**Introduction**

The Washington State Department of Transportation’s (WSDOT) Olympic Region Area 1 manages 312 miles of freeway and highway corridor in Pierce and Thurston Counties. The main corridor in the area is Interstate 5 but the area also maintains portions of other limited access highways along State Routes (SR)16, 167 and 512, and US 101. The area is responsible for maintaining the more maintenance intensive roadsides in the Tacoma and Olympia urban areas. There are many secondary routes in the area in settings ranging from urban to rural in character, some are high in scenic quality. 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 Olympic 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 vegetation management activities. Wherever appropriate the agency is looking for opportunities to plan, cooperate, and partner with others in managing the roadside. Please direct any questions, comments or suggestions to the Olympic Region Area 1 Superintendent – Jeff Hastings, Assistant Superintendent Brent Schiller, or the State’s Roadside Asset Manager – Ray Willard.

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Olympic Region, Area 1 Map

Figure 1
The section outlines the overall 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 measured 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
- Approximately 160 acres of herbicide treatment will be applied to road shoulders throughout the area.

Locations of Planned Treatments
- Planned treatment sites are mapped in HATS
- Locations where bare ground treatments will be applied to all gravel shoulder sections include:
  - SR 101 both directions from MP 362 to MP 367
  - SR 121 All
  - I-5 MP 85 to102 gravel areas
  - I-5 102 to 109 gravel areas
  - I-5 From MP 109 to Lewis County Line both sides
  - I-5 From MP 109 to MP 114 Hardware only
  - I-5 From MP 114 to King County Line Hardware and none construction sites
  - SR 507 MP From Roy Y to Lewis County
  - SR 509
  - SR 510 MP 6 to MP 9
  - SR 512 All
  - SR 702 All
  - SR 704 MP 5.21 to 5.92
  - SR 705 Ramps and Hardware only
  - SR 706 to main gate
  - SR 7 & SR 7 Extension MP 16.90 36.08
  - SR 7 MP 52 to 47.5 intersections
• SR 161 All except Eatonville and Graham Hill MP 13 to 24 intersections
• SR 162 except in city limits.
• SR 165 NO SPRAY AREA
• SR 167 All to King County Line
• SR 410 ALL
• SR 99 Hardware and selective locations.
• SR 16 ALL

- For other road shoulders in the area not mentioned above. Will be at the discretion of area management.

**Treatment Methods**

- Designated locations will be treated in mid to late spring with the following mixture of herbicides and adjuvants:
  - Perspective @ 6 ozd/acre
  - SFM 75 Alligare @ 3 ozd/acre
  - Ranger Pro @ 48 ozl/acre
  - EDT Concentrate @ 32 ozl/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 **150 acres** of Zone 2 safety mowing will be conducted throughout the area.
- If there is adequate Zone 1 width and/or low growing grass established up to the pavement edge, the roadside will not be mowed.

**Locations of Planned Treatments**

- Planned Zone 2 mowing locations are mapped in HATS
- I-5 MP 85.5 to MP 93 both directions will be mowed in late March because of ESA considerations. Prior to mowing that section will be conducted with spot treatment for nuisance weeds. The area will be mowed beyond 1 pass where the application was made.
- I-5 will be one pass mowing on the outside shoulders from MP 93 both directions to Trosper interchange.
- I-5 the interchanges at 93rd and Tumwater Blvd. inside quadrants will be mowed with a one pass mowing operation.
- I-5 MP 116 to 139.50 Safety Mowing as needed to King County Line.
- SR 7 Extension to I-5 Interchange.
- SR 7 MP 17 to MP 47.5 one pass mowing
- SR 7 Both directions MP 47.5 to MP 52 for site distance.
- SR 706 One pass for site distance.
- SR 706 MP 0.10 to 7.2 Mowing wider than one pass for High animal kill corridor
- SR 706 MP 8.0 to 10.2 Mowing wider than one pass for High animal kill corridor
- SR 706 MP 10.2 to 13.4 Mowing for site distance concerns.
- SR 161 MP 0 to MP 20 One pass for site distance
- SR 162 MP 0 to 1, 12.85 to MP 14, 17 to 19.5 and Mundy Loss Rd to SR 165
- SR 167 Both directions one pass mowing.
• SR 507 One pass mowing for site distance
• SR 509 MP 2.35 to MP 3.88 and Spot mowing as needed to King County Line
• SR 510 One pass mowing for site distance. Except in city limits.
• SR 512 One pass mowing in both directions and median
• SR 16 2.51 to MP 5.0
• SR 99 MP 0.85 to 6.15 as needed to King County Line.
• Bike Trail MP 107 to MP 109 mowed twice a year.
• All Guardrails in the Area that have overgrowth of vegetation
• Other areas may be mowed at the direction of area management

Interchanges to be mowed in 2017
• I-5 at Grand Mound MP 88
• I-5 and SR 512 MP 127
• I-5 and 72nd MP 129
• I-5 and 56th MP 130
• I-5 and 38th MP 131
• SR 101 and Mud Bay (Well Head Protection Head)

Treatment Methods
• 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.
• Mowing width varies between 4 and 24 feet as specified on the HATS maps.

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 195 acres will be treated throughout the area.

Locations of Planned Treatments
• SR7 MP 17.5-35 Cutting tree branches for winter operations
• SR 7 MP 35-36 High lift trimming for dead and overhanging branch removal
• SR 161 MP 0-2.5 Trim back tree branches to allow for winter operations and wider mowing for high road kill area
• SR 161 MP 3.6-4.2 Trees of concern slides, sight distance for side roads
• SR 161 MP 12-13 Cut tree branches winter operations, sight distance mowing
• SR 162 MP 0 to 1, 12.85 to MP 14, 17 to 19.5 and Mundy Loss Rd to SR 165
• SR 702 One pass mowing, MP 0 to 9.33
• SR 706 MP 10 to 13.65 Trees of concern, trimming/pruning for winter operations
• SR 704 Both directions one pass mowing. May need two for site distance.
• SR 162 MP 18-20 Cut tree branches for winter operations, Brush cutting for sight distance
• SR 165 MP 0 to 10
- SR 165 MP 11-20 Cut branches winter operations, sight distance signs, mowing
- SR 165 MP 15-16.5 Mowing, cut branches winter operations, sight distance signs
- SR 165 MP 19-19.6 Mowing, cut branches winter operations, sight distance signs, nuisance vegetation.
- SR 167 MP .56 to .76 Remove Limbs
- SR 410 MP 8.8-11 WB/EB Brush cutting and mowing for site distance
- SR 410 Traffic Ave Intersection cut branches both EB & WB for transient issues and sight distance for ramps, sight distance for signs, mowing
- SR 410 MP 21.5-22 Cut branches for winter operations, sight distance signs
- SR 507 pruning and brushing between MP 7-9
- SR 507 Tree pruning MP 41 to 43
- SR 510 Tree pruning MP 5 to 6
- SR 510 Tree pruning MP 7.5 to 8
- SR 512 EB MP 2.0 to 2.19, MP 8 to 9
- SR 512 Brush out Guardrail Sections in the Median

Treatment Methods
- Side arm mounted mowing heads, skid steer mower, man-lift, hand held saws, pole saws, and chippers.
- Prescriptions for herbicide treatments:
  - Garlon 3A at 96 Oz/ Per Acre or Garlon 4 at 96Oz/ Per Acre (Site Specific depending on locations)
  - Metcel VMF 2 Oz /Per Acre
  - Spreader 90 48 Oz/ Per Acre
  - EDT Concentrate 128

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
- There are typically between 80 and 160 mature hazard trees removed throughout the area each year.

Locations of Planned Treatments
- Tacoma Area 1 will complete and review hazard tree assessment in early fall, track locations and species of trees that are remove because of their concern.
- Review Quadrant @ 93rd and Tumwater Blvd.
- Alder Canyon on SR 7 and SR 507 south of Bucoda
- I-5 and 93rd Ave Quadrant
- I-5 and Tumwater Blvd Quadrant
- I-5 Nisqually area MP 95-102
- I-5 NB and SB 98 to 101
- Emerging cottonwood and alder both sides I-5 MP 118 to Center Drive in Dupont
- Locations will be determined throughout the year for emergency purposes.
- SR7 MP 17.5 - MP 34 Remove trees of concern after assessment
- SR 161 MP 3.6-4.2 Trees of concern in Slide Areas after assessment
• SR 165 MP 11-14  Remove trees of concern in Slide Areas after assessment
• SR 410 Traffic Ave and SR 167 NB on ramp review and provide assessment
• SR 512 Review MP 9 to MP 10
• SR 706 MP 10 to 13.65  Remove Trees of concern after assessment
• Scatter Creek and Maytown Rest Areas as needed for public safety.
• Locations to be determined by area management.

Treatment Methods
• Qualified and experienced tree fellers within WSDOT, assistance from WA State Parks and small contracts.
• Fallen trees and debris left to decompose on site whenever possible.

Noxious Weed Control – 3A2
This group of activities is focused on control of weed species and infestation locations identified in this plan document. The focus is on species that are legally designated by 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 at the expense 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 patrol and control operations are made in the early summer with a goal of spraying or pulling all visible or mapped target species 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, 1699
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 Olympic Region, Area 1 at this time.

General Noxious Weed Control
Work Operations: 1616, 1618, 1641, 1699
HATS Forms: 4 sub-forms under Noxious Weed Control/General – Noxious Weed Control/Spray, Noxious Weed Control/Mechanical, Noxious Weed Control/Manual, and Noxious Weed Control/Biological

These operations are timed and carried out throughout the season to prevent the spread of legally designated noxious weed species, and to reduce or eliminate populations wherever possible. Integrate treatment plans combine field monitoring and a mixture of seasonally timed treatment methods with proven effectiveness on designated species. Successful plans are consistently implemented over a series of years and annually adjusted as necessary based on field observations. Care must be taken in all cases to avoid damage to surrounding desirable/native vegetation.

Target Species on Right of Way in Olympic Region Area 1:

<table>
<thead>
<tr>
<th>Common Name/Botanical Name</th>
<th>Treatment Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gorse/Ulex europaeus</td>
<td>Control has been executed on all known infestations and sites are being monitored.</td>
</tr>
<tr>
<td>Purple loosestrife/Lythrum salicaria</td>
<td>Control has been executed on all known plants and sites are being monitored.</td>
</tr>
<tr>
<td>Hawkweed sp./Hieracium sp.</td>
<td>Hot spots have been mapped in HATS and sites are treated annually in early summer.</td>
</tr>
<tr>
<td>Knotweed sp./Polygonum sp.</td>
<td>Target infestations have been mapped in HATS and sites are treated annually after most plants have flowered.</td>
</tr>
<tr>
<td>Ragwort tansy/Senecio jacobaea</td>
<td>Heavily infested locations have been identified for early season treatment, then in early summer when plants are in flower crews conduct hand-pulling and seed disposal.</td>
</tr>
<tr>
<td>Rush skeletonweed/Chondrilla juncea</td>
<td>EDRR locations have been mapped in HATS and sites are treated annually in early spring. All visible plants are then treated when flowering throughout the summer.</td>
</tr>
<tr>
<td>Toadflax Dalmatian/Linarea dalmatica</td>
<td>EDRR locations have been mapped in HATS and sites are treated annually in late summer.</td>
</tr>
<tr>
<td>Hemlock, poison/Conium maculatum</td>
<td>EDRR locations have been mapped in HATS and sites are treated annually in early spring. All visible plants are then treated when flowering throughout the summer.</td>
</tr>
<tr>
<td>Knapweed sp./Centaurea sp.</td>
<td>EDRR locations have been mapped in HATS and sites are treated annually in early spring. All visible plants are then treated when flowering throughout the summer.</td>
</tr>
<tr>
<td>Butterfly bush/Buddleia davidii</td>
<td>EDRR locations have been mapped in HATS and sites are treated annually in late summer.</td>
</tr>
</tbody>
</table>

Total Units of Planned Treatment
- Approximately **30 acres** to be treated with herbicides.
- Spot Spraying and hand pulling?
- Locations of Planned Treatments
- Timing and location to be determined from field reviews and new locations from spread of seedlings.
- Reference HATS layer – Noxious Weed Control General includes Thurston and Pierce County data points for species location and distribution.
• Planned treatment targets include:
  o Knapweed early summer I-5 MP 88-89 both sides of the interchange
  o Knapweed early summer I-5 median from MP 92 to 95
  o Sulfur cinquefoil early summer I-5 Exit 95
  o Tansy Ragwort early spring I-5 MP 96 SB
  o Poison Hemlock early spring I-5 MP 99 NB/SB
  o Tansy Ragwort early spring I-5 Exits 101, 102, 104, 107 and 111 both NB/SB
  o Tansy Ragwort early spring I-5 MP 104.5 to 105 NB
  o Tansy Ragwort and Poison Hemlock early spring I-5 Exit 109 NB/SB
  o Tansy Ragwort and Poison Hemlock early spring I-5 median MP 110.5
  o Tansy Ragwort, Poison Hemlock and Skeleton weed early spring on I-5 Exit 114
  o Tansy Ragwort and Gorse early summer I-5 Exit 114
  o Tansy Ragwort, Poison Hemlock and Skeleton weed early spring I-5 MP 114.93 to 115.50
  o Knapweed early summer I-5 MP 114.93 to 115.50
  o Dalmatian Toadflax late summer I-5 MP 114.93 to 115.50
  o Tansy Ragwort and Poison Hemlock early spring I-5 Exit 118 NB/SB
  o Dalmatian Toadflax late summer I-5 Exit 118 NB/SB
  o Tansy Ragwort early spring I-5 Exit 119
  o Knapweed in early summer on I-5 Exit 119
  o Tansy Ragwort early spring on SR 7 from MP 18 to 47.38
  o Poison Hemlock early spring SR 507 MP 6.13 to MP 9
  o Tansy Ragwort early spring SR 507 MP 15 to 20 then from 30.05 to 43.57
  o Knapweed early summer SR 507 MP 15 to MP 20
  o Tansy Ragwort and Poison Hemlock early spring SR 510 MP 3.77 to 5.9
  o Poison Hemlock early spring SR 702 MP 2.29 to 3.32
  o SR 706 MP 11.8 to MP 12.1 Japanese Knot weed in known locations Spot treatment.

Treatment Methods and Timing
• Seasonal timing is critical to successful reduction in weed populations. However, in some cases the only possible treatments are made simply to control seed production, rather than to reduce populations. Seasonal target species and herbicide prescriptions include:
  Early Season Targets
    o Tansy ragwort, poison hemlock, shiny geranium, rush skeletonweed, gorse and Canada thistle
  Late Season Targets
    o Knotweed, blackberries, butterfly bush, and scotch broom

• Prescriptions for herbicide treatments for noxious weed treatments include:
  o Garlon 4 Ultra 96 Ozl/Pre Acre
  o Metcel VMF 2 Ozl/Per Acre
  o Spreader 90 33Ozl/Per Acre
  o Blazon-Blue 66Ozl/Per Acre

Nuisance Vegetation Control – 3A3
Nuisance vegetation control includes control/management of weed species that are recommended but not mandated by state and/or county law. These maintenance activities also may address vegetation growth that presents a publically perceived negative visual impact. Because nuisance weed control activities are not legally mandated and do not pose a safety risk, they are considered the last priority vegetation management needs.
Maintenance funding currently only allows for control of nuisance weed species in designated higher profile areas such as urban freeway corridors and at interchanges or when they are growing alongside designated noxious weed species and control is incidental.

**Nuisance Vegetation Control**

**Work Operations:** 1611, 1612, 1699

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

**HATS Map Layer:** Feature polygons – Roadside Features/Nuisance Vegetation Control Zone 3

Nuisance weed species are often treated incidentally to controls directed at designated noxious weed species in proximity. Other nuisance vegetation management is conducted in a select set of high profile interchanges and urban roadsides where the goal is establishing the lowest maintenance weed free roadside possible.

**Total Units of Planned Treatment**

- Approximately **45 acres** will be treated with herbicides for nuisance weed control as part of IVM treatments in prioritized Zone 3 areas.
- Approximately **100 acres** will be mowed for nuisance vegetation control in 2017.

**Locations of Planned Treatments**

- Reference HATS layer – Roadside Features/Nuisance Vegetation Control Zone 3.
- Primary focus areas for Nuisance Vegetation Control in Zone 3 includes:
  - Mow out designated sections of interchanges near the Tacoma Mall
  - Hand cut and stump treat scotch broom along I-5 when plants only exist in isolated patches.
  - Spot treat for re-growth of previously controlled scotch broom and blackberry on I-5 Exit 118 NB quadrants
  - Cut and stump treat scotch broom and other undesirable vegetation on I-5 Exit 118 (DuPont interchange) SB quadrants
  - Couple of areas on SR 512 MP 1.5 east bound median areas on SR 509 between Port of Tacoma and Taylor Way near MP 2-3 where scotch broom is encroaching on the fog line and also for sight distance.
  - Other areas may applied at the direction of area management

**Treatment Methods and Timing**

- Multi-year IVM treatment plans for each planned location are described in the attribute notes attached to the Zone 3 polygons on HATS maps.
- Treatment strategies typically include the initial use of selective or wholesale mowing, and cutting and/or hand pulling to clear larger target species where present. In succeeding years regrowth of unwanted species is selectively treated with herbicide broadcast spraying, spot spraying, and hand pulling.
- Prescriptions for herbicide treatments:
  - Garlon 3A at 96 Ozl/ Per Acre or Garlon 4 at 96Ozl/ Per Acre (Site Specific)
  - Metcel VMF 2 Ozl /Per Acre
  - Spreader 90 48 Ozl/ Per Acre
  - EDT Concentrate 128

**Landscape Maintenance – 3A5**

Landscape maintenance work includes all vegetation management activities that take place on roadsides within areas designated as formal urban planting areas where the intention is to enhance the appearance of freeways through urban centers. For these roadsides 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 Polygon Feature-based Form:** Roadside Features/Landscape Maintenance

**HATS Map Layer:** Feature polygons – Roadside Features/Landscape Maintenance

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 35 acres of formally landscaped roadside in Tacoma and Olympia.

**Locations of Planned Treatments**

- Reference HATS layer – Roadside Features/Landscape Maintenance.
- Locations of designate formal landscape include:
  - I-5 MP104.73 – 104.83 IVY BED
  - I-5 MP105.04 – 105.2 SHRUB BED
  - I-5 MP105.24 – 105.5 SHRUB AND IVY BEDS includes the capitol interchanges
  - I-5 MP105.55 – 105.92 IVY BED
  - I-5 MP106.04 – 106.58 IVY BED
  - I-5 MP106.58 – 106.6 COTONEASTER AND IVY yearly light pruning with heavy pruning every 7 to 10 years as needed
  - I-5 MP106.6 – 106.66 IVY BED
  - I-5 MP106.66 – 107.58 SHRUB BED
  - I-5 MP107.64 – 107.91 ELEVATED SHRUB BED does not receive a casoron application
  - I-5 MP107.91 – 108.51 IVY AND SHRUB BEDS including the Sleater Kinney interchange
  - I-5 MP108.51 – 108.93 SHRUB BED identified as a shiny geranium sight. Also has a 6 to 6 foot grass fringe on the mainline side
  - I-5 MP108.93 – 109.28 SHRUB BEDS including the 109 interchange
  - I-5 MP111.39 – 112.04 SHRUB BEDS with grass fringe including the 111 interchange
  - I-705 area in and around downtown Tacoma and areas designated as formal landscaped areas.
  - I-5 MP108.94 – 109.12 WAX MYRTLE moderate pruning every 2 years. Nuisance and noxious control as needed
  - I-5 MP112.15 – 111.84 SHRUB BEDS with grass fringe mainline side includes the 111 interchange
  - I-5 MP109.24 – 108.9 SHRUB BEDS including 109 interchange
  - I-5 MP108.9 – 108.46 SHRUB BEDS identified as a shiny geranium class a noxious weed area
  - I-5 MP108.46 – 108.16 IVY BED with grass fringe mainline side includes Sleater Kinney interchange
  - I-5 MP109.28 to the interchange at 111 mowed back to the native tree line.
  - I-5 MP102.6 SHRUB BED. Trosper off ramp right side up to the stop light.
  - I-5 MP102.6 – 102.7 IVY BED Gore to Gore at Trosper and interior of ramps.
o I-5 MP102.89 – 103.43 SHRUB BED.
o I-5 MP103.53 – 103.65 SHRUB BED Deschutes off ramp both sides
o I-5 MP103.98 – 104.31 IVY BED. 101 off ramp both sides
o I-5 MP104.38 – 104.5 SHRUB BEDS Includes 101 on ramp and Deschutes on ramp both sides
o I-5 MP108.16 – 106.87 SHRUB BEDS includes Pacific Ave. interchanges
o I-5 MP106.69 – 106.51 COTONEASTER WITH IVY yearly light pruning. Heavy pruning every 7 to 10 years as needed
o I-5 MP106.51 – 105.91 IVY BED
o I-5 MP105.81 – 105.39 IVY BEDS with elevated ivy including the capitol interchanges trim elevated ivy every 2 to 5 years as needed
o I-5 MP105.26 – 105.02 SHRUB BEDS Henderson on ramp both sides. Did not receive a casoron application in 2014
o I-5 MP105.02- 104.59 IVY BED
o I-5 MP104.46 – 104.27 IVY AND SHRUB BEDS includes the hwy. 101 interchange. North side of 101
o I-5 MP104.27 – 103.03 IVY AND ELEVATED IVY trim elevated ivy every 2 to 5 years as needed. Includes second Ave. interchange and south side of HWY 101
o I-5 MP102.94 – 102.79 IVY AND SHRUB BEDS includes new planting at Trosper and Trosper interchange
o SR 101 MP365.22 – 365.65 SHRUB BEDS this is both directions at black lake interchange.
o Other areas may applied at the direction of area management

Treatment Methods and Timing
• Broadcast applications with pre-emergent late winter early spring.
• Mechanical and power tools in spring and summer months
• Prescriptions for herbicide treatments:
  o Casoron 150 Lbs / Per Acre
  o Surflan AS T&O Ozl / Per Acre
  o Ranger Pro 64 Ozl /Per Acre

Stormwater Facilities Maintenance
Vegetation maintenance in stormwater management facilities is planned and measured separate from the other roadside activities described in this plan. Vegetation control actions in these facilities are defined in the “Owner’s Manual” for each feature. Because these facilities are regulated by permit and require ongoing maintenance in order to function properly, necessary vegetation management actions in these facilities are prioritized separately from other roadside vegetation management needs.

As in all vegetation management activities, long-term vegetation maintenance requirements can be minimized by applying a multi-year IVM strategy to establish desirable vegetation and minimize the emergence and growth of unwanted species.

NPDES Maintenance
Work Operations: 1344, 1363, 1364, 1365, 1368, 1399
HATS Feature-based Forms: Stormwater Features List
HATS Map Layers: Stormwater Features

Before crews warrant the need to remove or treat vegetation from a Stormwater Facility several factors need to be considered. Crews shall review sections 3.9 and 3.9.1 of the Olympic Region Area 1 IVM Plan, section 5.5 of the Highway runoff manual, and review sections 1 through 4 of the Roadside Policy Manual an onsite visit with Region and/or HQ environmental office to determine what is the “Best Maintenance Practice” to a site specific plan or Owner’s Manual.
• Locations of IVM needs in Stormwater facilities will be tracked through Highway Activities Tracking System. (HAT)
• All herbicide applications will tracked in the Pesticide Tracking Database
• Work will be determined by Typical and Non Typical Maintenance and the operation of the facility
• Facility restoration of sites over $25,000
  ✓ Three locations to for 2017 that will contain extensive tree and brush removal.
  ✓ SR 101 Black Lake Blvd, SR 161 and SR 16 All work coordinated with HQ and Region Environmental Office