



Technical Appendix 7- NW Region Area 1, Integrated Roadside Vegetation Management Plan

NW Region, Area 1

Integrated Roadside Vegetation Management Plan

December 2006



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

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Summary

This plan explains the Washington State Department of Transportation's (WSDOT) policy and practice for maintenance of roadside vegetation for Maintenance Area 1 within the agency's Northwest Region. This area manages vegetation within approximately 210 miles of state highway corridor in Whatcom and northwest Skagit Counties. In addition to the Interstate 5 corridor between Burlington and the Canadian border, the area maintains State Route (SR) 9 throughout Whatcom County and all of SR 11 (Chuckanut Drive), 539, 542 (Mt. Baker Highway), 543, 544, 546, 547, and 548. A map of the area is included as **Figure 1** on the following page.

The primary objectives in maintenance of roadside vegetation within the area are in relation to safety of the highway users, preservation of the highway infrastructure, and control of legally designated noxious weeds where they occur on the right of way. Other considerations include protection and preservation of natural environment, preserving and enhancing the natural scenic quality of the roadside, and being a good neighbor to the many adjoining property owners. In all cases, roadside vegetation maintenance activities are planned and conducted in a way that discourages or eliminates unwanted vegetation and promotes desirable vegetation. This is the basic premise of Integrated Vegetation Management (IVM) and the foundation of the program.

This document and associated information management tools serve as the primary reference for maintenance of roadside vegetation in the area. Included is detailed information on policies and locations for planned routine maintenance practices, reoccurring weed infestations, sensitive areas, and other areas with special management considerations. Also included are guidelines and prescriptions for best management practices in dealing with roadside vegetation problems and opportunities. In effect, this plan supports WSDOT's compliance with state law (RCW 17.15) by implementing the principles of Integrated Pest Management for the management of roadside vegetation. It also supports WSDOT's long-range goals for the management of roadsides to:

- Create naturally stable, sustainable plant communities
- Improve effectiveness and efficiency in the control of weeds and unwanted trees and brush
- Reduce maintenance cost and herbicide use over time

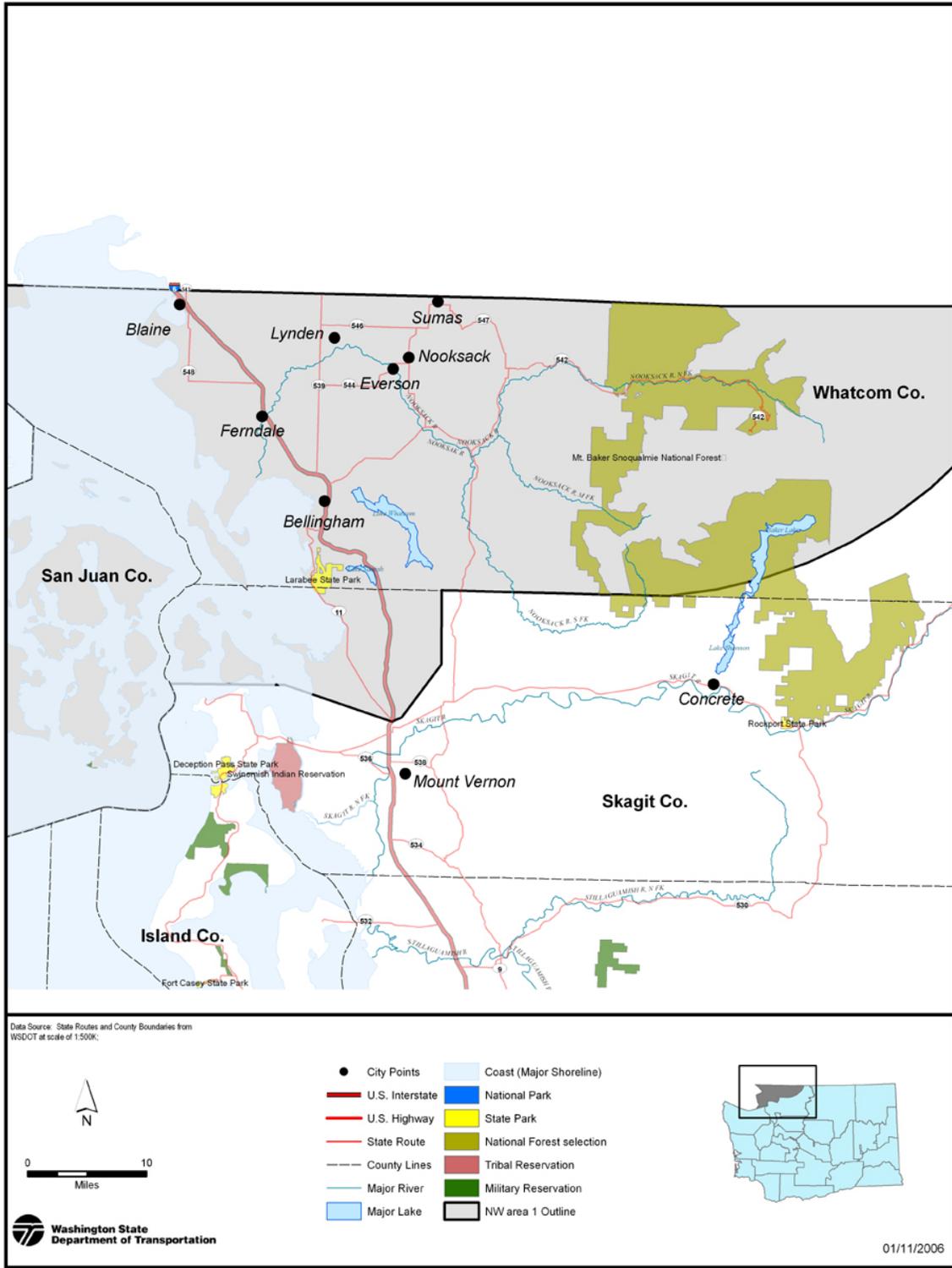
This plan is organized around the major categories of roadside vegetation maintenance work. The major categories include: Zone 1 (or pavement edge maintenance), Routine Mowing, Noxious Weed Control, Nuisance Weed Control, Tree and Brush Control, and Special Maintenance Areas.

The management of roadside vegetation is a dynamic process and it is intended that this plan be continuously adapted over time based on input from a variety of sources. An integral component of the process is a database for recording IVM treatments for specific vegetation controls and locations, and to record information on follow up evaluation on these treatments. Annual area meetings will be held to discuss what is learned each year and refine the plan over time.

WSDOT is also requesting that local public and private entities with an interest in weed control and roadside vegetation management provide input on the plan and cooperate in efforts where appropriate. Additional copies of the draft plan are available online: www.wsdot.wa.gov/maintenance/vegetation/mgmt_plans.htm, hard copies can also be provided upon request. Please contact Ron Morton or Ray Willard at the numbers listed below for questions or comments:

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Area Map
Figure 1

Roadside Management Considerations

The primary objectives for maintenance of roadside vegetation are to provide for safe highway operation and to comply with legal regulations for control of noxious weeds and protection of the environment. Overall WSDOT maintenance policy and procedures are defined in Chapter 6 of the [WSDOT Maintenance Manual](#) (M51-01, March 2002)

www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/MaintenanceManual.pdf

Visual Quality

It is also important to maintain appropriate visual standards in the appearance of the roadside. All maintenance activities should be conducted in a way that minimizes visual impacts such as wide spread “brown-out” from herbicides or shattered limbs from side trimming. Roadside should look as natural as possible throughout the year. Appropriate visual quality for roadsides throughout the state is defined in the [WSDOT Roadside Classification Plan](#) (June 1996)

www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/RCP.pdf

Operational Zones

WSDOT roadsides are divided into several zones for the purposes of assigning management objectives, maintenance needs, and thresholds for triggering vegetation maintenance actions. Noxious weed species designated for control by state and county law are controlled throughout all zones. Not all management zones occur along all state highways. In some cases the narrow width of the right-of-way or adjoining land-use, limits the operational zones to Zone 1 and/or a narrow Zone 2 only. Roadside vegetation management zones are illustrated in **Figure 2** below and defined as follows:

Zone 1 – A vegetation free gravel shoulder, where needed, is maintained as a one to three-foot wide strip to provide for key maintenance, operational, safety, and pavement and guardrail preservation needs.

Zone 2 – The operational zone extends from the edge of Zone 1 or the pavement edge to a width necessary to provide for safe errant vehicular recovery, maintain sight distance at corners and intersections, and provide for other operational, safety, and environmental functions.

Zone 3 – In areas with sufficient right-of-way width, a buffer or transition zone extends from Zone 2 to the right-of-way line to provide a buffer or transitional area between the highway facility and adjacent land uses. This area is maintained selectively, and to the greatest degree possible as a self-sustaining plant community, to minimize erosion as well as the growth of weeds and undesirable trees and brush.

Roadside Maintenance Activities

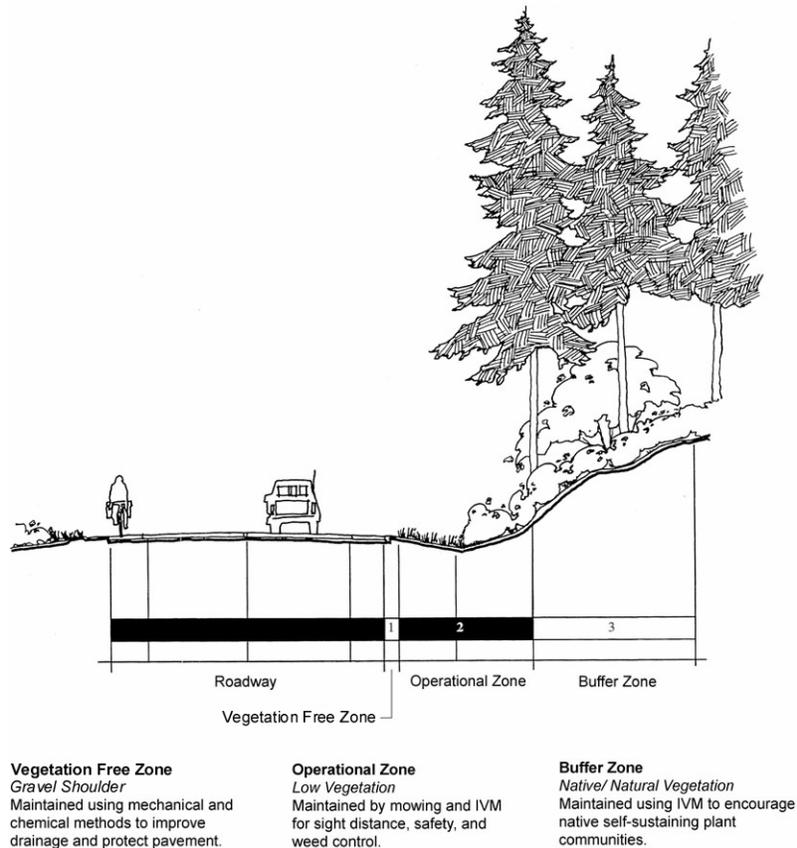
All roadside maintenance activities are to be planned and conducted in a way that discourages or eliminates unwanted vegetation and promotes desirable vegetation. This is the basic premise of Integrated Vegetation Management. In every case it is essential that the results of maintenance activities are evaluated and adjusted as necessary to maximize efficiency and effectiveness. However, in some cases maintenance activities are conducted more consistently on an annual basis, such as maintenance of Zone 1 where required, and routine mowing where specified.

Routine Maintenance Activities – When vegetation maintenance activities are intended to keep the area of roadside being treated in an annually controlled condition, they are considered routine. This is more critical for areas of vegetated roadside near the travel lanes, edge of pavement, and around guardrails. This plan provides prescriptions and gives locations for routine maintenance activities including maintenance of Zone 1 and annual mowing.

Integrated Vegetation Management Activities – Although all activities are to be planned and conducted in accordance with the principles of IVM, many vegetation maintenance activities are intended to target a specific type or types of unwanted plants.

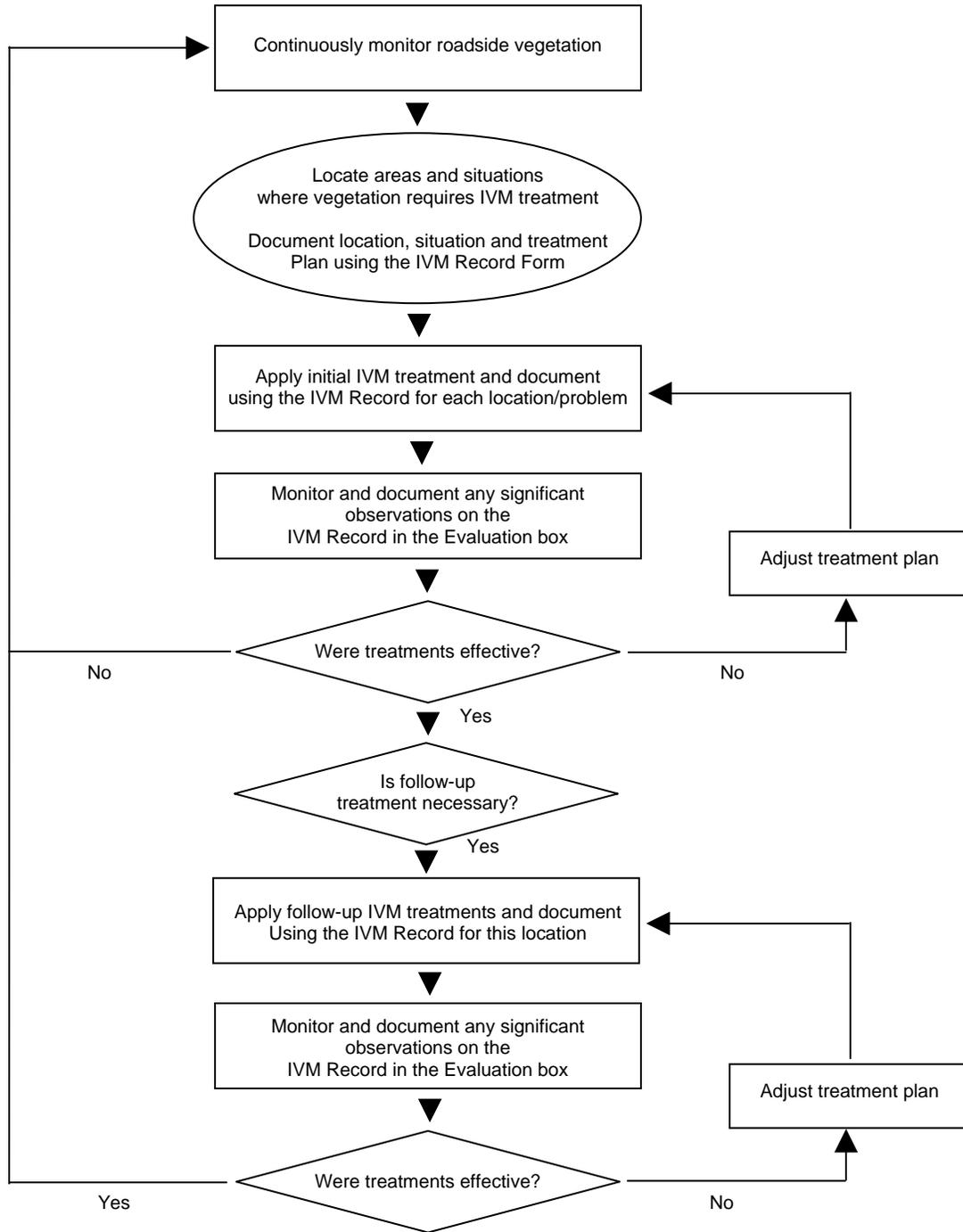
By carefully planning and carrying out these target specific activities it is possible over time to establish desirable vegetation, which will prevent the re-infestation of unwanted plants. The process for determining and carrying out IVM actions is illustrated in **Figure 3** below. This plan provides information, locations, and gives prescriptions for selective control of weeds and other unwanted vegetation and the promotion and establishment of desirable vegetation. Further information and guidance on the application of IVM is available in the document Integrated Vegetation Management for Roadsides (WSDOT, July 1997) www.wsdot.wa.gov/maintenance/pdf/IVM.pdf

Special Maintenance Areas – In some locations there are unique situations that require consideration in determining appropriate vegetation maintenance actions. Examples of these are: environmentally sensitive areas, areas with special neighbor concerns, areas where a higher level of maintenance is expected such as gateway interchanges or formally landscaped areas, or along highways that cross tribal or federal lands. This plan provides information and guidance on the locations and unique requirements or restrictions on maintenance activities in all of these situations throughout the area.



Typical Roadside Vegetation Management Zones

Figure 2



The IVM Decision-Making Process
Figure 3

Area IVM Goals

The purpose of this section is to identify short and long term goals for roadside vegetation management in the NW Region, Area 1. These goals are intended to help direct decisions that effect roadside maintenance and/or design/construction. These goals will be updated and evaluated on a yearly basis as part of the area's annual winter planning meetings.

Long Term Goals (2006 – 2011)

Long term goals are set to be achievable within 5 years. These goals are broad-scale in nature and may apply to maintenance operations and/or roadside condition.

- Focus on training all employees on IVM, recognizing and caring for beneficial plants, and proper techniques for vegetation maintenance.
- Annually evaluate, document, and refine the program for maintenance of Zone 1 and areas where vegetation is allowed to grow up to the edge of pavement.
- Communicate with project development and landscape architects on what are desirable/sustainable plantings for long-term maintenance.

Short Term Goals (2006 – 2007)

Short term goals are set to be achievable within 1 to 3 years. These goals are more specific in nature and are established with specific measures that can be documented and reported.

- Evaluate equipment needs, and best management practices for mowing shoulders in areas where Zone 1 is no longer being maintained.
- Review locations for environmentally sensitive areas and update field markings if necessary.
- Make sure county weed boards are in agreement with species (and locations) designated for priority control.
- Implement select locations in each lead tech section of the area where an IVM Treatment Plan will be developed, implemented and followed up on.

Northwest Region, Area 1 – Roadside Vegetation Management Plan

1. ROUTINE MAINTENANCE ACTIVITIES

Roadside maintenance activities are considered routine when regular periodic treatment is required to keep vegetative growth from interfering with highway operational and maintenance objectives. Typical routine maintenance activities are maintenance of Zone 1 and certain types of mowing and trimming.

1.1. Routine Shoulder Maintenance (Zone 1)

WSDOT is currently re-evaluating its policy for maintenance of Zone 1. Past policy and practice will be refined over the coming years in response to findings from study of long-term benefit/cost resulting from alternative treatments. For the 2006 growing season, vegetation at the edge of pavement will be managed as follows on roadsides in this maintenance area:

1.1.1. Policy and Practice

- Zone 1 is maintained with the annual application of herbicides for all secondary roads in the area.
- For limited access roads including I-5 and SR543, Zone 1 is only maintained around the base of guardrail.
- Where maintained, Zone 1 is 3' width or less.

1.1.2 Methods

- Herbicides being applied to Zone 1 include a non-selective, post emergent product (glyphosate) mixed with a non-selective, pre-emergent products (sulfometuron-methyl and chlorsulfuron, trade name Landmark).
- The area is also evaluating the effectiveness of the above mixture alone in comparison to this mixture with each of three additional non-selective, pre-emergent herbicides (flumioxazin, norflurazon, and imazapyr). These comparative applications will be repeated in designated locations for the next several years.
- Areas where Zone 1 is not maintained will be monitored for problems resulting from sod build-up and graded as necessary to allow for hydraulic flow of storm water off the roadway surface.
- See **Appendix A, Routine Maintenance Prescriptions, Zone 1 Maintenance**

1.1.3 Locations

- Areas for Zone 1 maintenance and areas set aside for evaluation of alternative practices are shown in **Appendix B, Zone 1 Map**

1.2. Routine Mowing/Trimming (Zone 2)

1.2.1. Policy and Practice

- Routine annual mowing only occurs in designated areas on Interstate 5 adjacent to edge of pavement and in designated focus areas such as interchanges and landscaped areas adjacent to safety rest areas and in Blaine near the border crossing as described in **Section 3**. In all other areas mowing is only used as part of IVM treatments for weed and brush control as described below in **Section 2**.
- Annual mowing or trimming is also conducted as needed for select locations on secondary highways to preserve site distance at curves, intersections and any other highway entry points.

- There are also areas on certain designated highway sections that are annually mowed to prevent problems caused by drifting snow in winter months.
- Other areas that may be routinely mowed include grass areas in park and ride lots, narrow grass strips along highway infrastructures, and fence-lines adjacent to neighboring properties as deemed necessary by the Area Superintendent.

1.2.2. Methods

- On I-5, routine annual mowing areas are designated as either single pass or multiple pass.
- Single pass mowing consists of one pass up to the maximum width of mowing equipment (25' max.) but may be as narrow as 6' depending on mowing equipment and the presence of existing visual lines such as ditches.
- In areas designated as multiple pass mowing roadsides are mowed out from edge of pavement to the right of way line, the edge of shrub or tree lines, or across the entire median widths.
- See **Appendix A, Routine Maintenance Prescriptions, Zone 2 Maintenance**

1.2.3. Locations

- **Appendix C, Routine Mowing Map** shows locations where routine annual mowing occurs as one pass and as multiple passes. **Appendix C, NW Region, Area 1 Limited Access Mowing Plan** describes mowing priorities, timing and limits on the I-5 and SR 534 corridors.

1.3. Hazard Tree Removal

1.3.1. Policy and Practice

- Hazard tree removal is considered a routine maintenance activity because maintenance is constantly on the look out for any trees that pose an imminent threat to the highway or traffic, and whenever hazard trees are identified they are routinely removed as soon as possible.
- Hazard trees may be dead, leaning, or structurally unsound. Best horticultural judgement will be used in evaluating trees that appear diseased or structurally unsound or are believed to pose a long-term threat to determine the best course of action.
- Another consideration in removal of trees is the contribution to shading in areas prone to frost and ice formation on the highway surface. When such areas are identified, the surrounding canopy may be thinned through selective removal of large trees on the right of way.

1.3.2. Methods

- Hazard trees are removed in such a manner to minimize damage and impact to the highway structure and other healthy trees and understory vegetation.

2. INTEGRATED VEGETATION MANAGEMENT ACTIVITIES

For all vegetation management needs not addressed through routine maintenance as described above, activities are planned and carried out using the principles of Integrated Vegetation Management (IVM) and the decision making process diagrammed on Page 5 in **Figure 3**. IVM is a coordinated decision making process that uses the most appropriate vegetation management methods and strategy, along with a monitoring and evaluation system, to achieve long term roadside maintenance goals and objectives in an environmentally and economically sound manner. The goal in utilizing the IVM approach is the effective control of unwanted vegetation and the establishment of stable, low maintenance native or naturalized plant communities on the roadside that are compatible with:

- Highway maintenance and safety objectives
- Preservation of environmental quality
- Weed control requirements
- The concern's of WSDOT's customers and neighbors.

Long term, the use of the IVM approach can reduce the intensity and cost of maintenance, as well as minimizing the need to use herbicides.

2.1. Integrated Vegetation Management Planning and Tracking Database

2.1.1. Policy and Practice

- An Integrated Vegetation Management Records database is available for use. This database is accessed through the same WSDOT network application as the Pesticide Application Records database.
- Any activities focused on treatment of a specific location and species infestation, or focused on treatment of any types of unwanted vegetation throughout the area will be documented with an initial IVM record outlining the long-term treatment plan. These same records will be updated over time whenever planned treatments are carried out, or when observations are made as to the success or failure of past treatments.
- Treatment records may be printed out and inserted into **Appendix G**.

2.2. Noxious Weed Control

2.2.1. Policy and Practice

- Noxious weed control is a high priority for WSDOT because of state law requiring control of designated species. Transportation rights of way are high priority locations for control of noxious weed species within the state because they cross and link so many adjacent properties and land uses.
- Whenever possible designated noxious weed species and infestations locations will be documented and treated following plans as defined by IVM record forms in the database.
- Washington State Law classifies noxious weeds in three classes: A, B, and C. All Class A species are required control wherever they occur statewide. The law allows for individual county weed boards to designate individual Class B and C weeds for control within the counties depending on how widespread and potentially harmful they are at the local level.

- For the purposes of this plan, noxious weeds are defined as species within any class designated or prioritized for control within the counties.
- For NW Region, Area 1 the following weeds designated for control are known to exist on state highway rights of way in Whatcom and Northwest Skagit Counties:

Class A

Class A noxious weeds are non-native species with a limited distribution in the state. No Class A weeds are known to exist on WSDOT rights of way in this area.

Class B

Class B weeds are more widespread than Class A, with control mandated by law only if infestations are generally limited and the species are designated within the individual counties by the County Noxious Weed Control Boards. The following designated species are known to exist on WSDOT right of way:

Common Name/Botanical Name	Whatcom	Skagit
Knotweed sp./Polygonum sp.	◆	◆
Ragwort tansy/Senecio jacobaea	◆	
Knapweed sp./Centaurea sp.	◆	◆
Purple loosestrife/Lythrum salicaria	◆	◆
Wild chervil/Anthriscus sylvestris	◆	◆
Sulfur cinquefoil/Potentilla recta	◆	
Orange hawkweed/Hieracium aurantiacum	◆	◆
Smooth hawkweed/Hieracium laivigatum	◆	◆

Class C

Class C noxious weeds are widely established throughout Washington or may impact the agricultural industry. All Class C noxious weeds on state right of way in Whatcom and Skagit Counties in NW Region, Area 1 are managed as nuisance weeds and described in **Section 2.3**.

2.2.2. Methods

- Because noxious weed species are often difficult to control, herbicides treatments are often the primary, initial means of control.
- If infestations are limited to a few plants, hand pulling is also effective when the entire root system is also removed. Maintenance employees are encouraged to be aware of and look for new noxious weed occurrences, and to stop and pull these plants whenever possible.
- In conjunction with weed control treatments, a variety of other measures may be taken to promote natural vegetative competition through seeding, planting, and soil enhancement. The IVM Record and database are essential to the execution and success of these control measures.
- For recommended treatments specific to noxious weed species, see **Appendix A, IVM Prescriptions, Noxious Weed Control**

2.2.3. Locations

- **Appendix D, Noxious Weed Location Map** shows locations where reoccurring infestations of noxious species are known to exist in NW Region, Area 1.

2.3. Nuisance Weed Control

2.3.1. Policy and Practice

- For the purposes of this plan, nuisance weed species are defined as species listed as Class B and C weeds on the state noxious weed lists, but not required for control within individual counties.
- Nuisance weed control, while not required by state law, provides many positive benefits to the overall condition of the roadside, enhances ecological function by maintaining and enhancing native plant communities, reduces the potential for continuing spread of weed infestations, and enhances visual quality.
- Nuisance weed species will be controlled when time and budget allows.
- Priority will be given to locations with the highest chance for success including relatively new infestations and where there is potential for infestations to spread to un-infested areas of the right of way or to un-infested neighboring properties.
- Species designated as nuisance weeds in NW Region, Area 1 that are known to exist on the highway right of way include:

<i>Common Name/Botanical Name</i>	<i>Whatcom</i>	<i>Skagit</i>
Butterfly bush/Buddleja davidii	◆	◆
Poison hemlock/Conium maculatum	◆	◆
St. Johnswort/Hypericum perforatum	◆	◆
Sulfur cinquefoil/Potentilla recta		◆
Common tansy/Tanacetum vulgare	◆	◆
Bull thistle/Cirsium vulgare	◆	◆
Canada thistle/Cirsium arvense	◆	◆
Scotch broom/Cytisus scoparius	◆	◆
Ragwort tansy/Senecio jacobaea		◆
Wild carrot/Daucus carota	◆	◆
Yellow Toadflax/Linaria vulgaris	◆	◆
Common Mullein/Verbascum thapsus	◆	◆
Himalayan blackberry/Rubus discolor	◆	◆

2.3.2. Methods

- Control measures for nuisance weed are dependent on the type of plant.
- Woody species such as Scotch broom and Himalayan blackberry are most effectively treated with a combination of cutting, herbicide treatments and encouragement of native vegetation.
- Perennial species such as Canada thistle are most effectively controlled by succeeding years of properly timed herbicide applications.
- Annual or biennial species such as bull thistle and common tansy may also be effectively controlled with herbicide applications when plants are in the rosette stage in spring, or by hand pulling prior to seed set.
- See **Appendix A, IVM Prescriptions, Nuisance Weed Control.**

2.3.3. Locations

- **Appendix E, Nuisance Weed Location Map** shows some of the locations where reoccurring nuisance weed infestations occur in NW Region, Area 1.

2.4. Tree and Brush Control

2.4.1. Policy and Practice

- Trees and brush are controlled for safety reasons including preservation of sight distance at curves and intersections, and for visibility of signs, and preventing trees with large trunk diameter from growing too close to traffic lanes.
- Native large shrub and small tree species should be allowed to grow and mature in Zone 2 and selectively trimmed if they begin to encroach on site distance or other traffic operational requirements.
- Large coniferous or hardwood deciduous tree species such as Douglas fir, bigleaf maple, alder, or cottonwood left to grow in Zone 2 and in some cases parts of Zone 3, can reach substantial size over a relatively short period of time and should be removed when young.
- Any tree with a trunk diameter of 4" or greater is considered a hazard for errant vehicles in Zone 2 and should be removed. This zone is also referred to as the Design Clear Zone and is typically maintained to a width of 30' from the traffic lane edge. Actual minimum widths are determined by roadway alignment, traffic speed and volume, and cross-section of the roadside, as specified in the WSDOT Design Manual, Chapter 700.04.
www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/DesignManual.pdf

2.4.2. Methods

- Removal of undesirable tree and brush species is typically accomplished by hand cutting, hand pulling, properly timed selective mowing, properly timed herbicide applications, or combinations thereof.
- In some locations it is most effective to mow back the majority of the existing vegetation and then selectively treat undesirable re-growth with herbicides in succeeding years, allowing desirable vegetation to grow up around and form a competitive cover.
- In some cases when tree and brush species are cut by hand, the debris can be fed through a chipper and placed back on the roadside in the form of mulch for soil enhancement and weed prevention.
- Timing of activities has a significant effect on how the vegetation grows back. Herbicide applications made by hand, directly to the cut surfaces of undesirable plants may be used to reduce or eliminate grow back.
- Chemical control methods will not be used on conifers greater than 2 feet in height and/or large dense patches of young trees, to avoid unnecessary negative visual impacts from "brown-out".
- Chemical control methods will not be used on deciduous plants until after the first of September, except for as stump treatments in conjunction with mechanical cutting to eliminate grow-back.
- When possible, safe and practical, seedling of desirable trees may be dug or pulled by hand and transplanted to areas where there growth will be beneficial and appropriate. Agreements may be

signed to allow private citizens to collect seedlings for use as transplants.

- See **Appendix A, IVM Prescriptions, Tree and Brush Control.**

3. SPECIAL MAINTENANCE AREAS

Special Maintenance Areas are any locations with unique maintenance requirements or special considerations for roadside management. These areas may include interchanges, community entrances or enhancement areas, areas maintained by cities, bicycle paths, storm water retention ponds, state park land, wellheads, environmentally sensitive areas, school zones and roadsides adjacent to individual properties with current or annual no-spray agreements.

3.1. Interchanges/Intersections

3.1.1. Policy and Practice

- Interchange areas are sometimes developed to a greater level than general roadside areas to include storm water management facilities, pedestrian areas, and permanent vegetation designed for screening, and visual enhancements for community entrances.

3.1.2. Locations

- Interchanges and intersections with unique maintenance considerations are listed in **Appendix F**, along with notes describing practices for each location.

3.2. Formally Landscaped Sections

3.2.1. Policy and Practice

- On areas along I-5 near Safety Rest Areas and in Blaine near the Canadian border, the roadsides have been planted with ornamental landscaping.

3.2.2. Locations

- Areas considered as formally landscaped are listed by route and begin and end milepost in **Appendix F**, along with notes describing practices for each location.

3.3. City Maintenance Areas

3.3.1. Policy and Practice

- In most cases where non-limited access highways exist within city limits, the roadside (all area outside the highway pavement and drainage systems) are maintained by the local city government.

3.3.2. Locations

- Areas where roadsides are maintenance by cities are listed by route and begin and end milepost in **Appendix F**.

3.4. Herbicide Sensitive Areas

3.4.1. Policy and Practice

- In some situations herbicide use is limited or restricted because of legal requirements, neighbor concerns, or WSDOT imposed environmental safety precautions.

- In these locations, vegetation must be managed without the use of herbicides or with only a limited palette of herbicide types.

3.4.2. Locations

- Herbicide sensitive areas and reason/type of limitations on herbicide use are listed by route and begin and end milepost in **Appendix F**.

3.5. Adopt-a-Highway and Neighbor Maintained Agreements

3.5.1. Policy and Practice

- In some locations WSDOT has signed agreements with private citizens or neighboring businesses for maintenance of roadside vegetation.

3.5.2. Locations

- Areas with existing agreements for others to maintain a portion of the roadside are listed in **Appendix F**, along with notes describing arrangements for each location.

3.6. Storm Water Management Facilities

3.6.1. Policy and Practice

- Storm water management facilities include bio-filtration swales, retention ponds and infiltration ponds.
- Storm water management facilities are managed for noxious and nuisance weeds, and hazard trees following the same guidelines mentioned in previous sections. The primary objectives with regard vegetation management within these facilities are maintenance of the functionality in terms of the designed volume of retention and water flow, and the maintenance of the surrounding fence
- Trees and brush should be cleared along both sides of the perimeter fencing for a width of approximately 8 feet as needed.
- Inlets and outfalls should be kept clear of vegetation and debris.

3.6.2. Locations

- Stormwater management facilities are listed by route and milepost in **Appendix F**.

3.7. Wetland Mitigation Sites

3.7.1. Policy and Practice

- Wetland mitigation sites are carefully monitored through WSDOT's Environmental Services Office for up to 10 years following their creation to ensure compliance with environmental regulation.
- In most cases vegetation in these sites is planted and established through the construction and long-term monitoring process so that once they are turned over to maintenance, actions are not required unless noxious weeds or hazardous trees become an issue.
- In cases where mitigation sites have fulfilled their original permit requirements and have been turned back to maintenance, sites should be inspected on an annual basis to determine if any repairs or weed control is necessary.

3.7.2. Locations

- All wetland mitigation sites within NW Region, Area 1 are listed by the nearest route and milepost in **Appendix F**.

3.8. IVM Treatment Sites

3.8.1. Policy and Practice

- As discussed in **Section 2.1**, selected sites are designated for planning, carrying out and monitoring multi-year IVM treatments for control of weeds or other unwanted vegetation.
- IVM treatment sites are documented with an initial record in the IVM Treatment Database, to identify the problem to be addressed, location(s), management goals, and integrated treatment plan.
- Records are updated each time a treatment is made, results observed, or when the treatment plan is modified based on observations.

3.8.2. Locations

- All designated IVM treatment sites within NW Region, Area 1 are listed by the route and milepost in **Appendix F**. This list is updated annually as new sites may be added and successfully treated sites removed.

Routine Maintenance Activities

Zone 1 Maintenance - typical annual maintenance

Location Type	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
gravel shoulder	3' area free of vegetation	annual herbicide application	spray truck w/ fixed nozzle mounted 18" from ground	non-selective residual herbicide Roundup Pro @ 32 oz/acre Oust @ 6 oz./acre	April start	none required

Zone 1 Maintenance - annual maintenance (SR 525 Evaluation Section)

Location Type	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
gravel shoulder under guardrail within SR525 evaluation section	3' area free of vegetation	annual herbicide application	spray truck w/ fixed nozzle mounted 18" from ground	Roundup Pro @ 32 oz/acre	April/May additional app. late summer if needed	none required

Zone 2 Maintenance - annual mowing w/ no zone 1

Location Type	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
operational zone adjacent to shoulder - no zone 1	4 inch average ht. single pass mowing adjacent to pavement where zone 1 is not present to maintain desirable low veg	annual mowing, 6' - 8' wide single pass adjacent to	mower, attenuator	none required	May, July and as needed	seed and fertilize to reduce weed competition if necessary

Zone 2 Maintenance - annual mowing

Location Type	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
operational zone adjacent to shoulder	8 inch average ht. single pass to maintain desirable low vegetation.	annual mowing, 6' - 8' wide single pass adjacent to Zone 1 as necessary	mower, attenuator	none required	June on as needed	seed and fertilize to reduce weed competition if necessary

Zone 2 Maintenance - selective trimming

Location Type	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
operational zone adjacent to shoulder	annual brush or tree limb control adjacent to shoulder to maintain sight distance and other operational needs.	annual mechanical trimming where needed. Follow up trimming with pole saw as needed.	mower with side-arm unit, pole saw, attenuator as needed.	none required	Late in season to minimize visual impacts.	seed and fertilize if alder/scotch broom are present to reduce competition.

Noxious Weed Control

Noxious Weed Control - *Chirvil* (A)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	as soon as plants appear	eradication and control of listed noxious weeds.	spot treatment w/ herbicide	truck mounted sprayer where possible, backpack sprayer	2 oz. acre Escort 2 oz. acre Telar DF	Prebloom April / May	Repeat as necessary. Seed and fertilize to reduce weed competition.

Noxious Weed Control - *Hairy Willow Herb* (A)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	as soon as plants appear	eradication and control of listed noxious weeds.	spot treatment w/ herbicide most effective	tank sprayer where possible, backpack sprayer where necessary	In research Milestone recommended label rates		Reapply as necessary. Seed and fertilize to reduce weed competition.

Noxious Weed Control - *Hawkweeds - Orange, Yellow, Yellow Devil, and Smooth* (A)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	as soon as plants appear	eradication and control of listed noxious weeds.	spot treatment w/ herbicide most effective	tank sprayer where possible, backpack sprayer where necessary	Milestone VM or Curtail at recommended label rates	Bolt stage June / July	Reapply as necessary. Seed and fertilize to reduce weed competition.

Noxious Weed Control - *Knotweed species* (A)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones new or limited infestations	wherever present (dependent on available resources)	eradication and control of listed noxious weeds.	foliar treatment w/ herbicide	truck mounted sprayer where possible, backpack sprayer where necessary	Habitat / MSO at recommended label rates	Early to late bloom July, Aug.	Reapply when if necessary following year Restore site w/ native vegetation.

Noxious Weed Control - *Knotweed species* (B)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones older established infestations	when resources are available	eradication and control of listed noxious weeds.	stem injection w/ herbicide	injection equipment	Concentrated Roundup or Garlon.	Actively growing	Re-treat green stems as necessary. Restore site w/ native vegetation.

Noxious Weed Control - *Knapweed - Diffuse, Meadow, Spotted,* (A)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	as soon as plants appear	eradication and control of listed noxious weeds.	spot treatment w/ herbicide most effective	tank sprayer where possible, backpack sprayer where necessary	Milestone VM at recommended label rates	growing season	Reapply as necessary. Seed and fertilize to reduce weed competition.

Noxious Weed Control - *Poison hemlock* (A)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	as soon as plants appear	eradication and control of listed noxious weeds.	spot treatment w/ herbicide	truck mounted sprayer where possible, backpack sprayer where necessary	2 oz. acre Escort 2 oz. acre Telar DF	Prebloom April / May	Repeat as necessary. Seed and fertilize to reduce weed competition.

Noxious Weed Control - *Poison hemlock* (B)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	as soon as plants appear	eradication and control of listed noxious weeds.	hand removal remove plant from site if flowers or seeds present	labor, transportation	Gloves	pull before May	Repeat as necessary. Seed and fertilize to reduce weed competition.

Noxious Weed Control - *Sulfur Cinquefoil* (A)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	as soon as plants appear	eradication and control of listed noxious weeds.	spot treatment w/ herbicide most effective	tank sprayer where possible, backpack sprayer where necessary	Milestone VM at recommended label rates	Prebud stage June / July	Reapply as necessary. Seed and fertilize to reduce weed competition.

Noxious Weed Control - *Tansy ragwort* (A)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	as soon as plants appear	eradication and control of listed noxious weeds.	spot treatment w/ herbicide	tank sprayer where possible, backpack sprayer where necessary	Milestone VM at recommended label rates	spray by June	Reapply as necessary. Seed and fertilize to reduce weed competition.

Noxious Weed Control - *Tansy ragwort* (B)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones new or limited infestations	as soon as plants appear	eradication and control of listed noxious weeds.	hand removal* * may include cut stem treatment		none required* * Round-up in spray bottle for cut stem treatment.	pull by June	Repeat as necessary. Seed and fertilize to reduce weed competition.

Nuisance Weed Control

Nuisance Weed Control - *Horsetail (A)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Zones 1	as soon as plants appear	eradication and control of listed noxious weeds.	spot treatment w/ herbicide	backpack sprayer, pickup, etc.	Telar at recommended label rates	spray by April	Reapply as necessary.

Nuisance Weed Control - *Marestail (A)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Zone 1	when resources are available	minimize populations and prevent further spread of nuisance weeds	mechanical control	mower, attenuator,		Prebloom	Re-cut/treat as necessary Seed and fertilize or plant to restore native plant community.

Nuisance Weed Control - *Marestail (B)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Zone 1	if applying residual herbicides	minimize populations and prevent further spread of nuisance weeds	residual herbicide	mower, attenuator,	Glyphosate (Razor Pro)	when present	Retreat as necessary the following year.

Nuisance Weed Control - *Prickly Lettuce (A)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Zone 1 & 2	when resources are available	minimize populations and prevent further spread of nuisance weeds	spot treatment w/ herbicide	tank sprayer where possible, backpack sprayer where necessary	Almost anything	Prebloom May, June	Re-cut/treat as necessary Only spreads by seeds.

Nuisance Weed Control - *Scotch broom (A)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
all zones new or limited infestations	wherever new infestations occur (dependent on available resources)	minimize populations and prevent further spread of nuisance weeds	foliar treatment w/ herbicide	truck mounted sprayer where possible, backpack sprayer where necessary	Garlon 3A at recommended label rates apply w/ Redi-vert when possible	prior to seed	Reapply as necessary. Seed and fertilize or plant to restore native plant community.

Nuisance Weed Control - *Scotch broom (B)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones	wherever present (dependent on available resources)	minimize populations and prevent further spread of nuisance weeds	hand pull	Weed Wrench optional		anytime	Reapply as necessary. Seed and fertilize or plant to restore native plant community.

Nuisance Weed Control - *Scotch broom (C)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones older established infestations	when resources are available	minimize populations and prevent further spread of nuisance weeds	mechanical control with follow-up cut stump treatment	mower, attenuator, backpack sprayer or spray bottle where necessary	Garlon 3A at label rates Cross bow at labeled rates	after mowing	Re-cut/treat as necessary Seed and fertilize or plant to restore native plant community.

Nuisance Weed Control - *Himalayan blackberry (A)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones new or limited infestations	wherever present (dependent on available resources)	control and eradication of selected nuisance weeds and brush.	foliar treatment w/ herbicide	truck mounted sprayer where possible, backpack sprayer where necessary	Krenite at labeled rates Cross bow at labeled rates Garlon 3A at label rates	fall after berries drop	Reapply as necessary. Seed and fertilize or plant to restore native plant community.

Nuisance Weed Control - *Himalayan blackberry (B)*

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
All zones older established infestations	when resources are available	minimize populations and prevent further spread of nuisance weeds	mechanical control with follow-up cut stump treatment	mower or hand labor, backpack sprayer or spray bottle where necessary	Krenite at labeled rates Cross bow at labeled rates Garlon 3A at label rates	after mowing in fall	Re-cut/treat as necessary Seed and fertilize or plant to restore native plant community.

Tree and Brush Control

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

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Zone 2	as soon as seedlings become visible w/in 30' of fog line (no guardrail present)	control of seedling trees that may impact roadside function if allowed to grow.	selective foliar treatment w/ herbicide	truck mounted sprayer where possible, backpack sprayer where necessary	Garlon 3A w/ Krenite S on alder at recommended label rates	late fall to avoid brown out	Seed and fertilize or plant to establish low growing native plant community.

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

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Zone 2	whenever trees are likely or have potential to grow and fall on the highway	control of young trees that may impact roadside function if allowed to grow.	hand cutting, treatment of cut surface w/ herbicide chip debris in zone 2	power saws, loppers, chipper, backpack or hand-held sprayer	Garlon 4 at label rate for cut-stump treatment	anytime	Seed and fertilize or plant to establish low growing native plant community.

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

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Zone 1 or 2	as soon as seedlings become visible w/in 30' of fog line (no guardrail present)	control of seedling trees that may impact roadside function if allowed to grow.	foliar treatment w/ herbicide	tank sprayer where possible, backpack sprayer where necessary	Garlon 4, Escort, or Krenite S at labelled rates	mid summer when new growth is present	Seed and fertilize or plant to establish low growing native plant community.

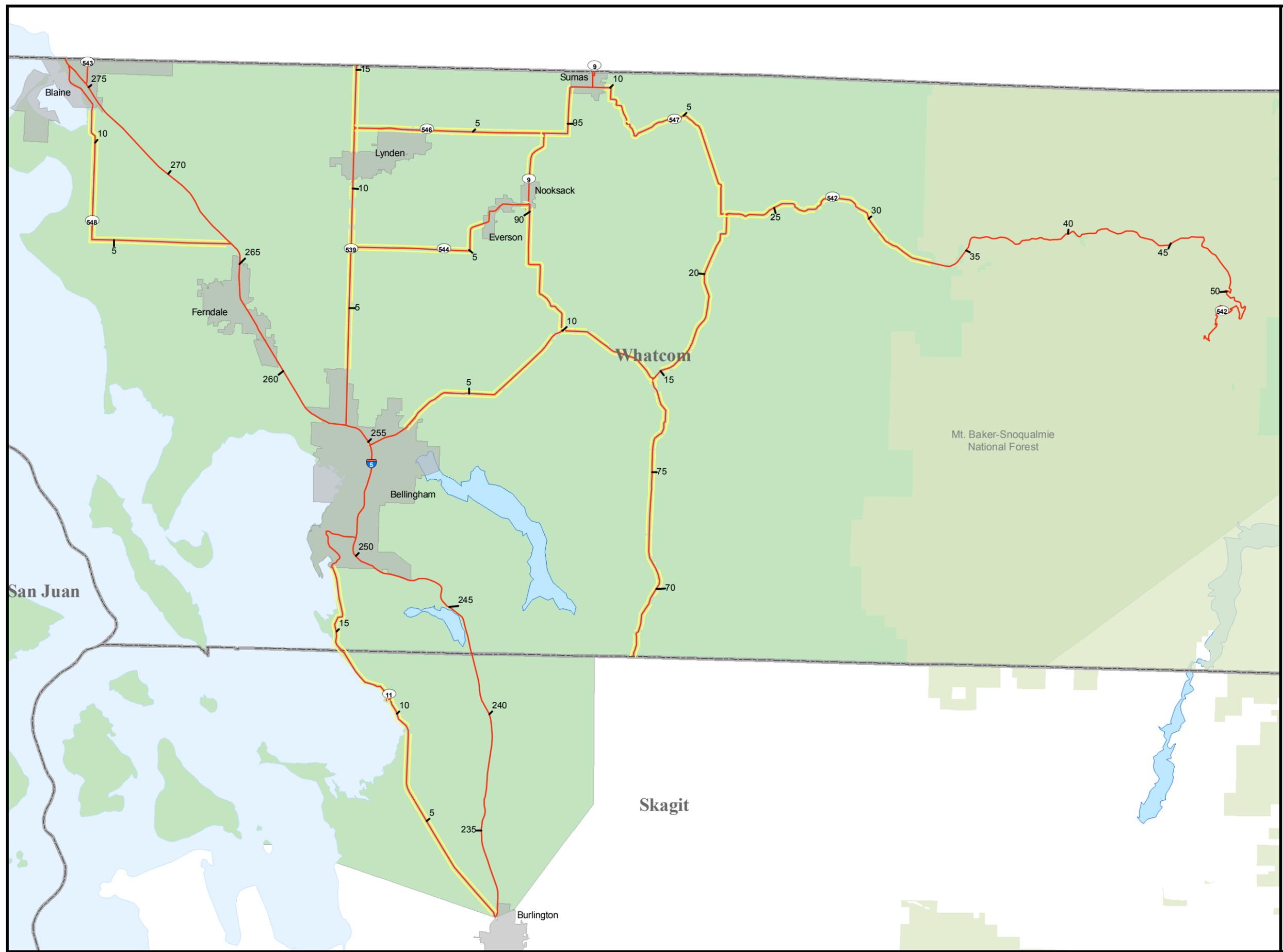
Tree and Brush Control - Conifers (trees under 2' ht.)

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Zone 1 or 2	as soon as seedlings become visible w/in 30' of fog line (no guardrail present)	control of seedling trees that may impact roadside function if allowed to grow.	hand pulling transplant if possible	Weed Wrench optional		anytime	Seed and fertilize or plant to establish low growing native plant community.

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

Location Type	Action Threshold	Management Goal	Method	Equipment	Materials	Timing	IVM Follow-up
Zone 2 or 3	whenever tree has been identified as defective or likely to fall on the highway	control of trees that may impact roadside function if allowed to grow.	hand cutting chip debris in zone 2 if necessary	power saws, chipper,		anytime	Seed and fertilize or plant to establish low growing native plant community.

Appendix B:
Northwest Region Area 1
Zone 1 Maintenance
Map 1 of 1



Legend

-  State Routes
-  Zone 1 Maintenance
-  75 Mile Post Marker
-  County Boundaries
-  National Forest
-  Coast
-  Major Lakes
-  City Limits
-  NW Region Area 1



Appendix C:
Northwest Region Area 1
Routine Mowing
Map 1 of 1

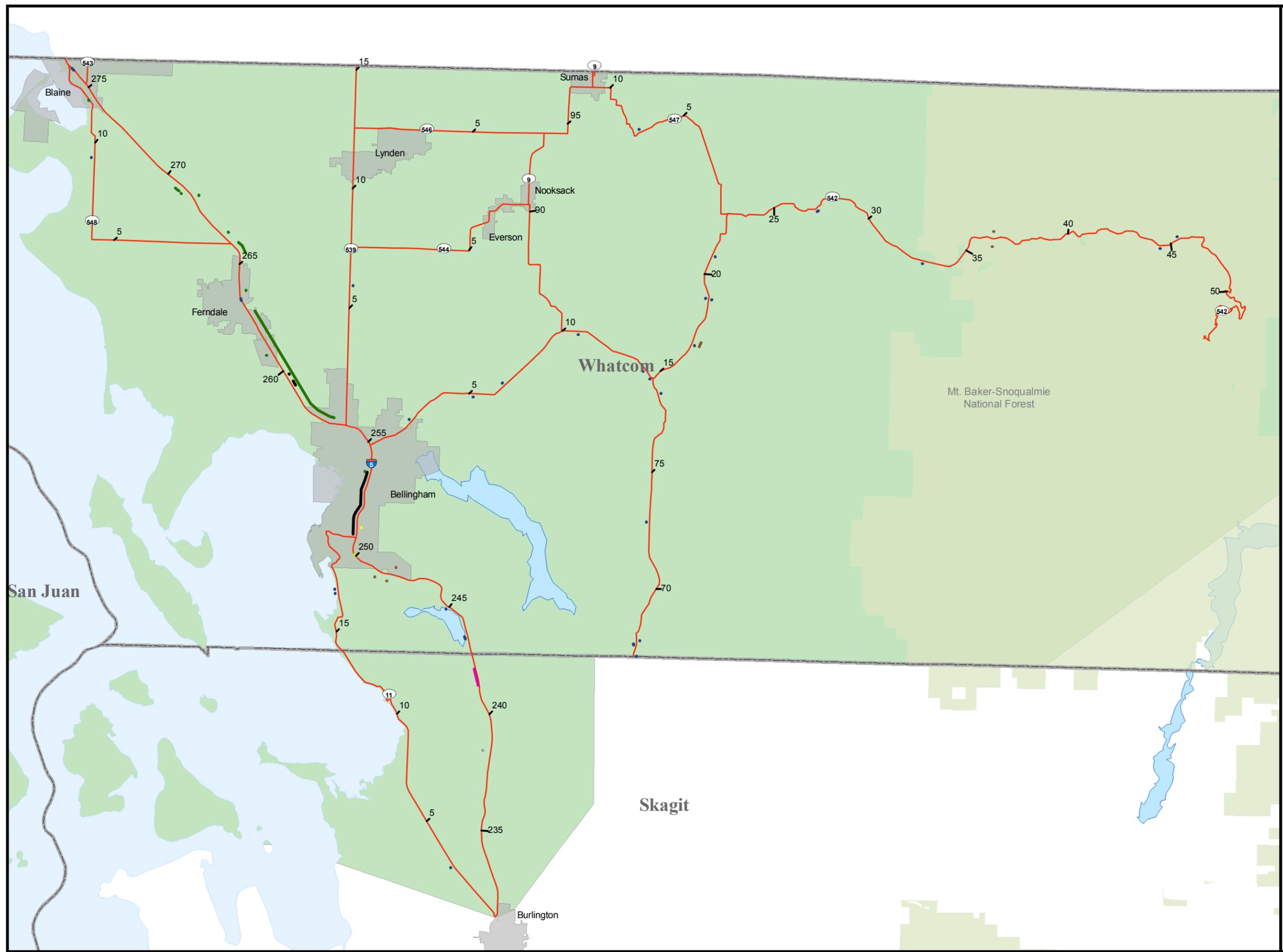


Legend

-  As Needed
-  Multi Pass
-  Single Pass
-  State Routes
-  National Forest
-  75 Mile Post Marker
-  County Boundaries
-  Coast
-  Major Lakes
-  City Limits
-  NW Region Area 1



Appendix D:
Northwest Region Area 1
Noxious Weed Locations
Map 1 of 1

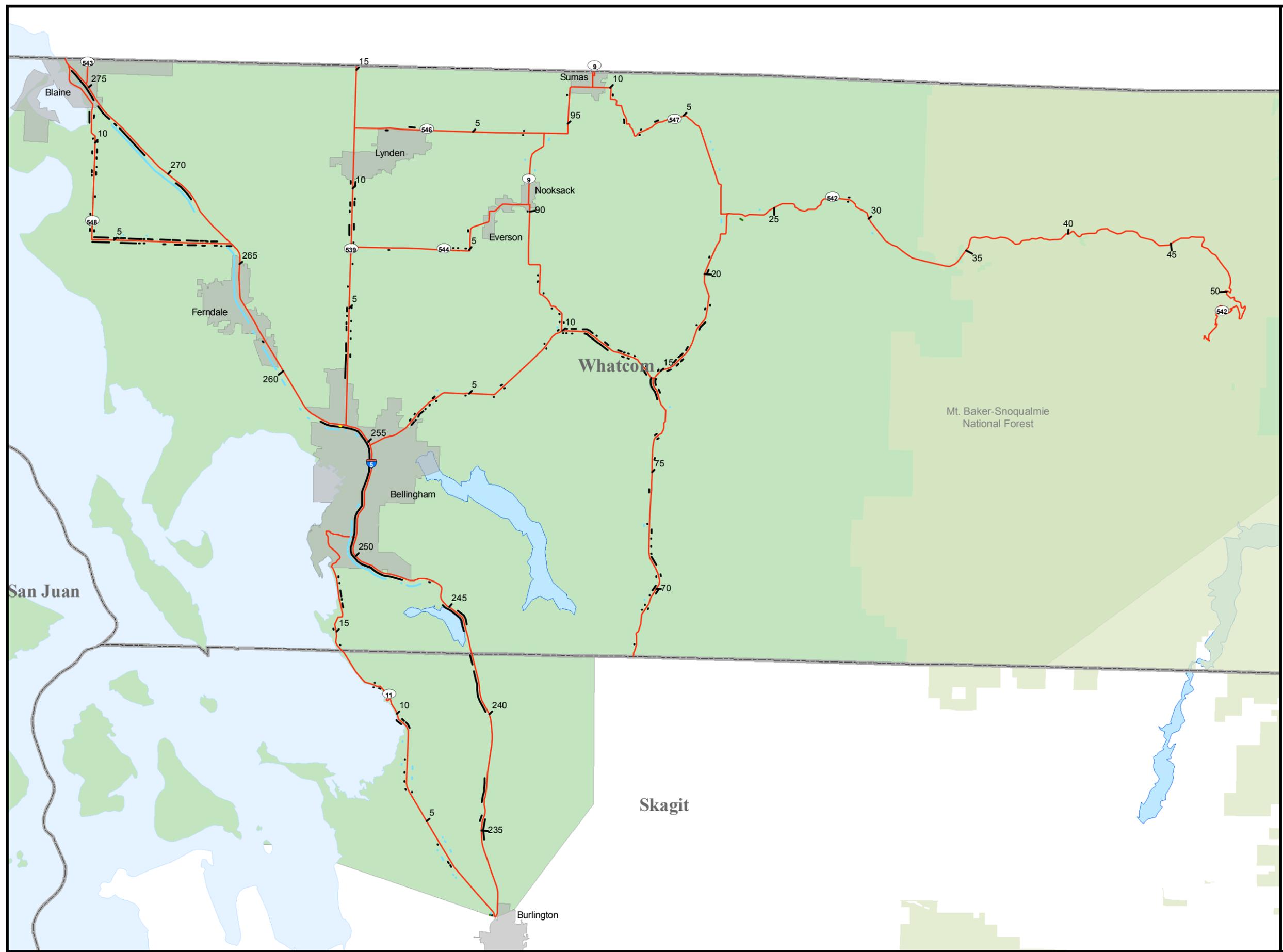


Legend

- Diffuse Knapweed
- Japanese Knotweed
- Meadow Knapweed
- Purple Loosestrife
- Smooth Hawkweed
- Spotted Knapweed
- Sulfur Cinquefoil
- Tansy Ragwort
- Yellow Hawkweed
- State Routes
- 75 ↖ Mile Post Marker
- National Forest
- County Boundaries
- Coast
- Major Lakes
- City Limits
- NW Region Area 1



Appendix E:
Northwest Region Area 1
Nuisance Weed Locations
Map 1 of 2

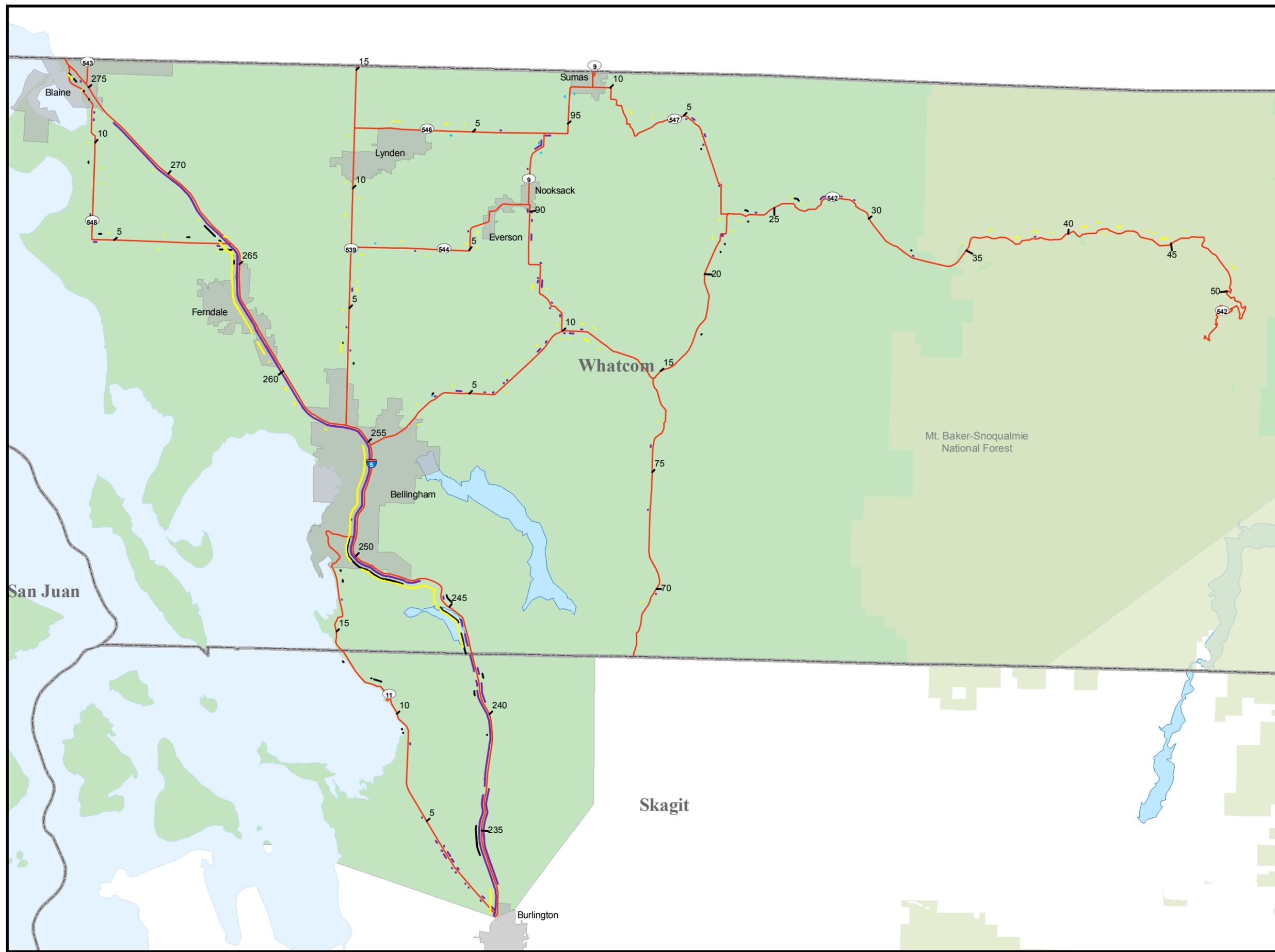


Legend

-  Blackberry
-  Bull Thistle
-  Butterfly Bush
-  St. Johnswort
-  State Routes
-  Mile Post Marker
-  National Forest
-  County Boundaries
-  Coast
-  Major Lakes
-  City Limits
-  NW Region Area 1



Appendix E:
Northwest Region Area 1
Nuisance Weed Locations
Map 2 of 2



Legend

-  Canada Thistle
-  Common Tansy
-  Poison Hemlock
-  Scotch Broom
-  State Routes
-  75 Mile Post Marker
-  National Forest
-  County Boundaries
-  Coast
-  Major Lakes
-  City Limits
-  NW Region Area 1



Appendix F

Special Maintenance Areas

Table 3.0

Locations are distinguished between the sides of the highway by right shoulder (RS) or left shoulder/median (LS) in relation to either increasing (INC) mile markers or decreasing (DEC) mile markers

Description - Brief explanation of special treatment required

SR	Direction	Shoulder	BEG MP	END MP	Type	Description
005	INC	RS	232.70	232.93	Exit 232 Cook Rd.	
005	INC	RS	236.19	236.52	Exit 236 Bow Hill Rd.	
005	INC	RS	237.79	238.41	Bow Hill Rest Area	
005	INC	RS	240.72	241.06	Exit 240 Samish Rd	
005	INC	RS	242.55	243.01	Exit 242 Nulle Rd. L. Samish	
005	INC	RS	246.29	246.48	Exit 246 - N. Lake Samish	
005	INC	RS	250.59	250.83	Exit 250 - Chuckanut Drive	
005	INC	RS	251.58	252.25	Exit 252 Samish Way WW U	
005	INC	RS	252.25	257.41	Formal Landscape	
005	INC	RS	253.01	253.19	Exit 253 Lakeway Dr.	
005	INC	RS	253.66	253.75	Exit 254 Iowa and State ST.	
005	INC	RS	254.62	255.04	Exit 255 Sunset Drive	
005	INC	RS	255.96	256.38	Exit 256A,B Meridan St.	
005	INC	RS	256.76	257.13	Exit 257 Northwest Ave.	
005	INC	RS	257.41	258.02	Exit 258 Bakerview Rd.	
005	INC	RS	259.88	260.30	Exit 260 Lum. Island Slater Rd	
005	INC	RS	262.43	262.72	Exit 262 Main St. Ferndale	
005	INC	RS	263.25	263.68	Exit 263 - Portal Way	
005	INC	RS	265.70	266.14	Exit 266 Custer Grandview Rd.	
005	INC	RS	267.37	268.05	Custer Rest Area	
005	INC	RS	269.95	270.40	Exit 270 Lynden Birch Bay	
005	INC	RS	273.95	274.18	Exit 274 Semiahoo	
005	INC	RS	274.96	275.18	Exit 275 Truck Customs H St.	
005	INC	RS	275.98	276.34	Exit 276 Blaine City Center	
005	DEC	RS	276.30	276.04	Exit 276 Blaine City Center	
005	DEC	RS	274.96	274.89	On ramp from SR 543	
005	DEC	RS	274.14	274.09	On ramp leaving Hughes Ave.	
005	DEC	RS	270.53	270.09	Exit 270 Lynden & Birch Bay	
005	DEC	RS	269.53	269.00	Bow Hill Rest Area	
005	DEC	RS	266.69	266.43	Joe Douglas Adopt-a-Highway	
005	DEC	RS	266.27	265.83	Exit 266 Grandview RD	
005	DEC	RS	263.82	263.46	Exit 263 - Portal Way	
005	DEC	RS	262.82	262.43	Exit 262 Main St. City Center	
005	DEC	RS	260.43	260.00	Exit 260 Lummi Island	
005	DEC	RS	257.99	257.47	Exit 258 Bakerview Road	
005	DEC	RS	257.47	252.25	Formal landscape	
005	DEC	RS	257.09	256.80	Exit 257 Northwest Ave.	
005	DEC	RS	256.44	256.05	Exit 256 Meridian St.	
005	DEC	RS	255.09	254.03	Exit 255 Sunset Dr. Mt. Baker	
005	DEC	RS	253.78	253.67	Exit 254 - Ohio St.	
005	DEC	RS	253.11	252.82	Exit 253 Lakeway Drive	
005	DEC	RS	252.25	251.75	Exit 252 Samish Way WWU	
005	DEC	RS	251.00	250.67	Exit 250 Chuckanut Drive	
005	DEC	RS	246.12	245.95	Exit 246 N. Lake Samish	

Appendix F

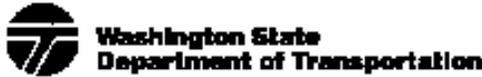
Special Maintenance Areas

Table 3.0

Locations are distinguished between the sides of the highway by right shoulder (RS) or left shoulder/median (LS) in relation to either increasing (INC) mile markers or decreasing (DEC) mile markers

Description - Brief explanation of special treatment required

SR	Direction	Shoulder	BEG MP	END MP	Type	Description
005	DEC	RS	243.04	242.72	Exit 242 - Nulle Rd.	
005	DEC	RS	241.17	240.83	Exit 240 - Alger	
005	DEC	RS	238.51	238.17	Bow Hill Rest Area	
005	DEC	RS	236.60	236.25	Exit 236 Bow Hill Rd	
005	DEC	RS	235.61	234.83	Weight Station	
005	DEC	RS	233.04	232.74	Exit 232 Cook Rd.	
005	DEC	RS	231.34	231.25	Exit 231 - Chuckanut Drive	
005	DEC	RS	231.25	231.08	On ramp from Chuckanut Dr.	
009	Both	RS	90.18	91.35	City of Nooksack	Maintain by city
009	Both	RS	96.61	98.17	City of Sumas	Maintain by city
009	Both	RS	72.05	72.05	RR Crossing at Grade	
009	Both	RS	73.91	73.91	RR Crossing at Grade	
009	Both	RS	77.38	77.38	RR Crossing at Grade	
009	Both	RS	86.28	86.28	RR Crossing at Grade	
009	Both	RS	90.32	90.32	RR Crossing at Grade	
009	Both	RS	97.47	97.47	RR Crossing at Grade	
011	Both	RS	13.44	15.03	Larabee State Park	
011	Both	RS	17.99	21.28	City of Bellingham	Maintain by city
539	Both	RS	0.00	2.40	City of Bellingham	Maintain by city
539	Both	RS	10.44	11.53	City of Lynden	
542	Both	RS	0.00	1.70	City of Bellingham	Maintain by city
542	Both	RS	33.57	33.80	Mt. Baker Snoqualmie Nat. Forest	
542	Both	RS	34.07	34.31	Mt. Baker Snoqualmie Nat. Forest	
542	Both	RS	34.80	57.24	Mt. Baker Snoqualmie Nat. Forest	
542	Both	RS	11.05	11.05	RR Crossing at Grade	
543	Both	RS	0.00	1.03	City of Blaine	Maintain by city
544	Both	RS	6.58	8.70	City of Everson	
546	Both	RS	6.91	6.91	RR Crossing at Grade	
547	Both	RS	10.79	10.31	City of Sumas	Maintain by city
548	Both	RS	11.58	13.85	City of Blaine	Maintain by city



Integrated Vegetation Management Record

Org. Code 435420	County Grays Harbor	Date 8/7/2006	Vegetation Management Zone(s) <input checked="" type="checkbox"/> Zone 1 <input checked="" type="checkbox"/> Zone 2 <input type="checkbox"/> Zone 3																			
Area SR 101 MP 104 to MP 137		Location _____																				
Check Appropriate Boxes: <input checked="" type="checkbox"/> Roadside <input type="checkbox"/> Landscaped Area <input type="checkbox"/> Interchange <input type="checkbox"/> Mitigation Site <input type="checkbox"/> Third Party Damage <input type="checkbox"/> Sensitive Sites																						
<input checked="" type="checkbox"/> NB <input type="checkbox"/> EB <input checked="" type="checkbox"/> Shoulder <input type="checkbox"/> Rest Area <input type="checkbox"/> Bridge <input type="checkbox"/> Stormwater <input type="checkbox"/> Yes <input type="checkbox"/> Aquatic																						
<input checked="" type="checkbox"/> SB <input type="checkbox"/> WB <input type="checkbox"/> Median <input type="checkbox"/> Park-n-Ride <input type="checkbox"/> Ramp <input type="checkbox"/> Yard/Stockpile <input type="checkbox"/> Wetlands																						
Target <input checked="" type="checkbox"/> Noxious Weeds <input type="checkbox"/> Brush/Trees <input type="checkbox"/> Other <input type="checkbox"/> Nuisance Weeds <input type="checkbox"/> Hazard Tree <input type="checkbox"/> List Target/Species: Orange Hawkweed																						
Reason for Action: <input checked="" type="checkbox"/> Noxious Weeds <input type="checkbox"/> Nuisance Weeds <input type="checkbox"/> Fire Prevention <input type="checkbox"/> Restore Native Veg. <input type="checkbox"/> Zone 1 Pilot <input type="checkbox"/> Aesthetic <input type="checkbox"/> Site Distance <input type="checkbox"/> Hazard Vegetation <input type="checkbox"/> Customer Request <input type="checkbox"/> Enhance Vegetation <input type="checkbox"/> Slope Stabilization <input type="checkbox"/> Other _____																						
Long term IVM plan (Describe goals/objectives and a step-by-step approach over time)																						
To control and eradicate this weed from zones 1 & 2. This was the first treatment this year but we are seeing good results from the previous treatments from the year before.																						
Approximate Acres to Accomplish <input type="text" value="1.5"/>																						
Activities																						
<table border="1"> <thead> <tr> <th></th> <th>Planned date of Treatment</th> <th>Actual date of Treatment</th> </tr> </thead> <tbody> <tr> <td>Manual <input type="checkbox"/> Digging <input type="checkbox"/> Pulling <input type="checkbox"/> Planting <input type="checkbox"/> Logging <input type="checkbox"/> Scalping <input type="checkbox"/> Other _____</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>Mechanical <input type="checkbox"/> Aerial Saw Work <input type="checkbox"/> Tractor Brush Cutter <input type="checkbox"/> Mower/Chem <input type="checkbox"/> Manual Brush Cutting <input type="checkbox"/> Tractor Mower <input type="checkbox"/> Other _____</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>Bio-Control <input type="checkbox"/> Insect <input type="checkbox"/> Pathogens <input type="checkbox"/> Parasites _____ Type/Species _____</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>Cultural <input type="checkbox"/> Burning <input type="checkbox"/> Grading <input type="checkbox"/> Seeding <input type="checkbox"/> Fertilizing <input type="checkbox"/> Grazing <input type="checkbox"/> Soil Amendment <input type="checkbox"/> Other _____</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>Chemical <input type="text" value="3119456"/> Record Number</td> <td><input type="text"/></td> <td><input type="text" value="8/7/2006"/></td> </tr> </tbody> </table>						Planned date of Treatment	Actual date of Treatment	Manual <input type="checkbox"/> Digging <input type="checkbox"/> Pulling <input type="checkbox"/> Planting <input type="checkbox"/> Logging <input type="checkbox"/> Scalping <input type="checkbox"/> Other _____	<input type="text"/>	<input type="text"/>	Mechanical <input type="checkbox"/> Aerial Saw Work <input type="checkbox"/> Tractor Brush Cutter <input type="checkbox"/> Mower/Chem <input type="checkbox"/> Manual Brush Cutting <input type="checkbox"/> Tractor Mower <input type="checkbox"/> Other _____	<input type="text"/>	<input type="text"/>	Bio-Control <input type="checkbox"/> Insect <input type="checkbox"/> Pathogens <input type="checkbox"/> Parasites _____ Type/Species _____	<input type="text"/>	<input type="text"/>	Cultural <input type="checkbox"/> Burning <input type="checkbox"/> Grading <input type="checkbox"/> Seeding <input type="checkbox"/> Fertilizing <input type="checkbox"/> Grazing <input type="checkbox"/> Soil Amendment <input type="checkbox"/> Other _____	<input type="text"/>	<input type="text"/>	Chemical <input type="text" value="3119456"/> Record Number	<input type="text"/>	<input type="text" value="8/7/2006"/>
	Planned date of Treatment	Actual date of Treatment																				
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Mechanical <input type="checkbox"/> Aerial Saw Work <input type="checkbox"/> Tractor Brush Cutter <input type="checkbox"/> Mower/Chem <input type="checkbox"/> Manual Brush Cutting <input type="checkbox"/> Tractor Mower <input type="checkbox"/> Other _____	<input type="text"/>	<input type="text"/>																				
Bio-Control <input type="checkbox"/> Insect <input type="checkbox"/> Pathogens <input type="checkbox"/> Parasites _____ Type/Species _____	<input type="text"/>	<input type="text"/>																				
Cultural <input type="checkbox"/> Burning <input type="checkbox"/> Grading <input type="checkbox"/> Seeding <input type="checkbox"/> Fertilizing <input type="checkbox"/> Grazing <input type="checkbox"/> Soil Amendment <input type="checkbox"/> Other _____	<input type="text"/>	<input type="text"/>																				
Chemical <input type="text" value="3119456"/> Record Number	<input type="text"/>	<input type="text" value="8/7/2006"/>																				
#1 Evaluation and Date																						
<input type="text"/>																						
#2 Evaluation and Date																						
<input type="text"/>																						
#3 Evaluation and Date																						
<input type="text"/>																						



Pesticide Application

Main Menu
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Org. Code 415520	County King	Date of Application 10/13/2006	Start 12:30	<input type="radio"/> AM <input checked="" type="radio"/> PM	ICP 051A	Stores Issue Ticket Number(s) F42735/F42733/42734																								
Area SR 99 MP 25.12 to MP 26.01 and MP to MP and MP to MP and MP to MP																														
Check Appropriate Boxes: <table border="0"> <tr> <td><input checked="" type="checkbox"/> NB</td> <td><input type="checkbox"/> EB</td> <td><input checked="" type="checkbox"/> Roadside</td> <td><input type="checkbox"/> Landscaped Area</td> <td><input type="checkbox"/> Interchange</td> <td><input type="checkbox"/> Yard/Stockpile</td> <td><input checked="" type="checkbox"/> Spot Spray</td> <td><input type="checkbox"/> Aquatic</td> </tr> <tr> <td><input checked="" type="checkbox"/> SB</td> <td><input type="checkbox"/> WB</td> <td><input checked="" type="checkbox"/> Shoulder</td> <td><input type="checkbox"/> Rest Area</td> <td><input type="checkbox"/> Bridge</td> <td></td> <td><input checked="" type="checkbox"/> Blanket Spray</td> <td><input type="checkbox"/> Wetlands</td> </tr> <tr> <td></td> <td></td> <td><input type="checkbox"/> Median</td> <td><input type="checkbox"/> Park-n-Ride</td> <td><input type="checkbox"/> Ramp</td> <td></td> <td><input type="checkbox"/> Banded Width</td> <td></td> </tr> </table>							<input checked="" type="checkbox"/> NB	<input type="checkbox"/> EB	<input checked="" type="checkbox"/> Roadside	<input type="checkbox"/> Landscaped Area	<input type="checkbox"/> Interchange	<input type="checkbox"/> Yard/Stockpile	<input checked="" type="checkbox"/> Spot Spray	<input type="checkbox"/> Aquatic	<input checked="" type="checkbox"/> SB	<input type="checkbox"/> WB	<input checked="" type="checkbox"/> Shoulder	<input type="checkbox"/> Rest Area	<input type="checkbox"/> Bridge		<input checked="" type="checkbox"/> Blanket Spray	<input type="checkbox"/> Wetlands			<input type="checkbox"/> Median	<input type="checkbox"/> Park-n-Ride	<input type="checkbox"/> Ramp		<input type="checkbox"/> Banded Width	
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		<input type="checkbox"/> Median	<input type="checkbox"/> Park-n-Ride	<input type="checkbox"/> Ramp		<input type="checkbox"/> Banded Width																								
<input type="checkbox"/> Weeds <input checked="" type="checkbox"/> Noxious Weeds <input type="checkbox"/> Disease <input type="checkbox"/> Brush <input type="checkbox"/> Insects <input type="checkbox"/> Other List Part(s): <u>Common Reed grass, Japanese knotweed, Blackberries</u>																														
Start Weather Conditions Temperature <u>54</u> °F Wind (Direction From) <u>NW</u> Wind (Range) <u>2</u> mph(kmh) <input type="radio"/> Sunny <input checked="" type="radio"/> Broken <input type="radio"/> Overcast No Rain <input type="radio"/> Light Scattered Showers <input type="radio"/> Hard Showers																														
Finish Weather Conditions Temperature <u>60</u> °F Wind (Direction From) <u>NW</u> Wind (Range) <u>4</u> mph(kmh) <input checked="" type="radio"/> Sunny <input type="radio"/> Broken <input type="radio"/> Overcast No Rain <input type="radio"/> Light Scattered Showers <input type="radio"/> Hard Showers																														
Tank No.	Material Name	Material Type	EPA Reg. No.	Lot Number	Product For Acres (Gallons)	Unit	Total Daily Usage	Unit																						
1	Water	Carrier	-----	Spokane St.	100	Gal	50	Gal																						
1	Aquamaster	Pesticide	524-343	MTR00805AJ	96	Ozl	48	Ozl																						
1	MSO	Adjuvant	-----	77562	32	Ozl	16	Ozl																						
1	Turf Trax	Adjuvant	-----	34294	32	Ozl	16	Ozl																						
Total 0.50 Acres(hectares) Treated at 100 gallons(liters) of spray per acre(hectare).																														
Equipment Number 21A36-5	Tank Size 1 200 3 5	Calibration Date 09/25/2006	Vehicle Speed n/a mph(kmh)	Nozzle Pressure 5 PSI(kPa)	Width of Spray Pattern N/A Feet(meter)																									
<input type="checkbox"/> Hand sprayer <input checked="" type="checkbox"/> Handgun <input type="checkbox"/> Boom <input type="checkbox"/> Backpack <input type="checkbox"/> Fixed Nozzle <input type="checkbox"/> Other (Specify) _____			<input checked="" type="checkbox"/> Tank Mix (Conv.) <input type="checkbox"/> Injection <input type="checkbox"/> Inert																											
Operator Name Gabriel Olivras		Operator Pesticide License No. 52698		Operator Signature		Driver Name Richard Blair																								
Remarks No water was present at the time of spray.						Buffer Truck Driver's Name																								
						Pesticide Sensitivity Registration Applies: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																								
						Contact																								
Division of Emergency Management (1-800-258-5990)						Additional Notes																								

DOI Form 540-506 EF Distribution: OSC Main Operator Region File Cal= Ounces Dry Lit= Pounds g= gram kg=kilo gram
 Revised 9/2001 Send OSC Copy Within 5 Days Cal= Ounces Liquid Ga= Gallon ml=Milliliter L= Liter
 P= Pint Q= Quart

Entity	Mailing Address	Contact Person	Title	Phone	E-Mail
Whatcom County Noxious Weed Board	Whatcom Co. Public Works 901 W. Smith Rd. Bellingham, WA	Laurel Shiner	Coordinator	(360) 354-3990	LShiner@co.whatcom.wa.us
Skagit County Noxious Weed Board	MacGregor Building 302 S. First St. Mount Vernon, WA 98273	Bill Rogers	Coordinator	(360) 336 - 9430	williamr@co.skagit.wa.us
Skagit County Public Works	1800 Continental Place Mount Vernon, WA 98273	Cliff Butler	Operations Manager	360-336-9400 Fax: 336-9369	mailto:pw@co.skagit.wa.us
Whatcom County Public Works	901 W. Smith Road Bellingham, WA 98226	Mary Green	M&O Superintendent	(360) 676-6759 Fax: 676-6879	mailto:MO@co.whatcom.wa.us
USFS District Office	810 State Route 20 Sedro Woolley, WA 98284	Ann Risvold	North Zone Botanist		arisvold@fs.fed.us
Nooksack Indian Tribe	5016 Deming Rd. PO Box 157 Deming, WA 98244	Robert "Bob" Kelly	Natural Resource Director	(360) 592-5176 Fax: 360-529-5753	rkelly@nooksacktribe.org
City of Bellingham	2221 Pacific St. Bellingham, WA 98229	Tom Rosenberg	Assistant Public Works Director, Operations	(360) 676-6850	mailto:trosenberg@cob.org
City of Lynden	323 Front St. Lynden, WA 98264	Duane Huskey	Public Works Director	(360) 354-3446 Fax: (360) 354-5749	
City of Blaine	1200 Yew Ave. Blaine, WA 98230	Leroy Dougall	Public Works Superintendent	(360) 332-8820 Fax: (360) 332-7124	Email: ldougall@cityofblaine.com
City of Everson	111 West Main Street Everson, WA 98247	Rick Holt	Public works supervisor	(360) 966-3411 Fax: 966-4134	
City of Nooksack Public Works Department	Nooksack City Hall PO Box 4265 103 W. Madison St. Nooksack, WA			(360) 966- 2531 Fax: (360) 966-2505	
City of Sumas	P.O. Box 9 Sumas, WA 98295	Administrator Knight	City Administrator	(360) 988-5711 Fax: (360) 988-8855	kdknightcityofsumas.com