Southwest Region, Area 1
Integrated Roadside Vegetation Management Plan
2017
Introduction

The Washington State Department of Transportation’s (WSDOT) Southwest Region Area 1 manages vegetation within 287 miles of state highway corridor in Clark and Cowlitz Counties. In addition to the Interstate 5 corridor between Castle Rock and the Oregon border and all of Interstate 205, the area maintains State Route (SR) 14 through the Columbia Gorge out to just past the Skamania County line, SR 4 in Cowlitz County, and all of State Routes 411, 432, 433, 500, 501, 502, 503, and 504 (Mt. St. Helens Highway). A map of the area is included as Figure 1 on the following page.

The primary roadside vegetation management objectives are in relation to traffic safety and preservation of the highway infrastructure. Additionally, as a landowner WSDOT is required to control all listed noxious weeds that occur on the right-of-way by state law (RCW 17.10 and 15.15.010). It is important that WSDOT not only meet the legal requirements for weed control, but also consider the needs and concerns of adjacent landowners in this area.

In order to best manage roadsides with these priority objectives in mind, WSDOT practices an annually cycling process called Integrated Vegetation Management (IVM). Plans like this are maintained and updated annually for all areas of the state, with an overall goal of establishing the most naturally self-sustaining roadsides vegetation possible. Adjustments are made year to year in each area plan based on monitoring the previous years’ accomplishments and results, available budget, and prioritization of other highway maintenance activities.

This plan serves as the guidance document for vegetation maintenance in Southwest Region Area 1 for the 2017 growing season. It provides a general description of the area work plan, and includes treatment prescriptions for accomplishing safety and prioritized weed control objectives through the use of a combination of seasonally-timed control measures. Each year’s actions are designed as part of a coordinated multi-year strategy to efficiently maintain traffic safety and comply with weed control laws on all state roadsides, and working within budget, to invest in restoring a set of selected priority locations to a stable self-sustaining native condition. This plan also accounts for specific locations where maintenance tactics are adjusted due to environmental issues, neighboring properties, local partnerships, or restoration work done through WSDOT design and construction.

The information contained in this plan document is referenced and utilized by crews in the field using iPads and the Highway Activity Tracking System (HATS). Accomplishments and results also tracked and referenced through this system, as part of the budget planning and maintenance accountability process. Carrying iPads in the field also gives maintenance crews the ability to reference a wide range of technical information and alerts for locations with environmental sensitivity or special agreements with neighbors.

WSDOT welcomes input from local public and private entities on its weed control and other vegetation management activities. Wherever appropriate the agency is looking for opportunities to plan and cooperate with others in managing the roadside. Please direct any questions, comments or suggestions to the Southwest Region Area 1 Superintendent – Bob Kofstad, or the State’s Roadside Asset Manager – Ray Willard.

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Southwest Region, Area 1 Map

Figure 1
This is an outline the overall planned approach and geographic distribution of roadside vegetation management requirements throughout the maintenance area in 2017. Information is organized in relation to four groups of activities defined in the WSDOT Maintenance Accountability Program (MAP) for the performance of roadside vegetation maintenance activities: Control of Vegetative Obstructions, Noxious Weed Control, Nuisance Weed Control, and Landscape Maintenance. Specific locations as noted in this work plan are also mapped in the Highway Activity Tracking System (HATS) for reference by maintenance in the field.

**Control of Vegetative Obstructions – 3A4**
The work of this group of maintenance activities relates to the safety and operational requirements of the highway. These items are considered first priority in terms of the overall roadside maintenance needs. Vegetation management objectives and work activities in this category fall into four groups – Pavement Edge Maintenance/Zone 1, Safety Mowing/Zone 2, Tree and Brush Control/Zone 2 and 3, and Hazard Tree Removal/Zone 3.

**Pavement Edge Maintenance/Zone 1**
Work Operation: 1615  
HATS Form: Spray Zone 1  
HATS Map Layer: Reference lines – Roadside Features/Spray Zone 1 Reference

This work includes the application of herbicides to road shoulders where necessary throughout the area. The objective of these applications in designated locations is preserving of a band of gravel shoulder adjacent to the pavement that is free of vegetation. This treatment is necessary in the mapped locations described below to provide visibility and maintainability of roadside hardware and guideposts, allow room for vehicles to safely pull off on shoulders, facilitate stormwater drainage, and/or provide added visibility of wildlife approaching the highway.

**Total Units of Planned Treatment**
- Apply approximately 240 acres of herbicide treatment to road shoulders throughout the area.

**Locations of Planned Treatments**
- Planned treatment sites are mapped in HATS layer – Zone 1 Treatments.
- All gravel shoulders throughout the area will receive an annual application of herbicide in the fall
- Locations where no bare ground treatment will be applied include:
  - Locations along secondary roads where there neighboring property owners have agreed to maintain the roadside
  - Within the city limits of Camas
- In several locations throughout the area where vegetation has established in pavement cracks and barrier joints, glyphosate will be applied in the spring

**Treatment Methods**
- Herbicides are applied using a truck mounted power spray system calibrated to deliver a 3-foot band of spray mixture adjacent to the paved shoulder. The resulting width of treated shoulder may be wider than 3 feet in areas with steeper shoulder slope.
- In locations with cable rail or guard rail – Bare ground will extend from pavement edge to back side of rail
- Locations with vegetation growing in cracks and joints will be spot-sprayed in May/June with:
  - Ranger Pro @ 64 oz/l acre
  - Syl-tac @ 16 oz/l acre
• All locations receiving bare ground applications will be treated in early fall with the following pre-blended products in 15 gallon reusable containers, mixed with 25 gallons of water per acre:
  - Method 240 @ 12.5 oz/acre
  - Sulfomet @ 3oz/acre
  - Rodeo @ 51oz/acre
  - Escort @ 1.5 oz/acre
  - Climb @ 1 oz./acre
  - Insist @ 16oz/acre

Safety Mowing/Zone 2
Work Operation: 1625
HATS Form: Mowing Zone 2
HATS Map Layer: Reference lines – Roadside Features/Mowing Zone 2 Reference
This work includes routine mechanical cutting of all vegetation on the road shoulder in a band width immediately adjacent to pavement. Mowing is necessary in areas where taller growing grasses or other vegetation are present and must be annually or semi-annually cut back for visibility and maintenance of roadside hardware and delineators, to maintenance traffic sight distance at curves and intersections, and for improved visibility of wildlife approaching the highway. Mowing height for these operations is typically 6 to 8 inches above the ground.

Total Units of Planned Treatment
• Approximately **800 acres** of shoulders will be mowed annually throughout the area.

Locations of Planned Treatments
• Planned Zone 2 mowing locations are mapped in HATS reference layer - Mowing Zone 2 Reference
• All roadsides with vegetation along the edge of pavement will be mowed once per year in late spring/early summer

Treatment Methods
• Mechanical mowing with side mounted flail mower
• Mowing width varies between 5 and 25 feet as specified on the HATS maps.
• Mowing will be done with multiple types of tractor mounted mowers including a 3-deck, 25 ft. total width mower, side arm mounted flail and rotary mowers, and orchard mowers.

Tree and Brush Control/Zone 2 and 3
Work Operations: 1622, 1625, 1626
HATS Forms: Tree/Brush Control – Spray, Trimming Mechanical, Trimming Manual, and Mowing
HATS Map Layer: None
This includes safety and traffic operations related work in Zone 2, such as periodic side-trimming or removal of brush and trees or tree branches encroaching on or overhanging traffic operations, and impacting sign visibility. Also included is work in Zone 2 and 3 when selectively controlling emergent early succession tree species – to prevent them from growing into mature hazard trees within striking distance of the road. Removal of mature-sized dead, diseased, dying or structurally defective and hazardous trees is also included in this activity group.

Total Units of Planned Treatment
• Approximately **200 acres** will be treated throughout the area.

Locations of Planned Treatments
• SR-14 arm mowing MP 22 to MP 24
- SR-14 canopy mowing MP 25 to MP 26
- SR-432 Quadrants at 3rd avenue, brushing to prevent illegal camping.
- SR-432 MP 2.7 trim cottonwoods
- SR-4 MP 50 to 55 behind guardrail with arm mower
- SR-4 MP 50 to 55 Tree trim from ground or man lift as necessary
- SR-503 MP 14-20.5 Remove overhanging and encroaching branches
- SR-503 MP 25-31 Remove overhanging and encroaching branches
- SR-503 MP 33-47 Remove overhanging and encroaching branches
- SR-504 MP 0 to 51 Arm mowing behind guardrail and cut and treat saplings throughout SR
- SR-504 MP 1.6 to 2.7 cut and treat scotch broom
- SR-504 MP 5 cut and treat fir trees on bank west bound
- SR-504 MP 6 Stockpile site trim limbs at fence
- SR-504 MP 8 to 8.5 West bound trees at Silver Lake cut and treat stumps
- SR-504 MP 9.7 Trim limbs on Spruce
- SR-504 MP 11.1 to 12.4 Brown Brush Monitor both east and west for scotch broom
- SR-504 MP 13 to 15 Brown Bush Monitor for scotch broom
- SR-504 MP 18 to 19 trim trees with man lift
- SR-504 MP 21 area trim trees from man lift and ground
- SR-411 MP 2 to 4 trim trees where necessary
- SR-411 MP 4.3 to 3.9 South Bound black berries taking over fence
- SR-411 MP 2 to 13.4 cut and treat saplings as needed
- SR-411 MP 8.1 to 9.3 limb trees for sight distance where necessary
- SR-411 MP 9.6 to 9.8 trim trees from man lift and ground
- SR-411 MP 10.1 to 10.5 trim trees from man lift and ground
- SR-411 MP 11.3 to 12.2 Brown Brush Monitor scotch broom
- I-5 MP 14 to 52 North and South Brown Brush Monitor quadrants as needed or requested by Weed Boards to control saplings and noxious weeds if necessary.
- I-5 MP 46.1 to 44.7 median trim trees as necessary
- I-5 South bound, MP, 36 limbs blocking sight distance
- I-5 exit 48 north bound right side trees cut and treated
- I-5 exit 40 on ramp south bound left side trees trimmed
- I-5 MP 43.7 to 44.9 North bound right side trim trees
- I-5 exit 49 to 48 South bound right side trim trees for sight distance
- I-5 MP 32.9 to 32.3 Kalama River road area trim trees
- I-5 MP 17 North bound on ramp tree trimming
- I-5 MP 30.8 exit 30 south bound left side tree trimming

**Treatment Methods**
- Mechanical trimming with radial head on a mowing arm
- Man lift and hand saws
- Mechanical mowing with combined herbicide treatment of cut surface (Brown Brush Monitor)
- Some cutting with hand tools and hand pulling

**Hazard Tree Removal/Zone 3**
**Work Operation: 1628**
**HATS Forms: Hazard Tree Removal – Individual Tree Removal, Stand Removal, and Cleanup Fallen Trees**
**HATS Map Layer: None**

Trees within and adjacent to the right of way are routinely monitored by maintenance staff for potential risk to the highway and/or neighboring structures. Individual and stands of trees identified as a potential imminent threat will be evaluated using best arboricultural judgment and removed as soon as possible where needed.
Total Units of Planned Treatment
- Approximately **600 mature hazard trees** are removed from area roadsides each year.

Locations of Planned Treatments
- As needed throughout the area
- Any areas proposed for logging next to the highway will be coordinated to avoid creating a fringe of hazard trees.

Treatment Methods
- Crews are continuously looking for any trees that exhibit structural defects and could strike the road or neighboring property if they come down.
- If trees growing outside WSDOT right of way are hazards, crews work with the neighboring property owner to negotiate removal.
- Removal will be done by WSDOT crews in most cases. Stump treatment with Garlon 3A or 4 at time of cutting.
- For difficult removals we will utilize the State Parks arborist crew.
- Where cottonwood stands are removed, areas will be managed from that point on for a species shift from Cottonwood to coniferous forest.

Noxious Weed Control – 3A2
This group of activities is focused on control of weed species and infestation locations identified in this plan document and mapped in HATS. The focus is on species that are legally designated in state and county regulations for required control by all property owners, along with any other identified and agreed upon species/locations that pose a unique threat to the roadside or surrounding environment if not controlled. Work under this group is considered second priority after safety related objectives have been addressed.

In some counties noxious weed laws may be enforced with fines and/or control work by the counties and billing of property owners – if adequate control is not accomplished. WSDOT communicates annually and throughout the season with each County Noxious Weed Board, to identify and prioritize treatment sites on state highways.

WSDOT employs three distinct strategies in planning and executing noxious weed control efforts. Any and all Class A species that occur on the right of way are treated as **Priority Noxious Weed Control**, and all maintenance actions are planned and tracked as individual, multi-year treatment sites. **General Noxious Weed Control** is planned and executed in one of two ways: 1.) Area-wide weed patrol and control operations are made in the early summer with a goal of spraying or pulling all visible target species and any notifications from the County weed boards, prior to seed-set, and 2.) Early and late season treatments are planned for a set of prioritized and mapped infestation points where the goal is early detection/rapid response/eradication.

**Priority Noxious Weed Control**
Work Operations: 1616, 1618, 1641
HATS Point Feature-based Forms: Priority Infestation
HATS Map Layer: Feature points – Roadside Features/Noxious Weed Control Priority

These operations are directed at locations where Class A noxious weed species are present on the right of way and state law requires complete eradication. Site specific integrated treatment plans are developed for each identified location/species, and all control activities are recorded as point feature data in HATS. Ongoing operations will combine field monitoring and a mixture of seasonally timed treatment methods over a series of years. Sites must also be monitored for 3 to 5 years after control to check for grow back.
Species and Locations
- No Class A noxious weed species are known to exist on state right of way in Southwest Region, Area 1 at this time.

General Noxious Weed Control
Work Operations: 1616, 1618, 1699
HATS Form: Noxious Weed Control General – Noxious Weed Control-Spray, Noxious Weed Control-Mechanical, Noxious Weed Control-Manual, and Noxious Weed Control-Biological
HATS Map Layer: Reference points – Roadside Features/Noxious Weed Control General (Under Development)

These operations are timed and carried out throughout the season to prevent the spread of designated noxious weed species, and to reduce or eliminate populations wherever possible. Integrated treatments as described in the table below, are planned to address infestations through 1.) seasonally timed treatments of identified priority sites, or 2.) during late spring/early summer section patrols to treat all visible target weed species. Successful plans are consistently implemented over a series of years and annually adjusted as necessary based on field observations. Care is taken in all cases to avoid damage to surrounding desirable/native vegetation.

Target Noxious Weeds on WSDOT Right of Way in Southwest Region Area 1

<table>
<thead>
<tr>
<th>Common Name/Botanical Name</th>
<th>Treatment Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bull thistle/Cirsium vulgare</td>
<td>Control small patches where visible in conjunction with seasonal patrols</td>
</tr>
<tr>
<td>Butterfly bush/Buddleja davidii</td>
<td>Control where visible</td>
</tr>
<tr>
<td>Canada thistle/Cirsium arvense</td>
<td>Control small patches where visible in conjunction with seasonal patrols</td>
</tr>
<tr>
<td>Common reed/Phragmites australis</td>
<td>Target sites mapped and treated in the fall</td>
</tr>
<tr>
<td>Dalmatian toadflax/Linaria dalmatica</td>
<td>Target sites mapped and treated in the spring and fall</td>
</tr>
<tr>
<td>European Hawkweed/Hieracium sabaudum</td>
<td>Target sites mapped and treated in the late summer</td>
</tr>
<tr>
<td>Hawkweed sp./Hieracium sp.</td>
<td>Control where visible in conjunction with seasonal patrols</td>
</tr>
<tr>
<td>Knapweed sp./Centaurea sp.</td>
<td>Control where visible in conjunction with seasonal patrols, priority target sites are mapped and treated in the spring</td>
</tr>
<tr>
<td>Knotweed sp./Polygonum sp.</td>
<td>Target sites mapped and treated after flower stage in late summer</td>
</tr>
<tr>
<td>Tansy ragwort/Senecio jacobaea</td>
<td>Occurs sporadically throughout the area. All visible plants are sprayed in the spring prior to bud/seed set, any remaining plants visible in flower are hand pulled with seed heads removed, bagged, and disposed of</td>
</tr>
<tr>
<td>Rush skeletonweed/Chondrilla juncea</td>
<td>Target sites mapped and treated in the spring, any remaining visible flowering plants will be treated in conjunction with summer seasonal weed patrols.</td>
</tr>
<tr>
<td>Scotch broom/Cytisus scoparius</td>
<td>Control prioritized for Cowlitz County, and treated wherever visible on secondary roads in the area. Along I-5 control efforts are focused on isolated patches and identified Zone 3 restoration areas.</td>
</tr>
<tr>
<td>Slenderflower thistle/Caruus tenuiflorus</td>
<td>Target sites mapped and treated in the spring</td>
</tr>
</tbody>
</table>
Shiny geranium/\textit{Geranium lucidum} & Worst infestation sites will be mapped, otherwise control where visible and per County Weed Board notifications \\
Poison hemlock/\textit{Conium maculatum} & Control where visible in conjunction with seasonal patrols, priority target sites are mapped and treated in the spring \\
Yellow flag iris/\textit{Iris pseudacrus} & Target sites mapped and treated in the spring prior to flower and late summer after flower.

\textbf{Total Units of Planned Treatment}
- Approximately 75 acres will be treated with herbicides for control of noxious weeds.

\textbf{Locations and Timing of Planned Treatments}
- Over the course of the 2017 season the area will be working with the County Weed Boards to prioritize and map seasonally planned treatment sites. To start with, the area has developed the following list of known infestations:

\textbf{Early Season Targets}
- I-5 MP .4 - .5 poison hemlock
- I-5 MP 1 NB & median spotted knapweed
- I-5 MP 1.2 NB meadow knapweed
- I-5 MP 2.2 SB Canada thistle
- I-5 MP 2.8 SB Canada thistle
- I-5 MP 3.1 NB shiny geranium
- I-5 MP 3.1 SB Canada thistle
- I-5 MP 3.1 SB poison hemlock
- I-5 MP 3.2 NB poison hemlock
- I-5 MP 3.7 SB poison hemlock
- I-5 MP 3.9 SB Canada thistle
- I-5 MP 4 SB poison hemlock
- I-5 MP 5.1 both sides Canada thistle
- I-5 MP 6.1 SB poison hemlock
- I-5 MP 6.7 SB Canada thistle
- I-5 MP 6.8 SB meadow knapweed
- I-5 MP 6.8 NB poison hemlock
- I-5 MP 6.9 SB Canada thistle
- I-5 MP 7 NB poison hemlock
- I-5 MP 7.1 SB bull thistle
- I-5 MP 8 SB meadow knapweed
- I-5 MP 8.2 Canada thistle
- I-5 MP 8.7 NB Canada thistle
- I-5 MP 9.4 NB Canada thistle
- I-5 MP 10.1 median & north side Canada thistle
- I-5 MP 11.5 SB meadow knapweed
- I-5 MP 12.3 SB shiny geranium
- I-5 MP 12.5 SB meadow knapweed
- I-5 MP 12.8 SB Canada thistle
- I-5 MP 13 slender flower thistle median
- I-5 MP 13 SB shiny geranium
- I-5 MP 14.1 median Canada thistle
- I-5 MP 15.9 NB Poison Hemlock
- I-5 MP 16 median Slender Flower Thistle
- I-5 MP 18.2 median & south Slender Flower Thistle
- I-5 MP 19.7 median Slender Flower Thistle
• I-5 MP 21 west side Poison hemlock
• I-5 MP 22 east side and median Poison hemlock
• I-5 MP 22.6 east side and median poison hemlock
• I-5 MP 23-24 median rush skeletonweed (early spring to late summer)
• I-5 MP 23.4 east side Poison hemlock
• I-5 MP 23.8 east side Poison hemlock
• I-5 MP 24.2 east side Poison hemlock
• I-5 MP 24.4 west side Poison hemlock between road and rail
• I-5 MP 24.6 west side Poison hemlock btw road /rail
• I-5 MP 24.8-24.5 center poison hemlock
• I-5 MP 25.1 center poison hemlock
• I-5 MP 25.0 west side Poison hemlock
• I-5 MP 25-26 east side rush skeletonweed
• I-5 MP 27-28 median rush skeletonweed
• I-5 MP 28.4 west side wooded property north of Todd Rd Poison hemlock (can be seen from DuPont Dr.)
• I-5 MP 31.1 median Canada thistle (spot spray early fall with glyphosate)
• I-5 MP 31.9 median Common tansy
• I-5 MP 35.1 center – common tansy
• I-5 MP 35.7 center Poison Hemlock
• I-5 MP 36.5 SR432 exit, west side Poison hemlock
• I-5 MP 37.9-38.1 poison hemlock
• I-5 MP 39.1-39.4 east side Poison hemlock
• I-5 MP 39 on-ramp west side Canada thistle
• I-5 Exit 39 east side of ramp Canada thistle
• I-5 MP 41 east side of on-ramp Canada thistle
• I-5 Sparks on-ramp east side Canada thistle
• I-5 MP 46-46.3 east side Canada thistle
• I-5 MP 48-48.2 east side Canada thistle
• I-5 MP 49.9 east side Canada thistle
• I-5 MP 50-51 median rush skeletonweed
• I-5 MP 51.8 (bridge) poison hemlock
• I-5 MP 54 east side Canada thistle
• I-5 MP 54.3 west side Canada thistle
• I-205 MP 3.1 median poison hemlock
• I-205 MP 3.6 NB & SB Canada thistle
• I-205 MP 3.7 median poison hemlock
• I-205 MP 4.1 median poison hemlock
• I-205 MP NB 5.9 – 5.6 Canada thistle
• I-205 MP 6 median poison hemlock
• I-205 MP 6.5 median poison hemlock
• I-205 MP 6.5 SB shiny geranium
• I-205 MP 9.9 NB meadow knapweed
• I-205 MP 31 SB meadow knapweed
• I-205 MP 31 SB poison hemlock
• I-205 MP 31.7 NB & SB poison hemlock
• I-205 MP 31.8 median meadow knapweed
• I-205 MP 32 SB Canada thistle
• I-205 MP 36 SB poison hemlock
• I-205 MP 36.9 poison hemlock
• SR 14 MP .3 WB Canada thistle
• SR 14 MP .7 WB poison hemlock
• SR 14 MP 3.2 Canada thistle
• SR 14 MP 3.6 WB shiny geranium
- SR 14 MP 3.7 WB poison hemlock
- SR 14 MP 11.2 WB shiny geranium
- SR 14 MP 11.7 WB shiny geranium
- SR 14 MP 11.8 south side shiny geranium
- SR-14 MP 19.5 – MP 22 shiny geranium
- SR-14 MP 23.2 bull thistle, Canadian thistle
- SR-14 MP 25 diffuse knapweed
- SR-14 MP 25 – mp28 scotch broom
- SR-14 MP 28 tree of heaven
- SR-14 MP 8 – MP 21 tansy, teasel, poison hemlock
- SR-14 MP 19-28 boom spray thistle, knapweed, shiny geranium, blackberry
- SR 500 MP 1.8 WB Canada thistle
- SR 500 MP 2.6 EB meadow knapweed
- SR 500 MP 4.9 EB meadow knapweed
- SR 500 MP 9.2 NB shiny geranium
- SR 500 MP 14.8 EB shiny geranium
- SR 501 MP 7.9 SB poison hemlock
- SR 501 MP 10.2 shiny geranium
- SR 501 MP 10.4 poison hemlock
- SR 501 MP 11.1 NB poison hemlock
- SR 501 MP 11.4 poison hemlock
- SR 503 MP 2 SB meadow knapweed
- SR 503 MP 3.5 meadow knapweed
- SR 503 MP 4.5 railroad to salmon creek meadow knapweed
- SR 503 MP 5.1 NB poison hemlock
- SR 503 MP 7.2 SB poison hemlock
- SR 503 MP 7.4 Canada thistle
- SR 503 MP 8.5 - 8.7 both sides meadow knapweed
- SR 503 MP 9.1 NB Canada thistle
- SR 503 MP 9.5 NB meadow knapweed
- SR 503 MP 10.2 SB tansy ragwort
- SR 503 MP 10.4 NB bull thistle
- SR 503 MP 10.6 NB Canada thistle
- SR 503 MP 13.1 NB shiny geranium
- SR 503 MP 16.3 NB bull thistle
- SR 503 MP 19.1 NB Canada thistle
- SR 503 MP 20.2 Canada thistle
- SR 503 MP 26.4 SB Canada thistle

Mid-Season Targets
- I-5 MP 2.4 NB spotted knapweed
- I-5 MP 2.8 SB spotted knapweed
- I-5 MP 2.8 SB Japanese knotweed
- I-5 MP 3.8 SB tansy ragwort
- I-5 MP 7.2 SB tansy ragwort
- I-5 MP 11.1 median tansy ragwort
- I-5 MP 20.1-20.5 west side Spotted knapweed
- I-5 MP 21.4-21.6 west side Spotted knapweed
- I-5 MP 21.5-21 east side Spotted knapweed
- I-5 MP 22.1 west Dalmatian toadflax
- I-5 MP 22.3. center knapweed
- I-5 MP 23 west side Dalmatian toadflax
- I-5 MP 22.8 west side Spotted knapweed
- I-5 MP 23.3-23.7 west side Dalmatian toadflax
- I-5 MP 23.5-22 east side spotted knapweed
- I-5 MP 24.2 east side Spotted knapweed
- I-5 MP 24.5-25.8 east side spotted knapweed
- I-5 MP 24-26 median Dalmatian toadflax
- I-5 MP 25.6 west knapweed and Dalmatian toadflax
- I-5 MP 26.8-26.4 center knapweed
- I-5 MP 28.5-27.7 west side knapweed
- I-5 MP 30.3 west side knapweed
- I-5 MP 30.9-30.4 center knapweed
- I-5 MP 32.2 center knapweed
- I-5 MP 33.8-33.6 west side knapweed
- I-5 MP 33.9 west side Dalmatian toadflax/ spotted knapweed
- I-5 MP 34.2 west side Dalmatian toadflax
- I-5 MP 25-31.6 east side knapweed
- I-5 MP 25-36.2 west side spotted knapweed
- I-5 Exit 27 off ramp knapweed both sides of road
- I-5 MP 31.5 east side Tansy ragwort (early target if rosettes are spotted)
- I-5 MP 33.6-33.7 Dalmatian toadflax
- I-5 MP 33.8 Dalmatian toadflax
- I-5 MP 34.0 west side Dalmatian toadflax
- I-5 MP 34.4-34.9 east side knapweed
- I-5 MP 38.8 west side spotted knapweed
- I-5 MP 36.0 center Knapweed
- I-5 MP 34.6-34.5 west side Knapweed
- II-205 MP 9.8 SB tansy ragwort
- I-205 MP 10.1 NB tansy ragwort
- SR 503 MP 7.6 NB meadow knapweed
- SR 503 MP 7.9 SB tansy ragwort
- SR 503 MP 11.2 both sides meadow knapweed
- SR 503 MP 11.8-12.1 NB meadow knapweed
- SR 503 MP 12.4 SB meadow knapweed
- SR 503 MP 13.1 SB meadow knapweed
- SR 503 MP 12.7-13.5 both sides meadow knapweed
- SR 503 MP 13.8-14 NB meadow knapweed
- SR 503 MP 14.3 SB meadow knapweed
- SR 503 MP 14.3 NB Japanese knotweed
- SR 503 MP 15.4-15.8 SB meadow knapweed
- SR 503 MP 16.2 NB meadow knapweed
- SR 503 MP 19.2 SB meadow knapweed
- SR 503 MP 23 SB meadow knapweed
- SR 503 MP 23.2 NB meadow knapweed
- SR 503 MP 24.5 NB meadow knapweed
- SR 503 MP 26.3 SB meadow knapweed
- SR504 south side 4.3-7 meadow knapweed (spotty infestations)
- SR504 south side 4.6 Tansy
- SR504 south side 8.2 – 9.0 Yellow flag iris
- SR504 south side 27.5-50 spotted knapweed (spotty infestations)
- SR504 south side 41-46 mouse-ear hawkweed (spotty infestations) treat before flowers open
- SR504 north side 7.2 tansy ragwort
- SR504 north side 6.8 tansy ragwort
- SR504 north side 6.7 meadow knapweed
- SR504 north side 6.1 Yellow Flag Iris
- SR504 north side 5.9-2.0 meadow knapweed
- SR-14 MP 8-21 butterfly bush

**Late Season Targets**
- I-5 MP 3.6 NB Japanese knotweed
- I-5 MP 17.9 median Tansy Ragwort
- I-5 MP 21.1 median butterfly bush
- I-5 MP 22.5 median butterfly bush
- I-5 MP 29.8 Butterfly bush
- I-5 MP 43 east side butterfly bush
- Spirit highway off-ramp east side Knotweed
- I-5 MP 52 at exit ramp on east side Knotweed
- I-5 MP 37.9 east side butterfly bush
- I-5 MP 29.9-28.9 butterfly bush
- I-5 MP 25.4 center butterfly bush
- SR 500 MP .6 WB Japanese knotweed
- SR 500 MP .8 EB tansy ragwort
- SR 500 MP 10.6 WB Japanese knotweed
- SR 500 MP 13.2 SB tansy ragwort
- SR 503 MP 2.4 SB Japanese knotweed
- SR504 south side 4.5 Japanese knotweed
- SR504 north side 10.3 Japanese Knotweed
- SR 14 MP 2.4 WB common tansy
- SR-14 MP 8-21 blackberry
- SR-14 MP 23.2 bull thistle, Canadian thistle
- SR-14 MP 9 giant knotweed
- SR-14 MP 13-17 Japanese knotweed
- SR-14 MP 19-28 SR-14 mp19-28 boom spray thistle, knapweed, shiny geranium, blackberry
- SR-500 MP 6-20 spot spray Japanese knotweed, tansy, Canadian thistle, bull thistle, butterfly bush.

**Nuisance Vegetation Control – 3A3**

Nuisance vegetation control takes place only in a select set of carefully prioritized locations throughout the area. These locations are delineated on maps in HATS as polygon outlines in Zone 3. Locations are prioritized to take place where there is heightened local interest in the visual appearance and condition of the roadside vegetation. Typical locations include: wider areas along limited access freeways in urban and suburban areas, freeway interchanges for local urban centers, environmentally sensitive areas, and areas where neighbors are willing to partner with WSDOT on management efforts. Because nuisance weed control activities are not related to safety or legal requirements, and are primarily undertaken to improve the visual appearance of the roadside, they are considered the last priority vegetation management needs.

For all areas designated to receive Nuisance Vegetation Control, multi-year treatment plans have been developed. The actions contained in these plans will be executed and tracked in relation to specific Zone 3 polygons for **Nuisance Vegetation Control Zone 3**, referenced on HATS maps and described below.

**Nuisance Vegetation Control**

Work Operations: 1611, 1612, 1699

HATS Feature-based Forms: Herbicide Application, Manual/Mechanical, Biological, and Seed/Fertilize/Mulch

HATS Map Layer: Feature polygons – Roadside Features/Nuisance Vegetation Control Zone 3
Maintenance activities in each identified location are planned and tracked as multi-year treatment strategies utilizing monitoring and the most effective combination of control methods – with a goal of establishing desirable vegetation that requires only minimal maintenance. Care must be taken in all cases to avoid damage to surrounding desirable/native vegetation. In some cases, soil enhancements may be used as well as seeding or planting of beneficial competition species. Successful plans are consistently implemented over a series of years and annually adjusted as necessary based on field observations.

**Total Units of Planned Treatment**
- Approximately **55 acres** will be mowed for nuisance weed control.
- Approximately **50 acres** will be treated with herbicides

**Locations of Planned Treatments**
- I-5 MP 26.4 to 32.3 Zone 3 in median throughout
- Some nuisance vegetation may be removed in Zone 3 along fence lines when time allows in response to complaints and safety concerns

**Treatment Methods and Timing**
- Full median mowing for nuisance vegetation followed by a broadcast herbicide treatment. The goal is to return this area back to native grasses and eradicate the weeds.

**Landscape Maintenance – 3A5**
Landscape maintenance work includes all vegetation management activities that take place on roadides within areas designated as formal urban planting areas where the intention is to enhance the appearance of freeways through urban centers. For these roadides the goal is to maintain healthy plantings in all three zones and to control all weeds. Planted vegetation is intended to be preserved and enhanced over time through pruning, hedging, trimming, and fertilization where necessary.

**Landscape Work Operations: 1516, 1518, 1525, 1541, 1552, 1561, 1599**
HATS Forms: 7 sub-forms under Landscape – Weed Control – Spray, Weed Control – Manual/Mechanical, Cutting/Pruning/Selective Thin, Seed/Mulch/Plant/Fertilize & Lime, Mowing Ornamental Lawns, Irrigation System Operations & Maintenance, and Other Maintenance as Approved

Landscape maintenance operations are only conducted in a limited number of locations as described below and mapped in HATS. Maintenance activities in each identified location are planned based on a multi-year treatment strategy. Treatment decision are based on monitoring and the proven most effective combination of maintenance actions, to keep plantings (and lawns if present) looking healthy and trimmed throughout the year.

**Total Units of Planned Treatment**
- There are approximately **88 acres** of formally landscaped roadside.

**Locations of Planned Treatments**
- Reference HATS layer – Landscape Maintenance.
- Locations of designate formal landscape include:
  - I-5 MP 0-3.1
  - I-5 MP 5.4 99th street interchange
  - I-5 MP 7.2-7.62 134 street interchange & 139th street interchange
  - I-5 MP 11.4 NB Gee Creek Rest Area
  - I-5 MP 12.98 SB Gee Creek Rest Area
  - I-5 MP 21.09 Woodland interchange
  - I-205 MP 28.37 Mill Plain interchange
  - SR-14 MP 0-1.08
• SR-14 MP 14.73-15.03
• SR-500 MP 1.12 St Johns interchange
• SR-500 MP 3.14 Andreason interchange
• SR-500 MP 3.92 Thurston interchange
• SR-500 MP 5.42 Gher Rd. interchange
• SR-500 MP 7-10B

Treatment Methods and Timing
• Prune and weed control as needed, maintain irrigation, and mow lawns weekly.