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Appendix A  Integrated Vegetation Management Prescriptions
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Summary

The Washington State Department of Transportation (WSDOT) manages approximately 1000 miles of roadside right-of-way throughout Okanogan, Chelan and Douglas Counties. This right-of-way is part of the state highway system including US 97, SR-20, US-2, SR 155, SR 153, SR 17 in addition to a number of other state routes.

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

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

- 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 North Central Region, Area 3 IVM Plan is available at the following link [http://www.wsdot.wa.gov/Maintenance/Roadside](http://www.wsdot.wa.gov/Maintenance/Roadside) or available in hard copy upon request. Please contact Dean Hills, or James Morin at the numbers listed below for questions or comments.

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North Central Region, Area 3
Vicinity Map
Figure 1
Program Goals

The purpose of this section is to identify the short and long term operational goals within NCR, 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 (2006-2010)
Long-term goals should be achievable within a 5 year period of time and have clearly stated objectives. Long-term goals may be general in nature and should provide direction for short term operational goals.

- **General Weed Control**
  1. Improve consistency and predictability in Vegetation Management (VM) program.
  2. Maintain good communication with County Weed Boards
  3. Revegetate disturbed soil as it occurs
  4. Revegetate 5 acres a year focusing on heavy weed infestations.

- **Noxious Weed Control 3A2  Map Target: B**
  1. Improve consistency and predictability in noxious weed control program

- **Nuisance Weed Control 3A3  Map Target B-**
  1. Nuisance weeds will only be controlled incidental to noxious weed control

- **Obstructions 3A4- Map Target: B-**
  1. Maintain hardware, intersections and low site distance locations to be free of vegetation obstructions.
  2. Reduce Zone 1 bareground by 10% yearly through 2010

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 2450 acres of roadside with selective herbicides for designate noxious weed control
  2. Mow approximately 20 acres of noxious weeds.
  3. Continue investment in biological control to target Spotted and Diffuse Knapweed and Dalmatian Toadflax infestations.

- **Nuisance Weed Control 3A3- Map Target: B-**
  1. Nuisance weeds will only be controlled incidentally to noxious weed control

- **Obstructions 3A4- Map Target: B-**
  1. Apply approximately 75 acres of Bareground
  2. Mow approximately 30 acres to control obstructions?
  3. Hand trim approximately 4 acres
  4. Remove approximately 30 danger trees
Long-Range Work Plan (2010-2015)

The purpose of this section is to identify the short and long term operational goals within NCR, 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 (2010-2015)
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) program.
  2. Maintain good communication with County Weed Boards
  3. Revegetate disturbed soil as it occurs
  4. Revegetate 5 acres a year, focusing on heavy weed infestations.

- **Noxious Weed Control 3A2**
  1. Improve consistency and predictability in noxious weed control program

- **Nuisance Weed Control 3A3**
  1. Nuisance weeds will only be controlled incidental to noxious weed control

- **Obstructions 3A4**
  1. Maintain hardware, intersections and low site distance locations to be free of vegetation obstructions.
  2. Continue to evaluate the need for zone 1 bareground throughout the maintenance area.
Annual Work Plan (2010)

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

- **Noxious Weed Control 3A2-**
  1. Treat an estimated 2450 acres of roadside with selective herbicides for designate noxious weed control. *Accomplished 2595 acres*
  2. Mow approximately 20 acres of noxious weeds. *Accomplished approximately 130 acres*
  3. Continue investment in biological control to target Spotted and Diffuse Knapweed and Dalmatian Toadflax infestations. *Accomplished*

- **Nuisance Weed Control 3A3-**
  1. Nuisance weeds will only be controlled incidentally to noxious weed control as resources become available.

- **Obstructions 3A4-**
  1. Apply approximately 75 acres of bareground. *Accomplished 125 acres*
  2. Mow approximately 30 acres to control obstructions.
  3. Hand trim approximately 4 acres
  4. Remove approximately 30 danger trees. *Accomplished approximately 89 trees*
Annual Work Plan (2011)

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

- **Noxious Weed Control 3A2**
  1. Treat an estimated **3000** acres of roadside with selective herbicides for designate noxious weed control. *Accomplished 2577 acres*
  2. Mow approximately **130** acres of noxious weeds. *Accomplished approximately 44 acres*
  3. Continue investment in biological control to target Spotted and Diffuse Knapweed and Dalmatian Toadflax infestations. *Partially Accomplished*

- **Nuisance Weed Control 3A3**
  1. Nuisance weeds will only be controlled incidentally to noxious weed control as resources become available.

- **Obstructions 3A4**
  1. Apply approximately **125** acres of bareground. *Accomplished approximately 95 acres*
  2. Mow approximately **30** acres to control obstructions. *Accomplished approximately 5 acres*
  3. Hand trim approximately **4** acres
  4. Remove approximately **75-100** danger trees. *Accomplished 72 trees*
Annual Work Plan (2012)

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

- **Noxious Weed Control 3A2**
  1. Treat an estimated 3000 acres of roadside with selective herbicides for designate noxious weed control. Accomplished 2695 acres
  2. Mow approximately 130 acres of noxious weeds. Accomplished 53 acres, adjust this down, most of mowing should fall within obstructions.
  3. Continue investment in biological control to target Spotted and Diffuse Knapweed and Dalmatian Toadflax infestations. Considered but not needed at this time.

- **Nuisance Weed Control 3A3**
  1. Nuisance weeds will only be controlled incidentally to noxious weed control as resources become available.

- **Obstructions 3A4**
  1. Apply approximately 125 acres of bare-ground. Accomplished 63 acres
  2. Apply approximately 100 acres for control of vegetation obstructions. Accomplished 181 acres
  3. Mow approximately 30 acres to control obstructions Accomplished 57 acres, this should be adjusted up to account for brush control on Loup-Loup and
  4. Hand trim approximately 4 acres Accomplished 1211 each (I suspect that this was recorded as “each” instead of acres.
  5. Remove approximately 75-100 dead or dying trees from the right-of-way. Accomplished 575 trees; this number needs to be revised up to keep up with number of trees that need to be removed from the ROW.
**Annual Work Plan (2013)**

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

- **Noxious Weed Control 3A2-**
  1. Treat an estimated 3000 acres of roadside with selective herbicides for designate noxious weed control. **Accomplished 3948 acres** - Increased acreage due to
  2. Mow approximately 100 acres of noxious weeds. **Accomplished**
  3. Continue investment in biological control to target Spotted and Diffuse Knapweed and Dalmatian Toadflax infestations. **Accomplished**

- **Nuisance Weed Control 3A3-**
  1. Nuisance weeds will only be controlled incidentally to noxious weed control as resources become available.

- **Obstructions 3A4-**
  1. Apply approximately 125 acres of bare ground. **Accomplished 322 Acres** - acreage increased for 2013 due to increased bare-ground need on SR 155 as well as several other roads that had heavy stands of tall wheat grass that were occluding the guide posts and causing general site distance problems. A narrow 3' bare-ground application will now be applied in these locations.
  2. Mow approximately 70 acres to control obstructions. **Accomplished**
  3. Hand trim 4-5 acres brush. **Accomplished**
  4. Remove approximately 200 dead or dying trees from the right-of-way. **Accomplished**
Annual Work Plan (2014)

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

- **Note:** The Carlton Complex Fire started July 17, 2014 and continued to burn throughout much of this maintenance area through the month of August. Substantial damage occurred throughout the US-97, US-20 and SR-153. The fire has greatly impacted crew availability and normal work routines. There will undoubtedly be other issues such as slides, risk tree removal, revegetation needs and increased weed pressure in these road sections.

- **Noxious Weed Control 3A2-**
  1. Treat an estimated 3500 acres of roadside with selective herbicides for designate noxious weed control.
  2. Mow approximately 100 acres of noxious weeds.
  3. Continue investment in biological control to target Spotted and Diffuse Knapweed and Dalmatian Toadflax infestations.

- **Nuisance Weed Control 3A3-**
  1. Nuisance weeds will only be controlled incidentally to noxious weed control as resources become available.

- **Obstructions 3A4-**
  1. Apply approximately 400 acres of bare ground in support of obstructions on guardrail sections, roadides, intersections and pits. Guardrail sections and roadside zone 1 treatments will be 2’ in band-width unless specifically stated otherwise. Bare-ground will be applied to the following locations.
    - SR-155 MP. 0-45, Coulee City to Nespelem
    - Hwy 2 MP 163 to 208, from Farmer to Lincoln Co. line
    - SR-17 MP. 87-136, Blue Lake to Bridgeport
    - SR-172 MP. 0-35
    - SR-174 MP. 0-24
    - SR-153 MP. 0-31, Pateros to Twisp
    - Pits sites- treat as needed
  2. Mow approximately 150 acres to control obstructions- this consists of mowing for drift control in high drift areas, zone 1 edge of pavement mowing and mowing intersections where sight distance is known to be a problem.
  3. Hand trim 4-5 acres brush
  4. Remove approximately 200 dead or dying trees from the right-of-way
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/fulltext/M25-31/RCP.pdf

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 NC 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**

**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 509.826.7364.

**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

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, June 2014).

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:
- No projects planned at this time.

WSDOT North Central Region Projects Link:  
http://www.wsdot.wa.gov/regions/northcentral/projects/

Below is a list of permitted utility projects in the North Central Region, Area 3 that are scheduled for construction within the next 2-4 years.
- There are no utility construction contracts planned for the near future.
Continuously Monitor Roadside Vegetation

Identify Problem Areas

Evaluate treatment options including Chemical-Mechanical-Biological-Cultural

Establish Treatment Plan

Treat Problem Area

Monitor Treatments

Treatment Effective

Document Results In IVM Form

Treatment Ineffective

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 (pg. 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 Bareground)

1.2.1. Policy and objectives

Zone 1 bareground is not present in all locations. When required it is maintained free of vegetation to promote positive surface and subsurface drainage, protect asphalt shoulders from deterioration due to vegetation growth, facilitate preservation and maintenance of roadside hardware (guardrails and delineators), and to minimize fire starts.

The width of the bareground is either 3’or 6’ (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, but does not in any case extend down-slope beyond the edge of the bridge abutment.

Bareground applications may be greater or less than the 3-foot standard width under some circumstances for certain operational functions. Prior to application, the area maintenance superintendent must approve all exceptions to standard width applications. These locations will be included on future updates to the area maps and plan documents.
1.2.2. **Action Thresholds (Zone 1 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 bareground are listed below.

- Sight distance limited by vegetation within zone 1 and designated for control.
- Special safety considerations as approved by the Area Superintendent.

1.2.3. **Methods (timing and procedures)**
Where present bareground will be maintained by an annual application of non-selective residual herbicide applied according to label instructions and in compliance with all state and federal regulations. Bareground applications will not be made during periods of heavy rain or in wind greater than 10 miles per hour.

Applications will be made in the spring typically beginning in March. They will be planned and carried out depending on weather patterns and precipitation events. A fall bareground application is typically applied in the following locations:

- SR-155 MP. 0-45, Coulee City to Nespelem
- Hwy 2 MP 163 to 208, from Farmer to Lincoln Co. line
- SR-17 MP. 87-136, Blue Lake to Bridgeport
- SR-172 MP. 0-35
- SR-174 MP. 0-24
- SR-153 MP. 0-31, Pateros to Twisp
- Pits sites- treat as needed

These applications are made during the fall months in high elevation areas to improve control where snow is present until late in the spring.

1.2.4. **Prescriptions**
See Appendix A Bareground prescriptions, Zone Maintenance

1.2.5. **Locations**
See Appendix C Zone 1 Bareground

1.3. **Mowing Operations**

1.3.1. **Policy and Objectives**
Mowing will be accomplished throughout the NC 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 Area supervisor.

1. **Identify Goals Of Mowing Operation**: Before prescribing mowing as a preferred alternative, it is important to clearly understand what the goals of the operations 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 NC 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**

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

WSDOT prioritizes weed control based on three legally defined weed species classification categories. Chapter 16-750 of the Washington Administrative Code lists weed species in classes A through C. Noxious weeds include all plants listed as class A, and those in classes B and C that are designated for control within each individual county.

**Class A**

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

**Okanogan County**

- Buffalobur (*Solanum rostratum*)
- Meadow clary (*Salvia pratensis*)
- Spurge flax (*Thymelaea passerine*)
- Garlic mustard (*Alliaria petiolata*)
- Syrian bean-caper (*Zygophyllum fabago*)
- Wild four o’clock (*Mirabilis nyctaginea*)

**Class B and C Designate Weeds**

Class B and C weeds are more widespread than Class A, with control mandated by law only if infestations are generally limited and the species are designated within the individual counties by the County Noxious Weed Control Boards. 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 Okanogan, Chelan, Douglas, and Grant Counties, and currently present within WSDOT right-of-way in NC Region, Area 3 include:

**Okanogan County**

- Bugloss, common (*Anchusa officinalis*)
- Hawkweed, oxtongue (*Picris hieraciodes*)
- Hawkweed, mouseear (*Hieracium pilosella*)
- Hawkweed, orange (*Hieracium aurantiacum*)
- Hawkweed, queen-devil (*Hieracium glomeratum*)
- Hawkweed, smooth (*Hieracium laevigatum*)
- Hawkweed, yellow (*Hieracium caespitosum*)
- Hawkweed, tall (*Hieracium piloselloides*)
- Hoary alyssum (*Berteroa incana*)
- Perennial pepperweed (*Lepidium latifolium*)
- Rush skeletonweed (*Chondrilla juncea*)
- Scotch broom (*Cytisus scoparius*)
- Spurge, leafy (*Euphorbia esula*)
- Tansy ragwort (*Senecio jacobaea*)
- Thistle, musk (*Carduus nutans*)
- Thistle, plumeless (*Carduus acanthoides*)
- Thistle, Scotch (*Onopordum acanthium*)
- Velvetleaf (*Abutilon theophrasti*)
- Yellow starthistle (*Centaurea solstitialis*)

**Chelan County**
- Blueweed (*Echium vulgare*)
- Bugloss, common (*Anchusa officinalis*)
- Camelthorn (*Alhagi maurorum*)
- Canada thistle (*Cirsium arvense*)
- Common reed (*Phragmites australis*)
- Dalmatian toadflax (*Linaria dalmatica ssp. dalmatica*)
- Gorse (*Ulex europaeus*)
- Hawkweed, mouseear (*Hieracium pilosella*)
- Hawkweed, orange (*Hieracium aurantiacum*)
- Hawkweed, smooth (*Hieracium laevigatum*)
- Hawkweed, yellow (*Hieracium caespitosum*)
- Hawkweed, tall (*Hieracium piloselloides*)
- Herb-Robert (*Geranium robertianum*)
- Hoary alyssum (*Berteroa incana*)
- Hoary cress (*Cardaria draba*)
- Houndstongue (*Cynoglossum officinale*)
- Indigobush (*Amorpha fruticosa*)
- Knapweed, meadow (*Centaurea jacea x nigra*)
- Knapweed, Russian (*Acroptilon repens*)
- Knapweed, spotted (*Centaurea stoebe*)
- Knotweed, Bohemian (*Polygonum x bohemicum*)
- Knotweed, giant (*Polygonum sachalinense*)
- Knotweed, Himalayan (*Polygonum polystachyum*)
- Knotweed, Japanese (*Polygonum cuspidatum*)
- Kochia (*Kochia scoparia*)
- Loosestrife, garden (*Lysimachia vulgaris*)
- Loosestrife, purple (*Lythrum salicaria*)
- Oxeye daisy (*Leucanthemum vulgare*)
- Perennial pepperweed (*Lepidium latifolium*)
- Poison hemlock (*Conium maculatum*)
- Policeman’s helmet (*Impatiens glandulifera*)
- Puncturevine (*Tribulus terrestris*)
- Rush skeletonweed (*Chondrilla juncea*)
- Saltcedar (*Tamarix ramosissima*)
- Scotch broom (*Cytisus scoparius*)
- Spurge laurel (*Daphne laureola*)
- Spurge, leafy (*Euphorbia esula*)
- Spurge, myrtle (*Euphorbia myrsinites*)
- St. Johnswort (*Hypericum perforatum*)
- Sulfur cinquefoil (*Potentilla recta*)
- Tansy ragwort (*Senecio jacobaea*)
- Thistle, musk (*Carduus nutans*)
- Thistle, plumeless (*Carduus acanthoides*)
- Thistle, Scotch (*Onopordum acanthium*)
- Velvetleaf (*Abutilon theophrasti*)
- Water primrose (*Ludwigia hexapetala*)
- White bryony (*Bryonia alba*)
- Wild chervil (* Anthriscus sylvestris*)
- Willow-herb, hairy (*Epilobium hirsutum*)
- Yellow archangel (*Lamiastrum galeobdolon*)
- Yellow nutsedge (*Cyperus esculentus*)
- Yellow starthistle (*Centaurea solstitialis*)

**Douglas County**
- Blueweed (*Echium vulgare*)
- Bugloss, annual (*anchusa arvensis*)
- Bugloss, common (*Anchusa officinalis*)
- Butterfly bush (*Buddleja davidii*)
- Camelthorn (*Alhagi maurorum*)
- Common reed (*Phragmites australis*)
- Hawkweed, mouseear (*Hieracium pilosella*)
- Hawkweed, orange (*Hieracium aurantiacum*)
- Hawkweed, smooth (*Hieracium laevigatum*)
- Hawkweed, yellow (*Hieracium caespitosum*)
- Hawkweed, tall (*Hieracium piloselloides*)
- Herb-Robert (*Geranium robertianum*)
- Hoary alyssum (*Berteroa incana*)
- Houndstongue (*Cynoglossum officinale*)
- Indigobush (*Amorpha fruticosa*)
- Knapweed, meadow (*Centaurea jacea x nigra*)
- Knapweed, Russian (*Acroptilon repens*)
- Knapweed, spotted (*Centaurea stoebe*)
- Knotweed, Bohemian (*Polygonum x bohemicum*)
- Knotweed, giant (*Polygonum cuspidatum*)
- Knotweed, Himalayan (*Polygonum polystachyum*)
- Knotweed, Japanese (*Polygonum sachalinense*)
- Kochia (*Kochia scoparia*)
- Loosestrife, garden (*Lysimachia vulgaris*)
- Perennial pepperweed (*Lepidium latifolium*)
- Poison hemlock (*Conium maculatum*)
- Policeman's helmet (*Impatiens glandulifera*)
- Rush skeletonweed (*Chondrilla juncea*)
- Saltcedar (*Tamarix ramosissima*)
- Scotch broom (*Cytisus scoparius*)
- Spurge, leafy (*Euphorbia esula*)
- Spurge, myrtle (*Euphorbia myrsinoides*)
- Sulfur cinquefoil (*Potentilla recta*)
- Tansy ragwort (*Senecio jacobaea*)
- Thistle, musk (*Carduus nutans*)
- Thistle, plumeless (*Carduus acanthoides*)
- Thistle, Scotch (*Onopordum acanthium*)
- Velvetleaf (*Abutilon theophrasti*)
- Water primrose (*Ludwigia hexapetala*)
- White bryony (*Bryonia alba*)
- Wild chervil (Anthriscus sylvestris)
- Willow-herb, hairy (Epilobium hirsutum)
- Yellow archangel (Lamiastrum galeobdolon)
- Yellow nutsedge (Cyperus esculentus)
- Yellow starthistle (Centaurea solstitialis)

**Grant County**
- Austrian fieldcress (Rorippa austriaca)
- Black henbane (Hyoscyamus niger)
- Blackgrass (Alopecurus myosuroides)
- Bugloss, annual (Anchusa arvensis)
- Bugloss, common (Anchusa officinalis)
- Bull thistle (Cirsium vulgare)
- Butterfly bush (Buddleja davidii)
- Camelthorn (Alhagi maurorum)
- Canada Thistle (Cirsium arvense)
- Cereal Rye (Secale cereal)
- Common barberry (Berberis vulgaris)
- Common groundsel (Senecio vulgaris)
- Common reed (Phragmites australis)
- Common tansy (Tanacetum vulgare)
- Common teasel (Dipsacus fullonum)
- Dalmatian toadflax (Linaria dalmatica ssp. dalmatica)
- Field bindweed (Convolvulus arvensis)
- Hawkweed, mouseear (Hieracium pilosella)
- Hawkweed, orange (Hieracium aurantiacum)
- Hawkweed, yellow (Hieracium caespitosum)
- Hawkweed, tall (Hieracium piloselloides)
- Herb-Robert (Geranium robertianum)
- Hoary alyssum (Berteroa incana)
- Hoary cress (Lepidium draba L.)
- Houndstongue (Cynoglossum officinale L.)
- Indigobush (Amorpha fruticosa)
- Jointed goatgrass (Aegilops cylindrical)
- Knapweed, diffuse (Centaurea diffusa)
- Knapweed, meadow (Centaurea jacea x nigra)
- Knapweed, Russian (Acroptilon repens)
- Knapweed, spotted (Centaurea stoebe)
- Knotweed, Bohemian (Polygonum x bohemicum)
- Knotweed, giant (Polygonum sachalinense)
- Knotweed, Himalayan (Polygonum polystachyum)
- Knotweed, Japanese (Polygonum cuspidatum)
- Kochia (Kochia scoparia)
- Lepyrodictis (Lepyrodictis holostoeoides)
- Longspine sandbur (Cenchrus longispinus)
- Loosestrife, garden (Lysimachia vulgaris)
- Loosestrife, purple (Lythrum salicaria)
- Oxeye daisy (Leucanthemum vulgare)
- Perennial pepperweed (Lepidium latifolium)
- Perennial sowthistle (Sonchus arvensis ssp. Arvensis)
- Poison hemlock (Conium maculatum)
- Policeman’s helmet (Impatiens glandulifera)
- Puncturevine (Tribulus terrestris)
• Rush skeletonweed (*Chondrilla juncea*)
• Saltcedar (*Tamarix ramosissima*)
• Scentless mayweed (*Matricaria perforata*)
• Scotch broom (*Cytisus scoparius*)
• Smoothseed alfalfa dodder (*Cuscuta approximate*)
• Spikeweed (*Hemizonia pungens*)
• Spurge, leafy (*Euphorbia esula*)
• Spurge, myrtle (*Euphorbia myrsinites*)
• St. Johnswort (*Hypericum perforatum*)
• Sulfur cinquefoil (*Potentilla recta*)
• Swainsongea (*Sphaerophysa salsula*)
• Tansy ragwort (*Senecio jacobaea*)
• Thistle, musk (*Carduus nutans*)
• Thistle, plumeless (*Carduus acanthoides*)
• Thistle, Scotch (*Onopordum acanthium*)
• Water primrose (*Ludwigia hexapetala*)
• White bryony (*Bryonia alba*)
• White cockle (*Silene latifolia ssp. Alba*)
• Wild carrot (*Daucus carota*)
• Wild chervil (*Anthriscus sylvestris*)
• Willow-herb, hairy (*Epilobium hirsutum*)
• Yellow archangel (*Lamiastrum galeobdolon*)
• Yellow flag iris (*Iris pseudacorus*)
• 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 2.2 of this document.
- Biological: Biological controls are being used widely throughout WSDOT within the operating right-of-way. It is important to consider climate, level of infestation and available control species when selecting an appropriate biological control. It is also imperative that biocontrols be placed in an area that won’t be adversely effected by mechanical or chemical control methods.
- Revegetation/Enhancement: A variety of other measures may be taken to promote natural vegetative competition through seeding, planting, and soil enhancement. Documentation of these methods and related success is essential to the success of long-term control measures. IVM forms will be completed for each of these sites and are located in Appendix E.

1.4.3. Action Thresholds
The action threshold for noxious weed control is met whenever a noxious weed is present on WSDOT right-of-way. WSDOT is required by state law to control and prevent the spread of all noxious weeds on WSDOT right-of-way.
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 NC Region, Area 3 as part of the overall Integrated Vegetation Management process. Priority control measures will be given to new infestations where there is a greater chance of control prior to continued invasion into healthy stands of existing vegetation. In some cases, where practical, nuisance weed infestations may be treated in conjunction with treatment of noxious weeds.

For established infestations currently identified in this plan, weed populations will be contained and gradually reduced by applying appropriate vegetation management prescriptions. Control options range from manual cutting, mechanical removal, 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 NC 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, however, WSDOT is not required to control these plants.
- Baby’s Breath (Gypsophila paniculata)
- China Lettuce (Lactuca serriola)
- Common Mullen (Verbascum thapsus)
- Field Mustard (Brassica campestris)
- Mares Tail (Conyza canadensis)
- Milk Weed (Asclepiadaceae)
- Mustard Species
- Teasel (Dipsacus sylvestris)
- Tumblemustard (Sisymbrium altissimum)

Nuisance weeds targeted for control in this area include:
- Russian Thistle (Salsola iberica sennen)
- Kochia (Kochia scoparia)
- Knapweeds (Centaurea)
- Canada Thistle (Cirsium arvense)

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

1.5.3. Methods
Control measures for nuisance weed 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, biological control and establishment and/or encouragement of native vegetation.

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

- Impact to adjacent land owners
- Impact to desirable vegetation
- 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, reducing snow drifting, and preventing trees with large trunk diameter from growing too close to traffic lanes.

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

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

- Mowing: In many cases it is effective to mow back the majority of the existing vegetation to the outside edge of zone 2, then follow with spot mowing or herbicide treatments of undesirable species as needed, leaving desirable species to form a competitive cover.
- Hand Cutting: When possible, 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 the area maintenance staff. Hazard trees may be:

- Dead
- Diseased
- Leaning or
- Structurally damaged or unsound
- Shading by trees, in some cases, can cause excessive frost problems on roadway surfaces. 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 principal residence is within one-half mile of the application. Concerned individuals can obtain further information by contacting the area maintenance office in Okanogan at 509.826.7364.

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 E, Special Maintenance Areas, Table 3.0.
2.3. Environmentally Sensitive Areas

2.3.1. Policy and Objectives
As a state agency, WSDOT is committed to conducting its activities in accordance with the dictates of sound environmental protection practices. This includes 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 NC Region, Area 3 to mitigate impacts from highway operation through the establishment of naturally self-sustaining plant communities in these areas, practices will not vary within these designated areas.

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

2.3.2. Locations
Environmentally sensitive areas are identified in the field with green guideposts and identified in an area atlas. For more information on the Regional Road Maintenance ESA Program Guidelines refer to: http://www.wsdot.wa.gov/maintenance/roadside/esa.htm or contact Gregor 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.
2.4.3. Locations table by MP
See Appendix E, Special Maintenance Areas, Table 3.0

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

2.5.2. Locations table by Milepost
See Appendix E, Special Maintenance Areas, Table 3.0
## NC Region Area 3 - IVM Prescriptions

### Zone 1 Bare-Ground

#### Zone 1 Bare-Ground Maintenance - Annual Cycle

<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>Where needed on site specific areas or guardrail sections</td>
<td>1'-4' area free of vegetation</td>
<td>Annual herbicide application</td>
<td>Spray truck w/ fixed nozzle mounted 18&quot; from ground</td>
<td>Non-selective residual herbicide: Perspective @ 10 ozd. Oust/SFM 75 @ 3 ozd. No Buffer Limitations</td>
<td>Spring March/April</td>
<td>Monitor</td>
</tr>
</tbody>
</table>

Where needed on site specific areas or guardrail sections  
Beware of Tree Damage

### Zone 1 Bare-Ground Maintenance - Annual Cycle

<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>Where needed on site specific areas or guardrail sections</td>
<td>1'-4' area free of vegetation</td>
<td>Annual herbicide application</td>
<td>Spray truck w/ fixed nozzle mounted 18&quot; from ground</td>
<td>Non-selective residual herbicide: Perspective @ 10 ozd. Esplanade @ 5 ozd. No Buffer Limitations</td>
<td>Spring March/April</td>
<td>Monitor</td>
</tr>
</tbody>
</table>

### Zone 1 Bare-Ground Maintenance - Annual Cycle

<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>Where needed on site specific areas or guardrail sections</td>
<td>1'-4' area free of vegetation</td>
<td>Annual herbicide application</td>
<td>Spray truck w/ fixed nozzle mounted 18&quot; from ground</td>
<td>Non-selective residual herbicide: Krovar DF @ 8 lbs. Oust/SFM @ 3 ozd. Inplace 16 oz. No Spray Within 60' of Water</td>
<td>Spring March/April</td>
<td>Monitor</td>
</tr>
</tbody>
</table>

### Zone 1 Bare-Ground Maintenance - Annual Cycle

<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>Where needed on site specific areas or guardrail sections</td>
<td>1'-4' area free of vegetation</td>
<td>Annual herbicide application</td>
<td>Spray truck w/ fixed nozzle mounted 18&quot; from ground</td>
<td>None-selective residual herbicide: Payload @ 8 oz. Oust/SFM 75 @ 3 ozd. No Buffer Limitations</td>
<td>Spring March/April</td>
<td>Monitor</td>
</tr>
</tbody>
</table>
**Appendix A**

**IVM Prescriptions**

**NC Region Area 3 - IVM Prescriptions**

**Noxious Weed Control**

### Chemical Control

#### Noxious Weed Control - General Weed Control (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>After emergence</td>
<td>Eradication and control of listed noxious weeds.</td>
<td>Spot/Band</td>
<td>Truck mounted injection sprayer</td>
<td>E-2 @ 32-48 oz/L, Super Spread 90 @ 32 oz per 100 gallons carrier</td>
<td>Early growing season, first/second flush</td>
<td>Reapply as necessary, Seed and fertilize to reduce weed competition.</td>
</tr>
</tbody>
</table>

#### Noxious Weed Control - General Weed Control (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>Zones 2-3</td>
<td>As soon as plants appear</td>
<td>Selective eradication and control of listed noxious weeds.</td>
<td>Spot treatment with herbicide most effective</td>
<td>Tank sprayer equipped with Invert system, Injection system</td>
<td>Veteran 720 @ 64 Oz/L, Escort @ 5/8 oz/L, Super Spread 90 @ 32 oz per 100 gallons carrier</td>
<td>Early growing season, first/second flush</td>
<td>Reapply as necessary, Seed and fertilize to reduce weed competition.</td>
</tr>
</tbody>
</table>

#### Noxious Weed Control - General Weed Control (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</td>
<td>After emergence</td>
<td>Eradication and control of listed noxious weeds.</td>
<td>Spot/Band</td>
<td>Truck mounted injection sprayer</td>
<td>Perspective @ 5 oz/L, Super Spread 90 @ 32 oz per 100 gallons carrier</td>
<td>Early growing season, first/second flush</td>
<td>Reapply as necessary, Seed and fertilize to reduce weed competition.</td>
</tr>
</tbody>
</table>

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

<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>Eradication and control of listed noxious weeds.</td>
<td>Herbicide</td>
<td>Labor, transportation</td>
<td>Milestone @ 7 oz/L, Super Spread 90 @ 32 oz per 100 gallons carrier</td>
<td>Early growing season</td>
<td>Repeat as necessary, Seed and fertilize to reduce weed competition.</td>
</tr>
</tbody>
</table>

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

<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>Eradication and control of listed noxious weeds.</td>
<td>Spot treatment with herbicide</td>
<td>Backpack sprayer, pickup, etc.</td>
<td>Milestone @ 5 oz/L, Syl-Tac @ 16 oz/L per 100 gallons carrier</td>
<td>Early growing season</td>
<td>Reapply as necessary, Seed and fertilize to reduce weed competition.</td>
</tr>
</tbody>
</table>
### Appendix A

### IVM Prescriptions

#### North Central Region, Area 3 - IVM Prescriptions

### Noxious Weed Control

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

<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>Eradication and control of listed noxious weeds.</td>
<td>Spot treatment w/ herbicide</td>
<td>Backpack sprayer or spray bottle, pickup, etc.</td>
<td>Milestone @ 5 oz. Super Spread 90 @ 32 oz per 100 gallons carrier</td>
<td>Early Season</td>
<td>Repeat as necessary. Seed and fertilize to reduce weed competition.</td>
</tr>
</tbody>
</table>

#### Noxious Weed Control - Dalmatian Toadflax - Plant Emergence (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>Eradication and control of listed noxious weeds.</td>
<td>Spot treatment w/ herbicide</td>
<td>Backpack sprayer, pickup, etc.</td>
<td>Escalade @ 48 ozl Syl-Tac @ 16 oz per 100 gallons carrier</td>
<td>Early growing season</td>
<td>Reapply as necessary. Seed and fertilize to reduce weed competition.</td>
</tr>
</tbody>
</table>

#### Noxious Weed Control - Dalmatian Toadflax - Plant Emergence (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>Eradication and control of listed noxious weeds.</td>
<td>Spot treatment w/ herbicide</td>
<td>Backpack sprayer, pickup, etc.</td>
<td>Tordon 22k @ 32 ozl Telar @ 1 ozl Syl-Tac @ 16 oz per 100 gallons carrier</td>
<td>Early growing season</td>
<td>Reapply as necessary. Seed and fertilize to reduce weed competition.</td>
</tr>
</tbody>
</table>

#### Noxious Weed Control - Poison Hemlock

<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>Eradication and control of listed noxious weeds.</td>
<td>Spot treatment w/ herbicide</td>
<td>Backpack sprayer, pump sprayer</td>
<td>Veteran 720 @ 64 ozl Super Spread 90 @ 32 oz per 100 gallons carrier</td>
<td>Late spring to fall</td>
<td>Reapply as necessary. Seed and fertilize to reduce weed competition.</td>
</tr>
</tbody>
</table>

#### Noxious Weed Control - Broadleaves in Reseeded Areas - Under 2” (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>Eradication and control of listed noxious weeds.</td>
<td>Band application</td>
<td>Tank sprayer</td>
<td>Buctril @ 24 oz Super Spread 90 @ 32 oz per 100 gallons carrier</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” (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>Eradication and control of listed noxious weeds.</td>
<td>Band application</td>
<td>Tank sprayer</td>
<td>Buctril @ 20 ozl Vista @ 16 ozl Vanquish @ 2-4 ozl Super Spread 90 @ 32 oz per 100 gallons carrier</td>
<td>Early Season</td>
<td>Repeat as necessary. Seed and fertilize to reduce weed competition.</td>
</tr>
</tbody>
</table>
## Appendix A

### IVM Prescriptions

#### NC Region Area 3 - IVM Prescriptions

## Noxious Weed Control

### Mechanical Control

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

<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>Before seed</td>
<td>Reduce seed production listed noxious weeds.</td>
<td>Mow</td>
<td>Mower</td>
<td>None</td>
<td>Late fall</td>
<td>Repeat as necessary</td>
</tr>
</tbody>
</table>

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

<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>2' to 6'</td>
<td>Eradication</td>
<td>Dig up plant</td>
<td>Shovel</td>
<td>N/A</td>
<td>All season</td>
<td>Monitor for reemergence</td>
</tr>
</tbody>
</table>

### Biological Control

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

<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>Flowering</td>
<td>Reduce/control host plant</td>
<td>Biological</td>
<td>None</td>
<td>Larinus minutus</td>
<td>Spring</td>
<td>Monitor and repeat or redeploy as needed</td>
</tr>
</tbody>
</table>

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

<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 plans appear</td>
<td>Reduce/control host plant</td>
<td>Biological</td>
<td>None</td>
<td>Eustenopus villosus</td>
<td>Spring</td>
<td>Monitor and repeat or redeploy as needed</td>
</tr>
</tbody>
</table>

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

<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 plans appear</td>
<td>Reduce/control host plant</td>
<td>Biological</td>
<td>None</td>
<td>Agonopterix alstroemeriana</td>
<td>Spring</td>
<td>Monitor and repeat or redeploy as needed</td>
</tr>
</tbody>
</table>

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

<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 plans appear</td>
<td>Reduce/control host plant</td>
<td>Biological</td>
<td>None</td>
<td>Macinus Jenthus</td>
<td>Spring</td>
<td>Monitor and repeat or redeploy as needed</td>
</tr>
</tbody>
</table>
## Appendix A  
IVM Prescriptions

### NC Region Area 3 - IVM Prescriptions

#### Tree and Brush Control

<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 seedlings become visible w/in 30' of fog line (no guardrail present)</td>
<td>Control of trees that may impact roadside function if allowed to grow.</td>
<td>Selective foliar treatment w/ herbicide</td>
<td>Truck mounted sprayer where possible, backpack sprayer where necessary</td>
<td>Garlon 3A w/ Redi-vert at label rate, Krenite S on alder at recommended label rates</td>
<td>Late fall to avoid brown out</td>
<td>Reapply as necessary, seed and fertilize to reduce weed competition. See Appendix B</td>
</tr>
</tbody>
</table>

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

<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 or have potential to grow and fall on the highway</td>
<td>Control of trees that may impact roadside function if allowed to grow.</td>
<td>Hand cutting, treatment of cut surface w/ herbicide Chip debris in zone 2</td>
<td>Power saws, loppers, chipper, backpack or hand-held sprayer</td>
<td>Garlon 4 at label rate for cut-stump treatment</td>
<td>Anytime</td>
<td>Reapply as necessary.</td>
</tr>
</tbody>
</table>

**Tree and Brush Control - Conifers (trees under 2' ht.)**

<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 1 or 2</td>
<td>As soon as seedlings become visible w/in 30' of fog line (no guardrail present)</td>
<td>Control of trees that may impact roadside function if allowed to grow.</td>
<td>Foliar treatment w/ herbicide</td>
<td>Tank sprayer where possible, backpack sprayer where necessary</td>
<td>Garlon 4, Escort, or Krenite S at labeled rates apply w/ Redi-vert when possible</td>
<td>Mid summer when new growth is present</td>
<td>Reapply as necessary, seed and fertilize to reduce weed competition. See Appendix B</td>
</tr>
</tbody>
</table>

**Tree and Brush Control - Conifers (trees over 2' ht.)**

<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 or 3</td>
<td>Whenever tree has been identified as defective or likely to fall on the highway</td>
<td>Control of trees that may impact roadside function if allowed to grow.</td>
<td>Hand pulling transplant if possible</td>
<td>Weed Wrench optional</td>
<td>Mechanical</td>
<td>Anytime</td>
<td>Reapply as necessary. Seed and fertilize to reduce weed competition. See Appendix B</td>
</tr>
</tbody>
</table>

**Tree and Brush Control - Conifers (trees over 6' ht.)**

<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 seedlings become visible w/in 30' of fog line (no guardrail present)</td>
<td>Control of trees that may impact roadside function if allowed to grow.</td>
<td>Hand cutting, treatment of cut surface w/ herbicide Chip debris in zone 2</td>
<td>Power saws, chipper, backpack or hand-held sprayer</td>
<td>Garlon 3A w/ Redi-vert at label rate, Krenite S on alder at recommended label rates</td>
<td>Late fall to avoid brown out</td>
<td>Reapply as necessary, seed and fertilize to reduce weed competition. See Appendix B</td>
</tr>
</tbody>
</table>
## Appendix A

### IVM Prescriptions

### NC Region Area 3 - IVM Prescriptions

#### Nuisance Weed Control

**Nuisance Weed Control - Mustard Species, Mullen, Teasel, China Lettuce and other Nuisance species (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 new or limited infestations</td>
<td>Wherever new infestations occur (dependent on available resources)</td>
<td>Minimize populations and prevent further spread of nuisance weeds</td>
<td>Foliar treatment w/ herbicide</td>
<td>Truck mounted sprayer where possible, backpack sprayer where necessary</td>
<td>Veteran 720 @ 64 Ozl Escort @ .5 Ozl Super Spread 90 @ 32 oz per 100 gallons carrier No spray w/in 60' of water</td>
<td>Prior to seed</td>
<td>Reapply as necessary. Seed and fertilize to reduce weed competition See Appendix B</td>
</tr>
</tbody>
</table>

**Nuisance Weed Control - Mustard Species, Mullen, Teasel, China Lettuce and other Nuisance species (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>Roadside</td>
<td>As soon as plants appear</td>
<td>Selective eradication and control of listed noxious weeds.</td>
<td>Spot treatment w/ herbicide most effective</td>
<td>Tank sprayer equipped with Invert system, Injection system tank mix or backpack sprayer</td>
<td>Super Spread 90 @ 32 oz per 100 gallons carrier No spray w/in 60' of water</td>
<td>Early growing season</td>
<td>Reapply as necessary. Seed and fertilize to reduce weed competition See Appendix B</td>
</tr>
</tbody>
</table>

**Nuisance Weed Control - Mustard Species, Mullen, Teasel, China Lettuce and other Nuisance species (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>Roadside</td>
<td>As soon as plants appear</td>
<td>Selective eradication and control of listed noxious weeds.</td>
<td>Spot treatment w/ herbicide most effective</td>
<td>Tank sprayer equipped with Invert system, Injection system tank mix or backpack sprayer</td>
<td>Super Spread 90 @ 32 oz per 100 gallons carrier No Buffer Limitation</td>
<td>Early growing season</td>
<td>Reapply as necessary. Seed and fertilize to reduce weed competition See Appendix B</td>
</tr>
</tbody>
</table>

**Nuisance Weed Control - Mustard Species, Mullen, Teasel, China Lettuce and other Nuisance species (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 new or limited infestations</td>
<td>Wherever new infestations occur (dependent on available resources)</td>
<td>Minimize populations and prevent further spread of nuisance weeds</td>
<td>Foliar treatment w/ herbicide</td>
<td>Truck mounted sprayer where possible, backpack sprayer where necessary</td>
<td>Super Spread 90 @ 32 oz per 100 gallons carrier No Buffer Limitation</td>
<td>Prior to seed</td>
<td>Reapply as necessary. Seed and fertilize to reduce weed competition See Appendix B</td>
</tr>
</tbody>
</table>

**Nuisance Weed Control - Mustard Species, Mullen, Teasel, China Lettuce and other Nuisance species (Option E)**

<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 new or limited infestations</td>
<td>Wherever new infestations occur (dependent on available resources)</td>
<td>Minimize populations and prevent further spread of nuisance weeds</td>
<td>Foliar treatment w/ herbicide</td>
<td>Truck mounted sprayer where possible, backpack sprayer where necessary</td>
<td>Super Spread 90 @ 32 oz per 100 gallons carrier No Buffer Limitation</td>
<td>Prior to seed</td>
<td>Reapply as necessary. Seed and fertilize to reduce weed competition See Appendix B</td>
</tr>
</tbody>
</table>

**Nuisance Weed Control - Mustard Species, Mullen, Teasel, China Lettuce and other Nuisance species (Option F)**

<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 new or limited infestations</td>
<td>Wherever new infestations occur (dependent on available resources)</td>
<td>Minimize populations and prevent further spread of nuisance weeds</td>
<td>Foliar treatment w/ herbicide</td>
<td>Truck mounted sprayer where possible, backpack sprayer where necessary</td>
<td>Super Spread 90 @ 32 oz per 100 gallons carrier No Buffer Limitation</td>
<td>Prior to seed</td>
<td>Reapply as necessary. Seed and fertilize to reduce weed competition See Appendix B</td>
</tr>
</tbody>
</table>
## NC Region Area 3 - IVM Prescriptions

### Nuisance Weed Control - Kochia, Knapweeds, Dalmation Toadflax, Thistle (Mechanical)

<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 2-3</td>
<td>Weed height exceeds 8”</td>
<td>Reduce or eliminate seed production of weeds</td>
<td>Mow at vegetation at 6” to eliminate or reduce production of seeds</td>
<td>Mower</td>
<td>None</td>
<td>Prior to weed seed development</td>
<td>Re-mow as needed or follow up with herbicide, many plants will still produce seeds without follow-up treatment.</td>
</tr>
</tbody>
</table>

### Nuisance Weed Control - Knapweeds (Biological)

<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>Eradication and control of listed noxious weeds.</td>
<td>Biological Place 2 bio control agents (bugs) per plant</td>
<td>Hand placement</td>
<td>Larinus minutus</td>
<td>Early growing season</td>
<td>Monitor population and reapply as needed document in IVM form</td>
</tr>
</tbody>
</table>
### Routine Mowing

#### Zone 2 Maintenance - Annual mowing

<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>Operational zone adjacent to shoulder</td>
<td>8 inch average ht. single pass to maintain desirable low vegetation.</td>
<td>Annual mowing, 6’ - 8’ wide single pass adjacent to Zone 1 as necessary</td>
<td>Mower, attenuator</td>
<td>None required</td>
<td>June on as needed</td>
<td>Seed and fertilize to reduce weed competition if necessary (See Appendix B)</td>
</tr>
</tbody>
</table>

#### Zone 2 Maintenance - Selective trimming

<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>Operational zone adjacent to shoulder</td>
<td>Annual brush or tree limb control adjacent to shoulder to maintain sight distance and other operational needs.</td>
<td>Annual mechanical trimming where needed. Follow up trimming with pole saw as needed.</td>
<td>Mower with side-arm unit, pole saw, attenuator as needed.</td>
<td>None required</td>
<td>Late in season to minimize visual impacts.</td>
<td>Seed and fertilize if alder/scotch broom are present to reduce competition.</td>
</tr>
</tbody>
</table>
### Planting Area A (Okanogan/Omak)

#### Planting Prescriptions

**Seed Mix 1 (Okanogan/Omak)**

<table>
<thead>
<tr>
<th>Species 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>Bluebunch Wheatgrass “Duffy Creek” <em>(Pseudoroegneria spicata)</em></td>
<td>12.00</td>
</tr>
<tr>
<td>Sand dropseed <em>(Sporobolus cryptandrus)</em></td>
<td>1.00</td>
</tr>
<tr>
<td>Sandberg Bluegrass “Duffy Creek” <em>(Poa sandbergii)</em></td>
<td>3.00</td>
</tr>
<tr>
<td>Basin Wildrye “Yakima” <em>(Elymus cinereus)</em></td>
<td>5.00</td>
</tr>
</tbody>
</table>

**Total Lbs PLS/Acre** 21
Appendix A  

IVM Prescriptions

Planting Area B  
(Pateros/Brewster/Bridgeport)

Planting Prescriptions

Seed Mix 1 (Pateros)

<table>
<thead>
<tr>
<th>Species 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 “Schwindemar” <em>(Agropyron trachycaulum)</em></td>
<td>4.25</td>
</tr>
<tr>
<td>Bluebunch Wheatgrass “Duffy Creek” <em>(Pseudoroegneria spicata)</em></td>
<td>3.66</td>
</tr>
<tr>
<td>Sand dropseed <em>(Sporobolus cryptandrus)</em></td>
<td>0.15</td>
</tr>
<tr>
<td>Sandberg Bluegrass “Duffy Creek” <em>(Poa sandbergii)</em></td>
<td>0.62</td>
</tr>
<tr>
<td>Indian Ricegrass <em>(Oryzopsis hymenoides)</em></td>
<td>4.75</td>
</tr>
<tr>
<td><strong>Total Lbs PLS/Acre</strong></td>
<td><strong>13.43</strong></td>
</tr>
</tbody>
</table>
## Planting Area B  
(Pateros/Brewster/Bridgeport)

### Planting Prescriptions

#### Seed Mix 1 (Pateros)

<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>
</table>
| Thickspike Wheatgrass  “Schwindemar”  
  (*Agropyron trachycaulum*)                                                | 4.25                                |
| Bluebunch Wheatgrass  “Duffy Creek”  
  (*Pseudoroegneria spicata*)                                              | 3.66                                |
| Sand dropseed  
  (*Sporobolus cryptandrus*)                                              | 0.15                                |
| Sandberg Bluegrass  “Duffy Creek”  
  (*Poa sandbergii*)                                                        | 0.62                                |
| Indian Ricegrass  
  (*Oryzopsis hymenoides*)                                                 | 4.75                                |
| **Total Lbs PLS/Acre**                                                    | **13.43**                           |
## 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>2,4-D</td>
<td>Agri Star 2, 4-D LV4, Basecamp Amine 4, Clean Amine, Crossbow, Curtail, ES, Escalade, Low Vol 4 Ester, Platoon, Rangestar, Savage, Solution, Veteran 720, Weedar 64, WeedDestroy, Weedmaster, 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 Milestone VM Milestone VM Plus Capstone</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</td>
<td>Westside - Restricted use</td>
<td>Bromacil is potentially mobile in soil, use caution if rain is possible.</td>
</tr>
<tr>
<td>Bromoxynil</td>
<td>Buctril 2EC BroClean Brox 2E Maestro 2EC</td>
<td>Photosynthetic inhibitor photosystem II, site C (6)</td>
<td>Noxious and nuisance weed control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td>Effective broadleaf weed control without grass seed suppression</td>
<td>Westside - Restricted use</td>
<td>Can cause irreversible eye damage, highly toxic to fresh water fish</td>
</tr>
<tr>
<td>Chlorsulfuron</td>
<td>Telar XP Landmark XP Throttle XP Perspective</td>
<td>Amino acid synthesis inhibitors - ALS inhibitor (2)</td>
<td>Noxious and nuisance weed control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td>Product highly effective on difficult perennials such as Canadian thistle and horsetail. Landmark is premixed with Oust.</td>
<td>No WSDOT use restrictions beyond those specified on product labels</td>
<td>Refer to product labels</td>
</tr>
<tr>
<td>Clopyralid</td>
<td>Transline Curtail</td>
<td>Growth regulator - pyridinecarboxylic acid synthetic auxin (4)</td>
<td>Noxious and nuisance weed control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td>Curtail is premixed with 2,4-D, Pathfinder is premixed with triclopyr</td>
<td>Westside - Restricted use</td>
<td>Curtail and Pathfinder are restricted for use within 60’ of all water because of mixture with other restricted herbicides.</td>
</tr>
</tbody>
</table>
## Herbicides Approved for Use on WSDOT Rights of Way

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

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

When making herbicide applications:

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### Chemical Name

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Product Names</th>
<th>Mode of Action</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 show a significant impact on desirable perennial grasses at rates above 6 oz per acre.</td>
<td>Westside - Restricted use Eastside - Restricted for use within 60’ of all water</td>
<td>Moderate to high potential to leach into groundwater</td>
</tr>
<tr>
<td>Imazapyr</td>
<td>Arsenal</td>
<td>Amino acid synthesis inhibitors - ALS inhibitor (2)</td>
<td>All zones</td>
<td>Pre and post-emergent non-selective control of all vegetation</td>
<td>Habitat is an aquatic version of Arsenal - good alternative to glyphosate in certain cases, approved for use with NPDES permit.</td>
<td>No WSDOT use restrictions beyond those specified on product labels</td>
<td>High surface runoff potential</td>
</tr>
<tr>
<td>Indaziflam</td>
<td>Esplanade</td>
<td>Cellulose-biosynthesis inhibitor (21)</td>
<td>Zone 1 bare-ground</td>
<td>Nonselective pre-emergent weed control</td>
<td>Effective control of annual weeds such as marestail, kochia, and crab grass</td>
<td>Restricted for use within 60’ of all water</td>
<td>Toxic to fish and aquatic invertebrates</td>
</tr>
<tr>
<td>Isoxaben</td>
<td>Gallery 75DF</td>
<td>Cell wall (cellulose) synthesis inhibitor (20)</td>
<td>Turf &amp; Ornamental</td>
<td>Pre-emergent weed control in ground cover beds</td>
<td>Works well by itself or with Ronstar</td>
<td>Restricted for use within 60’ of all water</td>
<td>Moderate to high potential to leach into groundwater</td>
</tr>
<tr>
<td>Metsulfuron-methyl</td>
<td>Escort XP</td>
<td>Amino acid synthesis inhibitors - ALS inhibitor (2)</td>
<td>Noxious and nuisance weed control, and tree and brush control, Zones 2 and 3</td>
<td>Selective broadleaf and conifer treatment</td>
<td>Good control on many difficult perennials.</td>
<td>No WSDOT use restrictions beyond those specified on product labels</td>
<td>Refer to product labels</td>
</tr>
<tr>
<td>Norflurazon</td>
<td>Predict</td>
<td>Bleaching - carotenoid biosynthesis inhibitor (12)</td>
<td>Zone 1 bare-ground</td>
<td>Pre-emergent weed control in Zone 1 and ground cover beds</td>
<td>Good Zone 1 product but may be difficult to keep in suspension</td>
<td>Restricted for use within 60’ of all water</td>
<td>High surface runoff potential</td>
</tr>
<tr>
<td>Oryzalin</td>
<td>Oryzalin A.S.</td>
<td>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</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, gardens, plants bearing edible fruit</td>
<td>Highly toxic to fish</td>
</tr>
<tr>
<td>Pendimethalin</td>
<td>Pendulum 2G</td>
<td>Seedling growth inhibitor - microtubule assembly inhibitor (3)</td>
<td>Zone 1</td>
<td>Nonselective/Selective depending on rate, Pre-emergent grass and weed control</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 toxic to fish, high potential for loss on eroded soil</td>
</tr>
<tr>
<td>Pendimethalin</td>
<td>Pendulum Aqua</td>
<td>Seedling growth inhibitor - microtubule assembly inhibitor (3)</td>
<td>Zone 1</td>
<td>Nonselective/Selective depending on rate, Pre-emergent grass and weed control</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>
## Herbicides Approved for Use on WSDOT Rights of Way

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<tr>
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</tr>
</thead>
<tbody>
<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</td>
<td>High surface runoff potential, potentially mobile in soil if rain is possible.</td>
</tr>
<tr>
<td>Sulfometuron-methyl</td>
<td>Oust Landmark XP Sulfomet Throttle XP</td>
<td>Amino acid synthesis inhibitors - ALS inhibitor (2)</td>
<td>Zone 1 bare-ground</td>
<td>Nonselective pre/post emergent grass and weed control</td>
<td>Landmark is a premix with Oust and Telar</td>
<td>Refer to product labels</td>
<td>Oust has been proven to move with wind if not watered in to the ground</td>
</tr>
<tr>
<td>Tebuthiuron</td>
<td>Spike 80DF</td>
<td>Photosynthetic inhibitor photosystem II, site B (7)</td>
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<td>Nonselective pre-emergent grass and weed control</td>
<td>Refer to product label</td>
<td>Westside - Restricted use</td>
<td>High surface runoff potential, potentially mobile in soil if rain is possible.</td>
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<td>Bleaching - carotenoid biosynthesis inhibitor (12)</td>
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<td>Growth regulator - pyridinecarboxylic acid synthetic auxin (4)</td>
<td>Noxious and nuisance weed control, and tree and brush control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td>Works well for scotch broom control</td>
<td>Refer to product label</td>
<td>Can cause irreversible eye damage</td>
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<td>Triclopyr Ester</td>
<td>Crossbow, Crossbow L, Element 4, Garlon, Pathfinder</td>
<td>Growth regulator - pyridinecarboxylic acid synthetic auxin (4)</td>
<td>Noxious and nuisance weed control, and tree and brush control, Zones 2 and 3</td>
<td>Selective broadleaf treatment</td>
<td>Works well for cut-stump or basal treatments applications. Crossbow is premixed with 2,4-D, Pathfinder with clopyralid</td>
<td>Restricted for use within 60’ of all water</td>
<td>Highly toxic to fish</td>
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Appendix C:
North Central Region Area 3
Zone 1 Maintenance
Map 1 of 4

Legend
- Zone 1 Bareground
- Milepost
- City Limits
- State Route
- County Boundaries
- Major Lakes
- National Park
- National Forest
- NC Region area 3

2014

Washington State Department of Transportation

Twisp
Winthrop
NC Area 3
**Appendix E**

**Special Maintenance Areas**

**Table 3.0**

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

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

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Appendix E

Special Maintenance Areas

Table 3.0

**Definitions:** 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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**Integrated Vegetation Management Record**

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**Location**
- PN Area

**Check Applicable Boxes**
- [ ] NB
- [ ] EB
- [ ] Shoulder
- [ ] Rest Area
- [ ] Bridge
- [ ] Stormwater
- [ ] Yes
- [ ] Aquatic
- [ ] Wetlands

**Target**
- [ ] Noxious Weeds
- [ ] Brush/Trees
- [ ] Other
- [ ] Nuisance Weeds
- [ ] Hazard Tree

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

We released 100-125 Mecinus Janthinus insects per acre. We will monitor this area. We will also continue spot spraying noxious weeds as needed. Most of this area will have to be sprayed with a backpack sprayer because of the 60' ESA buffer zone.

**Activities**

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**#1 Evaluation and Date**

We have sprayed this area 2 times per year with Vetric 720 and Escort. This treatment has failed to give us needed control of the Toadflax problem.

**#2 Evaluation and Date**

**#3 Evaluation and Date**
# Appendix F

## Forms and Records

### Pesticide Application

#### Washington State Department of Transportation

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#### Check Appropriate Boxes:

- Roadside
- Landscaped Area
- Interchange
- Yard/Stockpile
- Spot Spray
- Aquatic
- Shoulder
- Post Area
- Bridge
- Blanket Spray
- Wetlands
- Median
- Park-n-Ride
- Ramp

#### Weather Conditions

**Start Weather Conditions**
- Temperature: 40 °C
- Wind (Direction From): E
- Wind (Range): 1-2 mph

**Finish Weather Conditions**
- Temperature: 60 °C
- Wind (Direction From): E
- Wind (Range): 2-3 mph

#### Material List

<table>
<thead>
<tr>
<th>Material Name</th>
<th>Material Type</th>
<th>EPA Reg. No.</th>
<th>Lot Number</th>
<th>Product Description</th>
<th>Unit</th>
<th>Usage</th>
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<tbody>
<tr>
<td>Veteran 720</td>
<td>Pesticide</td>
<td>228-295</td>
<td>DE07248713523</td>
<td>64 Ozi</td>
<td>1152 Ozi</td>
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<tr>
<td>Telar</td>
<td>Pesticide</td>
<td>352-522</td>
<td>MAR02EL001</td>
<td>1 Ozi</td>
<td>18 Ozi</td>
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<tr>
<td>Redi-vert III</td>
<td>Adjuvant</td>
<td>--------------</td>
<td>------------</td>
<td>90 Ozi</td>
<td>1620 Ozi</td>
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<tr>
<td>OKANOGAN</td>
<td></td>
<td></td>
<td></td>
<td>25 ga</td>
<td>450 ga</td>
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#### Equipment Number:

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<tr>
<th>Equipment Number</th>
<th>Tool Size 3</th>
<th>Tool Size 2</th>
<th>Calibration Date</th>
<th>Vehicle Speed</th>
<th>Hours Operated</th>
<th>Width of Spray Pattern</th>
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<tbody>
<tr>
<td>SB29-3</td>
<td>1 1400</td>
<td>1 130</td>
<td>6/26/2006</td>
<td>4-8 mph</td>
<td>20-25</td>
<td>2-5</td>
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- Headlamps: 0
- Backpack: 0
- Other (Specify): 0

#### Operator Details

- Name: HARRY MONNIK
- Operator's License No.: 70952
- Operator Signature: BRAD FITZHUGH

#### Division of Emergency Management (1-800-258-5990)

**Additional Notes**

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**North Central Region, Area 3**

Integrated Roadside Vegetation Management Plan

**Forms & Records - 2014**
# Appendix G

## STAKEHOLDER LIST

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Address</th>
<th>Phone</th>
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</thead>
<tbody>
<tr>
<td>Okanogan County Noxious Weed Control Board</td>
<td>143 3rd St. Okanogan, WA 98840 (509) 422-7165</td>
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<tr>
<td>Grant County Noxious Weed Control Board</td>
<td>32 C St. NW, Suite 321 Ephrata, WA 98823 (509) 754-2011</td>
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<tr>
<td>Skagit County Noxious Weed Control Board</td>
<td>11768 Westar Lane, Suite A Burlington, WA 98233 (360) 336-9430</td>
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<tr>
<td>Douglas County Weed Management</td>
<td>P.O. Box 550 Waterville, WA 98858 (509) 745-8531</td>
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<tr>
<td>Chelan County Noxious Weed Control Board</td>
<td>412 Washington St. Wenatchee, WA 98801 (509) 667-6550</td>
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<tr>
<td>USFS Okanogan National Forest</td>
<td>1240 S. 2nd Ave. Okanogan WA 98844 (509) 826-3275</td>
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<tr>
<td>Confederated Tribes of the Colville</td>
<td>P.O. Box 150 Nespelem, WA 99155 (509) 634-2200</td>
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<tr>
<td>Town of Winthrop</td>
<td>P.O. Box 459 Winthrop, WA 98862 (509) 996-2320</td>
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<tr>
<td>Town of Twisp</td>
<td>P.O. Box 278 Twisp, WA 98856 (509) 997-4081</td>
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<td>City of Omak</td>
<td>P.O. Box 72 Omak, WA 98841 (509) 826-1170</td>
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<td>City of Okanogan</td>
<td>P.O. Box 752 Okanogan, WA 98840 (509) 422-3600</td>
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<td>City of Pateros</td>
<td>P.O. Box 8 Pateros, WA 98846 (509) 923-2571</td>
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<tr>
<td>City of Brewster</td>
<td>P.O. Box 340 Brewster, WA 98812 (509) 689-3464</td>
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<tr>
<td>Town of Coulee City</td>
<td>P.O. Box 398 Coulee City, WA 99115 (509) 632-5331</td>
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<tr>
<td>Town of Coulee Dam</td>
<td>300 Lincoln Ave, Coulee Dam, WA 99116 (509) 633-0320</td>
<td></td>
</tr>
</tbody>
</table>
Appendix G

City of Grand Coulee ................................................................. P.O. Box 180 Grand Coulee, WA 99133 (509) 633-1105
Town of Electric City ............................................................... P.O. Box 130 Electric City, WA 99123 (509) 633-1510
Town of Nespelem ................................................................. P.O. Box 240 Nespelem, WA 99155 (509) 634-4691
Town of Mansfield ................................................................. P.O. Box 218 Mansfield, WA 98830 (509) 683-1112
City of Tonasket ................................................................. P.O. Box 487 Tonasket, WA 98855 (509) 486-2132
City of Oroville ................................................................. P.O. Box 2200 Oroville, WA 98844 (509) 476-2926
Town of Bridgeport ............................................................... P.O. Box 640 Bridgeport, WA 98813 (509) 684-4041
DNR Colville ........................................................................... 225 S Silke Rd, PO Box 190 Colville, WA 99114 (509) 684-7484
WDFW Region 2 ...................................................................... 1550 Alder Street NW Ephrata, Washington 98823 (509) 754-4624
Cascade & Columbia Railroad .............................................. 901 Omak Ave, Omak, WA 98841 (360) 807-4325
Grant County PUD ............................................................... P.O. Box 878 Ephrata, WA 98823 (509) 754-0500
Okanogan County PUD .......................................................... P.O. Box 912, 1331 2nd Ave North Okanogan, WA 98840 (509) 422-3310
Douglas County PUD ............................................................ 1151 Valley Mall Parkway East Wenatchee, WA 98802 (509) 884-7191
US Bureau of Reclamation .................................................. 1917 Marsh Road Yakima WA 98901 (509) 575-5848