

# Olympic Region, Area 1 Integrated Roadside Vegetation Management Plan

2024



Washington State  
Department of Transportation  
Maintenance Operations Division

## *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, as well as a number of secondary rural routes. 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.

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.

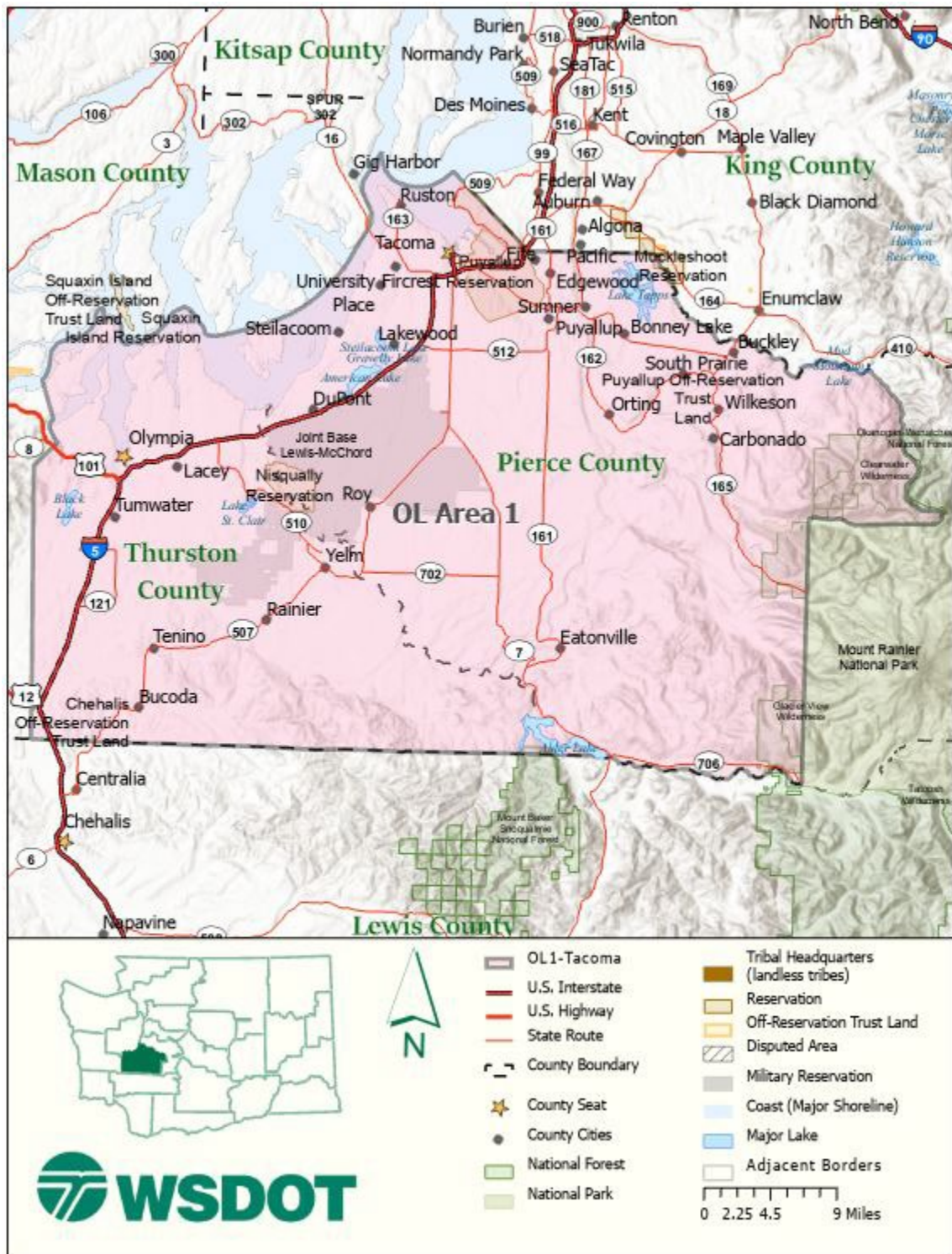
This plan serves as the guidance document for vegetation maintenance in Olympic Region Area 1 for the 2024 growing season. It identifies priority locations and prescribes treatments for accomplishing safety and weed control objectives through the use of a combination of seasonally-timed control measures. Each year's actions are designed as part of a coordinated multi-year strategy to minimize roadside maintenance requirements wherever possible. 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.

As of the 2024 season, the information contained in this plan document can be geographically referenced by crews in the field using iPads and the Highway Activity Tracking System (HATS). Accomplishments and results will also be tracked geographically through this new system. This development in WSDOT maintenance management will greatly improve the agency's success in properly executing planned actions, monitoring and documenting results of treatments, and in measuring cost and results over time.

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 cooperate and partner with others in managing the roadside. Please direct any questions, comments, or suggestions to the Olympic Region Area 1 Superintendent – Mike Gauger, Assistant Superintendent Tim Marganelli, or the State's Roadside Asset Manager – Ray Willard.

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Olympic Region, Area 1 Map  
Figure 1

## ***Olympic Region, Area 1 IVM Work Plan – 2024***

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The section outlines the overall approach and geographic distribution of roadside vegetation management requirements throughout the maintenance area in 2024. 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**. Safety Rest Area Operations and Drainage and Stormwater 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.

### **Safety First**

Safety of our employees, the traveling public, and the environment are WSDOT's highest priorities and key to our success. Pre-Activity Safety Plans (PSAP) are developed for all activities and crews review, discuss, and sign these plans at tailgate meetings, prior to each day's work. When applying herbicides, our licensed pesticide applicators read the entire label before using products and use the products strictly in accordance with label precautionary statements and directions. WSDOT has implemented additional agency specific environmental restrictions on some products, to minimize any risk to aquatic or terrestrial ecosystems. Applicators wear protective equipment applicable to the products being used and discuss any potential environmental and/or human health risks as part of the daily PASP meeting. Technicians inspect their calibrated equipment daily to ensure it is in proper working order. Herbicides are stored in locked facilities and kept in an organized condition.

### **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: Pesticide Application**

**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 **200 acres** of herbicide treatment will be applied to road shoulders throughout the area.
- Areas under construction will not be treated, including I-5 Fort Lewis, 167, 509, and 99

#### **Locations of Planned Treatments**

- Planned treatment sites are mapped in HATS
- Construction on I-5 MP 116.57 to 123.88
- Construction I-5 MP 137.85 to 139
- Construction 509 MP 2.63 to 3.90
- Construction 99 MP .86 to 1.28
- As construction is completed additional shoulder treatment will be required

- Locations where bare ground treatments will be applied to all gravel shoulder sections include all shoulders within the area, with the following considerations:

Locations where only glyphosate only will be applied:

- US 101 MP 362-365 (City of Olympia Wellhead Protection Area)
- SR 510 MP 6-8.65 (City of Olympia Wellhead Protection Area)

Locations where no herbicide treatment is required:

- I-5 MP 109-114 (Where rolled shoulder pavement is present)
- Locations where wider treatment is applied include intersections, gore points and hardware.

### Treatment Methods

- Designated locations will be treated in mid to late spring with the following mixture of herbicides and adjuvants:

Blend R4:

- Roundup Pro Conc. @ 32 oz/acre
- Esplanade @ 5 oz/acre
- Lockdown SC @ 8 oz/acre
- Escort XP @ 1.5 oz/acre
- MSO @ 16 oz/acre
- Supplemental Roundup Pro Conc @ 32 oz/acre when Canary grass or thick vegetation is present

Wellhead Protection Areas:

- Roundup Pro Conc. @ 64 oz/acre
- MSO @ 16 oz/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

Locations with increased mowing widths:

- 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 MP all areas not under consideration
- 512 all areas where needed
- SR 706 MP 0.10-13.4 mow wider than one pass for high animal kill corridor.
- SR 167 and 410 all areas where needed
- SR 510 extension has section of pathway that requires annual mowing

- Olympia Bike Trail I-5 MP 106 to MP 109 mowed twice a year.
- All areas with sight distance considerations such as gore points and intersections are mowed as needed for traffic safety

#### 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: Pesticide Application for spray applications, and three sub-forms under Tree/Brush Control –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 **150 acres** will be trimmed or mowed mechanically
- Less than **10 acres** will be trimmed manually throughout the area.
- Approximately **30 acres** will be treated with herbicides

#### Locations of Planned Treatments

- SR 702 whole section site distance clearing
- SR 161 Clear Lake hill both directions focus on behind guardrail
- SR 161 MP 16 to MP 13
- SR 121 Site distance clearing
- SR 165 MP 15 to 19.5 site distance and behind rail
- SR 410 MP 17 to 19 both directions
- SR 410 Traffic Ave. SR 162 to Valley Ave., 166<sup>th</sup> Ave. E
- SR 162 MP 19.3 to 17 both directions, Patterson Rd. area 12.2 to 12.6, MP 6.9 to 6.8 near new retaining wall site distance

#### Treatment Methods

- Side arm mounted mowing heads, skid steer mower, man-lift, handheld saws, pole saws, and chippers.
- Herbicide applications are made late in the growing season to maximize effectiveness and avoid “brown-out”
- Prescription for tree and brush herbicide treatments:
  - Crossbow @ 128 oz/acre
  - Spreader 90 @ 16 oz/acre
  - Blazon-Blue @ 66 oz/acre

### **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 exhibiting structural or health defects and identified as a potential imminent threat, are removed as soon as possible.

#### Total Units of Planned Treatment

- There are typically less than **500** mature hazard trees removed throughout the area each year.

#### Locations of Planned Treatments

- Continued work throughout the area will address priority removal.
- Priority removal locations to be determined by area management.

#### Treatment Methods

- Qualified and experienced tree fallers within WSDOT, assistance from WA State Parks and small contracts when needed.
- Fallen trees and debris left to decompose on site whenever possible.

### **Noxious Weed Control – 3A2**

This group of activities includes control of non-native invasive weed species as defined by state law and individual county designation. This group of activities is second priority vegetation management work after safety related objectives have been addressed. While all Class A, B, and C noxious weed species as listed in RCW 17.10 are considered potential targets for WSDOT noxious weed control, the agency is currently not funded to achieve 100% control of all noxious weeds. Therefore, the top priorities for weed control are focused on locations and species that are more limited in distribution on the right of way – where there is a chance of successful eradication. To prioritize control of species that are already widespread in the area, WSDOT works with the local county noxious weed boards and coordinators, to annually review and determine which species and locations will be specifically targeted.

To prioritize, plan, and track noxious weed control, WSDOT maps and monitors weed infestations in three categories: **Priority**, **Planned Treatment**, and **General Reference**. **Priority** locations are where Class A noxious weed species exist on the right of way, and complete eradication is required by state law. **Planned Treatment** sites are locations where there are new, and/or limited distribution infestations of Class B and C noxious weed exist, and eradication is possible. **General Reference** points are currently hidden and not in use.

#### **Noxious Weed Control**

**Work Operations: 1616, 1618, 1641, 1699**

**HATS Forms: Pesticide Application (for spray applications,) and three sub-forms under Noxious Weed Control General– Manual/Mechanical, Seed/Fertilize/Mulch, and Biological**

**HATS Map Layer: Reference Points – Roadside Features/Noxious Weed Control Priority, Noxious Weed Control Planned Treatment, and Noxious Weed Control General Reference**

Operations are prescribed throughout the season to prevent the spread of any legally designated noxious weed species, and to reduce or eliminate populations wherever possible. Integrated treatment plans combine field monitoring and an integral mixture of seasonally timed control 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.

**Priority Class A Noxious Weed on WSDOT Right of Way in Olympic Region Area 1:**

#### Species and Locations

- Slender flower thistle/*Carduus tenuiflorus* on I-5 at MP 114 in the median

Planned Treatments

- Capstone @ 96 oz/acre, Spreader 90 @ 16 oz/acre
- Treatment in May/June prior to flowering stage

Target Species list for planned treatment in Olympic Region Area 1:

<b>Common Name/Botanical Name</b>	<b>Treatment Notes</b>
Butterfly bush/ <i>Buddleia davidii</i>	EDRR locations have been mapped in HATS and sites are treated annually in late summer. Largest areas of infestation in the Tacoma area on SR16 and I-5.
Common reed/ <i>Phragmites</i>	Most sites in the vicinity of Port of Tacoma
Dalmatian toadflax/ <i>Linarea dalmatica</i>	One known site I-5 median at MP 86, treated annually in late summer.
Gorse/ <i>Ulex europaeus</i>	Control has been executed on all known infestations and sites are being monitored.
Hawkweed sp./ <i>Hieracium sp.</i>	Target locations in Thurston Co. listed in Appendix A.
Knapweed sp./ <i>Centaurea sp.</i>	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. Priority locations in Thurston Co. listed in Appendix A.
Knotweed sp./ <i>Polygonum sp.</i>	Target infestations have been mapped in HATS and sites are treated annually late summer after most plants have flowered. Priority locations in Thurston Co. listed in Appendix A.
Poison hemlock/ <i>Conium maculatum</i>	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. Priority locations in Thurston Co. listed in Appendix A.
Purple loosestrife/ <i>Lythrum salicaria</i>	Thurston Co. sites mapped in HATS and listed in Appendix A
Ragwort tansy/ <i>Senecio jacobaea</i>	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. Priority locations in Thurston Co. listed in Appendix A.
Rush skeletonweed/ <i>Chondrilla juncea</i>	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. Priority locations in Thurston Co. listed in Appendix A.
Scotch broom/ <i>Cytisus scoparius</i>	Only target in Zone 2 and in newly infested Zone 3 sites, and in designated native restoration areas including I-5 median through Hawk's Prairie, and I-5 vicinity of Scatter Creek MP 88.5 to 92.
Shiny geranium/ <i>Geranium lucidum</i>	Target infestations have been mapped in HATS and sites are treated annually during the growing season.
Spurge laurel/ <i>Daphnie laureola</i>	Main infestation along US101 vicinity of MP 258. Other priority locations in Thurston Co. listed in Appendix A.
Sulfur cinquefoil/ <i>Potentilla recta</i>	EDRR locations have been mapped in HATS and sites are treated annually in early spring. Priority locations in Thurston Co. listed in Appendix A.



Toadflax Dalmatian/ <i>Linarea dalmatica</i>	EDRR locations have been mapped in HATS and sites are treated annually in late summer.
Yellow flag iris/ <i>Iris pseudacurus</i>	EDRR locations have been mapped in HATS and sites are treated annually in late summer. Priority locations in Thurston Co. listed in Appendix A.

Total Units of Planned Treatment

- Approximately **15 acres** to be treated with herbicides.
- Up to **10 acres** will be controlled with mechanical tools or by hand.

Locations of Planned Treatments

- Thurston County species and locations targets are listed in **Appendix A**
- Reference HATS layer – **Noxious Weed Control General** includes Thurston and Pierce County data points for species location and distribution.
- Broadcast treatment planned for early spring for I-5 median MP112.5 to 114.5.

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**

- Tansy ragwort, poison hemlock, shiny geranium, rush skeletonweed, gorse and Canada thistle

**Late Season Targets**

- Knotweed, blackberries, butterfly bush, and scotch broom

- Prescriptions for herbicide treatments for late season noxious weed treatments include:
  - Crossbow @ 96 oz/acre
  - Escort XP @ 2 oz/acre
  - Spreader 90 16 oz/acre
  - Blazon-Blue 66 oz/acre
- Prescriptions for herbicide treatments for early season noxious weed treatments include:
  - Capstone @ 96 oz/acre
  - Spreader 90 16 oz/acre
  - Blazon-Blue 66 oz/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 they 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: Reference polygons – Roadside Features/Zone 3 Nuisance Reference**

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 **15 acres** will be treated with herbicides for nuisance weed control as part of IVM treatments in prioritized Zone 3 areas.
- Approximately **15 acres** will be mowed for nuisance vegetation control in 2024.

#### Locations of Planned Treatments

- Reference HATS layer – **Roadside Features/Zone 3 Nuisance Reference**
- Primary focus areas for Nuisance Vegetation Control in Zone 3 includes:
  - SR 16 Pearl St.
  - SR 512 MP 2 to 12 starting in I/C quadrants and moving out, including median
  - I-5 – 56<sup>th</sup> St. Interchange and surrounding alignment
  - I-5 – 84<sup>th</sup> St.
  - SR 410 Traffic Ave. SR 162 to Valley Ave., 166<sup>th</sup> Ave. E, quadrants
  - I-5 Hawks Prairie
  - I-5 Scatter Creek vicinity, MP 88 – 92

#### 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 timed in the spring:
  - Capstone @ 96 oz/acre
  - Escort XP @ 2 oz/acre
  - Spreader 90 @ 16 oz/acre

### **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: 1513, 1516, 1518, 1525, 1541, 1552, 1561, 1599**

**HATS Forms: Pesticide Application (for all spray applications), and six sub-forms under Landscape – Weed Control/Manual, Weed Control/Mechanical, Pruning/Hedging/Edging, Seed/Mulch/Plant/Fertilize, Mowing Lawn, Irrigation System Operations & Maintenance, and Other Maintenance as Approved by Superintendent**  
**HATS Map Layer: Reference polygons – Roadside Features/Landscape Maintenance Reference**

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.**
- Priority work:
  - Cut ivy at base all trees
  - Wax myrtle in median at Martin Way – Cut at base and stump treat
- 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.
  - I-5 MP102.89 – 103.43 SHRUB BED.
  - I-5 MP103.53 – 103.65 SHRUB BED Deschutes off ramp both sides
  - I-5 MP103.98 – 104.31 IVY BED. 101 off ramp both sides
  - I-5 MP104.38 – 104.5 SHRUB BEDS Includes 101 on ramp and Deschutes on ramp both sides
  - I-5 MP108.16 – 106.87 SHRUB BEDS includes Pacific Ave. interchanges
  - I-5 MP106.69 – 106.51 COTONEASTER WITH IVY yearly light pruning. Heavy pruning every 7 to 10 years as needed
  - I-5 MP106.51 – 105.91 IVY BED

- 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
- I-5 MP105.26 – 105.02 SHRUB BEDS Henderson on ramp both sides. Did not receive a casoron application in 2014
- I-5 MP105.02- 104.59 IVY BED
- I-5 MP104.46 – 104.27 IVY AND SHRUB BEDS includes the hwy. 101 interchange. North side of 101
- 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
- I-5 MP102.94 – 102.79 IVY AND SHRUB BEDS includes new planting at Trospen and Trospen interchange
- SR 101 MP365.22 – 365.65 SHRUB BEDS this is both directions at black lake interchange.
- 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:
  - Post emergent
  - Mix 1:
    - Ranger Pro 64 oz/acre
    - Syltac @ 16 oz/acre
  - Mix 2:
    - Milestone @ 7 oz/acre
    - Syltac @ 16 oz/acre

**Safety Rest Operations – 7B1**

All safety rest areas have planted areas and vegetation maintenance requirements throughout the facility. These are some of WSDOT’s most heavily accessed facilities and often one the first impressions of Washington State for the visiting public. The goal in maintenance of rest area landscape plantings is to present a well-kept appearance and plantings are intended to be maintained in a set condition throughout the year. For landscape treatments in these facilities 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 including irrigation and fertilization where necessary.

**Safety Rest Area Landscape Maintenance**

**Work Operations: 1711, 1752, 1789, 1799**

**HATS Forms: Pesticide Application (for all spray applications)**

**HATS Map Layers: Formal Landscape and Natural Landscape polygons (coming soon to HATS)**

Rest area landscape maintenance operations may be conducted by rest area attendants and/or maintenance area IVM specialists. Planting areas at all rest area sites are mapped as two sets of reference polygons in HATS showing areas with formal landscape plantings and those with naturalized plantings. Treatment plans are based on monitoring and evaluation of previous years’ actions and results. Annually adaptive plans are based on the proven most effective combination of maintenance actions to keep plantings (and lawns if present) looking healthy and trimmed throughout the year.

Locations of Safety Rest Areas in Olympic Region Area 1

- Maytown – I-5 SB at MP 93.2 to 93.6
- Scatter Creek – I-5 NB at MP 90.6 to 91.1

- Polygons have been created for outlines on high and low maintained landscape areas throughout each site. These polygons will be incorporated with HATS in the future.

#### Treatment Methods and Timing

- Vegetation management activities within Safety Rest Areas is conducted by the Area 1 crew with some assistance from the rest area attendants.
- Routine landscape related work requirements include:
  - Annual startup and winterization of irrigation.
  - Weekly mowing and routine edging of lawn areas
  - Weed control in lawns and in planting beds around pedestrian areas
- Pollinator Research at Scatter Creek Rest Area:
  - Wildflower meadows have been established in areas beyond the direct building access
  - Mowing in these area is conducted once per year in September/October
  - Selective control of certain weed species is also required in these area and is conducted by hand either manually or with herbicide spot treatments

### **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
  - ✓ SR 101 Black Lake Blvd, SR 161 and SR 16 All work coordinated with HQ and Region Environmental Office

***Appendix A – Thurston County Noxious Weed Species and Locations***

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Bohemian Knotweed	RW JOHNSON BLVD SW	2120 R W JOHNSON BLVD SW (WSDOT SHOPS) - BEHIND CHAIN LINK FENCED AREA ON THE SW CORNER OF THE PROPERTY
Bohemian Knotweed	2ND AVE SW	BEHIND 1222 2ND AVE SW ON WSDOT SIDE OF OVER GROWN FENCE - CAN'T SEE FROM FREEWAY-VISIBLE FROM 2ND AVE
Dalmatian Toadflax	SR 005 MP 86	NEAR MP86. CENTRAL MEDIAN UP AGAINST CONCRETE BARRIER
Diffuse Knapweed	SR 507 MP 023	S SIDE OF SR 507, .600 FT E OF MP 23
Diffuse Knapweed	SR 005 MP 112	SR005 MEDIAN 1000 FT SOUTH OF THE MARVIN RD OVERPASS. BETWEEN NB & SB LANES.
Poison Hemlock	SR 005 MP 110	SB SR005 - SHOULDER, 250 FT. SOUTH OF THE CARPENTER RD. NE OVERPASS. ALONG NEIGHBORING PROPERTY OWNERS FENCE
Poison Hemlock	SR 005 MP 109	NB I-5 OVER GROWN AREA BETWEEN THE NB I-5 OFF RAMP AND NB I-5. SOUTH SIDE OF MARTIN WAY. CHECK ENTIRE AREA.
Poison Hemlock	SR 005 MP 113	SR005 NB SHOULDER - I-5 - 150 FT. NORTH OF MERIDIAN RD OVERPASS.
Poison Hemlock	951 SE MARVIN RD	NEAR 951 SE MARVIN RD. GROWING BY ELECTRIC BOX ON EDGE OF SIDEWALK
Poison Hemlock	SR 510 MP 006	E SIDE SR510, 500 FT S OF MP 6 (NORTH OF OLD PACIFIC HWY)
Poison Hemlock	RW JOHNSON BLVD SW	2120 R W JOHNSON BLVD SW (WSDOT SHOPS) - WALK PATH ALONG SOUTH FENCELINE TO R/R LINE
Poison Hemlock		UP THE BANK BETWEEN NB. & SB. I-5. NORTH SIDE OF MARTIN WAY BETWEEN THE BRIDGES. N. SIDE OF MARTIN WAY
Poison Hemlock	SR 005 MP 110	NB I-5 MEDIAN - 500 FT. SOUTH OF CARPENTER RD NE. RIGHT NEXT TO THE WSP DIRT "TURN OUT" NO PLANTS IN 2024 - BUT CHECK AREA
Purple Loosestrife	SR 005 MP 114	CAN BE VIEWED FROM DRIVEWAY TO 10133 E MARTIN WAY
Purple Loosestrife	SR 101	BELOW NB HWY 101 RAMP FROM I-5. AT BOTTOM OF STEEP SLOPE. APRX. 400 FT. NORTH OF DESHUTES PARKWAY. IN THE TREES ON SOUTH SIDE OF WSDOT FENCING MAY NEED TO ACCESS FROM DESHUTES PARKWAY VIA THE POND TRAILS TO THE SITE AREA.

Rush Skeleton	SR 005 MP 114	PAST MP #114 - NB I-5 SHOULDER - 200 FT. NORTH OF THE BROWN FARM RD UNDER PASS.
Rush Skeleton	SR 005 MP 114	I-5 #114 NB SHOULDER APPRX. 400 FT. NORTH OF MP 114. PLANTS FROM G-RAIL DOWN SLOPE NEAR FIR TREE.
Rush Skeleton	SR 005 MP 114	SB-I-5 #114: UP TO (BROWN FARM RD) OVERERPASS. FROM NE "CORNER" OF SB BRIDGE SHOULDER.
Rush Skeleton	SR 005 MP 114	SB I-5 SHOULDER: #114 JUST PRIOR TO BROWN THE FARM RD. OVERPASS. IN GRASSY SHOULDER AREA. CHECK FROM NE CORNER OF BRIDGE TO 50 FT. NORTH OF BRIDGE SHOULDER AREA.
Rush Skeleton	SR 005 MP 114	SR005 IN MEDIAN - 40 FT. PRIOR TO THE NB NISQUALLY OFF RAMP EXIT #114 SIGN.
Slender Flower Thistle	SR 005 MP 114	I-5 MEDIAN, .42 MI SOUTH OF MP 114, IN LINE WITH "SOUTH INTERSTATE 5" SIGN
Slender Flower Thistle	SR 005 MP 114	SR005 MEDIAN 750 FT. SOUTH OF THE NB NISQUALLY EXIT OFF RAMP SIGN TO EXIT #114.
Slender Flower Thistle	SR 005 MP 114	I-5 MEDIAN, .28 MI SOUTH OF MP 114
Spotted Knapweed	SR 005 MP 114	EX114- NB I-5 / N. SIDE OF BRIDGE - SHOULDER. BEHIND GUARD RAIL.
Spotted Knapweed	SR 005 MP 114	NB I-5 SHOULDER, .56 MI NORTH OF MP114, NEAR END OF NB ON-RAMP. BEHIND SCOTCHBROOM. SHOULDER TO WSDOT FENCELINE. SCATTERED PATCHES & PLANTS OVER EXTENSIVE AREA.
Spotted Knapweed	SR 005 MP 114	NB I-5 SHOULDER, .51 MI NORTH OF MP114 - AREA NEAR END OF NB MARTIN WAY ONRAMP. CHECK ENTIRE AREA. AREA FLAGGED 2020
Spotted Knapweed	SR 005 MP 114	NB I-5 #114 MEDIAN - SITE AREA STARTS APPROX. 200 FT. NORTH OF THE SB MARTIN WAY OVERPASS/OFF RAMP BRIDGE.
Spotted Knapweed	SR 005 MP 112	SR005 NB-SHOULDER. 1800 FT. NORTH OF MP #100 - PAST THE TUM/BLVD AIRPORT EXIT 1/2 MILE SIGN.
Spotted Knapweed	SR 005 MP 115	SR005 - MEDIAN 1000 FT. SOUTH OF THE NISQUALLY RIVER. *BETWEEN NISQ. RIVER AND SB EXIT #114
Spotted Knapweed	SR 005 MP 114	I-5 MEDIAN, .55 MI NORTH OF MP114. VISIBLE ONLY NORTHBOUND.
Spotted Knapweed	SR 012 MP 043	WESTBOUND SHOULDER HWY 12, .1MI EAST OF NICODY LN

Spotted Knapweed	SR 005 MP 114	SR005 MEDIAN SB-MEDIAN SHOULDER. 750 FT. PRIOR TO THE MARVIN ROAD OVERPASS
Spotted Knapweed	SR 005 MP 114	NB I-5 SHOULDER JUST N. OF THE SB MARTIN WAY OFF RAMP OVERPASS BRIDGE.
Spurge Laurel	US HWY 101 NW	6321 US HWY 101 NW IN FORESTED EDGE ALONG 101
Spurge Laurel	SR101 MP359	SITE IS IN THE MEDIAN AT JUNCTION BETWEEN HWY 101 AND OLD HWY 101 NW.
Spurge Laurel	SR 005 SLEATER KINNEY ON RAMP	SLEATER KINNEY SOUTHBOUND ONRAMP TO I5
Sulfur Cinquefoil		HWY 8 MEDIAN -2,050 FT. WEST OF MP20. BEST SEEN FROM EB INSIDE SHOULDER. WB FROM OLD OLYMPIC HWY, SITE IS PAST 1ST GROUP OF TREES IN MEDIAN.
Sulfur Cinquefoil	SR 101 MP 358	HWY 101 NB SHOULDER, APPROX. 100 YARDS BEFORE HOLIDAY VALLEY RD. SITE RUNS FOR 300 FT. - SHOULDER TO "UP" SLOPE.
Sulfur Cinquefoil	SR 005 MP 095	I-5 NORTHBOUND, .13 MI NORTH OF MP 95
Sulfur Cinquefoil	SR 005 MP 112	NB SR005 - MAIN I-5 SB SHOULDER, 1000 FT. SOUTH OF MARVIN RD NE OVERPASS. ACROSS FROM NE CORNER OF NW HARLEY DAVIDSON BUILDING. JUST OFF THE PAVEMENT IN THE GRASS.
Sulfur Cinquefoil	SR 005 MP 114	SR005 MEDIAN - SOUTH OF MP #114.
Sulfur Cinquefoil	SR 101 MP 363	HWY 101 MEDIAN, SOUTH OF MP363 - THROUGHOUT MEDIAN BETWEEN MP363 AND DELPHI OVERPASS
Tansy Ragwort	SR 101	HWY101 MEDIAN - FROM PERRY CREEK AREA UP TO THE HWY 8 & 101 INTERCHANGE.
Tansy Ragwort	SR 005	I-5 SHOULDERS, ON & OFFRAMAPS & LANDSCAPING
Tansy Ragwort	SR 5	SR510 FROM I-5 TO MP 11. ALSO CHECK ALL DIRECTIONS NEAR-AROUND THE ROUNDABOUTS.
Tansy Ragwort	SR 012	HWY 12 ~ FROM MP38.75 (GRAYS HARBOR COUNTY LINE AT ANDERSON RD SW) TO MP46.5 (END AT JUNCTION WITH I-5)
Tansy Ragwort	SR 005	I-5 FROM MP85.5 (LEWIS COUNTY LINE) TO MP99.25 (93RD AVE SW) INCLUDES ON AND OFFRAMPS
Tansy Ragwort	DESCHCUSTE WAY SE	DESCHUTES WAY SE - AREA BELOW THE CUSTER WAY OVERPASS.



Tansy Ragwort	SEXTON DR NW	WSDOT-SMALL PARCEL AT SW CORNER OF STEAMBOAT ISLAND RD NW & SEXTON DR. WEDGE SHAPED PARCEL NEAR 6644 SEXTON DR NW
Tansy Ragwort	SR 005 MP 108	I-5 PACIFIC AVE EXITS/RAMPS - PLANTS FOUND ON NB AND SB SIDES OF OFF AND ON RAMPS.
Tansy Ragwort	SR 005 MP 109	I-5 SB MARTIN WAY E. OFF RAMP - TANSY PATCH IS ON SOUTH SIDE OF OFF RAMP
Tansy Ragwort	PACIFIC AVE SE	FENCED RET. POND-PACIFIC AVE SE, JUST WEST OF MARVIN RD. IN FIELD ON THE NORTH SIDE OF PACIFIC. 8100 BLK OF PACIFIC AVE SE WSDOT "DRY" POND IS ON DETRAY'S PROPERTY
Tansy Ragwort	SR 005	I-5 AT CAPITAL LAKE. BELOW NB I-5. BETWEEN CAPITAL BLVD. & 101 INTERCHANGE SO. SIDE.
Tansy Ragwort	SR 101 MP 359	HWY 101 MEDIAN FROM STEAMBOAT ISLAND ROAD TO HOLIDAY VALLEY ROAD. SCATTERED PATCHES AND PLANTS, MOSTLY IN MEDIAN
Tansy Ragwort	SR 101	SR101 FROM I-5 TO PERRY CREEK, WORST IS USUALLY FROM MP 364 TO 365 (BLACK LAKE EXIT TO EVERGREEN PARKWAY)
Tansy Ragwort	SR 005 MP 108	NB SR005 SHOULDER - 1300 FT. SOUTH OF MP 108. TOP OF THE CEMENT WALL. (SHOULDER) NEXT TO I-5 WALKING PATH.
Tansy Ragwort	SR 008 MP 016	EAST-BOUND HWY 8: .26 MI E OF MP 16. IN SHOULDER AND MEDIAN
Tansy Ragwort	SR 012 SR 005	S SIDE OF HWY 12 W OF I-5 INTERCHANGE
Tansy Ragwort	SR 101 MP 359	HWY 101 MEDIAN - FROM HOLIDAY VALLEY ROAD NORTH TO THE MASON COUNTY LINE.
Tansy Ragwort	SR 101	WSDOT - SCATTERED THROUGHOUT THE HWY 101 & STEAMBOAT ISLAND RD. AREA.
Tansy Ragwort	SR 008	ALL OF HWY 8 IN THURSTON COUNTY SOME ON SHOULDERS, MOST IN MEDIAN. ALSO CHECK SB 101-SW SLOPE AS U GO UNDER HWY 8.
Tansy Ragwort	SR 101	MEDIAN - HWY 101 FROM INTERCHANGE WITH HWY 8 TO STEAMBOAT ISLAND ROAD.
Tansy Ragwort	SR 005 MP 109	I5 ON AND SB AND NB RAMPS, EXIT 108-SLEATER KINNEY
Tansy Ragwort	SR 005 MP 109	I-5 EXIT 109, MARTIN WAY- BOTH NB AND SB OFF AND ON RAMPS

Tansy Ragwort	SR 008 MP 016	WEST BOUND SR8, 1,500 FT. PRIOR TO THE FIRST (EASTERN) SUMMIT LAKE EXIT. 2,200FT EAST OF MP #16 - OLD REST STOP. "WIRE GATE"
Yellow Devil Hawkweed	SR 005 MP 114	EXIT #114 SB-BETWEEN THE OFF RAMP AND I-5 NEAR LARGE METAL DRAIN GRATE. 2019 JUST 2 FOUND
Yellow Devil Hawkweed	SR 005 EXIT 111	I-5 NB EXIT 111 TO NB MARVIN RD RAMP. SOUTH SHOULDER, A LITTLE OVER 1/2 MILE PAST MP111
Yellow Devil Hawkweed	SR 005 EXIT 111	I-5 NB EXIT 111 MARVIN RD. TO SB MARVIN RD NEXT TO WALMART. ON THE SLOPE JUST BELOW CHAIN LINK FENCING.
Yellow Flag Iris	SR 005 MP 101	MCLANE TRAIL-WSDOT - POND IS JUST WEST OF EVERGREEN PARKWAY & JUST NORTH OF HWY 101. SITE ON NORTH SIDE OF POND
Yellow Flag Iris	SR 101 MP 359	SR 101 NORTHBOUND, JUST NORTH OF STEAMBOAT ISLAND.
Yellow Flag Iris	SR 101	ON RAMP TO SR101 FROM CROSBY BLVD SW POND BETWEEN 101 ONRAMP AND MOTTMAN RD SW
Yellow Flag Iris	SR 005 MP 097	I-5 SOUTH BOUND SHOULDER, .65 MILES SOUTH OF MP 97 - WHERE FREEWAY CROSSES ALLEN CREEK