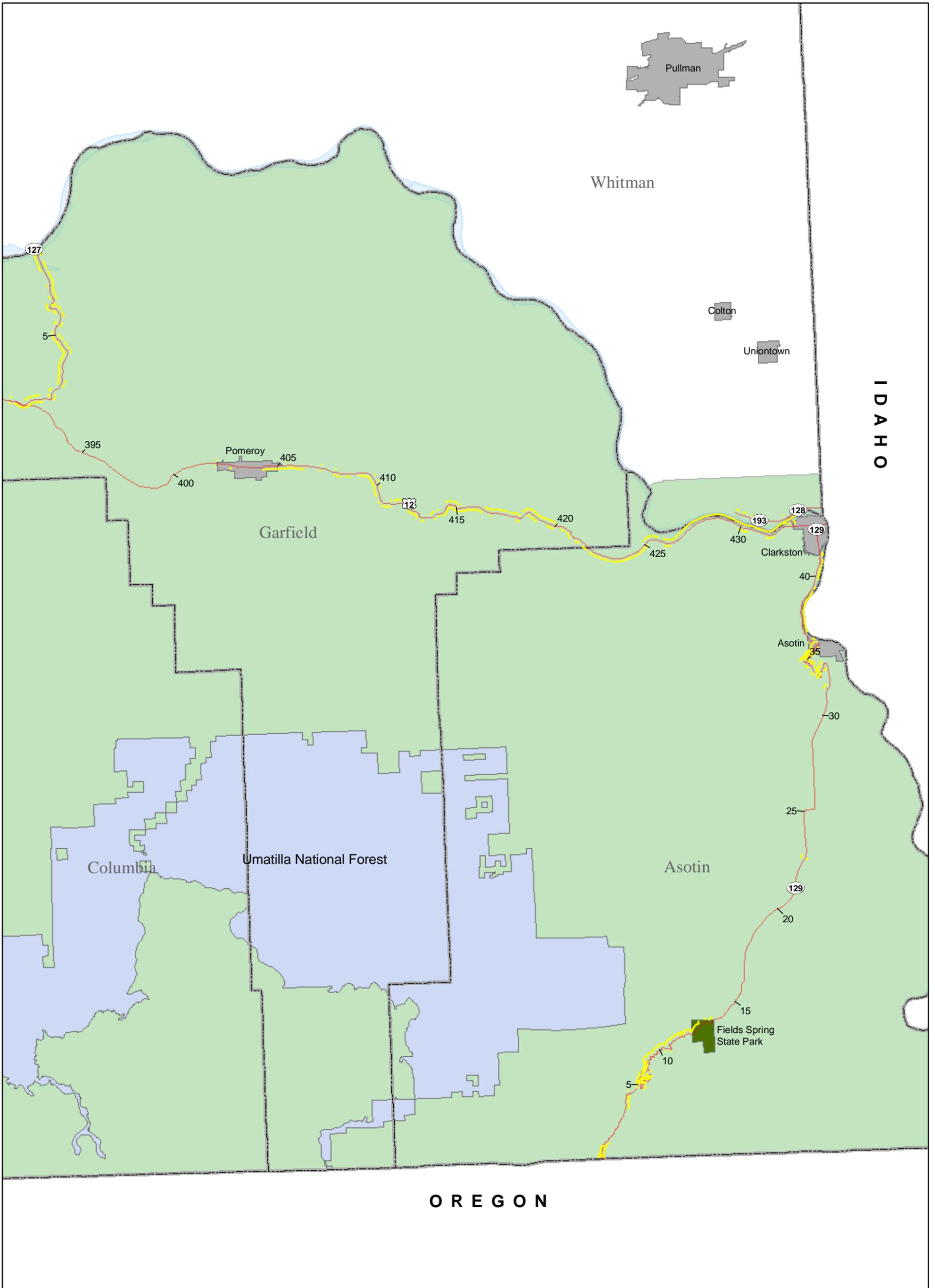
Chemical Name	Product Names	Mode of Action (WSSA Class)	Where Used	How/Why Used	Notes/ Recommendations	WSDOT Restrictions	Cautions
Imazapic	Plateau	Amino acid synthesis inhibitors - ALS inhibitor (2)	All zones	Pre-emergent control of undesirable grasses	WSDOT tests plots show a significant impact on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

Herbicides Approved for Use on WSDOT Rights of Way

When making herbicide applications:

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2. Always use personal protective equipment when mixing, loading, and applying

Chemical Name	Product Names	Mode of Action (WSSA Class)	Where Used	How/Why Used	Notes/ Recommendations	WSDOT Restrictions	Cautions
Sulfentrazone	Portfolio	Cell membrane disrupter - PPO inhibitor (14)	Zone 1 bare-ground	Nonselective pre-emergent grass and weed control	Use caution in sandy soils	Westside - Restricted use Eastside - Restricted for use within 60' of all water	High surface runoff potential, potentially mobile in soil if rain is possible.
Sulfometuron-methyl	Oust Landmark XP	Amino acid synthesis inhibitors - ALS inhibitor (2)	Zone 1 bare-ground	Nonselective pre/post emergent grass and weed control	Landmark is a premix with Oust and Telar	Refer to product labels	Oust has been proven to move with wind if not watered in to the ground
Tebuthiuron	Spike 80DF	Photosynthetic inhibitor - photosystem II, site B (7)	Zone 1 bare-ground	Nonselective pre-emergent grass and weed control		Westside - Restricted use Eastside - Restricted for use within 60' of all water	High surface runoff potential, potentially mobile in soil if rain is possible.
Topramezone	Frequency	Bleaching - carotenoid biosynthesis inhibitor (12)	Zone 1 bare-ground	Nonselective pre-emergent grass and weed control	Use in combination with another bare-ground chemical	Refer to product label	Refer to product label
Triclopyr Amine	Garlon 3A	Growth regulator - pyridinecarboxylic acid synthetic auxin (4)	Noxious and nuisance weed control, and tree and brush control, Zones 2 and 3	Selective broadleaf treatment	Works well for scotch broom control	Refer to product label	Can cause irreversible eye damage
Triclopyr Ester	Garlon 4 Crossbow Pathfinder	Growth regulator - pyridinecarboxylic acid synthetic auxin (4)	Noxious and nuisance weed control, and tree and brush control, Zones 2 and 3	Selective broadleaf treatment	Works well for cut-stump or basal treatments applications. Crossbow is premixed with 2,4-D, Pathfinder with clopyralid	Restricted for use within 60' of all water	Highly toxic to fish



IDAHO

OREGON

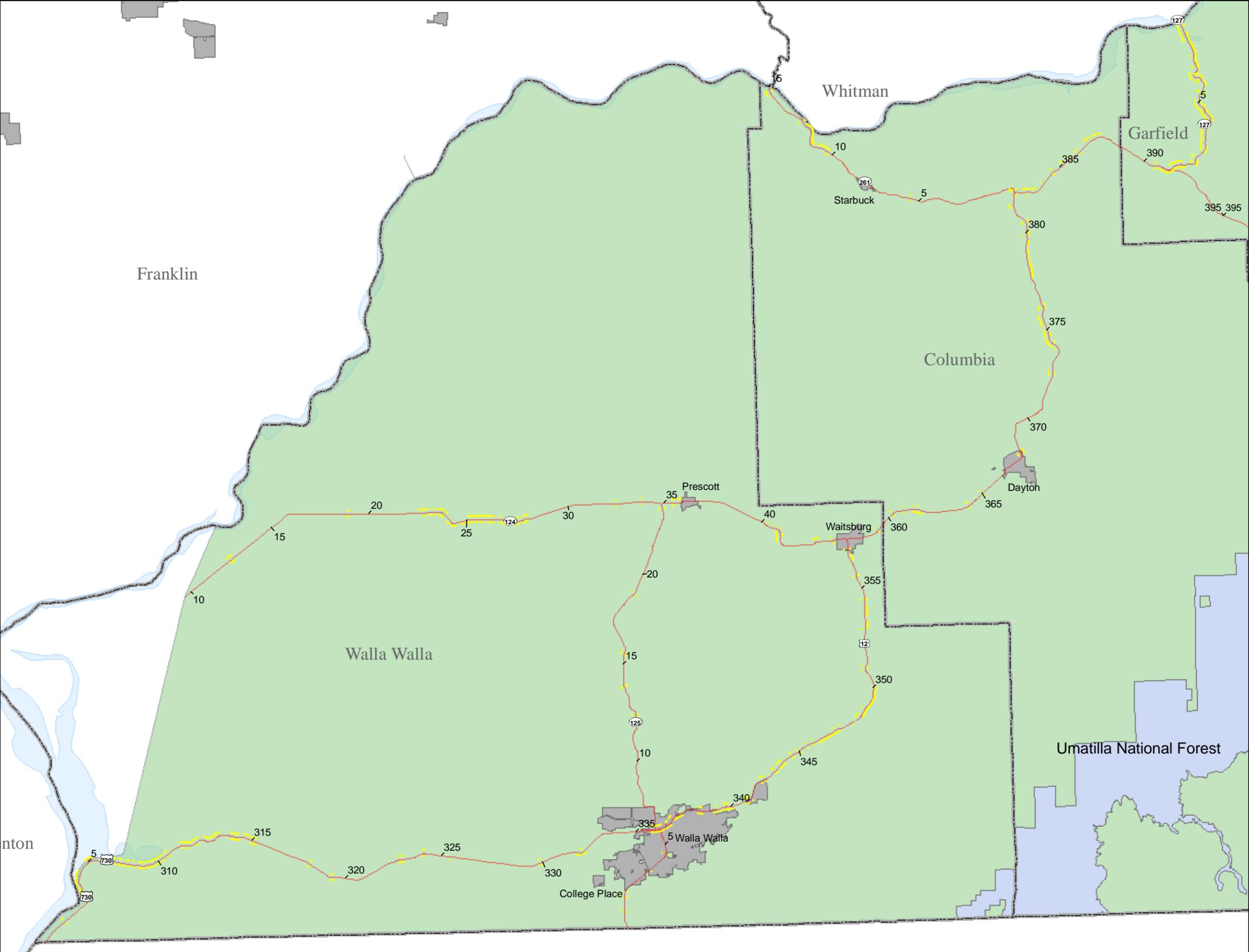
Zone 1 Bareground	State Park
State Route	Umatilla National Forest
25 Mile Post	SC area 4
County Boundary	Major Lakes
City Limits	Shoreline

Appendix C:
South Central Region Area 4
Zone 1 Bareground
Map 1 of 2



Appendix C:

South Central Region Area 4
Zone 1 Bareground
Map 2 of 2



- Zone 1 Bareground
- State Route
- 25 Mile Post
- County Boundary
- City Limits
- State Park
- Umatilla National Forest
- SC area 4
- Major Lakes
- Shoreline



Appendix E

Special Maintenance Areas

Table 3.0

Definitions:

Locations area distinguished between opposing sides of the highway by right shoulder (RS) and median shoulder (LS) in relation to direction of travel, indicated by increasing (INC) or decreasing (DEC) mile makers.

SR	Direction	Shoulder	Beg MP	End MP	Description
012	Both	RS	307.74	310.46	Wildlife Refuge
012	Both	RS	335.23	337.17	City of Walla Walla
012	Both	RS	338.09	338.93	City of Walla Walla
012	Both	RS	340.78	341.06	City of Walla Walla
012	Both	RS	357.04	358.34	City of Waitsburg
012	Both	RS	361.81	362.07	Lewis and Clark Trail State Park
012	Both	RS	366.51	367.67	City of Dayton
012	Both	RS	367.74	367.76	City of Dayton
012	Both	RS	402.09	404.98	City of Pomeroy
012	Both	RS	432.62	434.19	City of Clarkston
012	Dec	RS	340.09	339.35	Ramps
012	Dec	RS	341.17	340.95	Ramps
012	Dec	RS	336.50	336.19	Ramps
012	INC	RS	336.23	336.57	Ramps
012	INC	RS	339.48	340.22	Ramps
012	INC	RS	341.00	341.09	Ramps
012			304.89	304.94	Dispersion Area/Natural Dispersion
012			304.94	304.99	Dispersion Area/Natural Dispersion
012			308.00		Wallula Jct. Stockpile Site
012			320.10		Touchet River N. Pit Site
012			358.60		Joe Groom Quarry Site
012			372.70		Whetstone Stockpile Site
012			376.30		Willow Creek Stockpile Site
012			381.30		Delaney Junction Stockpile Site
012			381.50		Delaney Pit Site
012			390.70		Dodge Jct. Stockpile Site
012			393.90		Hauser Quarry Site
012			398.30		Dixon Quarry Site
012			398.80		Tatman Mt. Rod. Stockpile Site
012			398.85		Linville Gulch Quarry Site
012			403.90		Dutch Flat Stockpile Site
012			407.40		Rickman Quarry Site
012			430.00		Evans Rd. Stockpile Site
124	Both	RS	35.90	36.65	City of Prescott
124	Both		40.21	39.96	Cantilever Mntd - RR at grade
124	Both	RS	44.50	44.98	City of Waitsburg
124			29.20		Mcfeeley Rd. Quarry Site
124			34.70		Prescott W. Stockpile Site

Appendix E

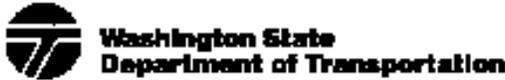
Special Maintenance Areas

Table 3.0

Definitions:

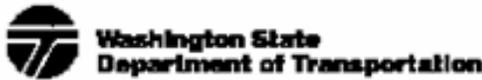
Locations area distinguished between opposing sides of the highway by right shoulder (RS) and median shoulder (LS) in relation to direction of travel, indicated by increasing (INC) or decreasing (DEC) mile makers.

SR	Direction	Shoulder	Beg MP	End MP	Description
124			40.85		Bolles Jct. Stockpile Site
125	Both	RS	1.96	3.15	City of College Place
125	Both	RS	3.32	7.29	City of Walla Walla
125	Both		4.51	4.50	Cantilever Mntd - RR at grade
125	Both		6.34	6.32	Passive - RR at grade
125	Both		6.38	6.36	Passive - RR at grade
125	Both		6.57	6.55	Passive - RR at grade
125	Both		15.63	15.61	Shoulder Mntd - RR at grade
125			19.00		Ennis Station Stockpile Site
127			1.30		Dodge hill Stockpile
127			1.95		Hagen Rd. Quarry Site
127			5.00		Gilbert Pit Site
127			5.90		Beale Hill Stockpile Site
129	Both	RS	13.3	13.6	Fields Spring State Park
129	Both	RS	35.69	36.95	City of Asotin
129	Both	RS	41.07	42.55	City of Clarkston
129	DEC	RS	40.92	40.82	Ramps
129	INC	RS	40.82	40.87	Ramps
129			2.20		Frazier Pit Site
129			13.50		Field Springs Quarry Site
129			22.60		Benedict Quarry Site
129			23.55		Rocky Hollow Stockpile Site
129			38.60		Clemens Addition Stockpile Site
730	Both	RS	5.91	6.05	Wildlife Refuge



Integrated Vegetation Management Record

Org Code 455410	County Walla Walla	Date 4/6/2005	Vegetation Management Zone(s) <input checked="" type="checkbox"/> Zone 1 <input checked="" type="checkbox"/> Zone 2 <input type="checkbox"/> Zone 3																			
Area SR <u>125</u> MP <u>7.1</u> to MP <u>6.74</u>		Location <u>Permetenary boundary /mullenrd.</u>																				
Check Appropriate Boxes: <input checked="" type="checkbox"/> Roadside <input type="checkbox"/> Landscaped Area <input type="checkbox"/> Interchange <input type="checkbox"/> Mitigation Site <input type="checkbox"/> Third Party Damage <input type="checkbox"/> Sensitive Sites <input checked="" type="checkbox"/> NB <input type="checkbox"/> EB <input checked="" type="checkbox"/> Shoulder <input type="checkbox"/> Rest Area <input type="checkbox"/> Bridge <input type="checkbox"/> Stormwater <input type="checkbox"/> Yes <input type="checkbox"/> Aquatic <input checked="" type="checkbox"/> SB <input type="checkbox"/> WB <input type="checkbox"/> Median <input type="checkbox"/> Park-n-Ride <input type="checkbox"/> Ramp <input type="checkbox"/> Yard/Stockpile <input type="checkbox"/> Wetlands																						
Target <input checked="" type="checkbox"/> Noxious Weeds <input type="checkbox"/> Brush/Trees <input type="checkbox"/> Other <input type="checkbox"/> Hazard Tree <input type="checkbox"/> List Target/Species: <u>Star thistle, kochia, Jim Hill</u>																						
Reason for Action: <input checked="" type="checkbox"/> Noxious Weeds <input checked="" type="checkbox"/> Nuisance Weeds <input type="checkbox"/> Fire Prevention <input type="checkbox"/> Restore Native Veg. <input type="checkbox"/> Zone 1 Pilot <input checked="" type="checkbox"/> Aesthetic <input type="checkbox"/> Site Distance <input type="checkbox"/> Hazard Vegetation <input type="checkbox"/> Customer Request <input type="checkbox"/> Enhance Vegetation <input type="checkbox"/> Slope Stabilization <input checked="" type="checkbox"/> Other _____																						
Long term IVM plan (Describe goals/objectives and a step-by-step approach over time)																						
Re establish self-sustaining desirable grass to cut future herbicide usage and improve gateway area appearance. North and south side of roadway. This area was sprayed out using round-up, 1 week later cultivated and packed, then chem followed until Nov. It will be sprayed out when cheatgrass appears and then seeded using the broadcast and pack method using Crested wheat, cover sheep fescue, durar hard fescue, coron bluegrass sherman big bluegrass.																						
Approximate Acres to Accomplish <u>9</u>																						
Activities																						
<table border="1"> <thead> <tr> <th></th> <th>Planned date of Treatment</th> <th>Actual date of Treatment</th> </tr> </thead> <tbody> <tr> <td>Manual <input type="checkbox"/> Digging <input type="checkbox"/> Pulling <input type="checkbox"/> Planting <input type="checkbox"/> Logging <input type="checkbox"/> Staking <input checked="" type="checkbox"/> Other _____</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>Mechanical <input type="checkbox"/> Aerial Saw Work <input type="checkbox"/> Tractor Brush Cutter <input type="checkbox"/> Mower/Chem <input type="checkbox"/> Manual Brush Cutting <input type="checkbox"/> Tractor Mower <input type="checkbox"/> Other</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>Bio-Control <input type="checkbox"/> Insect <input type="checkbox"/> Pathogen <input type="checkbox"/> Parasite _____ Type/Species _____</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>Cultural <input type="checkbox"/> Burning <input type="checkbox"/> Grading <input checked="" type="checkbox"/> Seeding <input type="checkbox"/> Fertilizing <input type="checkbox"/> Grazing <input type="checkbox"/> Soil Amendment <input type="checkbox"/> Other _____</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>Chemical <u>W40030</u> Record Number _____</td> <td><u>4/6/2005</u></td> <td><u>4/6/2005</u></td> </tr> </tbody> </table>						Planned date of Treatment	Actual date of Treatment	Manual <input type="checkbox"/> Digging <input type="checkbox"/> Pulling <input type="checkbox"/> Planting <input type="checkbox"/> Logging <input type="checkbox"/> Staking <input checked="" type="checkbox"/> Other _____	<input type="text"/>	<input type="text"/>	Mechanical <input type="checkbox"/> Aerial Saw Work <input type="checkbox"/> Tractor Brush Cutter <input type="checkbox"/> Mower/Chem <input type="checkbox"/> Manual Brush Cutting <input type="checkbox"/> Tractor Mower <input type="checkbox"/> Other	<input type="text"/>	<input type="text"/>	Bio-Control <input type="checkbox"/> Insect <input type="checkbox"/> Pathogen <input type="checkbox"/> Parasite _____ Type/Species _____	<input type="text"/>	<input type="text"/>	Cultural <input type="checkbox"/> Burning <input type="checkbox"/> Grading <input checked="" type="checkbox"/> Seeding <input type="checkbox"/> Fertilizing <input type="checkbox"/> Grazing <input type="checkbox"/> Soil Amendment <input type="checkbox"/> Other _____	<input type="text"/>	<input type="text"/>	Chemical <u>W40030</u> Record Number _____	<u>4/6/2005</u>	<u>4/6/2005</u>
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Bio-Control <input type="checkbox"/> Insect <input type="checkbox"/> Pathogen <input type="checkbox"/> Parasite _____ Type/Species _____	<input type="text"/>	<input type="text"/>																				
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Chemical <u>W40030</u> Record Number _____	<u>4/6/2005</u>	<u>4/6/2005</u>																				
#1 Evaluation and Date																						
Fence line treated by property owner in 2004. This plot will be monitored for weed pressure 5/1/06 and will be treated with Buctril if necessary.																						
#2 Evaluation and Date																						
#3 Evaluation and Date																						



Pesticide Application

Org. Code 455420	County COLUMBIA	Date of Application 5/16/2006	Start 5:45	<input checked="" type="radio"/> AM <input type="radio"/> PM	ICP 082A	Stores Issue Ticket Number(s) 516-06 A
Area SR <u>12</u> MP <u>382.2</u> to MP <u>388.5</u> and MP _____ to MP _____ and MP _____ to MP _____ and MP _____ to MP _____						
Check Appropriate Boxes: <input type="checkbox"/> NB <input checked="" type="checkbox"/> EB <input type="checkbox"/> Shoulder <input type="checkbox"/> Rest Area <input type="checkbox"/> Bridge <input type="checkbox"/> Interchange <input type="checkbox"/> Yard/Stockpile <input type="checkbox"/> Spot Spray <input type="checkbox"/> Aquatic <input type="checkbox"/> SB <input type="checkbox"/> WB <input type="checkbox"/> Median <input type="checkbox"/> Park-n-Ride <input type="checkbox"/> Ramp <input type="checkbox"/> Blanket Spray <input type="checkbox"/> Wetlands <input checked="" type="checkbox"/> Banded Width						
<input checked="" type="checkbox"/> Weeds <input checked="" type="checkbox"/> Noxious Weeds <input type="checkbox"/> Disease <input type="checkbox"/> Brush <input type="checkbox"/> Insects <input type="checkbox"/> Other List Pest(s): <u>RUSSIAN THISTLE, KOCHIA</u>						
Start Weather Conditions Temperature <u>60</u> °F (°C) Wind (Direction From) <u>SW</u> Wind (Range) <u>2-4</u> mph (km/h) <input type="radio"/> Sunny <input checked="" type="radio"/> Broken <input type="radio"/> Overcast No Rain <input type="radio"/> Light Scattered Showers <input type="radio"/> Hard Showers						
Finish Weather Conditions Temperature <u>68</u> °F (°C) Wind (Direction From) <u>SW</u> Wind (Range) <u>2-4</u> mph (km/h) <input type="radio"/> Sunny <input checked="" type="radio"/> Broken <input type="radio"/> Overcast No Rain <input type="radio"/> Light Scattered Showers <input type="radio"/> Hard Showers						
Tank No.	Material Name	Material Type	EPA Reg. No.	Lot Number	Product For Acre (Gallons)	Unit Total Daily Usage Unit
1	WATER		-----	POMEROY	30.34	Gal 206 Gal
1	Spreader 90	Adjuvant	-----	62581	7.76	Oz 52 Oz
1	Escalade	Pesticide	228-417	IL ED-05	48	Oz 328 Oz
Total <u>6.8</u> Acres (hectares) Treated at <u>30.34</u> gallons (liters) of spray per acre (hectare).						
Equipment Number 8E29-14	Tank Size 1 1000 3 30 5	Calibration Date 3/23/2006	Vehicle Speed 6-8 mph (km/h)	Nozzle Pressure 25 PSI (Pa)	Width of Spray Pattern 3-11 Feet (meters)	
<input type="checkbox"/> Hand sprayer <input type="checkbox"/> Hand gun <input type="checkbox"/> Boom <input type="checkbox"/> Backpack <input checked="" type="checkbox"/> Fixed Nozzle <input type="checkbox"/> Other (Specify) _____				<input checked="" type="checkbox"/> Tank Mix (Conv.) <input type="checkbox"/> Injection <input type="checkbox"/> Invert		
Operator Name GEORGE R. FEDER		Operator Pesticide License No. 36520		Operator Signature		Driver Name COREY SLAYBAUGH
Remarks				Buffer Truck Driver's Name HEATH SHELTON		
				Pesticide Sensitivity Registration Applies: <input type="checkbox"/> Yes <input type="checkbox"/> No		
				Contact _____ _____		
Division of Emergency Management (1-800-258-5990)				Additional Notes		

DOI Form 540-506 EF
Revised 9/2001

Distribution: OSC Maint Operator Es gen File
Send OSC Copy Within 5 Days

Oz=Ounces Dry L=Pound g=gram lg=1/2 lb gram
Gal=Gallon Ga=Gallon ml=Milliliter L=Liter
Pt=Pint Qt=Quart

Appendix G

STAKEHOLDER LIST

City of College Place	625 S. College Ave. College Place, WA 99324 (509) 529-1200
City of Walla Walla	P.O. Box 478, Walla Walla, WA 99362 (509) 527-3772
City of Waitsburg	147 Main Street Waitsburg, WA 99361 (509) 337-6371
City of Dayton	111 S. First St. Dayton, WA 99328 (509) 382-2361
Town of Prescott:	108 S D. Street Prescott, WA 99348 (509) 849-2262
Town of Starbuck	200 Main St. Starbuck, WA 99359 (509) 399-2100
Walla Walla County Noxious Weed Control Board	328 W. Poplar Walla Walla, WA 99362 Butch Bosley (509) 527-3246
Columbia County Noxious Weed Control Board.....	202 S. 2 nd . St. Dayton, WA 99328 Valerie Turner (509) 382-9760
Garfield County Noxious Weed Control Board	690 W. Main Pomroy, WA 99347 Jim McKeirman (509) 843-1913
Asotin County Noxious Weed Control Board.....	P.O. Box 881 Asotin, WA 99402 Nelle Murray (509) 243-2098
Confederated Tribes of the Umatilla Indian Reservation.....	P.O. Box 638 Pendleton, OR 97801 (541) 966-2028
Department of Corrections.....	1313 N. 13 th Ave. Walla Walla, WA 99362 (509) 525-3610
US Fish and Wildlife	311 Lake Rd. Burbank, WA 99323 (509) 543-8322
McNary National Wildlife Refuge	64 Maple St. Burbank, WA 99323 (509) 547-4942
Washington State Department of Fish and Wildlife	Dayton office: Tom Schiarm 529 W. Main, Dayton, WA 99328 (509) 382-1266

Appendix G

Washington State Department of Fish and Wildlife	Walla Walla office: Mark Grandstaff Walla Walla, WA 99362 (509) 527-4141
US Forest Service Umatilla National Forest	Walla Walla Ranger District: 1415 W. Rose St. Walla Walla, WA 99362 (509) 522-6290
US Forest Service Umatilla National Forest	Pomeroy Ranger District: 71 W. Main Pomroy, WA 99347 (509) 843-1891
Hells Canyon National Recreational Area	2535 Riverside Dr. PO Box 699 Clarkston, WA 99403 (509) 758-0616
Washington State Patrol	406 Wellington Walla Walla, WA 99362 (509) 527-4413
Washington State Department of Ecology (Air Quality)	Walla Walla, WA 99362 (509) 527-4546
Port of Walla Walla.....	310 A. St. Walla Walla, WA 99362 (509) 525-3100
Port of Clarkston	849 Port Way Clarkston, WA 99403 Rick Davis (509) 758-5272
Port of Garfield.....	P.O. Box 788 Pomeroy, WA 99347 Laura Brazell (509) 843-3740
Port of Columbia Walla.....	Walla, WA 99362 Dave Karl (509) 527-4138
Walla Walla Valley Wine Alliance.....	128 N. 2 nd . St. Walla Walla, WA 99362 (509) 526-3117
Washington Association of Wine Grape Growers	P.O. Box 716 Cashmere, WA 98815 (509) 782-8234
Milton Freewater Drift Task Force.....	OSU Extension Service 418 N. Main, Milton Freewater, OR 97862 Tom Darnell (541) 938-5597

Appendix G

Bonneville Power Administration.....	22 Pasco Kahlotus Rd. Pasco, WA 99301 (509) 547-7542
US Army Corp of Engineers	Walla Walla District (509) 527-7424
WSDOT Aviation Division.....	PO Box 3367 Arlington, WA 98223 Jim Scott (360) 651-6313
Watco	325 Mill Rd. PO Box 1166 Lewiston, ID 83501 (208) 798-8395
Blue Mountain Railroad	709 North 10 th Walla Walla, WA 99362 (509) 522-1462 Westside
Irrigation District #5 & Eastside Irrigation District # 6.....	PO Box 224 Touchet, WA 99360 (509) 394-2917
Burlingame Ditch Gardena Farms Dist. # 13.....	539 White Rd. Touchet, WA 99360 Stewart Durfee (509) 394-2331
Bergevin/Williams Irrigaiton District.....	3227 Barney Rd. Touchet, WA 99360 Ed Chvatal (509) 522-4820
Old Lowden Ditch	2525 Detour Rd. Walla Walla, WA 99362 Tom Bergevin (509) 529-5351