South Central Region, Area 2
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 2 manages approximately 680 miles of roadside right-of-way throughout Yakima County. This right-of-way is part of the state highway system including I-82, I-182, US-12, SR-395, SR-17, SR-14 as well as a number of other state routes in the area.

As a landowner in this area WSDOT is required to control all designated 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 has developed an Integrated Vegetation Management Plan (IVM) for this area. This plan serves 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:

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

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 2 IVM plan is accessible in an electronic form at [http://www.wsdot.wa.gov/Maintenance/Roadside](http://www.wsdot.wa.gov/Maintenance/Roadside) or available in hard copy upon request. Please contact, Les Turnley, Steve Underwood or James Morin at the numbers listed below for questions or comments.

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Vicinity Map
Figure 1
Program Goals (2009)

The purpose of this section is to identify the short and long term operational goals within South Central Region, Area 2. These goals will help direct decisions that effect 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 (2008-2012)
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.

- **General Weed Control**
  1. Improve consistency and predictability in Vegetation Management (VM) in the Selah to Union Gap corridor. **Ongoing**
  2. Maintain good communication with Yakima and Kittitas County Weed Boards **Ongoing**
  3. Increase cooperative VM efforts with local land owners, cities and county **Ongoing**
  4. Establish policy and methods that will reduce risk of off target herbicide impacts while allowing for designate weed control in vineyard areas.

- **Noxious Weed Control 3A2**  **Map Target: B**
  1. Reduce zone 1 were practical throughout SCR Area 2 **Ongoing**
  2. Control listed weeds in Yakima and Kittitas Counties, keep these weeds from spreading and make steady progress in reducing infestations **Accomplished**

- **Nuisance Weed Control 3A3**  **Map Target B**
  1. Control kochia on the I-82 and Yakima County Area 2 roadides through Yakima County to incrementally reduce infestations.

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

Short-Term Goals (2009)
Short-term goals are planned for implementation during the 2009 season. Short-term goals should be specific goals with clear objectives that can be measured and reported.

- **Noxious Weed Control 3A2**  **Map Target: B**
  1. Treat an estimated 313 acres of roadside with selective herbicides for noxious weed control **Accomplished 533 Acres**
  2. Increase fall applications to improve control of Scotch Thistle, Russian Thistle and Russian Knapweed, approximately 10 acres annually **Accomplished**

- **Nuisance Weed Control 3A3**  **Map Target: B**
  1. Mow as per mowing plan (See appendix A) to include approximately 370 acres of nuisance weeds primarily focused in the areas of I-82 MP. 50 to 69 and the Yakima corridor. **Accomplished 71 acres**
  2. Treat I-82 MP 38 to 69 with selective herbicide as needed to keep Kochia from going to seed, approximately 150 acres. **Was this accomplished? Partial?**
  3. Treat Dalmatian Toadflax with spring and fall herbicide applications, to cover approximately 10 acres.
  4. Apply biocontrol agents to approximately 20 acres of Dalmatian Toadflax throughout area. **Did we accomplish this?**
  5. Continue investment in biological control to target Spotted and Diffuse Knapweed infestations. **Did we accomplish this?**
  6. Mow approximately 20 acres of Canada Thistle to keep from going to seed followed by fall herbicide treatment with Milestone **Accomplished**

- **Obstructions 3A4**  **Map Target: B**
  1. Apply approximately 114 acres of bare-ground to roadsides in guardrail sections and selected locations as per Bare-ground Plan (see Appendix A). **Accomplished 169 acres**
  2. Mow approximately 200 acres of weeds for control of visual obstructions as per plan (see appendix A). **Accomplished 1116 Acres**

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

- **General Weed Control**
  1. Improve consistency and predictability in Vegetation Management (VM) in the Selah to Union Gap corridor. *Ongoing*
  2. Maintain good communication with Yakima and Kittitas County Weed Boards *Ongoing*
  3. Increase cooperative VM efforts with local land owners, cities and counties *Ongoing*
  4. Establish policy and methods that will reduce risk of off target herbicide impacts while allowing for designate weed control in vineyard areas. *Ongoing*

- **Noxious Weed Control 3A2**
  1. Reduce zone 1 were practical throughout SCR Area 2 *Accomplished*
  2. Control listed weeds in Yakima and Kittitas Counties, keep these weeds from spreading and make steady progress in reducing infestations *Accomplished*

- **Nuisance Weed Control 3A3**
  1. Control kochia on the I-82 and Yakima County Area 2 roadsides through Yakima County to incrementally reduce infestations. *Accomplished*

- **Obstructions 3A4**
  1. Maintain hardware, intersections and low site distance locations to be free of vegetation obstructions. *Accomplished*
Annual Work Plan (2010)

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

- **Noxious Weed Control 3A2-**
  1. Treat an estimated 700 acres of roadside with selective herbicides for noxious weed control  
     Accomplished 482 acres
  2. Increase fall applications to improve control of Scotch Thistle, Russian Thistle and Russian Knapweed, approximately 10 acres annually  
     Treated 0 acres

- **Nuisance Weed Control 3A3-**
  1. Mow as per mowing plan (See appendix A) to include approximately 370 acres of nuisance weeds primarily focused in the areas of I-82 MP 50 to 69 and the Yakima corridor.  
     Accomplished approximately 800 acres
  2. Treat I-82 MP 38 to 69 with selective herbicide as needed to keep Kochia from going to seed, approximately 250 acres.  
     Accomplished
  3. Treat Dalmatian Toadflax with spring and fall herbicide applications, to cover approximately 10 acres.  
     Accomplished
  4. Apply bio-control agents to approximately 20 acres of Dalmatian Toadflax throughout area.  
     Did not Accomplish
  5. Continue investment in biological control to target Spotted and Diffuse Knapweed infestations.  
     Partially Accomplished
  6. Mow approximately 20 acres of Canada Thistle to keep from going to seed followed by fall herbicide treatment with Milestone.  
     Accomplished 10 acres

- **Obstructions 3A4-**
  1. Apply approximately 170 acres of bare-ground to roadsides in guardrail sections and selected locations as per Bare-ground Plan (see Appendix A).  
     Accomplished 240 Acres
  2. Mow approximately 200 acres of weeds for control of visual obstructions as per plan (see appendix A).  
     Accomplished approximately 485 acres
  3. Remove 30-40 danger trees.  
     Accomplished, removed 38 trees
  4. Control approximately 20-30 acres of brush on the roadside  
     Accomplished 54 acres
Long Range Work Plan (2011-2016)

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

- **General Weed Control**
  1. Improve consistency and predictability in Vegetation Management (VM) in the Selah to Union Gap corridor.
  2. Maintain good communication with Yakima and Kittitas County Weed Boards
  3. Work with South Central Washington CWMA as a weed control partner
  4. Increase cooperative VM efforts with local land owners, cities and counties
  5. Establish policy and methods that will reduce risk of off target herbicide impacts while allowing for designate weed control in vineyard areas.

- **Noxious Weed Control 3A2**
  1. Control listed weeds in Yakima and Kittitas Counties, keep these weeds from spreading and make steady progress in reducing infestations

- **Nuisance Weed Control 3A3**
  1. Control kochia on the I-82 and Yakima County Area 2 roadsides through Yakima County to incrementally reduce infestations.
  2. Maintain zone 1 bare ground at current levels

- **Obstructions 3A4-**
  1. Maintain hardware, intersections and low site distance locations to be free of vegetation obstructions.
Annual Work Plan (2011)

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

- **Noxious Weed Control 3A2-**
  1. Treat an estimated 500 acres of roadside with selective herbicides for noxious weed control (Accomplished 826 acres total)
  2. Increase fall applications to improve control of Scotch Thistle, Russian Thistle and Russian Knapweed, approximately 10 acres annually
  3. Increase vigilance for Rush Skeletonweed and Yellow Starthistle on SR 97 between Toppenish and the Yakima County line.

- **Nuisance Weed Control 3A3-**
  1. Mow as per mowing plan (See appendix A) to include approximately 700 acres of nuisance weeds primarily focused in the areas of I-82 MP 50 to 69 and the Yakima corridor. (Accomplished 810 acres)
  2. Treat I-82 MP 38 to 69 with selective herbicide as needed to keep Kochia from going to seed, approximately 250 acres. (Accomplished?)
  3. Treat Dalmatian Toadflax with spring and fall herbicide applications, to cover approximately 10 acres.
  4. Coordinate biocontrol efforts for Dalmatian Toadflax with Yakima County Weed Board
  5. Coordinate biocontrol efforts for Spotted and Diffuse Knapweed with Yakima County Weed Board.
  6. Mow approximately 10 acres of Canada Thistle to keep from going to seed followed by fall herbicide treatment with Milestone. (Did not Accomplish)

- **Obstructions 3A4-**
  1. Apply approximately 250 acres of bare-ground to roadsides in guardrail sections and selected locations as per Bare-ground Plan (see Appendix A). (Accomplished 137 acres)
  2. Mow approximately 500 acres of weeds for control of visual obstructions as per plan (see appendix A). (Accomplished 80 acres)
  3. Remove 30-40 danger trees. (Accomplished 165 trees)
  4. Control approximately 20-30 acres of brush on the roadside
Annual Work Plan (2012)

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

- **Noxious Weed Control 3A2**
  1. Treat an estimated **700-800** acres of roadside with selective herbicides for noxious weed control
  2. Increase fall applications to improve control of Scotch Thistle, Russian Thistle and Russian Knapweed, approximately **10** acres annually
  3. Increase vigilance for Rush Skeletonweed and Yellow Starthistle on SR 97 between Toppenish and the Yakima County line and SR 82 between Selah and Sunnyside.

- **Nuisance Weed Control 3A3**
  1. Mow as per mowing plan (See appendix A) to include approximately 700 acres of nuisance weeds primarily focused in the areas of I-82 MP 50 to 69 and the Yakima corridor.
  2. Treat I-82 MP 50 to 69 with selective herbicide as needed to keep Kochia from going to seed, approximately **250** acres.
  3. Treat Dalmatian Toadflax with spring and fall herbicide applications, to cover approximately 10 acres.
  4. Coordinate biocontrol efforts for Dalmatian Toadflax with Yakima County Weed Board
  5. Coordinate biocontrol efforts for Spotted and Diffuse Knapweed with Yakima County Weed Board.
  6. Mow approximately **10** acres of Canada Thistle to keep from going to seed followed by fall herbicide treatment with Milestone.

- **Obstructions 3A4**
  1. Apply approximately **250** acres of bare-ground to roadsides in guardrail sections and selected locations as per Bare-ground Plan (see Appendix A).
  2. Mow approximately **500** acres of weeds for control of visual obstructions as per plan (see appendix A).
  3. Remove **30-40** danger trees.
  4. Control approximately **20-30** acres of brush on the roadside
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. Roadsides should look as natural as possible throughout the year. Appropriate visual quality for roadsides throughout the state is defined in the WSDOT Roadside Classification Plan (November 2011) [http://www.wsdot.wa.gov/Publications/Manuals/M25-31.htm](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 SC Region, Area 2. 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 stormwater management. Zone 1 may include a vegetation-free band adjacent to the pavement edge, particularly when guardrail is present, or may consist of desirable vegetation up to the pavement edge depending on site specific needs. 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.
Typical Roadside Vegetation Management Zones  
**Figure 2**

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

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

**Buffer Zone**  
Native or Naturally Occurring Vegetation  
Where adequate right of way exists, maintained using IVM techniques to encourage desirable, self-sustaining plant communities.
### 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 509.577.1920.

**Herbicide Safety**
When applying herbicides WSDOT takes precautions 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](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).

Internal agency coordination between the Design, Construction, and Maintenance programs is imperative to a comprehensive roadside vegetation management plan. A commitment to increasing communication in these areas is an important component in an ongoing effort to reduce lifecycle costs and improves roadside vegetation. This commitment has been recognized and agreed to by the regional management team.

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

- US-97 Satus Creek Bridge, Bridge Replacement- 1/19/10
- I-82 Valley Mall Blvd Interchange, **Construction 2010**
- I-82 South Union Gap Interchange, **Projected Construction 2013**
- I-82/South Union Gap I/C Improvements- **Ad Unknown**

**WSDOT South Central Region Projects Link:**
[http://www.wsdot.wa.gov/regions/SouthCentral/](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 2 that are scheduled for construction within the next 2-4 years:**

- There are no utility construction contracts planned at this time.
The IVM Decision-Making Process
Figure 3
1. INTEGRATED VEGETATION MANAGEMENT ACTIVITIES

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 12). 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 successful use of IVM is carrying out activities in accordance with a long-range plan and then 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. Shoulder Maintenance (Zone 1 Bare-Ground)

1.2.1. Policy and objectives

Zone 1 may be maintained in a narrow bareground condition or with low growing desirable vegetation to the edge of pavement. In some locations it is necessary to maintain zone 1 in a bareground condition for site distance due to excessive vegetation growth, facilitate preservation and maintenance of roadside hardware (guardrails and delineators), and in some cases to function as a firebreak.

The width of the Zone 1 bareground, where present, may vary from 2’ to 4’ (or to the back side of roadside hardware) as measured from the edge of pavement along the slope of the shoulder. This may include the area behind guardrail and barrier associated with bridge ends.

Some site specific locations are maintained in a bareground condition due to roadside configuration such as rock fill slopes or narrow medians.
1.2.2. Action Thresholds (Zone 1 Bareground)
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 bare-ground, where present, are listed below.
- Sight distance limited by vegetation within zone 1
- Guardrail or other roadside hardware that must be routinely maintained to be free of vegetation
- Special safety considerations as approved by the Area Superintendent

1.2.3. Methods (timing and procedures)
Zone 1 bareground applications, where required, 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, Zone 1 Bare-ground prescriptions.

1.2.5. Locations by Milepost
See Appendix C, Zone 1 Bare-ground locations.

1.3. Mowing Operations

1.3.1. Policy and Objectives
Mowing will be accomplished throughout the South Central Region, Area 2 on an as needed basis. Mowing needs and prescriptions will vary by location and are listed in Appendix A. 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 or their designee.

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 2 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, Mowing Prescriptions

1.4. **Noxious Weed Control**

1.4.1. **Policy and Objectives**
WSDOT is required to control and prevent the spread of all designated noxious weeds on lands owned or managed by the agency. 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, new infestations can further spread along transportation corridors and to adjacent property. The overall cost and economic impact to the agricultural community and the health of native ecosystems can be significant.
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. South Central Region, Area 2 is located primarily within Noxious Weed Regions 6 and 9

http://www.nwcb.wa.gov/weed_list/weed_regions.htm

Currently there are no known Class A weeds identified within the WSDOT operating right-of-way in South Central Region, Area 2.

**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 Yakima, Kittitas and Benton counties and currently present within WSDOT right-of-way include:

**Yakima County:**
- Buffalobur (Solanum rostratum)
- Common Catsear (Hypochaeris radicata)
- Dyers Woad (Isatis tinctoria)
- Hawkweed, European (Hieracium sabaudum)
- Knapweed, Meadow (Centaurea jacea x nigra)
- Knapweed, Spotted (Centaurea biebersteinii)
- Oxeye daisy (Leucanthemum vulgare)
- Perennial Sowthistle (Sonchus arvensis spp. Arvensis)
- Purple Loosestrife (Lythrum salicaria)
- Rush Skeletonweed (Chondrilla juncea)
- Saltcedar (Tamarix ramosissima)
- Scotch Broom (Cytisus scoparius)
- Spurge, Leafy (Euphorbia esula)
- Sulfer Cinquefoil (Potentilla recta)
- Tansy Ragwort (Senecio jacobaea)
- Thistle, musk (Cardus nutans)
- Thistle, Scotch (Onopordum acanthium)
- Wild Carrot (Daucus carota)
- Wild Four O’clock (Mirabilis nyctaginea)
- Yellow Starthistle (Centaurea solstitialis)

**Kittitas County:**
- Annual Bugloss, (Anchusa arvensis)
- Common Bugloss (Anchusa officinalis)
- Common Catsear, (Hypochaeris radicata)
• Dalmatian Toadflax, (*Linaria dalmatica spp dalmatica*)
• Diffuse Knapweed, (*Centaurea diffusa*)
• Giant Knotweed, (*Polygonum polystachyum*)
• Hoary Alyssum, (*Berteroa incana*)
• Houndstongue, (*Cynoglossum officinale*)
• Japanese Knotweed, (*Polygonum cuspidatum*)
• Kochia, (*Kochia scoparia*)
• Longspine Sandbur, (*Cenchrus longispinus*)
• Meadow Knapweed, (*Centaurea jacea x nigra*)
• Musk Thistle, (*Carduus nutans*)
• Oxeye Daisy, (*Leucanthemum vulgare*)
• Orange Hawkweed, (*Hieracium aurantiacum*)
• Purple Loosestrife, (*Lythrum salicaria*)
• Perennial Pepperweed, (*Lepidium latifolium*)
• Perennial Sowthistle, (*Sonchus arvensis ssp. Arvensis*)
• Puncturevine, (*Tribulus terrestris*)
• Rush Skeletonweed, (*Chondrilla juncea*)
• Russian Knapweed, (*Acroptilon repens*)
• Spotted Knapweed, (*Centaurea biebersteinii*)
• Sulfur Cinquefoil, (*Potentilla recta*)
• Scotch Thistle, (*Onopordum acanthium*)
• Scotch Broom, (*Cytisus scoparius*)
• Tansy Ragwort, (*Senecio jacobaea*)
• Thistle, Canada (*Cirsium arvense*)
• Wild Carrot, (*Daucus carota*)
• Yellow Starthistle, (*Centaurea solstitialis*)

**Benton County:**
• Buffalobur (*Solanum rostratum*)
• Dyers woad (*Isatis tinctoria*)
• Hawkweed, European (*Hieracium sabaudum*)
• Houndstongue (*Cynoglossum officinale*)
• Knapweed, diffuse (*Centaurea diffusa*)
• Knapweed, spotted (*Centaurea biebersteinii*)
• Knotweed, Japanese (*Polygonum cuspidatum*)
• Perennial pepperweed (*Lepidium latifolium*)
• Perennial Sowthistle (*Sonchus arvensis ssp. Arvensis*)
• Rush skeletonweed (*Chondrilla juncea*)
• Thistle, Canada (*Cirsium arvense*)
• Thistle, Musk (*Carduus nutans*)
• Thistle, plumeeless (*Carduus acanthoides*)
• Thistle, scotch (*Onopordum acanthium*)
• Toadflax, dalmation (*Linaria dalmatica spp dalmatica*)
• Wild four o’clock (*Mirabilis nyctaginea*)
• Yellow flag Iris (*Iris pseudacorus*)
• Yellow starthistle (*Centaurea solstitialis*)

1.4.2. **Methods**
Control of designate 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 affected 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
The action threshold for designate weed control is met whenever seed production of a noxious weed is imminent. 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 2 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 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 SC Region, Area 2 within WSDOT right-of-way that are 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.

- Bur buttercup (Ranunculus testiculatus)
- Catchweed bedstraw (Galium aparine)- found on the
- Common Mullen (Verbascum thapsus)
- Coast fiddleneck (Amsinckia intermedia)
- Cocklebur, Common (Xanthium strumarium)
- Crabgrass, Large (Digitaria sanguinalis)- landscape/turf areas
- Dandelion (Taraxacum officinale)- landscape turf areas
- Horsetail or Smooth Scouringrush (Equisetum arvense)
- Jimsonweed (Datura stramonium)
- Knotweed, Japanese (Polygonum cuspidatum)
- Milk Weed (Asclepiadaceae)
- Mustard Purple (Chorispora tenella)
- Mustard, Tumble (Sisymbrium altissimum)
- Perennial Pepperweed (Lepidium latifolium)
- Poison Ivy (Toxicodendron radicans)
- Poison Oak (T. diversilobum)
- Prickly (China) lettuce (Lactuca serriola)
- Puncturevine (Tribulus terrestris)
- Smooth Scouring Rush (Equisetum laevigatum)
- Stinging nettle (Urtica dioica)
- Teasel, Common (Dipsacus fullonum)

Nuisance weeds targeted for control on SC Region Area 2 rights-of-way, within Zone 1 and Zone 2 are:

- Russian Thistle (Salsola ibberica Sonnen)
- Kochia (Kochia scoparia)
- Non-Noxious Knapweeds

1.5.3. Methods
Control measures for nuisance weeds are dependent on the type of plant. Species that are wide spread are treated routinely throughout the season where time and budget allows. Many of these species are treated with a combination of mowing, herbicide treatments and establishment and/or encouragement of native vegetation.

1.5.4. Action Threshold For 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
- Impact to structures or ability to maintain the roadway
- Nuisance weed presence reduces effectiveness of noxious weed control due to height or density
- New infestation where local control is achievable

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, big leaf 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 there growth will be beneficial and appropriate. Agreements may be signed to allow private citizens or groups to collect seedlings for use as transplants.

1.6.3. **Prescriptions:**

See Appendix A, IVM Prescriptions, Tree and Brush control.
1.7. Hazard tree Removal

1.7.1. Policy and Objectives
Trees within the right-of-way are routinely monitored by maintenance staff. Hazard trees may be:
- Dead
- Diseased
- Leaning
- 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 East Selah at 509.577.1920.

2.2. U.S. Forest Service Easement

2.2.1. Policy and Objectives
In some locations, Interstates and State Routes are operated by WSDOT under easement from the U. S. Forest Service. This arrangement is governed by a Memorandum of Understanding between the two agencies. Road sections operated or partially operated under easement from the USFS include:
- SR 410
- US 12
In accordance with this agreement WSDOT provides annual notification to the U.S. Forest Service, Naches Ranger District of proposed weed control operations. This notification is typically provided in the spring of each year and followed up every two years to discuss the overall weed control program.

2.3. **Adopt-a-Highway and Owner Will Maintain Agreements**

2.3.1. **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 roadides 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. 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.

2.3.2. **Locations by Milepost**
See Appendix E, Special Maintenance Areas, Table 3.0

2.4. **Environmentally Sensitive Areas**

2.4.1. **Policy and Objectives**
As a state agency, WSDOT is committed to conducting it 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 2 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.

2.4.2. Special Considerations/Actions
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.

2.5. Storm Water Management Facilities

2.5.1. 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.

2.5.2. Activities and 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 or 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.

2.5.3. Locations by Milepost
See Appendix E, Special Maintenance Areas, Table 3.0

2.6. Wetland Mitigation Sites

2.6.1. 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.

2.6.2. Locations by Milepost
See Appendix E, Special Maintenance Areas, Table 3.0
# Appendix A

## IVM Prescription

### Bare-Ground Applications

#### Bareground Maintenance (Residual) - typical annual maintenance (Option A)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>gravel shoulder and under guardrail</td>
<td>4’ area free of vegetation under guardrail and gravel shoulders</td>
<td>annual residual herbicide application</td>
<td>spray truck w/ fixed nozzle mounted 12” - 36” from ground Pickup with slip-in sprayer</td>
<td>Krovar DF @ 8 pounds/acre Oust XP @ 3 oz./acre <strong>No Spray Within 60' of Water</strong> or Direx 4L @ 256 oz./acre Oust XP @ 3 oz./acre <strong>No Spray Within 60' of Water</strong> or Payload @ 8 oz./acre Oust XP @ 3 oz./acre <strong>No Buffer Limitation</strong></td>
<td>February start</td>
<td>monitor treatment area and evaluate results</td>
</tr>
</tbody>
</table>

#### Bareground Maintenance (Residual) - typical annual maintenance (Option B)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>gravel shoulder and under guardrail</td>
<td>4’ area free of vegetation under guardrail and gravel shoulders</td>
<td>annual residual herbicide application</td>
<td>spray truck w/ fixed nozzle mounted 12” - 36” from ground Pickup with slip-in sprayer</td>
<td>Perspective @ 10 ozd Oust XP @ 3 oz. <strong>No Buffer Limitation</strong></td>
<td>February start</td>
<td>monitor treatment area and evaluate results</td>
</tr>
</tbody>
</table>

#### Bareground Maintenance (Residual) - Gap to Gap Special Bareground Zone

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobble slopes</td>
<td>Vegetation free</td>
<td>annual residual herbicide application</td>
<td>Pickup with slip-in sprayer</td>
<td>Krovar DF @ 8 lbs Direx 4L @ 80 oz Oust XP @ 4 oz./acre <strong>No Spray Within 60' of Water</strong></td>
<td></td>
<td>monitor treatment area and evaluate results</td>
</tr>
</tbody>
</table>

#### Bareground Maintenance (Residual) - annual maintenance within sensitive areas

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>gravel shoulder and under guardrail</td>
<td>4’ area free of vegetation</td>
<td>annual herbicide application</td>
<td>spray truck w/ fixed nozzle mounted 12” - 36” from ground</td>
<td>Roundup Pro @ 32 - 64 oz/l/acre or Payload @ 8 oz./acre Oust XP @ 4 oz./acre <strong>No Buffer Limitation</strong></td>
<td>April - September as needed.</td>
<td>monitor treatment area and evaluate results</td>
</tr>
</tbody>
</table>

#### Bareground Maintenance (Residual) - annual maintenance within sensitive areas

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>landscapes</td>
<td>Control unwanted vegetation in landscaped areas</td>
<td>annual herbicide application</td>
<td>broadcast</td>
<td>Caseron 4G @ 150 lbs <strong>No Spray Within 60' of Water</strong></td>
<td>April - September as needed.</td>
<td>monitor treatment area and evaluate results</td>
</tr>
</tbody>
</table>
### Appendix A

#### IVM Prescription

<table>
<thead>
<tr>
<th>Residual Spray Prescriptions</th>
<th>Material Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescription # 1  Diuron 4L @ 256 ozl &amp; SFM @ 4ozd</td>
<td>$48.04 per Acre</td>
</tr>
<tr>
<td>Prescription # 2  Payload @ 8ozd &amp; SFM @ 4ozd</td>
<td>$66.60 per Acre</td>
</tr>
<tr>
<td>Prescription # 3  Krovar @ 8 lbs &amp; SFM @ 4ozd</td>
<td>$96.28 per Acre</td>
</tr>
<tr>
<td>Prescription # 4  Gallery 75 DF @ 1lb &amp; Oryzalin 4 Pro @ 32 ozl</td>
<td>$119.76 per Acre</td>
</tr>
<tr>
<td>Prescription # 5  Casoron 4 G @ 150lb</td>
<td>$271.50 per Acre</td>
</tr>
</tbody>
</table>

Area 2 Guardrail = All guardrail in Area 2 stopping at the Forest Service boundaries.
Yakima Corridor Area = Selah Gap to Union Gap on I-82 & North 1st St to Suntides Blvd. on US-12
All "Fishstick Areas" will use Prescription # 2
SRs 22, 223, & 241 will use Prescription # 2

<table>
<thead>
<tr>
<th>Location</th>
<th>Treatment</th>
<th>Material Cost</th>
<th>Equipment Cost</th>
<th>Labor Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yakima Corridor Median (N 1st St to Valley Mall Blvd.)</td>
<td>Prescription # 3</td>
<td>$1,444.00</td>
<td>$80.37</td>
<td>$510.00</td>
<td>$2,034.37</td>
</tr>
<tr>
<td>Yakima Corridor Shoulders @ 4 Feet</td>
<td>Prescription # 3</td>
<td>$1,444.00</td>
<td>$267.90</td>
<td>$1,700.00</td>
<td>$3,411.90</td>
</tr>
<tr>
<td>Cobble Slopes</td>
<td>Prescription # 4</td>
<td>$599.00</td>
<td>$52.10</td>
<td>$680.00</td>
<td>$1,331.10</td>
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<tr>
<td>Area 2 Guardrail @ 4 Feet</td>
<td>Prescription # 1</td>
<td>$1,922.00</td>
<td>$1,031.60</td>
<td>$6,800.00</td>
<td>$9,753.60</td>
</tr>
<tr>
<td>SR-24 Selected Locations</td>
<td>Prescription # 1</td>
<td>$240.00</td>
<td>$15.02</td>
<td>$102.00</td>
<td>$357.02</td>
</tr>
<tr>
<td>US-97 Selected Locations</td>
<td>Prescription # 1</td>
<td>$577.00</td>
<td>$100.15</td>
<td>$680.00</td>
<td>$1,357.15</td>
</tr>
<tr>
<td>SR-22, SR-223 &amp; SR-241 Selected Locations</td>
<td>Prescription # 2</td>
<td>$133.00</td>
<td>$79.10</td>
<td>$510.00</td>
<td>$722.10</td>
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<tr>
<td>Area 2 Stockpile Sites</td>
<td>Prescription # 1</td>
<td>$192.00</td>
<td>$24.21</td>
<td>$680.00</td>
<td>$896.21</td>
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<tr>
<td>Area 2 Sewage Lagoons</td>
<td>Prescription # 1</td>
<td>$384.00</td>
<td>$24.21</td>
<td>$680.00</td>
<td>$1,088.21</td>
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<tr>
<td>US-12 Landscape Area</td>
<td>Prescription # 5</td>
<td>$543.00</td>
<td>$10.42</td>
<td>$136.00</td>
<td>$689.42</td>
</tr>
</tbody>
</table>

**South Central Region, Area 2**

**Integrated Roadside Vegetation Management Plan**

**Bareground - 2**

2012
Appendix A

IVM Prescription

SR-24 Eastbound

MP 0 to MP 0.48, 4 feet wide
MP 0.8 to MP 1, 4 feet wide
MP 1.1 to MP 1.24, 4 feet wide

Riverside Rd. Intersection:
  **In** luminar pole to telephone pole (edge of pavement to R/W fence)
  **Out** telephone pole to delineator (edge of pavement to R/W fence)
  .4 acre

Birch Road Intersection:
  **In** stop bar to corner post (edge of pavement to R/W fence)
  **Out** stop bar to electrical box (edge of pavement to R/W fence)
  .2 acre

Beaudry Road Intersection:
  **In** Park-n-Ride
  **Out** telephone pole to end of guardrail (edge of pavement to fence)
  .5 acre

Bell Road Intersection: 4 feet wide
  **In** Moxee sign to corner post
  **Out** corner post to luminar pole
  .1 acre

Rivard Road Intersection: 4 feet wide
  **In** delineator w/green sticker to Beauchene
  **Out** Beauchene to luminar pole
  .1 acre

Faucher Road Intersection: 4 feet wide
  **In** phone box to corner post
  **Out** telephone pole to luminar pole
  .1 acre

Walters Road Intersection: 4 feet wide
  **In** telephone pole to telephone pole
  **Out** telephone pole to luminar pole
  .1 acre

Beane Road Intersection: 4 feet wide
  **In** fish-stick to corner post
  **Out** corner post to corner post
  .1 acre

Junction of SR 24/240: 4 feet wide
  **In** delineator before stop sign to luminar pole
  .1 acre
Appendix A

IVM Prescription

SR-24 Westbound

Junction of SR 24/240:
  Island between merging lanes
  .3 acre

Beane Road Intersection: 4 feet wide
  In corner post to corner post
  Out corner post to corner post
  .1 acre

Deeringhoff Road Intersection: 4 feet wide
  In ditch to corner post
  Out end fence post to luminar pole
  .2 acre

Walters Road Intersection: 4 feet wide
  In end of guardrail to sign
  Out end fence post to luminar pole
  .1 acre

Holy Rosary Cemetery Road: 4 feet wide
  In corner post to corner post
  Out corner post to mail boxes
  .1 acre

Faucher Road Intersection: 4 feet wide
  In first turn arrow on road to telephone pole
  Out sidewalk to luminar pole
  .1 acre

Rivard Road Intersection: 4 feet wide
  In Moxee sign to sidewalk
  Out corner post to telephone pole
  .1 acre

Bell Road Intersection: 4 feet wide
  In corner post to corner post
  Out corner post to luminar pole
  .1 acre

Beaudry Road Intersection: 4 feet wide
  In luminar pole to end fence post
  Out rail tracks to No Parking sign

Birchfield Road Intersection:
  In luminar pole to end fence post (edge of pavement to fence)
  Out signal pole to route marker sign, 4 feet wide
  .2 acre
Appendix A  IVM Prescription

University Way Intersection:
  In first turn arrow to corner post, 4 feet wide (from first luminar to corner fence post, residual edge of pavement to R/W fence)
  Out corner post to 6th post in from corner (sidewalk to R/W fence)
  .3 acre

Fence line along pathway:
  2 feet wide, 1.2 miles long .3 acre

SR 241 SB and NB

241/Sunnyside-Mabton Road Intersection: 4 feet wide
  NE corner telephone pole to telephone pole
  NW corner 50 feet each side of Stop sign
  SW corner phone box to phone box
  SE corner telephone/light pole to telephone pole
  .2 acre

Green Valley Road SB: 4 feet wide
  In weir box to telephone pole
  Out telephone pole to weir box
  .1 acre

Forsell Road NB: 4 feet wide
  In 50 feet before telephone pole to last delineator
  Out 50 feet before telephone pole to 50 feet past telephone pole
  .1 acre

241/22 Intersection: 4 feet wide
  Access Road before Stop sign to luminar pole
  .1 acre

SR 22 EB/WB

MP 1 to 2.5 (McDonald Road) 4 feet wide, .5 acre
MP 2.5 (McDonald Road) to 1 (including Fraley Road Intersection) 4 feet wide, .5 acre

SR 223 NB

Indian Church Road: 4 feet wide
  In 50 feet before Intersection to beginning of guardrail
  Out end of guardrail to 50 feet past Stop sign
  .1 acre
Appendix A

US 97 Toppenish to Union Gap

All Cable Rail
9.9 acres

Bowls at West Wapato
.4 acre

SB Fence near mp 69
.6 acre

Lateral A median Islands
.7 acre

Weigh Station Island at mp 57
.5 acre
## Appendix A

### IVM Prescription

<table>
<thead>
<tr>
<th>Location</th>
<th>Treatment</th>
<th>Equipment To Be Used</th>
<th>Labor</th>
<th>Time To Complete Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yakima Corridor Median (N 1st St to Valley Mall Blvd.)</td>
<td>Prescription # 3</td>
<td>1 Spray Truck 2 Road Warriors 1 Shadow PU</td>
<td>5 People</td>
<td>3 Hours</td>
</tr>
<tr>
<td>Yakima Corridor Shoulders @ 4 Feet</td>
<td>Prescription # 3</td>
<td>1 Spray Truck 2 Road Warriors 1 Shadow PU</td>
<td>5 People</td>
<td>1 Day or 10 Hours</td>
</tr>
<tr>
<td>Right Hand &amp; Left Hand Shoulders</td>
<td>Prescription # 3</td>
<td>1 PU 1 Skid Mount Sprayer</td>
<td>2 People</td>
<td>1 Day or 10 Hours</td>
</tr>
<tr>
<td>Cobble Slopes</td>
<td>Prescription # 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area 2 Guardrail @ 4 Feet</td>
<td>Prescription # 1</td>
<td>1 Spray Truck 2 Road Warriors 1 Shadow PU</td>
<td>5 People</td>
<td>4 Days or 40 Hours</td>
</tr>
<tr>
<td>All guardrail in Area 2 except what is in the Forest Service boundaries.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR-24 Selected Locations</td>
<td>Prescription # 1</td>
<td>1 Spray Truck 1 Road Warrior</td>
<td>3 People</td>
<td>1 Hour</td>
</tr>
<tr>
<td>US-97 Selected Locations</td>
<td>Prescription # 1</td>
<td>1 Spray Truck 1 Road Warrior 1 Shadow PU</td>
<td>4 People</td>
<td>5 Hours</td>
</tr>
<tr>
<td>SR-22, SR-223 &amp; SR-241 Selected Locations</td>
<td>Prescription # 2</td>
<td>1 Spray Truck 1 Road Warrior</td>
<td>3 People</td>
<td>5 Hours</td>
</tr>
<tr>
<td>Area 2 Stockpile Sites</td>
<td>Prescription # 1</td>
<td>1 PU 1 Skid Mount Sprayer</td>
<td>2 People</td>
<td>1 Day or 10 Hours</td>
</tr>
<tr>
<td>Silver Dollar, Beam Road, Sulphur Creek</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area 2 Sewage Lagoons</td>
<td>Prescription # 1</td>
<td>1 PU 1 Skid Mount Sprayer</td>
<td>2 People</td>
<td>1 Day or 10 Hours</td>
</tr>
<tr>
<td>US-12 Landscape Area</td>
<td>Prescription # 5</td>
<td>1 PU</td>
<td>2 People</td>
<td>2 Hours</td>
</tr>
</tbody>
</table>

Residual applications should start mid February and be completed by the mid March.
Appendix A

IVM Prescriptions

SC Region Area 2 - IVM Prescriptions

Note: In coordination with the Yakima, Kittitas, and Benton County Noxious Weed Board, WSDOT SCR Area 2 will work to control class A noxious weed species within this area. WSDOT will work to suppress, contain, control and eradicate any class B designated noxious weeds known to occur within WSDOT right of ways. Class C noxious weeds will be targeted for containment, gradual reduction, and prevention of further spread.

Tree and brush control will vary in accordance with the specific needs of each location in SCR Area 2.

### Noxious Weed Control

#### Noxious Weed Control Herbicide - General Weed Control (Option A)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>as soon as plants appear</td>
<td>Our goal is suppression, control, and eradication of listed noxious weeds from our Rights of Way.</td>
<td>spot treatment with herbicide</td>
<td>Pickup and slip-in Sprayer Backpack sprayer where necessary.</td>
<td>E-2 @ 32 to 48 ozl Spread 90 @ 32 ozl / 100 gal</td>
<td>Full to late bloom</td>
<td>Reapply spot treatment as necessary. Monitor area for re-growth.</td>
</tr>
</tbody>
</table>

#### Noxious Weed Control Herbicide - General Weed Control (Option B)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>as soon as plants appear</td>
<td>Our goal is suppression, control, and eradication of listed noxious weeds from our Rights of Way.</td>
<td>spot treatment with herbicide</td>
<td>Pickup and slip-in Sprayer Backpack sprayer where necessary.</td>
<td>Perspective @ 4.75 ozl Spread 90 @ 32 ozl / 100 gal</td>
<td>Full to late bloom</td>
<td>Reapply spot treatment as necessary. Monitor area for re-growth.</td>
</tr>
</tbody>
</table>

#### Noxious Weed Control Herbicide - Dalmation Toadflax - After Bolting/Flowering (Option A)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>as soon as plants appear</td>
<td>Our goal is suppression, control, and eradication of listed noxious weeds from our Rights of Way.</td>
<td>spot treatment with herbicide</td>
<td>Pickup and slip-in Sprayer Backpack sprayer where necessary.</td>
<td>Tordon 22K @ 2 to 4 pts./acre Spread 90 @ 32 ozl / 100 gal</td>
<td>Full to late bloom</td>
<td>Reapply spot treatment as necessary. Monitor area for re-growth.</td>
</tr>
</tbody>
</table>

#### Noxious Weed Control Biological - Dalmation Toadflax Biological Control (Option B)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>as soon as plants appear</td>
<td>Our goal is suppression, control, and eradication of listed noxious weeds from our Rights of Way.</td>
<td>Use of Biological Agents: &quot;Mecinus Janthinus&quot; weevil.</td>
<td>Pickup Biological Agents</td>
<td></td>
<td>growing season</td>
<td>Map and monitor release sites. Evaluate treatment. Establish No Spray and No Mow Zones.</td>
</tr>
</tbody>
</table>

#### Noxious Weed Control Herbicide - Scotch Thistle (Option A)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>as soon as plants appear</td>
<td>Our goal is suppression, control, and eradication of listed noxious weeds from our Rights of Way.</td>
<td>spot treatment with herbicide</td>
<td>Pickup and slip-in Sprayer Backpack sprayer where necessary.</td>
<td>Tordon 22K @ 2 pints/acre Spread 90 @ 32 ozl / 100 gal Or Milestone @ 7 ozl Spread 90 @ 32 ozl / 100 gal</td>
<td>Treat Spring to Summer. Apply as seeds appear, preferably before plants bolt and seed heads appear.</td>
<td>Monitor sites for new growth. Repeat treatment if necessary.</td>
</tr>
</tbody>
</table>

Note: In coordination with the Yakima, Kittitas, and Benton County Noxious Weed Board, WSDOT SCR Area 2 will work to control class A noxious weed species within this area. WSDOT will work to suppress, contain, control and eradicate any class B designated noxious weeds known to occur within WSDOT right of ways. Class C noxious weeds will be targeted for containment, gradual reduction, and prevention of further spread.
Appendix A

IVM Prescriptions

SC Region Area 2 - IVM Prescriptions

Note: In coordination with the Yakima, Kittitas, and Benton County Noxious Weed Board, WSDOT SCR Area 2 will work to control class A noxious weed species within this area. WSDOT will work to suppress, contain, control and eradicate any class B designated noxious weeds known to occur within WSDOT right of ways. Class C noxious weeds will be targeted for containment, gradual reduction, and prevention of further spread.

Tree and brush control will vary in accordance with the specific needs of each location in SCR Area 2.

**Noxious Weed Control**

**Noxious Weed Control Herbicide - Scotch Thistle (Option B)**

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>as soon as plants appear</td>
<td>Our goal is suppression, control, and eradication of listed noxious weeds</td>
<td>spot treatment with herbicide</td>
<td>Pickup and slip-in sprayer</td>
<td>E-2 @ 48 oz. Spreader 90 @ 32 ozl/100 gal No Spray Within 60' of Water</td>
<td>Treat Spring to Summer. Apply as plants appear, preferably before plants bolt and seed heads appear.</td>
<td>Monitor sites for new growth. Repeat treatment if necessary.</td>
</tr>
</tbody>
</table>

**Noxious Weed Control Manual - Scotch Thistle (Option B)**

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>ants bolting 2' and taller</td>
<td>Our goal is suppression, control, and eradication of listed noxious weeds</td>
<td>Manual</td>
<td>Shovel</td>
<td>n/a</td>
<td>Spring through Summer</td>
<td>Monitor sites and areas appear control, and eradication herbicide</td>
</tr>
<tr>
<td>Areas that fall within our responsibilities to maintain.</td>
<td>as soon as mature plants appear. Mandated control</td>
<td>our goal is suppression, control, and eradication of listed noxious weeds in our areas of responsibility.</td>
<td>spot treatment with herbicide</td>
<td>backpack sprayer or pump can sprayer, Pickup</td>
<td>Rodeo at 2 oz/gallon, LI 700 @ 1 oz/liter</td>
<td>July, August and September</td>
<td>Monitor sites for re-growth. Reapply spot treatment as necessary.</td>
</tr>
</tbody>
</table>

**Noxious Weed Control Herbicide - Purple Loosestrife (Option A)**

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Areas that fall within our responsibilities to maintain.</td>
<td>as soon as mature plants appear. Mandated control</td>
<td>Our goal is suppression, control, and eradication of listed noxious weeds in our areas of responsibility.</td>
<td>spot treatment with herbicide</td>
<td>backpack sprayer or pump can sprayer, Pickup</td>
<td>Habitat @ 1 pint/acre LI 700 @ 2 pints/acre</td>
<td>Apply to actively growing foliage</td>
<td>Monitor sites Reapply spot treatment as necessary.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wetlands, ditches or areas that are inundated through the year</td>
<td>When population of purple loosestrife becomes established</td>
<td>Suppression Use of Biological Agents: &quot;Galerucella calamiens&quot; beetle.</td>
<td>Pickup</td>
<td>Galerucella Beetle</td>
<td></td>
<td>June to August, as mature plant appears.</td>
<td>Map and monitor release sites. Evaluate treatment. Establish No Spray and No Mow Zones.</td>
</tr>
</tbody>
</table>

**Noxious Weed Control Herbicide - Yellow Starthistle, Rush Skeletonweed (Option A)**

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>as soon as plants appear</td>
<td>Our goal is suppression, control, and eradication of listed noxious weeds in our areas of responsibility.</td>
<td>spot treatment with herbicide</td>
<td>Pickup and slip in sprayer, backpack sprayer where necessary.</td>
<td>Tordon 22K @ 2 pints/acre Spreader 90 @ 32 ozl/100 gal No Spray Within 60' of Water</td>
<td>Spot spray as mature plants appear.</td>
<td>Monitor treatment areas. Reapply spot treatment as necessary.</td>
</tr>
</tbody>
</table>
### Appendix A

#### IVM Prescriptions

**SC Region Area 2 - IVM Prescriptions**

Note: In coordination with the Yakima, Kittitas, and Benton County Noxious Weed Board, WSDOT SCR Area 2 will work to control class A noxious weed species within this area. WSDOT will work to suppress, contain, control and eradicate any class B designated noxious weeds known to occur within WSDOT right of ways. Class C noxious weeds will be targeted for containment, gradual reduction, and prevention of further spread.

Tree and brush control will vary in accordance with the specific needs of each location in SCR Area 2.

#### Noxious Weed Control

##### Noxious Weed Control - Yellow Starthistle, Rush Skeletonweed (Option B)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>as soon as plants appear</td>
<td>Our goal is suppression, control, and eradication of listed noxious weeds in our areas of responsibility</td>
<td>spot treatment with herbicide</td>
<td>Pickup with slip in sprayer, backpack sprayer where necessary.</td>
<td>Milestone @ 5 to 7 oz./acre Spreader 90 @ 32 oz/’100 gal</td>
<td>Spot spray as mature plants appear.</td>
<td>Monitor treatment areas. Reapply spot treatment as necessary.</td>
</tr>
</tbody>
</table>

##### Noxious Weed Control Herbicide - Diffuse & Spotted Knapweed (Option A)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>Rosette stage</td>
<td>Our goal is suppression control, and eradication of listed noxious weeds in our areas of responsibility</td>
<td>Spot treatment</td>
<td>Pickup with slip-in sprayer Backpack sprayer</td>
<td>Escalade @ 48 oz./acre MSO @ 32 oz./acre</td>
<td>Early Spring</td>
<td>Monitor and re apply as necessary</td>
</tr>
</tbody>
</table>

##### Noxious Weed Control Herbicide - Diffuse & Spotted Knapweed (Option B)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>Rosette stage</td>
<td>Our goal is suppression control, and eradication of listed noxious weeds in our areas of responsibility</td>
<td>Spot treatment</td>
<td>Pickup with slip-in sprayer Backpack sprayer</td>
<td>Milestone @ 5 to 7 oz./acre Spreader 90 @ 32 oz/’100 gal</td>
<td>Early Spring</td>
<td>Monitor and re apply as necessary</td>
</tr>
</tbody>
</table>

##### Noxious Weed Control Herbicide - Diffuse & Spotted Knapweed (Option C)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>Rosette stage</td>
<td>Our goal is suppression control, and eradication of listed noxious weeds in our areas of responsibility</td>
<td>Spot treatment</td>
<td>Pickup with slip-in sprayer Backpack sprayer</td>
<td>Tordon 22K @ 2 pints/acre Spreader 90 @ 32 oz/’100 gal</td>
<td>Early Spring</td>
<td>Monitor and re apply as necessary</td>
</tr>
</tbody>
</table>

##### Noxious Weed Control - Spotted & Diffuse Knapweed (Option D)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>as soon as plants appear</td>
<td>Suppression</td>
<td>Use of Biological Agents: “Larinus obtusius” and/or “Larinus minutus”</td>
<td>Pickup</td>
<td>Larinus obtusius and/or Larinus minutus</td>
<td>Pre-bloom May-September</td>
<td>Map and monitor release sites. Evaluate treatment. Establish No Spray and No Mow Zones.</td>
</tr>
</tbody>
</table>

##### Noxious Weed Control - Yellow Starthistle (Option C)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>as soon as plants appear</td>
<td>Suppression</td>
<td>Use of Biological “Eustenopus vallisus”</td>
<td>Pickup</td>
<td>Eustenopus vallisus</td>
<td>Pre-bloom May-September</td>
<td>Map and monitor release sites. Evaluate treatment. Establish No Spray and No Mow Zones.</td>
</tr>
</tbody>
</table>
### Appendix A

### SC Region Area 2 - IVM Prescriptions

Note: In coordination with the Yakima, Kittitas, and Benton County Noxious Weed Board, WSDOT SCR Area 2 will work to control class A noxious weed species within this area. WSDOT will work to suppress, contain, control and eradicate any class B designated noxious weeds known to occur within WSDOT right of ways. Class C noxious weeds will be targeted for containment, gradual reduction, and prevention of further spread.

Tree and brush control will vary in accordance with the specific needs of each location in SCR Area 2.

#### Noxious Weed Control

##### Noxious Weed Control - Kochia (Option A)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>As soon as plants emerge</td>
<td>Our goal is suppression control, and eradication of listed noxious weeds in our areas of responsibility</td>
<td>spot or blanket treatment with herbicide</td>
<td>Pickup with slip-in sprayer Backpack sprayer Spray truck w/ fixed nozzles</td>
<td>Escalade @ 48 oz./acre Spreader 90 @ 32 ozl/ 100 gal Spray truck w/fixed nozzles</td>
<td>April - October</td>
<td>Monitor and re apply as necessary</td>
</tr>
</tbody>
</table>

##### Noxious Weed Control - Kochia above 2" (Option B)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>4&quot; - 6&quot; height</td>
<td>Our goal is suppression control, and eradication of listed noxious weeds in our areas of responsibility</td>
<td>spot or blanket treatment with herbicide</td>
<td>Pickup with slip-in sprayer Backpack sprayer Spray truck w/ fixed nozzles</td>
<td>Vista XRT @ 16 oz./acre MSO @ 32 oz./acre Vista XRT @ 2 ozl</td>
<td>Spring/Summer</td>
<td>Monitor and re apply as necessary</td>
</tr>
</tbody>
</table>

##### Noxious Weed Control - Kochia (Mechanical Control) (Option C)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones and areas as mandated</td>
<td>Prior to plant going to seed</td>
<td>Our goal is suppression control, and eradication of listed noxious weeds in our areas of responsibility</td>
<td>Mowing</td>
<td>Mower</td>
<td>n/a</td>
<td>Late July - August</td>
<td>Repeat as necessary</td>
</tr>
</tbody>
</table>

##### Noxious Weed Control - Japanese Knotweed

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones</td>
<td>as soon as plant appears</td>
<td>Eradication and control of listed noxious weeds</td>
<td>spot treat with herbicide</td>
<td>backpack sprayer or tank sprayer</td>
<td>Habitat @ 64 oz. Phase @ 64oz per 100 gal</td>
<td>Early Season</td>
<td>Repeat as necessary</td>
</tr>
</tbody>
</table>

##### Noxious Weed Control - Broadleaf in Reseeded Areas - Under 2" in diameter (A)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones</td>
<td>as soon as plants appear</td>
<td>Control of all weedy species</td>
<td>Band application</td>
<td>tank sprayer</td>
<td>Buctril @ 20 oz or generic equivalent Spreader 90 @ 32 ozl per 100 gal Vista XRT @ 2 ozl Vanquish @ 7 ozl Spray truck w/fixed nozzles</td>
<td>Early Season</td>
<td>Repeat as necessary. Seed and fertilize to reduce weed competition.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones</td>
<td>as soon as plants appear</td>
<td>Control of all weedy species</td>
<td>Band application</td>
<td>tank sprayer</td>
<td>Buctril @ 20 ozl Vista XRT @ 7 ozl Vanquish @ 2 ozl Spreader 90 @ 32 ozl per 100 gal No Spray Within 60' of Water</td>
<td>Early</td>
<td>Repeat as necessary. reduce weed competition.</td>
</tr>
</tbody>
</table>
### Tree and Brush Control

#### Tree and Brush Control - Alder, Maple, Cottonwood (trees under 6' ht.) (Option A)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 2</td>
<td>As soon as seedling become a nuisance</td>
<td>Control of seedling trees that may impact roadside function if allowed to grow</td>
<td>Cut with hand tools or mower</td>
<td>Chainsaw, loppers</td>
<td>N/A</td>
<td>Anytime</td>
<td>Re-cut as necessary, Monitor and evaluate treatment</td>
</tr>
</tbody>
</table>

#### Tree and Brush Control - Alder, Maple, Cottonwood (trees over 6' ht.) (Option B)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 2</td>
<td>Whenever trees are likely to or have potential to grow and fall onto the roadway</td>
<td>Control of young trees that may impact roadside function if allowed to grow</td>
<td>Hand cutting, chipping debris and hauling debris from ESA areas</td>
<td>Power saws, loppers, chipper, front end loader, 6E7 truck</td>
<td>N/A</td>
<td>Anytime when necessary</td>
<td>Monitor and evaluate treatment</td>
</tr>
</tbody>
</table>

#### Tree and Brush Control - Elm, Aspen (trees under 6 feet)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal landscaped areas</td>
<td>Wherever new growth becomes a nuisance</td>
<td>Minimize populations and prevent further spreading, clean up landscaped areas</td>
<td>Cut with loppers and treat newly exposed area at ground level and paint on herbicide</td>
<td>Loppers, paint brush</td>
<td>Garlon 3A undiluated dauber, backpack sprayer</td>
<td>Anytime, usually when trees are small and manageable</td>
<td>Re-cut and reapply as necessary as new trees appear</td>
</tr>
</tbody>
</table>

### Nuisance Weed Control

#### Nuisance Weed Control Herbicide - Kochia (Option A)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All zones</td>
<td>Shortly after emergence</td>
<td>Minimize populations and prevent further spread, eradicate where mandated</td>
<td>Foliar treatment with herbicide</td>
<td>Pickup with slip-in tank, spray truck w/ fixed nozzles, backpack sprayer, 4 wheeler w/ spray tank</td>
<td>Escalade @ 48 oz./acre MSO @ 32 oz./acre or Spreader 90 @ 32 oz./100 gal No Spray within 60’ of Water</td>
<td>As plants appear March - October</td>
<td>Monitor and evaluate treatment, reapply as necessary</td>
</tr>
</tbody>
</table>

#### Nuisance Weed Control Herbicide - Kochia (Option B)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Zones</td>
<td>Shortly after emergence</td>
<td>Minimize populations and prevent further spread, eradicate where mandated</td>
<td>Foliar treatment with herbicide</td>
<td>Pickup with slip-in tank, spray truck w/ fixed nozzles, backpack sprayer</td>
<td>Vista XR1 @ 16 oz./acre MSO @ 32 oz./acre or No Buffer Limitation</td>
<td>As plants appear March - October</td>
<td>Monitor and evaluate treatment, reapply as necessary</td>
</tr>
</tbody>
</table>
## Appendix A
### IVM Prescription

#### SC Region Area 2 - IVM Prescriptions

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuisance Weed Control Mowing - Kochia (Mechanical Control) (Option C)</td>
<td>All Zones</td>
<td>12&quot; and above</td>
<td>Minimize populations and prevent further spread</td>
<td>Mechanical Mowing</td>
<td>Mower</td>
<td>N/A</td>
<td>As needed</td>
</tr>
<tr>
<td>Nuisance Weed Control Burning - Kochia (Option D)</td>
<td>All Zones</td>
<td>After plants have cycled and died off</td>
<td>Clear away dead skeletons, create clear view, clean out culverts</td>
<td>Burning</td>
<td>Pickup 1 ton truck, propane burner, water truck, pitch forks, shovels</td>
<td>None</td>
<td>Spring/Fall</td>
</tr>
<tr>
<td>Nuisance Weed Control Herbicide - Russian Thistle (Option A)</td>
<td>All Zones</td>
<td>Shortly after emergence</td>
<td>Minimize populations, eradicate where mandated</td>
<td>Foliar treatment</td>
<td>Pickup with slip-in tank, backpack sprayer, spray truck with fixed nozzles, 4 wheeler w/ spray tank</td>
<td>Escalade @ 48 ozl./acre, Spread @ 32 ozl./ 100 acre</td>
<td>As plants appear March - October</td>
</tr>
<tr>
<td>Nuisance Weed Control Herbicide - Russian Thistle 6&quot; and above (Option B)</td>
<td>All Zones</td>
<td>Mature plants</td>
<td>Minimize populations and prevent further spread</td>
<td>Foliar treatment with herbicide</td>
<td>Pickup with slip-in sprayer, Sprayer truck with fixed nozzles, 4 wheeler w/ spray tank</td>
<td>Escalade @ 48 ozl./acre, Platoon @ 16 ozl./acre, Spread @ 32 ozl./ 100 acre</td>
<td>May - September</td>
</tr>
<tr>
<td>Nuisance Weed Control Mowing - Russian Thistle (Mechanical Control) (Option C)</td>
<td>All Zones</td>
<td>As plants mature and bolt</td>
<td>Minimize populations and prevent further spread</td>
<td>Mechanical mowing</td>
<td>Mower</td>
<td>N/A</td>
<td>February - November</td>
</tr>
<tr>
<td>Nuisance Weed Control Burning - Russian Thistle (Option D)</td>
<td>All Zones</td>
<td>After plants have cycled and died off</td>
<td>Clear away dead skeletons, create clear view, clean out culverts</td>
<td>Burning</td>
<td>Pickup 1 ton truck, propane burner, water truck, pitch forks, shovels</td>
<td>None</td>
<td>Spring/Fall</td>
</tr>
</tbody>
</table>
## Appendix A

### Integrated Roadside Vegetation Management Plan

#### SC Region Area 2 - IVM Prescriptions

**Nuisance Weed Control Herbicide - Russian Knapweed (Option A)**

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Zones</td>
<td>Active growth from bud to bloom and fall regrowth</td>
<td>Minimize populations and prevent further spread</td>
<td>Foliar treatment with herbicide</td>
<td>Pickup with slip-in sprayer</td>
<td>Milestone @ 7 oz./acre Li 700 @ 32 oz./acre</td>
<td>Apply during active growth from bud to mid-flowering or to fall regrowth</td>
<td>Fall application is preferable</td>
</tr>
</tbody>
</table>

**Nuisance Weed Control Herbicide - Russian Knapweed (Option B)**

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Zones</td>
<td>Applied to fall regrowth</td>
<td>Minimize populations and prevent further spread</td>
<td>Foliar treatment with herbicide</td>
<td>Pickup with slip-in sprayer</td>
<td>Habitat @ 2-3 pints/acre MSO @ 32 oz./acre</td>
<td>Applied in fall</td>
<td>Fall application is preferable</td>
</tr>
</tbody>
</table>

**Nuisance Weed Control Herbicide - Japanese Knotweed**

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zones 2 and 3</td>
<td>Post-emergence</td>
<td>Minimize populations and prevent further spread</td>
<td>Foliar treatment with herbicide</td>
<td>Pickup with slip-in sprayer, backpack sprayer</td>
<td>Habitat @ 3-4 pints/acre Li 700 @ 32 oz./acre</td>
<td>Post-emergence to actively growing foliage</td>
<td>Monitor and evaluate treatment, reapply as necessary</td>
</tr>
</tbody>
</table>

**Nuisance Weed Control Herbicide - All other Nuisance weeds**

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yakima Corridor Area, all zones</td>
<td>Shortly after emergence</td>
<td>Eradicate and control minimize populations and prevent further spread</td>
<td>Foliar treatment with herbicide band/spot treatment</td>
<td>Spray truck with fixed nozzles, pickup with slip-in tank, 4 wheeler w/ spray tank</td>
<td>#1 Escalade @ 48 oz./acre Platoon @ 16 oz./acre Spreader 90 @ 32 oz/ 100 gal or #2 Escalade @ 48 oz./acre Spreader 90 @ 32 oz/ 100 gal or #3 Tordon 22K @ 1 pint/acre Spreader 90 @ 32 oz/ 100 gal</td>
<td>As plants appear March - October</td>
<td>Monitor and evaluate treatment, reapply as necessary</td>
</tr>
</tbody>
</table>

---

**South Central Region, Area 2**

Integrated Roadside Vegetation Management Plan

Nuisance - 3

2012
### Re-vegetation Sites and Planted Areas

**General Weed Control - Broadleaf in Reseeded Areas - Under 2” in diameter (A)**

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Zones</td>
<td>As soon as plants appear</td>
<td>Control of all weedy species</td>
<td>Band application</td>
<td>tank sprayer</td>
<td>Buctril @ 20 oz. or generic equivalent Spreader 90 @ 32 ozl/ 100 gal</td>
<td>Early season</td>
<td>Repeat as necessary. Seed and fertilize to reduce weed competition</td>
</tr>
</tbody>
</table>

*No Spray Within 60’ of Water*

**General Weed Control - Broadleaves in Reseeded Areas - Over 2” in diameter (B)**

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Zones</td>
<td>As soon as plants appear</td>
<td>Control of all weedy species listed noxious</td>
<td>Band application</td>
<td>Tank sprayer</td>
<td>Buctril @ 20 ozl Vista XRT@ 7 ozl Vanquish @ 2 ozl Spreader 90 @ 32 ozl per 100 gal</td>
<td>Early season</td>
<td>Repeat as necessary. Seed and fertilize to reduce weed competition</td>
</tr>
</tbody>
</table>

*No Spray Within 60’ of Water*

**General Weed Control - Undesirable weeds and annual grasses in Reseeded Areas (non-native)**

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Action Threshold</th>
<th>Management Goal</th>
<th>Method</th>
<th>Equipment</th>
<th>Materials</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-vegetation site</td>
<td>Pre-emergent control</td>
<td>Control of all weedy species listed noxious weeds</td>
<td>Band application</td>
<td>Pickup with slip-in sprayer 4 wheeler with sprayer</td>
<td>Milestone @ 7 oz./acre</td>
<td>Fall</td>
<td>Monitor and evaluate treatment. Follow-up with herbicide application in the Spring, if necessary</td>
</tr>
</tbody>
</table>

*No Buffer Limitation*
### 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

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Management Goals</th>
<th>Method</th>
<th>Equipment</th>
<th>Timing</th>
<th>Planning and Follow-up</th>
</tr>
</thead>
</table>
| As needed in Zone 2 or 3 | 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. | 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

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Management Goals</th>
<th>Method</th>
<th>Equipment</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
</table>
| As needed in Zone 2 or 3 | 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. | 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

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Management Goals</th>
<th>Method</th>
<th>Equipment</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
</table>
| As needed in Zone 1, 2 or 3 | 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 | 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)

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Management Goals</th>
<th>Method</th>
<th>Equipment</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
</table>
| As needed in Zone 2 or 3 | 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 | 1) Communicate goals with operator prior to undertaking operation |

#### Zone 2 Maintenance - New Seeding

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Management Goals</th>
<th>Method</th>
<th>Equipment</th>
<th>Timing</th>
<th>IVM Follow-up</th>
</tr>
</thead>
</table>
| As needed in Zone 1, 2 or 3 | 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 | 1) Communicate goals with operator prior to undertaking operation  
2) Inspect after operation is complete to ensure target species are controlled |
## Mowing Locations

### Selah Section

<table>
<thead>
<tr>
<th>Location</th>
<th>Acres</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-1</td>
<td>50</td>
<td>I-82 Yakima Corridor, 50 Acres</td>
</tr>
</tbody>
</table>
  MP 31 to MP 38 EB and WB, Non Landscape Areas, Shoulders, and Interchanges, No Median Mowing. |
| S-2 | 40 | US 12 Yakima Corridor, 40 Acres |  
  MP 198.7 to MP 202.4 EB and WB, Shoulders, Interchanges and Median |
| S-3 | 5 | I-82, 5 Acres |  
  Between Exit 26 and Fred Redmon Bridge, Spot Mow Weed Infestations. |
| S-4 | 50 | SR-24, 50 Acres |  
  MP 1 to MP 6.47 EB and WB, Mow Shoulders to R/W Fences |
| S-5 | 4 | SR-821, 4 Acres |  
  MP 0.4 to 1.2, Mow Shoulders to R/W Fences |
| S-6 | 1 | WSDOT Property, 1 Acres |  
  Corner of Elton & Sheets Rd., Mow Kochia Patch |

### Toppenish Section

<table>
<thead>
<tr>
<th>Location</th>
<th>Acres</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-1</td>
<td>200</td>
<td>I-82, 200 Acres</td>
</tr>
</tbody>
</table>
  MP 50 to MP 69, Shoulders, Median and Interchanges, Kochia Mowing Only |
| T-2 | 5 | US-97, 5 Acres |  
  MP 45 to MP 45.9, Shoulders NB |
| T-3 | 5 | US-97, 5 Acres |  
  MP 57 to MP 57.8 One Pass with Tiger Mower, Shoulders SB |
| T-4 | 36 | SR-22, 36 Acres |  
  MP 4 to MP 22, Shoulders EB and WB One Pass 8 Feet Wide |
| T-5 | 14 | SR-241, 14 Acres |  
  MP 0 to MP 7, Shoulders NB & SB One Pass 8 Feet Wide |

### Rimrock Section

<table>
<thead>
<tr>
<th>Location</th>
<th>Acres</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-1</td>
<td>50</td>
<td>US-12, 50 Acres</td>
</tr>
</tbody>
</table>
  MP 166 to MP 189.5, Shoulders EB & WB One 8’ Pass, Spot mow as needed. |
| R-2 | 20 | US-12, 20 Acres |  
  MP 190 to MP 198, Gleed area near the old barn and Trailer Park, Customer Complaint Areas |
| R-3 | 90 | SR-410, 90 Acres |  
  MP 69.2 to MP 116.3, Shoulders EB & WB One 8’ Pass, Spot mow as needed. |


## Mowing Operation Costs

<table>
<thead>
<tr>
<th>Location</th>
<th>Hours Charged</th>
<th>T-2 Labor</th>
<th>T-3 Labor</th>
<th>Mower</th>
<th>Water Truck</th>
<th>Dump Truck</th>
<th>Trailer</th>
<th>Equipment Cost</th>
<th>Labor Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-1</td>
<td>40</td>
<td>1312</td>
<td>1428</td>
<td>302</td>
<td>598</td>
<td>0</td>
<td>0</td>
<td>$900.00</td>
<td>$2,740.00</td>
<td>$3,640.00</td>
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<tr>
<td>S-2</td>
<td>30</td>
<td>984</td>
<td>1071</td>
<td>227</td>
<td>449</td>
<td>0</td>
<td>0</td>
<td>$676.00</td>
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<td>$2,731.00</td>
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<tr>
<td>S-3</td>
<td>10</td>
<td>328</td>
<td>357</td>
<td>76</td>
<td>150</td>
<td>0</td>
<td>0</td>
<td>$226.00</td>
<td>$685.00</td>
<td>$911.00</td>
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<tr>
<td>S-4</td>
<td>40</td>
<td>1312</td>
<td>1428</td>
<td>302</td>
<td>598</td>
<td>0</td>
<td>0</td>
<td>$900.00</td>
<td>$2,740.00</td>
<td>$3,640.00</td>
</tr>
<tr>
<td>S-5</td>
<td>4</td>
<td>131</td>
<td>143</td>
<td>30</td>
<td>60</td>
<td>0</td>
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<td>$90.00</td>
<td>$274.00</td>
<td>$364.00</td>
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<tr>
<td>S-6</td>
<td>4</td>
<td>131</td>
<td>143</td>
<td>30</td>
<td>60</td>
<td>0</td>
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<td>$90.00</td>
<td>$274.00</td>
<td>$364.00</td>
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<tr>
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<td>5248</td>
<td>2855</td>
<td>605</td>
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<td>$1,801.00</td>
<td>$8,103.00</td>
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<tr>
<td>T-2</td>
<td>10</td>
<td>328</td>
<td>357</td>
<td>76</td>
<td>150</td>
<td>107</td>
<td>8</td>
<td>$341.00</td>
<td>$685.00</td>
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<tr>
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<td>1640</td>
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<td>$1,126.00</td>
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<tr>
<td>T-4</td>
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<td>598</td>
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<td>0</td>
<td>$226.00</td>
<td>$685.00</td>
<td>$3,640.00</td>
</tr>
<tr>
<td>T-5</td>
<td>10</td>
<td>328</td>
<td>357</td>
<td>76</td>
<td>150</td>
<td>0</td>
<td>0</td>
<td>$226.00</td>
<td>$685.00</td>
<td>$911.00</td>
</tr>
<tr>
<td>R-1</td>
<td>40</td>
<td>1312</td>
<td>1428</td>
<td>302</td>
<td>598</td>
<td>0</td>
<td>0</td>
<td>$900.00</td>
<td>$2,740.00</td>
<td>$3,640.00</td>
</tr>
<tr>
<td>R-2</td>
<td>10</td>
<td>328</td>
<td>357</td>
<td>76</td>
<td>150</td>
<td>0</td>
<td>0</td>
<td>$226.00</td>
<td>$685.00</td>
<td>$911.00</td>
</tr>
<tr>
<td>R-3</td>
<td>60</td>
<td>1968</td>
<td>2141</td>
<td>608</td>
<td>897</td>
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<td>0</td>
<td>$1,505.00</td>
<td>$4,109.00</td>
<td>$5,614.00</td>
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</tbody>
</table>

**Totals**

<p>|                  | $9,907.00 | $31,940.00 | $41,847.00 |</p>
<table>
<thead>
<tr>
<th>Location</th>
<th>Reason</th>
<th>Equipment To Be Used</th>
<th>Labor</th>
<th>Time To Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-1</td>
<td>Esthetics</td>
<td>1 3 Gang Mower 1 Water Truck</td>
<td>2 People</td>
<td>4 Days</td>
</tr>
<tr>
<td>S-2</td>
<td>Esthetics</td>
<td>1 3 Gang Mower 1 Water Truck</td>
<td>2 People</td>
<td>3 Days</td>
</tr>
<tr>
<td>S-3</td>
<td>Control Nuisance Weeds</td>
<td>1 3 Gang Mower 1 Water Truck</td>
<td>2 People</td>
<td>1 Day</td>
</tr>
<tr>
<td>S-4</td>
<td>Esthetics &amp; Site Obstructions</td>
<td>1 3 Gang Mower 1 Water Truck</td>
<td>2 People</td>
<td>4 Days</td>
</tr>
<tr>
<td>S-5</td>
<td>Reduce Fire Fuels / Public Complaint</td>
<td>1 3 Gang Mower 1 Water Truck</td>
<td>2 People</td>
<td>4 Hours</td>
</tr>
<tr>
<td>S-6</td>
<td>Control Nuisance Weeds</td>
<td>1 3 Gang Mower 1 Water Truck</td>
<td>2 People</td>
<td>4 Hours</td>
</tr>
<tr>
<td>T-1</td>
<td>Kochia Control</td>
<td>1 3 Gang Mower 1 2 Gang Mower 1 Water Truck</td>
<td>3 People</td>
<td>8 Days</td>
</tr>
<tr>
<td>T-2</td>
<td>Reduce Site Obstructions</td>
<td>1 Dump Truck 1 Tilt Trailer 1 3 Gang Mower 1 Water Truck</td>
<td>2 People</td>
<td>1 Day</td>
</tr>
<tr>
<td>T-3</td>
<td>Reduce Site Obstructions</td>
<td>1 Boom Mounted Mower 1 Water Truck</td>
<td>2 People</td>
<td>5 Hours</td>
</tr>
<tr>
<td>T-4</td>
<td>Reduce Site Obstructions</td>
<td>1 Boom Mounted Mower 1 Water Truck</td>
<td>2 People</td>
<td>4 Days</td>
</tr>
<tr>
<td>T-5</td>
<td>Reduce Site Obstructions</td>
<td>1 Boom Mounted Mower 1 Water Truck</td>
<td>2 People</td>
<td>1 Day</td>
</tr>
<tr>
<td>R-1</td>
<td>Reduce Site Obstructions</td>
<td>1 Boom Mounted Mower 1 Water Truck</td>
<td>2 People</td>
<td>4 Days</td>
</tr>
<tr>
<td>R-2</td>
<td>Reduce Fire Fuels / Public Complaint</td>
<td>1 3 Gang Mower 1 Water Truck</td>
<td>2 People</td>
<td>1 Day</td>
</tr>
<tr>
<td>R-3</td>
<td>Reduce Site Obstructions</td>
<td>1 Boom Mounted Mower 1 Water Truck</td>
<td>2 People</td>
<td>6 Days</td>
</tr>
</tbody>
</table>
**Planting Area A**  
(Yakima Valley)

## Planting Prescriptions

### Seed Mix 1

<table>
<thead>
<tr>
<th>Kind and Variety of Seed in Mixture by Common Name and (Botanical name)</th>
<th>Pounds Pure Live Seed (PLS) Per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickspike Wheatgrass” “Swindemar” (<em>Elymus macrourus</em>)</td>
<td>6.00</td>
</tr>
<tr>
<td>Bluebunch Wheatgrass “Wahluke” (<em>Pseudoroegneria spicata</em>)</td>
<td>6.00</td>
</tr>
<tr>
<td>Sandberg Bluegrass “Hanford” (<em>Poa sandbergii</em>)</td>
<td>2.00</td>
</tr>
<tr>
<td>*Basin Wildrye “Yakima” (<em>Leymus cinereus</em>)</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>Snowy Buckwheat (Erigonum niveum)</strong></td>
<td>0.5</td>
</tr>
<tr>
<td>**Common Yarrow (<em>Achillea millefolium</em>)</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total Lbs PLS/Acre</strong></td>
<td><strong>19.00</strong></td>
</tr>
</tbody>
</table>

* This grass can grow 4-5’ in height under certain conditions.
**These are broad-leaf forbs that are subject to damage by most broadleaf chemicals.
## Herbicides Approved for Use on WSDOT Rights of Way

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

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

### Herbicide Guidelines

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

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

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

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

**Herbicide Guidelines**

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

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

Table 3.0

Locations are 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 markers.

Description - Brief explanation of special treatment required

<table>
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### Table 3.0

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 markers.

**Description - Brief explanation of special treatment required**

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South Central Region, Area 2
Integrated Roadside Vegetation Management Plan

SMA - 2
2012
Table 3.0

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 markers.

Description - Brief explanation of special treatment required

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Table 3.0

Locations are 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 markers.

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<th>SR</th>
<th>Direction</th>
<th>Shoulder</th>
<th>BEG MP</th>
<th>END MP</th>
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<td>2.50</td>
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<td>City Maintain</td>
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<td>0.00</td>
<td>0.68</td>
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## Integrated Vegetation Management Record

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<th>County</th>
<th>Date</th>
<th>Vegetation Management Zone(s)</th>
<th>Location</th>
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</thead>
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<tr>
<td>455220</td>
<td>Yakima</td>
<td>4/10/2006</td>
<td>Zone 1 ☑ Zone 2 ☑ Zone 3 ☐</td>
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**Area**

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<tr>
<th>SL</th>
<th>MP</th>
<th>54</th>
<th>MP</th>
<th>48</th>
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**Check Appropriate Boxes**

- [ ] Roadside
- [ ] Landscaped Area
- [ ] Interchange
- [ ] Mitigation Site
- [ ] Third Party Damage
- [ ] Aquatic
- [ ] Sensitive Sites

- [ ] NB
- [ ] EB
- [ ] Shoulder
- [ ] Rest Area
- [ ] Bridge
- [ ] Stormwater
- [ ] Yes
- [ ] Yard/Stockpile
- [ ] Wetlands

**Target**

- [ ] Noxious Weeds ☑
- [ ] Brush/Trees ☐
- [ ] Other ☐
- [ ] Nuisance Weeds ☑
- [ ] Hazard Tree ☐

**List Target/Species:**

Undesirable vegetation/promote grass growth

**Reason for Action:**

- [ ] Noxious Weeds ☐
- [ ] Nuisance Weeds ☑
- [ ] Fire Prevention ☑
- [ ] Restore Native Veg. ☐
- [ ] Zone 1 Pilot ☐
- [ ] Aesthetic ☐
- [ ] Site Distance ☐
- [ ] Hazard Vegetation ☐
- [ ] Customer Request ☑
- [ ] Enhance Vegetation ☐
- [ ] Slope Stabilization ☐
- [ ] Other ☐

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

Reestablish native and perennial grasses. Applying liquid fertilizer to these areas is a positive step to encourage grasses and discourage undesirable species, that tend to establish in these areas. Applied liquid fertilizer at: N 60 - P 20 - K 20, at 30 gallons (pounds) per acre.

**Approximate Acres to Accomplish:** 10

### Activities

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

- [ ] Dugging
- [ ] Pulling
- [ ] Planting
- [ ] Lepping
- [ ] Rocking
- [ ] Other

**Mechanical**

- [ ] Axal Saw Work
- [ ] Excavation
- [ ] Anchor Work
- [ ] Water/Clean
- [ ] Manual Brush/Cutting
- [ ] Mower/Clean
- [ ] Other

**Bio-Control**

- [ ] Insect ☐
- [ ] Parasite ☐
- [ ] Fungus ☐
- [ ] Pathogen ☐

**Type/Species**

- [ ] ☐

**Cultural**

- [ ] Burning
- [ ] Grazing
- [ ] Seeding
- [ ] Nurturing
- [ ] Seeding
- [ ] Soil Amendment
- [ ] Other


**Chemical**

- [ ] ☐

**Record Number**

- [ ] ☐

### #1 Evaluation and Date

- [ ] ☐

### #2 Evaluation and Date

- [ ] ☐

### #3 Evaluation and Date

- [ ] ☐
## Pesticide Application

<table>
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<tr>
<th>Task No</th>
<th>Material Name</th>
<th>Material Type</th>
<th>EPA Reg. No.</th>
<th>Lot Number</th>
<th>Product Rate (lbs/acre)</th>
<th>Unit</th>
<th>Total Daily Usage Unit</th>
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### Total

1 Acresaects (treatments) at 50 gallons (liters) of spray per acre (treatments).

### Equipment Number

E2136-8

### Vehicle Speed

4/12/06

### Width of Spray Pattern

--- (Specify)

### Remarks

Treated median between no 1st and first boise bridge, west and east bound. Used BMP'S and monitored wind and temperature for this application, also went by safety plan we established before heading out to the area.

### DOT Form 540-506 EF

Send OSC Copy Within 5 Days

--- (Signatures and Contacts)
STAKEHOLDERS LIST

City of Moxee ................................................................. 255 W. Seattle Ave.
Moxee, WA 98936
(509) 575-8851

City of Naches ................................................................. 600 2nd St. Naches, WA
98937 (509) 653-2647

City of Selah ................................................................. 113 W. Naches Ave.
Selah, WA 98942
(509) 698-7338

City of Sunnyside .......................................................... 818 E. Edison Ave.
Sunnyside, WA 98944
(509) 837-3782

City of Toppenish ........................................................... 8 Buena Way, Toppenish, WA
98948 (509) 865-4500

City of Union Gap ............................................................ 102 W. Ahtanum
Union Gap, WA 98903
(509) 225-3524

City of Wapato ............................................................... 100 French Lane
Wapato, WA 98951
(509) 877-3622

City of Yakima ............................................................... 2301 Fruitvale Blvd
Yakima, WA 98953
(509) 575-6005

City of Zillah ................................................................. 503 First Ave. Zillah WA,
98908 (509) 829-5151

Yakima County Noxious Weed Board ................................ 1216 E. Race St. Yakima, WA
98901 (509) 574-1000

Benton County Noxious Weed Board .................................. P.O. Box 311 Prosser, WA
99350 (509) 786-5626

Kittitas County Noxious Weed Board ............................... 507 N. Nanum St. Suite 26
Ellensburg, WA 98926
(509) 962-7007

Confederated Tribes of the Yakama Nation .......................... P.O. Box 151 Toppenish WA.
98948 (509) 865-2800
Appendix G

US. Military
970 Firing Center Rd.
Yakima, WA 98901
(509) 577-3000

Naches Ranger District
10237 U.S. Highway 12,
Naches, WA 98937
(507) 653-1401

WDFW Region 3
1701 S. 24th Ave. Yakima, WA
98902 (509) 457-9310

Roza Irrigation District
125 S. Thirteenth St. Yakima,
WA 98901 (509) 837-5141

USBOR
1150 N. Curtis Rd., Suite 100
Boise, ID 83706
(208) 378-5312

DNR Ellensburg
713 Bowers Rd. Ellensburg,
WA 98926 (509) 925-8522

Hanford
P.O. Box 450, H6-60,
Richland, WA 99352
(509) 376-7411