

# **Eastern Region, Area 3** **Integrated Roadside Vegetation Management Plan**

2012



**Washington State  
Department of Transportation**  
Maintenance Operations Division

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- Appendix A Integrated Vegetation Management Prescriptions
- Appendix B Herbicide Guidelines
- Appendix C Weed Locations (currently not in plan)
- Appendix D Special Maintenance Areas
- Appendix E Forms and Records
- Appendix F Stakeholders List

## Summary

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The Washington State Department of Transportation (WSDOT) manages approximately 995 miles of roadside right-of-way throughout Lincoln and Adams counties. This right-of-way is part of the state highway system including I-90, US-2, US-395, SR-25, SR-21 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 (IRVM) 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

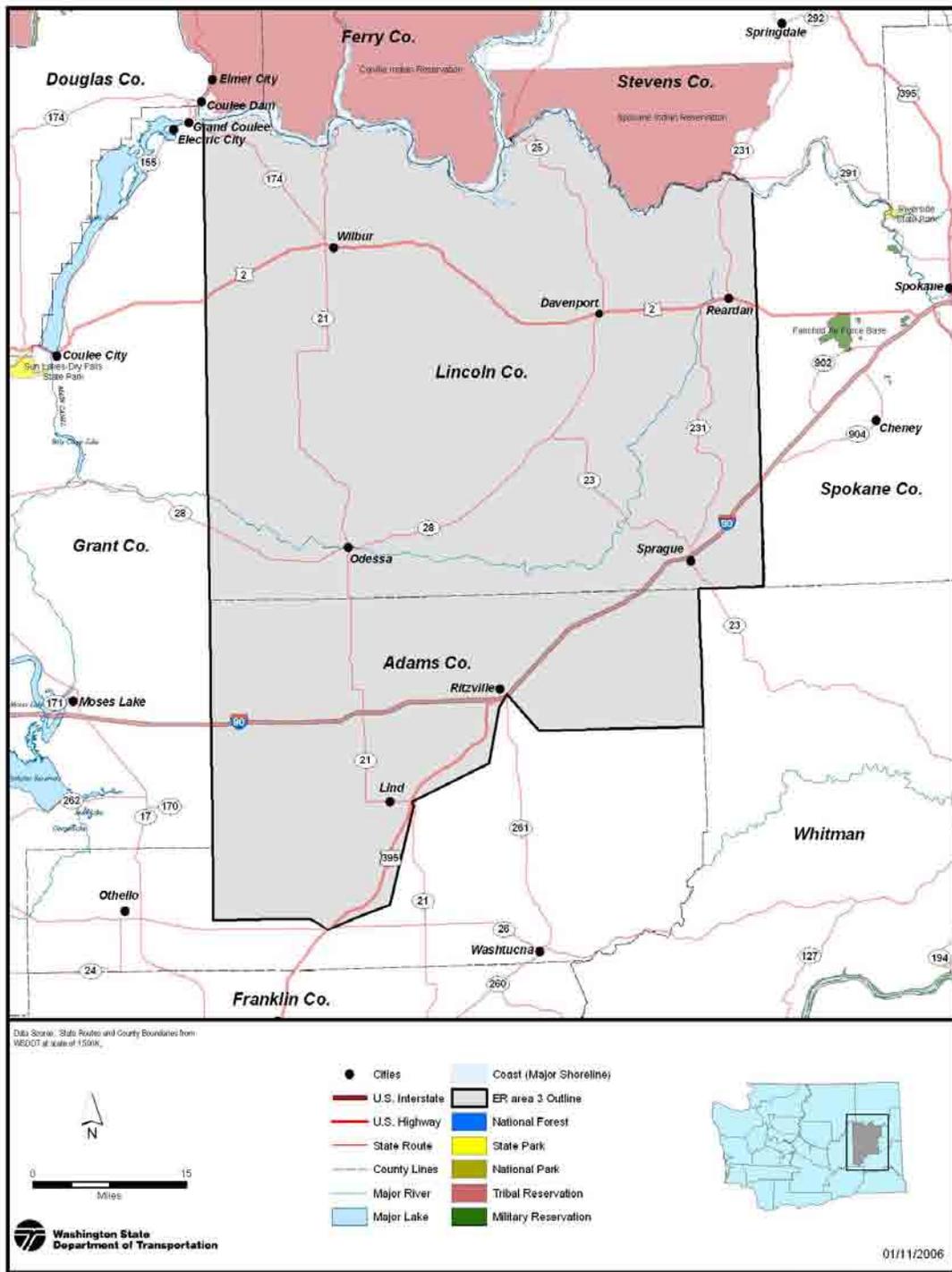
The attached plan consists of four main sections:

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 Eastern Region, Area 3 plan is available at [http://www.wsdot.wa.gov/Maintenance/Roadside/mgmt\\_plans.htm](http://www.wsdot.wa.gov/Maintenance/Roadside/mgmt_plans.htm) or available in hard copy upon request. Please contact Dale Luiten or James Morin at the numbers listed below for questions or comments.

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Vicinity Map  
Figure 1

## **2012 Work Plan**

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The purpose of this section is to identify the short and long term operational goals within Eastern Region, Area 3. These goals will help direct decisions that affect roadside management and the construction of roadside. These goals will be updated and evaluated on a yearly basis during the annual Winter Planning Meeting.

### **Long-Term Goals (2012-2016)**

Long-term goals should be achievable within a 4 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 roadside vegetation (zones 1-3) through the use of IVM practices.
  2. No herbicide related violations
  3. Work closely and proactively with county weed boards.
  4. No reportable, recordable safety issues within the VM Program
  5. Continue to accurately maintain inventory
  6. Improve roadsides through working with construction/design programs
  
- **Noxious Weed Control 3A-2**
  1. Continue to focus and coordinate with counties on bio-control as a viable weed control option for key species such as Knapweed, Dalmatian toadflax and other species identified by county weed boards.
  2. Revegetate all disturbed areas as they occur to provide desirable vegetation.
  
- **Nuisance Weed Control 3A-3**
  1. Control nuisance weeds on an "as needed" basis in support of noxious weed control and establishment of desirable vegetation.
  
- **Obstructions 3A-4**
  1. Reduce obstructions that cause snow drifting using mowing and bare-ground as needed.
  2. Reduce obstructions at intersections through the use of targeted bare-ground applications and timely mowing

## **Annual Work Plan (2012)**

Short-term goals are planned for implementation during the 2012 season. Short-term goals should be specific goals with clear objectives that can be measured and reported.

- **Noxious Weed Control 3A-2**
  1. Revegetate I-90 Ritzville Interchange- Approximately 10 acres
  2. Treat an estimated 800 acres with selective herbicide
  3. Mow approximately 25 acres
  4. Invest in biological control where possible, focusing on Toadflax, Diffuse Knapweed.
  5. Establish fall weed control plan to target biennials and perennials such as Canada thistle, Dalmatian toadflax, Rush skeletonweed.
  
- **Nuisance Weed Control 3A-3**
  1. Nuisance weeds will only be controlled incidentally to noxious weed control.
  2. Mow approximately 150 acres in support of nuisance weed control
  
- **Obstructions 3A-4**
  1. Apply approximately 350 acres of bare-ground to control roadside vegetation within 3' of the road shoulder as well as intersection obstructions
  2. Mow approximately 50 acres to control obstructions

## **Roadside Maintenance Considerations**

The primary objectives for maintenance of roadside vegetation are:

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

### **Visual Quality**

All maintenance activities should be conducted in a way that minimizes visual impacts such as wide spread “brown-out” from herbicides or shattered limbs from side trimming. Roadside should look as natural as possible throughout the year. Appropriate visual quality for roadsides throughout the state is defined in the WSDOT Roadside Classification Plan (November 2011) <http://www.wsdot.wa.gov/Publications/Manuals/M25-31.htm>

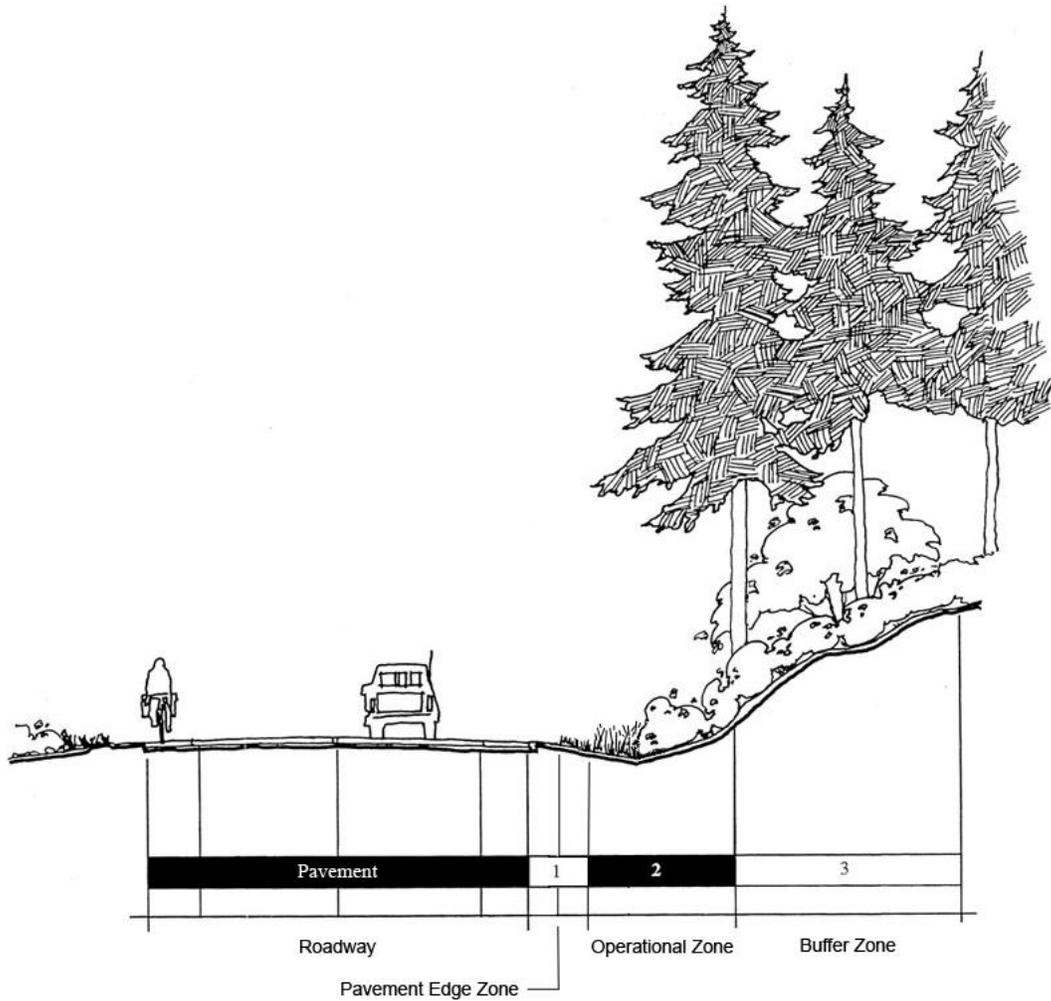
### **Operational Zones**

WSDOT roadsides are divided into several zones for the purposes of assigning management objectives, maintenance intensities, and thresholds for triggering vegetation maintenance actions. Noxious weed species designated for control by state and county law are controlled throughout all zones. Not all maintenance zones will occur along state highways in Eastern Region, Area 3. 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.



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

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

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

**Typical Roadside Vegetation Management Zones**  
**Figure 2**

## ***Special Considerations***

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### **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 509.324.6583.

### **Herbicide Safety**

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

WSDOT has also conducted a risk assessment for the herbicide products and application methods used on state highways. Toxicological impacts of WSDOT practices were evaluated for human health (both operators and the general public), for aquatic ecosystems, and terrestrial wildlife. The findings of this assessment are summarized in a series of fact sheets for the individual herbicides used by WSDOT. These fact sheets can be viewed and downloaded through the Internet at: [http://www.wsdot.wa.gov/Maintenance/Roadside/herbicide\\_use.htm](http://www.wsdot.wa.gov/Maintenance/Roadside/herbicide_use.htm) or copies may be obtained by calling the WSDOT Headquarters Maintenance Office at (360) 705-7850.

## ***Roadside Design and Construction Considerations***

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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).

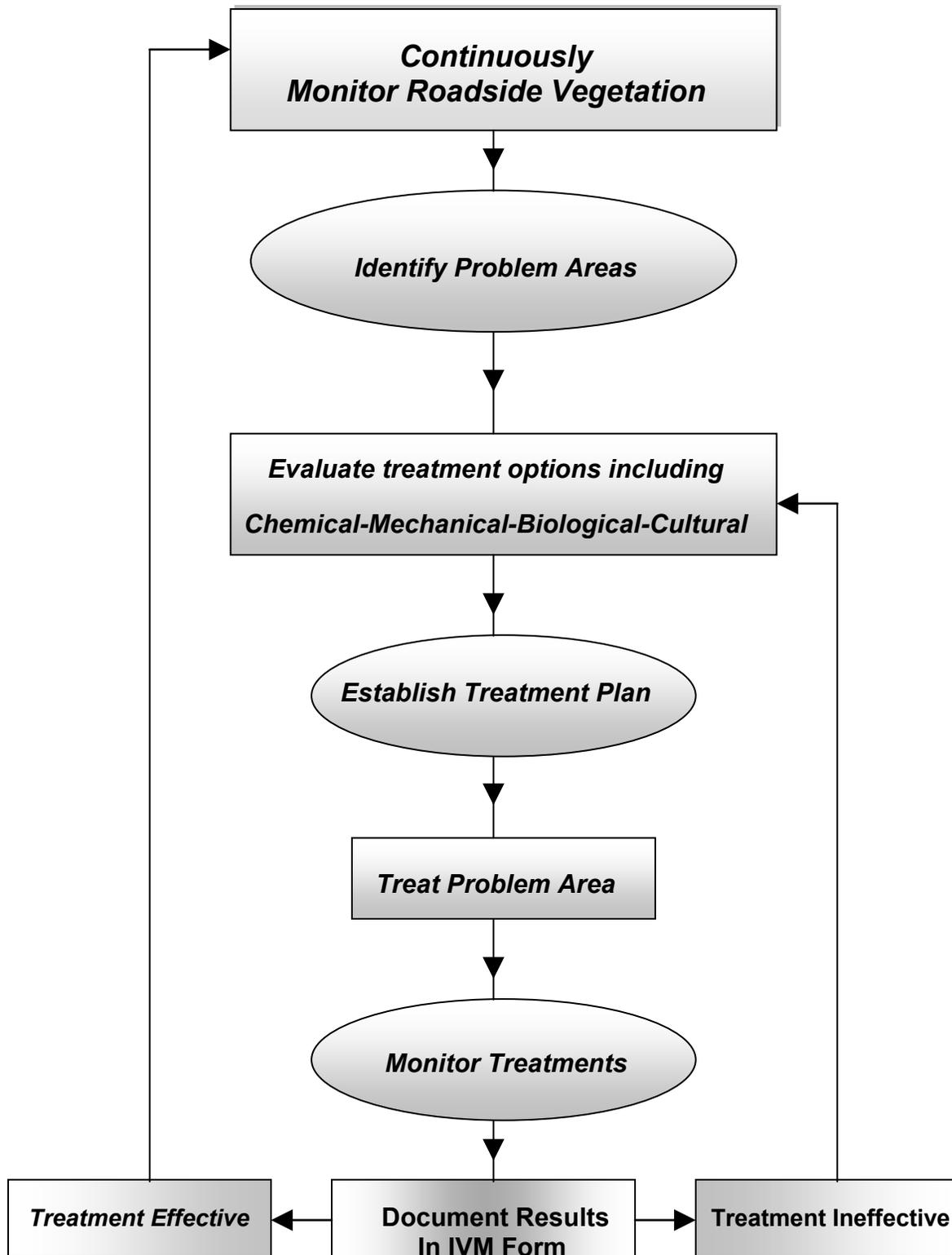
Internal agency coordination between the Design, Construction, and Maintenance programs is imperative to a comprehensive roadside vegetation management plan. A commitment to increasing communication in these areas is an important component in an ongoing effort to reduced lifecycle costs and improves 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:*

- *WSDOT Eastern Region Projects Link:*  
<http://www.wsdot.wa.gov/Regions/Eastern/Projects/>

*Below is a list of permitted utility projects that are scheduled for construction within the next 2-4 years.*

- No utility projects are scheduled in this area at this time.



The IVM Decision-Making Process  
Figure 3

## ***Roadside Vegetation Management Plan***

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### **1. INTEGRATED VEGETATION MANAGEMENT**

Vegetation management activities are planned and carried out using the principles of Integrated Vegetation Management (IVM) and the decision making process described in Figure 3 (page 9). 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**

##### **1.1.1. Description**

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

##### **1.1.2. Sample forms**

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

##### **1.1.3. Instructions**

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**

Prior to 2006 the edge of pavement was routinely treated with a zone 1 bare-ground application. Between the years of 2006-2011 the area drastically reduced the use of zone 1 bare-ground treatments in favor of selective weed control and mowing. In many cases excessively tall grass, primarily Intermediate Wheatgrass and Basin Wild rye, became established at the edge of pavement causing snow drift and sight distance issues. For 2012 a number of these locations will transition into narrow 3' wide bare-ground treatments to reduce the need for mowing. A number of areas will remain vegetation up to the edge of pavement, particularly sensitive areas.

##### **1.2.2. Action Thresholds (Zone 1 Bare Ground):**

An action threshold refers to the point at which action must be taken to control an infestation of weeds. The action thresholds for treatment of Zone 1 bare-ground, where present, are listed below.

- Sight distance limited by vegetation within zone 1
- Grass height in excess of 3'
- High drift locations
- Persistent shoulder build-up that causes standing water on the roadway.

- Special safety considerations as approved by the Area Superintendent or assigned designee

**1.2.3. Methods (timing and procedures)**

Zone 1 bare ground applications, where needed, will occur in the spring, typically beginning in early April. 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 Maintenance Prescriptions**

**1.2.5. Locations by Milepost,**

Currently there are no routine zone 1 bare-ground applications made in ER region area 3.

**1.3. Mowing Operations**

**1.3.1. Policy and Objectives**

Mowing will be accomplished throughout the Eastern Region, Area 3 on an as needed basis. Mowing needs and prescriptions will vary by location. Mowing can be an effective form of weed control, but done incorrectly can cause damage to desirable vegetation and enhance the growing environment for unwanted weeds. It's important when conducting a mowing operation to consider a number of factors including goals, timing, target species, deck height and frequency.

**1.3.2. Methods (Timing and Procedures)**

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

- 1. Identify Goals Of Mowing Operation:** Before prescribing mowing as a preferred alternative, it is important to clearly understand what the goals are of this operation. 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 to control seed production of undesirable plants in an area where no desirable vegetation is present, mowing should take place as late as

possible and 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 un-infested 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 Eastern Region, Area 3 is not a routine maintenance activity. It is a secondary form of weed control to be used on an as needed basis.
7. **Communicate:** Communication with the mower operator is critical to a successful mowing operation. The operator must understand the goals, timing, target species and desirable species before the mowing operation begins.

### 1.3.3. Prescriptions

See **Appendix A, IVM Mowing Prescriptions**

## 1.4. Noxious Weed Control

### 1.4.1. Policy and objectives

WSDOT is required to control and prevent the spread of all 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.

Currently there are no known Class A weeds identified within the WSDOT operating right of way in Eastern Region, Area 3.

### ***Class B and 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 Lincoln and Adams Counties and currently present within WSDOT right-of-way include:

#### **Adams County:**

- Buffalobur (*Solanum rostratum*)
- Camelthorn (*Alhagi maurorum*)
- Dyers woad (*Isatis tinctoria*)
- Garlic Mustard (*Alliaria petiolata*)
- Giant Hogweed (*Heracleum mantegazzianum*)
- Johnsongrass (*Sorghum halepense*)
- Knapweed, bighead (*Centaurea macrocephala*)
- Knapweed, Diffuse (*centaurea diffusa*)
- Knapweed, Russian (*Acroptilon repens*)
- Knapweed, Spotted (*Centaurea biebersteinii*)
- Longspine Sandbur (*Cenchrus longispinus*)
- Leafy Spurge (*Euphorbia esula*)
- Meadow clary (*Salvia pratensis*)
- Mediterranean Sage (*Salvia aethiopsis*)
- Perennial Pepperweed (*Lepidium latifolium*)
- Puncturevine (*Tribulus terrestris*)
- Rush Skeletonweed (*Chondrilla juncea*)
- Saltcedar (*Tamarix ramosissima*)
- Scotch Broom (*Cytisus scoparius*)
- Silverleaf Nightshade (*Solanum elaeagnifolium*)
- Swainsonspea (*Sphaerophysa salsula*)
- Thistle, Milk (*Silybum marianum*)
- Thistle, Musk (*Carduus nutans*)
- Thistle, Scotch (*Onopordum acanthium*)
- Toadflax, Dalmatian (*Linaria dalmatica*)
- Velvetleaf (*Abutilon theophrasti*)
- Wild Carrot (*Daucus carota*)

### **Adams County, continued**

- Wild four o'clock (*Mirabilis nyctaginea*)
- Yellow Nutsedge (*Cyperus esculentus*)
- Yellow Starthistle (*Centaurea solstitialis*)

### **Lincoln County**

- Blueweed (*Echium vulgare*)
- Buffalobur (*Solanum rostratum*)
- Bugloss, Annual (*Anchusa arvensis*)
- Bugloss, Common (*Anchusa officinalis*)
- Camelthorn (*Alhagi maurorum*)
- Common catsear (*Hypochaeris radicata*)
- Dyers woad (*Isatis tinctoria*)
- Garlic Mustard (*Alliaria petiolata*)
- Gorse (*Ulex europaeus*)
- Hawkweed, European (*Hieracium sabaudum*)
- Hawkweed, Smooth (*Hieracium laevigatum*)
- Hawkweed, Polar (*Hieracium atratum*)
- Hawkweed, Mouseear (*Hieracium pilosella*)
- Hawkweed, Orange (*Hieracium aurantiacum*)
- Hawkweed, yellow (*Hieracium caespitosum*)
- Herb Robert (*Geranium robertianum*)
- Indgobush (*Amprpha fruticosa*)
- Johnsongrass (*Sorghum halepense*)
- Knapweed, Diffuse (*centaurea diffusa*)
- Knapweed, Meadow (*Centaurea jacea x nigra*)
- Knapweed, Russian (*Acroptilon repens*)
- Knapweed, Spotted (*Centaurea biebersteinii*)
- Knotweed, Japanese (*Polygonum cucpidatum*)
- Leafy Spurge (*Euphorbia esula*)
- Longspine Sandbur (*Cenchrus longispinus*)
- Mediterranean Sage (*Salvia aethiopsis*)
- Oxeye Daisy (*Leucanthemum vulgare*)
- Perennial Pepperweed (*Lepidium latifolium*)
- Perennial Sowthistle (*Sonchus arvensis* ssp.)
- Policeman's Helmet (*Impatiens glandulifera*)
- Saltcedar (*Tamarix ramosissima*)
- Scotch Broom (*Cytisus scoparius*)
- Silverleaf Nightshade (*Solanum elaeagnifolium*)
- Leafy Spurge (*Euphorbia esula*)
- Meadow clary (*Salvia pratensis*)
- Mediterranean Sage (*Salvia aethiopsis*)
- Perennial Pepperweed (*Lepidium latifolium*)
- Puncturevine (*Tribulus terrestris*)
- Rush Skeletonweed (*Chondrilla juncea*)
- Saltcedar (*Tamarix ramosissima*)
- Scotch Broom (*Cytisus scoparius*)
- Silverleaf Nightshade (*Solanum elaeagnifolium*)
- Swainsonspea (*Sphaerophysa salsula*)
- Tansy Ragwort (*Senecio jacobaea*)
- Thistle, Milk (*Silybum marianum*)

### **Lincoln County, continued**

- Thistle, Musk (*Carduus nutans*)
- Thistle, Plumeless (*Carduus acanthoides*)
- Thistle, Scotch (*Onopordum acanthium*)
- Toadflax, Dalmatian (*Linaria dalmatica*)
- Velvetleaf (*Abutilon theophrasti*)
- Wild Carrot (*Daucus carota*)
- Wild four o'clock (*Mirabilis nyctaginea*)
- Yellow Nutsedge (*Cyperus esculentus*)
- Yellow Starthistle (*Centaurea solstitialis*)

#### **1.4.2. Methods**

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

- **Chemical:** In many cases herbicides are used as a means of early control due to levels of infestations and area requiring control. Timing of herbicide treatments within the growth stage of the weed species is critical to achieving complete control of perennial species.
- **Mechanical:** Mowing, blading, disking and hand pulling are often used in conjunction with other control methods. Mowing considerations are covered in section 1.3 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 bio controls 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 E.

#### **1.4.3. Action Thresholds:**

The action threshold for noxious 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 Eastern Region, Area 3 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 C nuisance weeds occur throughout Eastern Region, Area 3 within WSDOT right-of-way that are not targeted for control. In some cases they are controlled incidentally or for site-specific reasons.

Common nuisance weed species that occur on WSDOT right-of-way within Eastern Region, Area 3 include:

- Cereal Rye (*Secale cereale*)
- Common Mullen (*Verbascum thapsus*)
- China Lettuce (*Lactuca serriola*)
- Maretail (*Coryza canadensis*)
- Mustard Species
- Teasel (*Dipsacus sylvestris*)
- Russian Thistle (*Salsola iberica sennen*)

#### **1.5.3. Methods**

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

#### **1.5.4. Action Threshold 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
- 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 Practice

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 Zones 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 Fir, Ponderosa Pine, Poplar and 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.
- **Trimming:** Consideration should be given to the visual impact of trimming as well as the effectiveness of this 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.
- **Prescriptions:** See **Appendix A, IVM Prescriptions, Tree and Brush Control**

## **1.7. Hazard Tree Removal**

### **1.7.1. Policy and Practices**

Trees within the right-of-way are routinely monitored by maintenance staff. Hazard trees may be:

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

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

## **2. SPECIAL CONSIDERATIONS**

Special Maintenance Areas include any sections of roadside where there are unique maintenance requirements or existing arrangements with any external organizations. Special Maintenance Areas may include interchanges, community entrances or enhancement areas, areas maintained by cities, bicycle paths, storm water retention ponds, state parks, wellheads, environmentally sensitive areas, school zones, and 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 area 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 use 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 Davenport at 509.324.6583.

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

#### **2.2.1. Policy and objectives**

The Adopt-a-Highway program allows private citizens, volunteer groups, and businesses an opportunity to contribute to an enhanced roadside appearance through direct partnership with WSDOT. The program improves the overall appearance of the roadside primarily through litter control, although other activities that improve the visual and environmental condition of the roadside are permitted as well including limited planting and maintenance of specific areas. Other partnership opportunities are possible

through general permits and agreements. Volunteer groups that do enhancement planting on WSDOT roadsides are typically required to establish and maintain the plantings. Communities may partner with WSDOT to develop and maintain selected Community Enhancement Areas as described in the Roadside Classification Plan.

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

### **2.2.2. Locations by Milepost**

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

## **2.3. Environmentally Sensitive Areas**

### **2.3.1. Policy and Objectives**

As a state agency, WSDOT is committed to conducting its activities in accordance with the dictates of sound environmental protection practices. This includes pollution prevention, 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 occur within Eastern Region, Area 3, such as lakes, streams and wetlands. Special care will be taken to avoid and minimize impacts to these resources. Herbicide applications in these areas will follow normal label requirements. Other IVM treatments that take place in these areas, such as mowing or re-vegetation efforts will be subject to the Regional Road Maintenance Endangered Species Act Program Guidelines.

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

### **2.3.2. Locations**

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

## **2.4. Storm Water Management Facilities**

### **2.4.1. Policy and Objectives**

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

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

#### **2.4.2. Methods**

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

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

### **2.5. Wetland Mitigation Sites**

#### **2.5.1. Policy and Objectives**

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

Wetland mitigation sites are carefully monitored for up to 10 years following their creation to ensure compliance with environmental regulation. In most cases vegetation in these sites is planted and established through the construction process so the maintenance actions are not required unless noxious weeds or hazardous trees become an issue. However, it is important that maintenance be aware of the locations of wetland mitigation sites to avoid impacting the required environmental functions of the sites.

#### **2.5.2. Locations by Milepost**

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

## Eastern Region Area 3 - IVM Prescriptions

### Bare-Ground Prescriptions

#### Zone 1 Maintenance - Annual Cycle (Option A)

Location Type	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Where needed on gravel shoulder or guardrail sections	1-3' area free of vegetation	annual herbicide application	spray truck w/ fixed nozzle mounted 18" from ground	Non-selective residual herbicide Diuron 4L @ 256 ozl (8 lbs.) <b>No Spray Within 60 of Water</b>	Spring March/April	Monitor

#### Zone 1 Maintenance - Annual Cycle (Option B)

Location Type	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Where needed on gravel shoulder or guardrail sections	1-3' area free of vegetation	annual herbicide application	spray truck w/ fixed nozzle mounted 18" from ground	Non-selective residual herbicide Diuron 4L @ 256 ozl (8lbs) Oust XP @ 3 ozd <b>No Spray Within 60 of Water</b>	Spring March/April	Monitor

#### Zone 1 Maintenance - Annual Cycle (Option C)

Location Type	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Where needed on gravel shoulder or guardrail sections	1-3' area free of vegetation	annual herbicide application	spray truck w/ fixed nozzle mounted 18" from ground	Non-selective residual herbicide with selective broadleaf herbicide SFM 75 @ 3 ozd Payload @ 8 ozd <b>No 60 Buffer Limitations</b>	Spring March/April	Monitor

#### Zone 1 Maintenance - Annual Cycle (Option D)

Location Type	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Where needed on gravel shoulder or guardrail sections	1-3' area free of vegetation	annual herbicide application	spray truck w/ fixed nozzle mounted 18" from ground	Non-selective residual herbicide  Oust XP @ 3 ozd Portfolio 4F @ 10 ozl <b>No Spray Within 60 of Water</b>	Spring March/April	Monitor

#### Zone 1 Maintenance - Annual Cycle (Option C)

Location Type	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Where needed on gravel shoulder or guardrail sections	1-3' area free of vegetation	annual herbicide application	spray truck w/ fixed nozzle mounted 18" from ground	Non-selective residual herbicide Perspective @ 10 oz Oust @ 3 oz Add surfactant if treating growing veg <b>No 60 Buffer Limitations</b>	Spring March/April	Monitor

# Appendix A

# IVM Prescriptions

## Eastern Region Area 3 - IVM Prescriptions

### Noxious Weed Control

#### Chemical Control

#### Noxious Weed Control - General Weed Control

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	After emergence	eradication and control of listed noxious weeds.	Spot/Band	Truck mounted injection sprayer	E-2 @ 32-48 oz Sup Spreader 90 @ 32 oz per 100 gallons carrier <b>No Spray Within 60' of Water</b>	Early growing season first/second flush	Reapply as necessary. Seed and fertilize to reduce weed competition.

#### Noxious Weed Control - General Weed Control

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

#### Noxious Weed Control - *Thistles/Knapweeds* - Rosette/Bolting Stage

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	as soon as plants appear	eradication and control of listed noxious weeds.	herbicide	labor, transportation	Milestone @ 7 oz. Sup Spreader 90 @ 32 oz per 100 gallons carrier <b>No Buffer Limitations</b>	Early growing season	Repeat as necessary. Seed and fertilize to reduce weed competition.

#### Noxious Weed Control - *Rush Skeletonweed* - Rosette/bolting Stage

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	as soon as plants appear	eradication and control of listed noxious weeds.	spot treatment w/ herbicide	backpack sprayer, pickup, etc.	Milestone @ 5 oz. Sup Spreader 90 @ 32 oz per 100 gallons carrier <b>No Buffer Limitations</b>	Early growing season	Reapply as necessary. Seed and fertilize to reduce weed competition.

#### Noxious Weed Control - *Yellow starthistle* - At Rosette Stage

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	as soon as plants appear	eradication and control of listed noxious weeds.	spot treatment w/ herbicide	backpack sprayer or spray bottle, pickup, etc.	Milestone @ 5 oz. Sup Spreader 90 @ 32 oz per 100 gallons carrier <b>No Buffer Limitations</b>	Early Season	Repeat as necessary. Seed and fertilize to reduce weed competition.

# Appendix A

# IVM Prescriptions

## Eastern Region Area 3 - IVM Prescriptions

### Noxious Weed Control

#### Noxious Weed Control - *Dalmation Toadflax* - Plant Emergence (A)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	as soon as plants appear	eradication and control of listed noxious weeds.	spot treatment w/ herbicide	backpack sprayer, pickup, etc.	E-2 @ 48 ozl Syl-Tac @ 20 oz/100 gal  <b>No Spray Within 60' of Water</b>	Early growing season	Reapply as necessary. Seed and fertilize to reduce weed competition

#### Noxious Weed Control - *Dalmation Toadflax* - Plant Emergence (B)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	as soon as plants appear	eradication and control of listed noxious weeds.	spot treatment w/ herbicide	backpack sprayer, pickup, etc.	Tordon 22k @ 32 ozl Telar @ 1 ozl Syl-Tac @ 20 oz/100 gal  <b>No Spray Within 60' of Water</b>	Early growing season	Reapply as necessary. Seed and fertilize to reduce weed competition

#### Noxious Weed Control - *Poison Hemlock*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	as soon as plants appear	eradication and control of listed noxious weeds.	spot treatment w/ herbicide	backpack sprayer, pump sprayer	Veteran 720 @ 64 ozl Sup Spreader 90 @ 32 oz per 100 gallons carrier  <b>No Spray Within 60' of Water</b>	Late spring to fall	Reapply as necessary. Seed and fertilize to reduce weed competition.

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

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	as soon as plants appear	eradication and control of listed noxious weeds.	Band application	tank sprayer	Buctril @ 24 oz Sup Spreader 90 @ 32 oz per 100 gallons carrier  <b>No Spray Within 60' of Water</b>	Early Season	Repeat as necessary. Seed and fertilize to reduce weed competition.

#### Noxious Weed Control - *Broadleaf Weeds in Reseeded Areas* - Over 2" (B)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	as soon as plants appear	eradication and control of listed noxious weeds.	Band application	tank sprayer	Buctril @ 20 ozl Vista @ 16 ozl Vanquish @ 2-4 ozl Sup Spreader 90 @ 32 oz per 100 gallons carrier  <b>No Spray Within 60' of Water</b>	Early Season	Repeat as necessary. Seed and fertilize to reduce weed competition.

# Appendix A

# IVM Prescriptions

## Eastern Region Area 3 - IVM Prescriptions

### Noxious Weed Control

#### Mechanical Control

##### Noxious Weed Control - *Kochia* (Mechanical Control)

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

##### Noxious Weed Control - *Scotch Thistle* (Mechanical)

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

#### Biological Control

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

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

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

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

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

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

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

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

## Eastern Region Area 3- IVM Prescriptions

### Tree and Brush Control

#### Tree and Brush Control - Locust, Russian Olive, Tree of Paradise, Poplar, (trees over 6 ' in height)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
zone 2	whenever trees are likely or have potential to grow and fall on the highway	control of young trees that may impact roadside function if allowed to grow.	hand cutting, treatment of cut surface w/ herbicide chip debris in zone 2	power saws, loppers, chipper, backpack or hand-held sprayer	Backpack sprayer-undiluted mix of Garlon 3A  <u>No Buffer Limitations</u>	anytime	Seed and fertilize or plant to establish low growing native plant community.

### Nuisance Weed Control

#### Nuisance Weed Control - General Weed Control

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones	After emergence	eradication and control of listed noxious weeds.	Spot/Band	Truck mounted injection sprayer	E-2 @ 32-48 ozl Sup Spreader 90 @ 32 oz per 100 gallons carrier <u>No Spray Within 60' of Water</u>	Early growing season first/second flush	Reapply as necessary. Seed and fertilize to reduce weed competition.

#### Nuisance Weed Control - General Weed Control

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones new or limited infestations	whenever new infestations occur (dependent on available resources)	minimize populations and prevent further spread of nuisance weeds	foliar treatment w/ herbicide	truck mounted sprayer where possible, backpack sprayer where necessary	WeedDestroy @ 64 ozl Vanquish @ 32 ozl Super Spread 90 @ 32 ozl per 100 gallons carrier <u>No Spray Within 60' of Water</u>	prior to seed	Reapply as necessary. Seed and fertilize or plant to restore native plant community.

## Mowing Prescriptions

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

### Zone 2 Maintenance - Weed seed Control

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

### Zone 2 Maintenance - Crop/Sensitive Area

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

### Zone 2 Maintenance-Safety/Sight Distance

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

### Zone 2 Maintenance- Remove Overstory (old weed debris)

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

### Zone 2 Maintenance- New Seeding

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

## US 2 South

### Planting Prescriptions

#### Compost Mix

	Species and Variety of Seed in Mixture by Common Name and (Botanical name)	Pounds Pure Live Seed (PLS) Per Acre
	Bluebunch Wheatgrass "Duffy Creek/Rock Island" ( <i>Pseudoroegneria spicata</i> )	7.80
	Thickspike Wheatgrass "Schwindemar" ( <i>Agropyron trachycaulum</i> )	3.00
	Crested Wheatgrass "Nordan" ( <i>Agropyron desertorum</i> )	1.00
	Sandberg Bluegrass "Duffy Creek" ( <i>Poa sandbergii</i> )	1.20
	Idaho Fescue "Mallory or Hepner" ( <i>Festuca idahoensis</i> )	3.00
	<b>Total Lbs PLS/Acre</b>	<b>16.00</b>

## US 2 South

### Planting Prescriptions

#### Optional Species

	Species and Variety of Seed in Mixture by Common Name and (Botanical name)	Pounds Pure Live Seed (PLS) Per Acre
	<p><b>Grass Species</b>  <i>Basin Wildrye</i>                      (Elymus cinereus)  <i>Needle and Thread Grass</i>                      (Achillea millefolium)  <i>Indian Ricegrass "Nezpar"</i>                      (Oryzopsis hymenoides)</p> <p><b>Shrubs and Forb Species</b>  <i>Rubber Rabbitbrush</i>                      (Chrysothamnus nauseosus)  <i>Basin Big Sage</i>                      (Artemisia tridentata)  <i>Snowy Buckwheat</i>                      (Eriogonum niveum)</p>	

## US 2 North

### Planting Prescriptions

#### Compost Mix

	Species and Variety of Seed in Mixture by Common Name and (Botanical name)	Pounds Pure Live Seed (PLS) Per Acre
	Bluebunch Wheatgrass "Anatone/Asotin/Grand Ronde" ( <i>Pseudoroegneria spicata</i> )	9.40
	Crested Wheatgrass "Hycrest or Douglas" ( <i>Agropyron desertorum</i> )	1.00
	Sandberg Bluegrass "Wallowa" ( <i>Poa sandbergii</i> )	1.20
	Idaho Fescue "Winchester" ( <i>Festuca idahoensis</i> )	3.20
	Big Squirrtail "Lincoln" <i>Elymus Multisetus</i>	0.80
	Prairie June Grass "Zumwalt" <i>Koeleria cristat</i>	0.40
	<b>Total Lbs PLS/Acre</b>	<b>16.00</b>

## US 2 North

### Planting Prescriptions

#### Optional Species

	Species and Variety of Seed in Mixture by Common Name and (Botanical name)	Pounds Pure Live Seed (PLS) Per Acre
	<p><b>Grass Species</b></p> <p><i>Basin Wildrye</i> (<i>Elymus cinereus</i>)</p> <p><i>Needle and Thread Grass</i> (<i>Achillea millefolium</i>)</p> <p><i>Indian Ricegrass "Nezpar"</i> (<i>Oryzopsis hymenoides</i>)</p> <p><b>Shrubs and Forb Species</b></p> <p><i>Rubber Rabbitbrush</i> (<i>Chrysothamnus nauseosus</i>)</p> <p><i>Basin Big Sage</i> (<i>Artemisia tridentata</i>)</p> <p><i>Snowy Buckwheat</i> (<i>Eriogonum niveum</i>)</p>	

## Herbicides Approved for Use on WSDOT Rights of Way

### When making herbicide applications:

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

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

## Herbicides Approved for Use on WSDOT Rights of Way

### When making herbicide applications:

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

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

# 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

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

## Herbicides Approved for Use on WSDOT Rights of Way

### When making herbicide applications:

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

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

# Appendix D

# Special Maintenance Area

**Table 3.0**

**Definitions:** Locations area distinguishes 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.

**Descriptions:** Brief explanation of special treatment required

SR	DIRECTION	SHOULDER	BEG MP	END MP	TYPE	DESCRIPTION
002	INC	RS	237.99	238.11	Rest Area	SMA
002	Both	RS	221.19	222.21	City of Wilbur	Maintain by city
002	Both	RS	230.15	230.70	City of Creston	Maintain by city
002	Both	RS	250.54	251.55	City of Davenport	Maintain by city
002	Both	RS	263.44	264.42	City of Reardan	Maintain by city
002			210.65		Zimmerman Pit Site	
002			211.00		Almira East Pit Site	
002			219.45		West Wilburt Pit Site	
002			220.30		Wilbur Airport Pit Site	
002			226.00		Sherman Draw Rd. Pit Site	
002			232.30		Welsh Cr. Quarry Site	
002			235.40		Telford Quarry Site	
002			243.60		Sterrett Rd. Quarry Site	
002			246.90		Hawk Cr. Stockpile Site	
002			261.02		Reardan Stockpile Site	
002			351.55		Davenport Stockpile Site	
002					Wetland Mitigation Site	SR 2 Hawk Creek
021	Both	RS	25.93	27.30	City of Lind	Maintain by city
021	Both	RS	55.22	56.36	City of Odessa	Maintain by city
021	Both	RS	55.99	56.00	RR crossing	
021	Both	RS	91.35	91.73	City of Wilbur	Maintain by city
021	Both	RS	91.63	91.64	RR crossing	
021			36.90		Bauer Coulee Stockpile Site	
021			56.60		Odessa North Quarry Site	
021			67.25		Goetz Lake Quarry Site	
021			73.30		Canniwa Pit Site	
021			88.10		Minkey Pit Site	
021			98.80		Johnson Quarry Stockpile Site	
023	Both	RS	42.66	43.45	City of Sprague	Maintain by city
023	Both	RS	65.31	66.01	City of Harrington	Maintain by city
023	Both	RS	65.49	65.50	RR crossing	
023			44.55		231/23 Jct. Pit Site	
023			53.00		Harding Pit Site	
023			53.85		Lords Cr. Rd. Pit Site	
023			57.00		Jenkins Jct. Pit Site	
025	Both	RS	0.00	0.17	City of Davenport	Maintain by city
025			12.30		North Starr Stockpile Site	
025			23.60		Ft. Spokane Brid. Pit Site	

# Appendix D

# Special Maintenance Area

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**Descriptions:** Brief explanation of special treatment required

SR	DIRECTION	SHOULDER	BEG MP	END MP	TYPE	DESCRIPTION
026			60.68		Hatton-Coulee Quarry Site	
028	Both	RS	93.30	94.41	City of Odessa	Maintain by city
028	Both	RS	117.64	118.30	City of Harrington	Maintain by city
028	Both	RS	130.37	131.18	City of Davenport	Maintain by city
028	Both	RS	130.68	130.69	RR crossing	
028			82.65		Black Rock Pit Site	
028			92.65		Odessa Pit Site	
028			95.02		King Ranch Rd. Pit Site	
028			100.20		Coal Cr. Pit Site	
028			105.65		Hammerschmidt Pit Site	
028			116.80		Harrington Stockpile Site	
028			117.70		Harrington South Quarry Site	
028			122.10		Bluestem Quarry Stockpile Site	
028			124.70		Deking Rd. Quarry Site	
028			125.02		Deking Rd. Quarry Site	
090	INC	RS	196.62	197.45	Exit 196 to Deal Rd.	
090	INC	RS	197.91	198.97	Exit to Rest Area	
090	INC	RS	206.51	207.37	Exit 206 to Lind/Odessa	
090	INC	RS	214.96	215.75	Exit 215 to Paha/Packard	
090	INC	RS	219.83	221.42	Exit 220 to Ritzville/Pasco	
090	INC	RS	221.61	222.41	Exit 221 to Ritzville/Washtucna	
090	INC	RS	226.19	226.92	Exit 226 Coker Rd.	
090	INC	RS	230.88	231.82	Exit 231 Tokio Rd./W. Station	
090	INC	RS	241.62	242.36	Exit to Rest Area	
090	INC	RS	245.04	245.75	Exit 245 Sprague/Harrington	
090	INC	RS	253.72	254.48	Exit 254 to Fishtrap	
090	DEC	RS	197.25	196.43	Exit 196 to Deal Rd.	
090	DEC	RS	198.86	197.74	Exit to Rest Area	
090	DEC	RS	207.18	206.39	Exit 206 to Lind/Odessa	
090	DEC	RS	215.54	214.74	Exit 215 to Paha/Packard	
090	DEC	RS	221.64	220.13	Exit 220 to Ritzville/Pasco	
090	DEC	RS	222.28	221.84	Exit 221 Ritzville/Washtucna	
090	DEC	RS	226.67	225.88	Exit 226 Coker Rd.	
090	DEC	RS	231.57	230.62	Exit 231 Tokio Rd./W. Station	
090	DEC	RS	242.56	241.80	Exit to Rest Area	
090	DEC	RS	245.49	244.88	Exit 245 Sprague/Harrington	
090	DEC	RS	254.31	253.56	Exit 254 to Fishtrap	
090			196.00		Schrag Stockpile Site	
090			218.60	231.76	Stormwater Ponds	Pond
090			225.30		Wellsandt Quarry Site	

# Appendix D

# Special Maintenance Area

**Table 3.0**

**Definitions:** Locations area distinguishes 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.

**Descriptions:** Brief explanation of special treatment required

SR	DIRECTION	SHOULDER	BEG MP	END MP	TYPE	DESCRIPTION
090			226.00		Klein Quarry Site	
090			231.00		Tokio Stockpile Site	
090			Exit 254		Ames Lake Quarry Site	
174			24.99		Grand Coulee Heights Pit Site	
174			30.50		Hesseltine Quarry Site	
231	Both	RS	16.30	16.31	RR crossing	
231	Both	RS	31.08	31.41	City of Reardan	Maintain by city
231	Both	RS	31.17	31.18	RR crossing	
231			0.10		Sprague North Pit Site	
231			9.15		Rock Cr. Quarry Site	
231			9.60		Sassin Pit Site	
395	INC	RS	65.94	66.90	Exit to Colfax/Othello	
395	INC	RS	81.69	82.78	Exit to Lind/Kahlotus	
395	INC	RS	87.21	88.12	Exit to Paha/Packard	
395	INC	RS	94.92	95.49	Exit to I-90	
395	DEC	RS	66.65	65.64	Exit to Colfax/Othello	
395	DEC	RS	82.58	81.60	Exit to Lind/Kahlotus	
395	DEC	RS	87.90	86.95	Exit to Paha/Packard	
395	DEC	RS	95.46	95.06	On Ramp	



Integrated Vegetation Management Record

Org Code 455410	County Walla Walla	Date 4/19/2007	Vegetation Management Zone(s) <input checked="" type="checkbox"/> Zone 1 <input checked="" type="checkbox"/> Zone 2 <input checked="" type="checkbox"/> Zone 3																			
Area SR 125 so. MP 2.7 to MP 4		Location PLAZA to MEADOWBROOK																				
Class Approaches & Boxes: <input checked="" type="checkbox"/> Roadside <input type="checkbox"/> Landscaped Area <input type="checkbox"/> Interchange <input type="checkbox"/> Mitigation Site <input type="checkbox"/> Third Party Damage <input type="checkbox"/> Sensitive Sites <input type="checkbox"/> NB <input type="checkbox"/> EB <input checked="" type="checkbox"/> Shoulder <input type="checkbox"/> Rest Area <input type="checkbox"/> Bridge <input type="checkbox"/> Stormwater <input type="checkbox"/> Yes <input type="checkbox"/> Aquatic <input checked="" type="checkbox"/> SB <input type="checkbox"/> WB <input type="checkbox"/> Median <input type="checkbox"/> Park-n-Ride <input type="checkbox"/> Ramp <input type="checkbox"/> Yard/Stockpile <input type="checkbox"/> Wetlands																						
Target: <input checked="" type="checkbox"/> Noxious Weeds <input type="checkbox"/> Brush/Trees <input checked="" type="checkbox"/> Other <input type="checkbox"/> Nuisance Weeds <input type="checkbox"/> Hazard Tree List Target/Species: Yellow Starthistle, Canada Thistle Kochia, Puncturevine,																						
Reason for Action: <input checked="" type="checkbox"/> Noxious Weeds <input checked="" type="checkbox"/> Nuisance Weeds <input checked="" type="checkbox"/> Fire Prevention <input checked="" type="checkbox"/> Restore Native Veg. <input type="checkbox"/> Zone 1 Pilot <input checked="" type="checkbox"/> Aesthetic <input checked="" type="checkbox"/> Site Distance <input checked="" type="checkbox"/> Hazard Vegetation <input type="checkbox"/> Customer Request <input checked="" type="checkbox"/> Enhance Vegetation <input checked="" type="checkbox"/> Slope Stabilization <input checked="" type="checkbox"/> Other remove																						
Long term IVM plan (Describe goals/objectives and a step-by-step approach over time) Get locates and mark area's that may have utilities concerns, clean and pick up all trash, mow high vegetation so we can get a good herbicide application, mark area's to save and area's to take out. Discuss any ESA concerns, Round up area that requires new vegetation, Use a mechanical method to work area's. Pack down and wet down chemfallow area to help seal the ground, repeat herbicide application as needed to maintain the area for fall seeding, get soil samples for possible fertilizer application. Goals are to meet and follow all long and short time goals of South Central Region Area 4 IVM Plan.																						
Approximate Acres to Accomplish: 10.2																						
<table border="1"> <thead> <tr> <th>Activities</th> <th>Planned date of Treatment</th> <th>Actual date of Treatment</th> </tr> </thead> <tbody> <tr> <td>                     Manual <input type="checkbox"/> Digging <input type="checkbox"/> Pulling <input type="checkbox"/> Planting  <input type="checkbox"/> Logging <input type="checkbox"/> Sealing <input checked="" type="checkbox"/> Other: remove trash                 </td> <td>4/23/2007</td> <td></td> </tr> <tr> <td>                     Mechanical <input type="checkbox"/> Axial Saw Work <input type="checkbox"/> Tractor Brush Cutter <input type="checkbox"/> Mower/Chem  <input type="checkbox"/> Manual Brush Cutting <input checked="" type="checkbox"/> Tractor Mower <input checked="" type="checkbox"/> Other                 </td> <td>4/23/2007</td> <td></td> </tr> <tr> <td>                     Bio-Control <input type="checkbox"/> Insect <input type="checkbox"/> Pathogen  <input type="checkbox"/> Parasite Type/Species:                 </td> <td></td> <td></td> </tr> <tr> <td>                     Cultural <input type="checkbox"/> Burning <input type="checkbox"/> Grading <input checked="" type="checkbox"/> Seeding  <input type="checkbox"/> Fertilizing <input type="checkbox"/> Grazing <input type="checkbox"/> Soil Amendment <input type="checkbox"/> Other                 </td> <td>10/8/2007</td> <td></td> </tr> <tr> <td>                     Chemical <input type="checkbox"/> Record Number:                 </td> <td>4/27/2007</td> <td></td> </tr> </tbody> </table>					Activities	Planned date of Treatment	Actual date of Treatment	Manual <input type="checkbox"/> Digging <input type="checkbox"/> Pulling <input type="checkbox"/> Planting <input type="checkbox"/> Logging <input type="checkbox"/> Sealing <input checked="" type="checkbox"/> Other: remove trash	4/23/2007		Mechanical <input type="checkbox"/> Axial Saw Work <input type="checkbox"/> Tractor Brush Cutter <input type="checkbox"/> Mower/Chem <input type="checkbox"/> Manual Brush Cutting <input checked="" type="checkbox"/> Tractor Mower <input checked="" type="checkbox"/> Other	4/23/2007		Bio-Control <input type="checkbox"/> Insect <input type="checkbox"/> Pathogen <input type="checkbox"/> Parasite Type/Species:			Cultural <input type="checkbox"/> Burning <input type="checkbox"/> Grading <input checked="" type="checkbox"/> Seeding <input type="checkbox"/> Fertilizing <input type="checkbox"/> Grazing <input type="checkbox"/> Soil Amendment <input type="checkbox"/> Other	10/8/2007		Chemical <input type="checkbox"/> Record Number:	4/27/2007	
Activities	Planned date of Treatment	Actual date of Treatment																				
Manual <input type="checkbox"/> Digging <input type="checkbox"/> Pulling <input type="checkbox"/> Planting <input type="checkbox"/> Logging <input type="checkbox"/> Sealing <input checked="" type="checkbox"/> Other: remove trash	4/23/2007																					
Mechanical <input type="checkbox"/> Axial Saw Work <input type="checkbox"/> Tractor Brush Cutter <input type="checkbox"/> Mower/Chem <input type="checkbox"/> Manual Brush Cutting <input checked="" type="checkbox"/> Tractor Mower <input checked="" type="checkbox"/> Other	4/23/2007																					
Bio-Control <input type="checkbox"/> Insect <input type="checkbox"/> Pathogen <input type="checkbox"/> Parasite Type/Species:																						
Cultural <input type="checkbox"/> Burning <input type="checkbox"/> Grading <input checked="" type="checkbox"/> Seeding <input type="checkbox"/> Fertilizing <input type="checkbox"/> Grazing <input type="checkbox"/> Soil Amendment <input type="checkbox"/> Other	10/8/2007																					
Chemical <input type="checkbox"/> Record Number:	4/27/2007																					
#1 Evaluation and Date																						
#2 Evaluation and Date																						
#3 Evaluation and Date																						



Pesticide Application

Org. Code 465320	County ADAMS	Date of Application 5/2/2005	Start 0730 Finish 1500	<input type="radio"/> AM <input checked="" type="radio"/> PM <input type="radio"/> AM <input checked="" type="radio"/> PM	ICP 018A	Stores Issue Ticket Number(s) B71415
Area SR 395 MP 66 to MP 67 and MP to MP and MP to MP and MP to MP						
Check Appropriate Boxes: <input type="checkbox"/> Roadside <input type="checkbox"/> Landscaped Area <input type="checkbox"/> Interchange <input type="checkbox"/> Yard/Stockpile <input checked="" type="checkbox"/> Spot Spray <input type="checkbox"/> Aquatic <input type="checkbox"/> NE <input type="checkbox"/> EB <input type="checkbox"/> Shoulder <input checked="" type="checkbox"/> Rest Area <input type="checkbox"/> Bridge <input type="checkbox"/> Blanket Spray <input type="checkbox"/> Wetlands <input type="checkbox"/> SB <input type="checkbox"/> WB <input type="checkbox"/> Median <input type="checkbox"/> Park-n-Ride <input type="checkbox"/> Ramp						
<input checked="" type="checkbox"/> Weeds <input checked="" type="checkbox"/> Noxious Weeds <input type="checkbox"/> Disease <b>Zone 1</b> <input type="radio"/> yes <input type="radio"/> no <input type="checkbox"/> Brush <input type="checkbox"/> Insects <input type="checkbox"/> Other List Pest(s): <u>KNAPWEED--BROADLEAF--HATTON REST AREA</u>						
Start Weather Conditions Temperature <u>48</u> °F (°C) Wind (Direction From) <u>NE</u> Wind (Range) <u>1-2</u> mph (km/h) <input type="radio"/> Sunny <input type="radio"/> Broken <input checked="" type="radio"/> Overcast No Rain <input type="radio"/> Light Scattered Showers <input type="radio"/> Hard Showers						
Finish Weather Conditions Temperature <u>62</u> °F (°C) Wind (Direction From) <u>SW</u> Wind (Range) <u>2-4</u> mph (km/h) <input type="radio"/> Sunny <input type="radio"/> Broken <input checked="" type="radio"/> Overcast No Rain <input type="radio"/> Light Scattered Showers <input type="radio"/> Hard Showers						
Tank No.	Material Name	Material Type	EPA Reg. No.	Lot Number	Product For Acres (Inches)	Unit Total Daily Usage Unit
1	Water		-----	RITZVILLE	100	Gal 300 Gal
1	Amine 4	Pesticide	34704-120	04PW43394	128	Oz 384 Oz
1	Transline	Pesticide	62719-73	MF06161103	6	Oz 18 Oz
1	Freeway	Adjuvant	-----		7	Oz 21 Oz
Total <u>3</u> Acres (hectares) Treated at <u>100</u> gallons (liters) of spray per acre (hectare).						
Equipment Number 5G36-14	Tank Size 1 225 3 5	Calibration Date -----	Vehicle Speed .... mph (km/h)	Nozzle Pressure 25 PSI (kPa)	Width of Spray Pattern ..... Feet (meters)	
<input type="checkbox"/> Hand sprayer <input checked="" type="checkbox"/> Boom <input type="checkbox"/> Backpack <input type="checkbox"/> Fixed Nozzle <input type="checkbox"/> Other (Specify) _____				<input checked="" type="checkbox"/> Tank Mix (Cont.) <input type="checkbox"/> Injection <input type="checkbox"/> Invert		
Operator Name ARTHUR F. SANGER	Operator Pesticide License No. 36911	Operator Signature		Driver Name C SWEET		
Remarks				Buffer Involvement Driver's Name		
				Pesticide Sensitivity Expectation Apply: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
				Contact _____ _____		
Division of Emergency Management (1-800-258-5990)				Additional Notes		

DOT Form 540-506 E7  
Revised 1/2007

Distribution: OSC Mand Operator Region File  
Send OSC Copy Within 5 Days

Oz=Ounces Dry L=Pound  
Oz=Liquor Liquid Gal=Gallon  
P=Pint Q=Quart g=gram kg=kilogram  
ml=Milliliter L=Liter

# Appendix F

## STAKEHOLDER LIST

City of Davenport.....	PO Box 26 Davenport, WA 99122 (509) 721-1459
City of Wilbur .....	9 NE Division Wilbur WA, 99185 Jim Pope (509) 647-5821
City of Creston .....	100 SW Creston Ave. Creston, WA 99117 (509) 636-3145
City of Ritzville .....	216 E. Main Ave. Ritzville, WA 99169 David McCormick (509) 659-1313
City of Reardan.....	120 Oak St. S. Reardan, WA 99029 (509) 796-3921
City of Sprague .....	119 W. 2 <sup>nd</sup> St. Sprague, WA 99032 (509) 257-2662
City of Harrington.....	P.O. Box 291 Harrington, WA 99134 (509) 253-4781
City of Odessa .....	101 E. First Ave. Odessa, WA 99159 Roger Sebesta (509) 982-2201
City of Almira .....	19 North Third Almira, WA 99103 (509) 639-2601
Adams County Noxious Weed Control Board .....	201 E. Broadway Ritzville, WA 99169 Sue Sackman (509) 659-1800
Lincoln County Noxious Weed Control Board .....	PO Box 241 Davenport, WA 99122 Kevin Hupp (509) 725-3646
US Fish and Wildlife .....	11103 E Montgomery Dr, Spokane Valley, WA 99206 (509) 921-0160

## **Appendix F**

Washington State Department of Fish and Wildlife.....	315 N. Discovery Place Spokane, WA 99216 (509) 892-1001
Washington State Department of Ecology .....	N. 4601 Monroe Spokane, WA 99205 Dani Gilbert
Lake Roosevelt National Recreation Area .....	1008 Crest Drive Coulee Dam, WA 99116  Park Headquarters (509) 633-9441  Fort Spokane District Office (509) 633-9441
Adams County Public Works .....	210 W. Alder Ritzville, WA 99169 (509) 659-3276
Lincoln County Public Works .....	27234 SR 25 N. Davenport, WA 99122 (509) 725-7041