

THURSTON COUNTY NOXIOUS WEEDS
2025 ANNUAL IPM REPORT



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Prepared by Thurston County Noxious Weeds Staff:

Michael Murphy, Program Manager
John Johnson, Noxious Weed Specialist II
Sarah Watkins, Noxious Weed Specialist II

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Mission Statement

Our mission is to protect the community, natural resources, and agricultural resources of Thurston County from the impacts of invasive, noxious weeds.

Summary of 2025 Thurston County Noxious Weeds Survey and Control

Thurston County Noxious Weeds (TCNW) follows Integrated Pest Management (IPM) protocols to prevent and manage noxious weed infestations throughout Thurston County. IPM utilizes multiple, tiered control strategies and prioritizes the least environmentally harmful methods as the first-line treatments of noxious weed species. IPM strategies can be used to build effective control plans that are tailored to specific sites, species, and landowner objectives.

In 2025, TCNW continued projects controlling knotweed and parrotfeather on the Chehalis River, floating primrose-willow on Chambers Lake, and purple loosestrife on the Black River. Contractors were hired to continue eradication efforts of Brazilian elodea in the Chehalis River and Long Lake, variable-leaf milfoil in Blue Lake, and yellow flag iris on Lake Lawrence.

Meaningful control of noxious weeds is not possible without the efforts of landowners and residents of Thurston County, and in 2025, TCNW continued to carry out its mission by assisting landowners in their efforts through onsite inspections, consultations, education and outreach. Typically, site inspections include dialogue with landowners and land managers that can involve detailed technical assistance. This includes providing information on relevant noxious weed species and/or direct assistance managing species designated for mandatory control or eradication.

TCNW staff inspected 2,903 sites (out of 3,501 active sites) for 50 noxious weed species. *(See sidebar, right.)* Each site represents a single noxious weed species, so one parcel can

2025 NOXIOUS WEED CONTROL AT A GLANCE

- 3,501 • Active sites
- 1,145 • Tansy ragwort sites (33%)
- 2,903 • Sites inspected (83%)
- 50 • Species surveyed
- 1 • New noxious weed species
- 329 • New sites
- 281 • Eradicated sites
- 66 • County properties treated
- 192 • Private properties treated
- 71 • Deschutes River treatments
- 18 • Chehalis River treatments
- 3 • Black River treatments
- 35 • River miles surveyed
- 11,440 • Pounds of weeds pulled
- 2,159 • Publications distributed

have multiple sites if multiple species are present. Sites are monitored for a minimum of three years. After three consecutive years with a confirmed absence of a noxious weed species, the site is removed from active database records. In 2025, 329 new sites were added and eradication of infestations at 281 sites was confirmed.

Manual Control Overview

Where appropriate, manual and mechanical control methods are preferred as the first-line strategy for managing noxious weeds. Manual control is generally favored by the public and can be safer for field crew and sensitive sites. TCNW used manual methods to control 26 species in 2025 (see Table 5, Appendix B), and most treatment activities on Thurston County rights-of-way (ROWs) employed digging or hand pulling.

Staff disposed of over 11,000 lbs. of noxious weeds that they removed from county-owned and private properties, ROWs, state lands, and city-owned properties. (See sidebar, right.) This year, that total included approximately 3,790 lbs. of tansy ragwort and 1,500 lbs. of floating primrose-willow. In addition, an estimated 4,000 lbs. of delta arrowhead was pulled from Deep Lake. Aquatic weed weights are wet weights that can include water, mud, and any entangled non-target vegetation.

Photo, top: Noxious Weed Specialist John Johnson digging out spurge laurel. **Sidebar:** Total TCNW staff-pulled weights per species disposed at the WARC and Public Works campus. **Table 1:** WARC-reported disposal weights for residents and TCNW staff.



2025 STAFF-PULLED NOXIOUS WEED DISPOSAL

ESTIMATED WEIGHT IN POUNDS

- 11,440 • Total
- 4,000 • Delta arrowhead
- 3,790 • Tansy ragwort
- 1,500 • Floating primrose-willow
- 660 • Poison hemlock
- 320 • Hanging sedge
- 200 • Spurge laurel
- 210 • Wild chervil
- 160 • Garlic mustard
- 120 • Meadow knapweed
- 100 • Rough chervil
- 30 • Parrotfeather
- 20 • Sulfur cinquefoil

2025 WARC Noxious Weed Disposal Weights (lbs.)			
Species	Resident Weight	Staff Weight	Species Totals
Tansy ragwort	20,110	2,050	22,160
Garlic mustard	-	160	160
Poison hemlock	40	200	240
Hanging sedge	3,680	300	3,980
Grand total	23,830	2,710	26,540

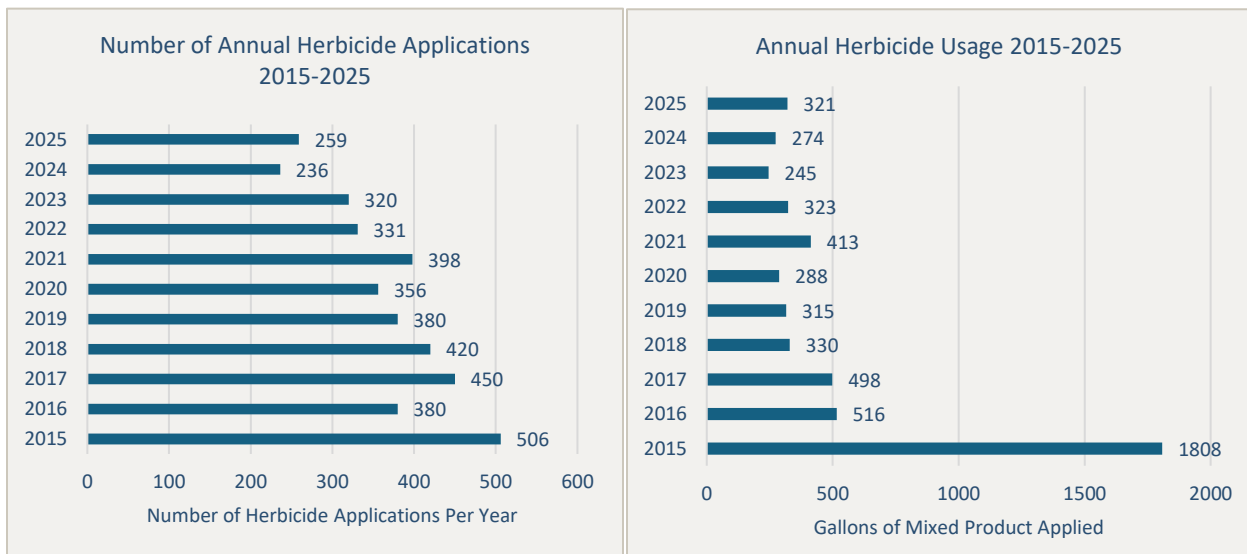
Thurston County residents hauled nearly 24,000 lbs. of noxious weeds to the Waste and Recovery Center (WARC) through TCNW’s free disposal program. (See Table 1, page 2.) The program, offered in collaboration with Thurston County Solid Waste, removes barriers for the removal of noxious weeds from private properties where they would otherwise contribute to the persistence of infestations.

Chemical Control Overview

Certain species, such as knotweed, cannot be effectively managed with manual control methods. In some circumstances, chemical control can be a more efficient method for controlling large infestations while remaining safe when employed carefully. In 2025, TCNW carried out 232 herbicide applications on 19 different species, including 161 applications for projects and/or private properties and 71 on county properties and ROWs. (See Figures 1 and 2, below, and Table 5, Appendix B.) At many sites that formerly required herbicide applications due to the severity of the infestations, populations of noxious weeds have been reduced so significantly that manual control has become feasible.



Photo: Noxious Weed Specialist Sarah Watkins sprays purple loosestrife plants along the Black River. **Figure 1, left:** Number of herbicide applications per year, 2015-2025. **Figure 2, right:** Gallons of mixed herbicide per year, 2015-2025. (See Tables 5 and 7, Appendix B.)



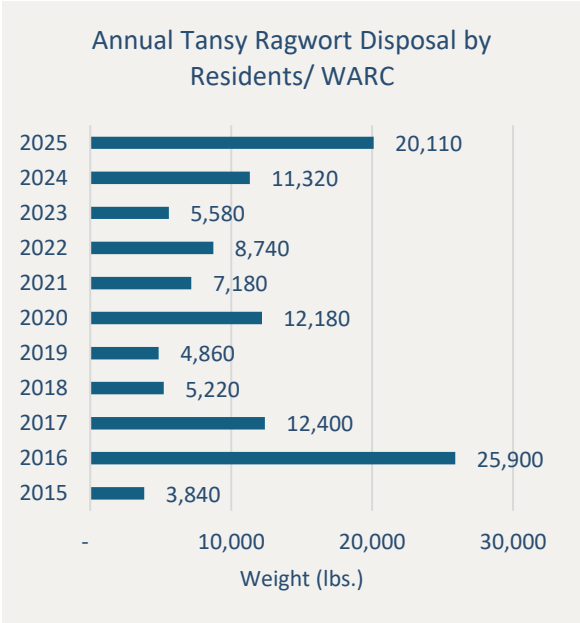


Noxious Weed Control Highlights

Tansy Ragwort

Tansy ragwort (*Jacobaea vulgaris*) is a Class B noxious weed that is toxic for domestic and wild animals to ingest and can spread easily via wind dispersal of seeds. The Thurston County Noxious Weed Control Board (TCNWCB) requires control of infestations that exceed 25 plants per parcel or per 20 acres. There were 1,145 tansy ragwort sites in 2025: 33% of the total number of active sites, slightly higher than 2024. (See sidebar, page 1, and Table 4, Appendix A.)

Hand pulling and digging are the primary methods of tansy ragwort control. Leafy, first-year basal growth, known as ‘rosettes,’ can also be managed chemically. In 2025, residents brought 20,110 lbs. of tansy ragwort to the WARC for free disposal, almost double the amount from 2024. (See Figure 3, right, and Table 1, page 2.) Staff disposed of an additional 3,790 lbs. (see sidebar, page 2), bringing the 2025 grand total to 22,160 lbs.



Thurston County ROWs account for most of the tansy ragwort pulled by staff. Selected county ROW sites with a significant population of rosettes were chemically treated with 6.4 gallons of mixed solution of triclopyr 3. (See Table 7, Appendix C.) Focusing on widespread control of rosettes significantly decreases the field time required to control this species and minimizes the risk of subsequent seed dispersal. For these reasons, TCNW plans to expand its focus on spring and fall treatments in 2026, with the goal of sharply reducing future roadside populations of flowering tansy ragwort plants.



Photo, this page: Tansy ragwort growing along a right-of-way.

PREVIOUS PAGE: Photo: Floating primrose-willow at Chambers Lake. **Figure 3:** Annual tansy ragwort disposal at the Waste and Recovery Center (WARC) by Thurston County residents for each year from 2015 to 2025.

Knotweed Species

Control of knotweed continues to be a priority of the TCNW program due to its aggressive nature that can have significant impacts anywhere it becomes established. Knotweed species include Bohemian, Japanese, Himalayan, and giant knotweed. All are Class B noxious weeds in Washington. Control of giant and Himalayan

knotweeds (*Polygonum sachilenese*, *Persicaria wallichii*) is required in Thurston County by the Washington State Noxious Weed Control Board (WSNWCB), and Bohemian and Japanese knotweeds (*Polygonum x bohemicum*, *P. cuspidatum*) are selected for control by the TCNWCB. The predominant species present are Japanese and Bohemian: very similar-looking species with the same invasive characteristics and control protocols. For these reasons, TCNW data does not differentiate between the two and typically reports both as “Bohemian knotweed” (KNBH.)

In 2025, knotweed was chemically treated at 161 sites: 71 on the Deschutes River, 14 on the Chehalis River, 12 on Thurston County ROWs, and 64 on other private (“upland”) properties. (See sidebar, page 1.) A total of 648 out of 863 sites on public and private properties were inspected. (See Table 4, Appendix A.) Each site represents a single parcel or multiple, contiguous parcels with the same ownership.

Deschutes River Knotweed Project

The Deschutes River project began in 2015, funded by the Washington Department of Agriculture (WSDA). Initial treatments covered only 10.5 river miles upstream of State Highway 507. The project area was expanded in 2018 to include 30 river miles from Deschutes Falls in Yelm to the intake of Capitol Lake in Olympia. Between August 20th and September 25th, noxious weeds staff surveyed and chemically treated knotweed along 16.5 river miles of the Deschutes River. (See map, page 8.) An aquatically approved imazapyr solution was applied to 1.28 solid (or “condensed”) acres at 71 sites out of 168 total parcels. (See Table 2, below.)

From 2015 to 2025, there was a net reduction in solid acres treated: from 5.17 acres over 99 sites in 2015 to 1.28 acres over 71 sites in 2025. Many infestations at sites along the river have been eradicated or significantly reduced. The number of herbicide applications peaked at 183 sites with the expansion of the survey area in 2018. The slight increase in applications from 2024 is primarily a result of small, incidental knotweed plants established in new places, newly observed regrowth of past infestations, and an increase in landowner permissions to treat existing infestations.

Deschutes River Knotweed Project 2015-2025				
Treatment Year	Total Deschutes River Sites	Herbicide Applications	Solid Acres Treated	Gallons of Product Applied
2025	168	71	1.28	0.52
2024	135	44	0.87	0.38
2023	94	47	1.24	0.55
2022	95	72	1.07	0.47
2021	108	104	1.74	0.77
2020	145	127	3.06	1.36
2019	173	150	4.51	1.99
2018	205	183	6.19	2.74
2017	189	154	1.83	0.81
2016	215	172	4.01	1.77
2015	213	99	5.17	2.29

Table 2: Showing solid acres of Deschutes River knotweed treated, number of herbicide applications and gallons of concentrated product applied for each year from 2015 at the start of the project through 2025. **Photo:** Regrowth of knotweed found on a previously treated site, substantially smaller than the original infestation.



Chehalis River Knotweed Project

In 2025, we completed the second year of knotweed treatments along the Chehalis River using WSDA funding. Stormpond Solutions was hired to conduct surveys and treat knotweed over five days between September 4th and 22nd along the nine river miles within Thurston County. (See map, page 8.) A total of 87.25 gallons of imazapyr solution was applied

to 14 infestations, totaling four solid acres of knotweed. (See Table 8, Appendix C.) Total herbicide use in 2025 was 10% lower from 2024 over the same area. A more significant reduction in both acres treated and herbicide applied is predicted for 2026.

Upland Knotweed

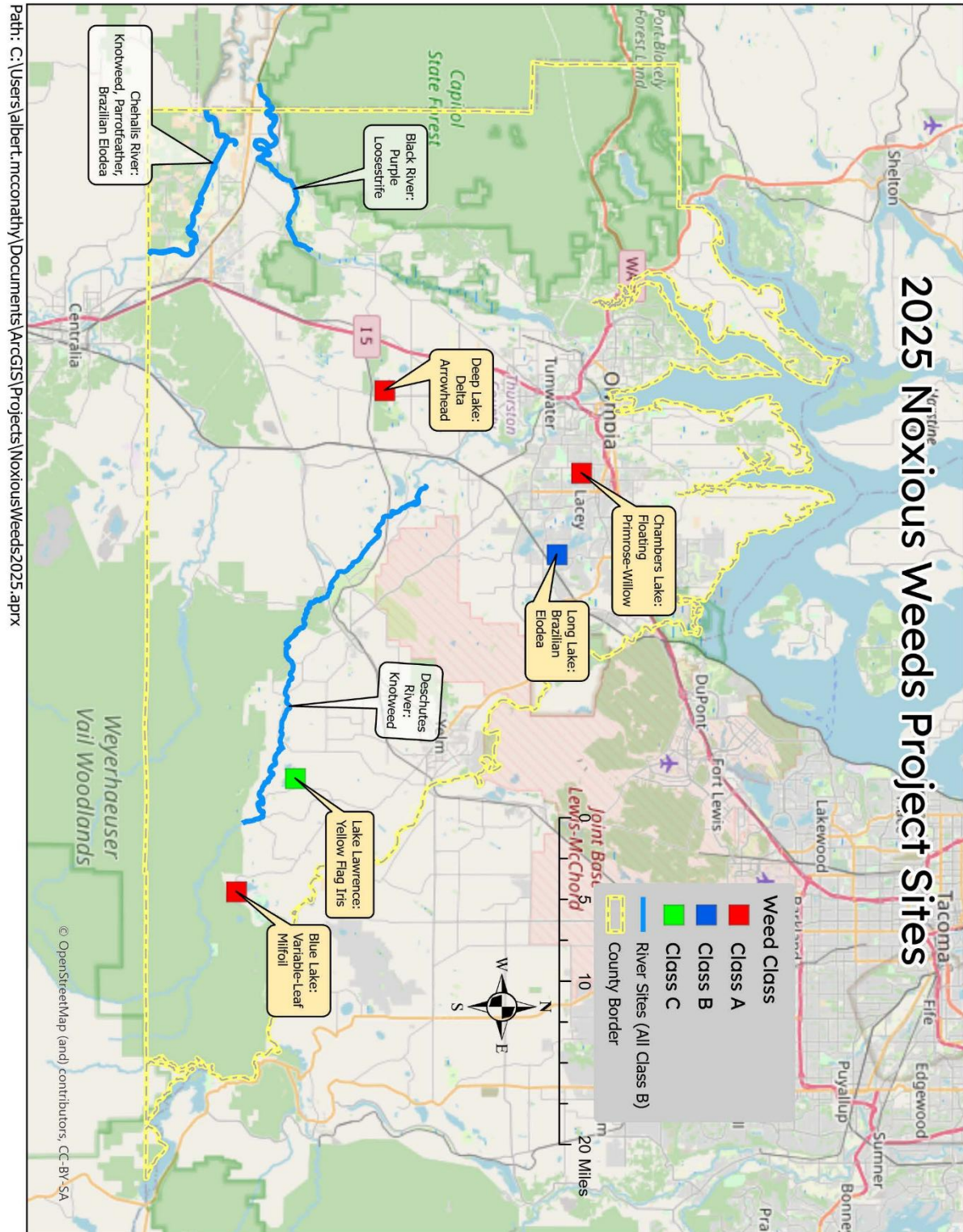
In addition to the Deschutes and Chehalis projects, TCNW has continued to offer free chemical treatment of knotweed to private landowners throughout the county as staff time allows. The term “upland” is used to differentiate these sites from river project sites, but they can include knotweed near streams or wetlands. Knotweed can be difficult and expensive to control; chemical control can require special licensing for herbicide applicators near streams and designated wetlands; and treatment for infestations growing across parcel boundaries can be complicated and expensive to coordinate. By offering this service, TCNW removes those barriers for landowners. This service began with 14 treatment sites in 2019, increasing to 101 sites in 2025. The knotweed at many of these sites has been successfully eradicated or is close to eradication. Because of its proven effectiveness, TCNW is looking to expand this service to as many as 200 sites per year.

Deschutes River Knotweed Photo Gallery



Map: 2025 Noxious Weeds Project Sites

Figure 4: Map showing the 2025 locations of project sites for knotweed, parrotfeather, Brazilian elodea, purple loosestrife, floating primrose-willow, and delta arrowhead. The highlighted areas on rivers show the entire extent of the survey and include areas without the target species present.



Purple Loosestrife: Black River

Purple loosestrife (*Lythrum salicaria*) is a serious aquatic invader listed as Class B and designated for control by the WSNWCB. Purple loosestrife can quickly create monocultures in sensitive aquatic environments. It is a prolific producer of seeds and can grow from a broken piece of the plant. In 2025, TCNW continued to survey and carry out treatment activities for purple loosestrife on 10 river miles of the Black River from the Littlerock boat launch to Grays Harbor County. (See map, page 8.) Staff sprayed 1.32 gallons of aquatically approved imazapyr solution at three previously known sites. (See Table 8, Appendix C.) This is a notable reduction from the 3.75 gallons of mixed herbicide solution applied in 2024, reflecting a continued reduction in severity. The remaining purple loosestrife found was manually removed at sites where permission to spray had not been obtained.

Yearly monitoring and treatment of purple loosestrife on the Black River has kept populations relatively low compared to areas lower in the Chehalis River Basin. Successful upstream control efforts in Thurston County have made purple loosestrife control in Grays Harbor County feasible, and large-scale eradication efforts were initiated in the lower Chehalis River in that county in 2025. In this way, local projects are having synergistic impacts on noxious weeds regionwide.



Photo: John Johnson and TCNW Program Manager Michael Murphy surveying the Black River for purple loosestrife.

Floating Primrose-Willow: Chambers Lake

Floating primrose-willow (*Ludwigia peploides*) was discovered on the shores of Chambers Lake in 2023. (See map, page 8.) Floating primrose-willow is a Class A aquatic weed in Washington State, and eradication is required. This species grows along the muddy shorelines of freshwater systems and forms dense mats which trap sediment and significantly alter habitat and water quality.

Treatment of floating primrose-willow began with manual control in 2023, followed by chemical control in 2024. Initial surveys in 2025 showed a reduction in the extent and severity of infestations, so manual

control was selected as the least damaging method, however substantial growth occurred after the survey. Three days of manual treatment in August and September in cooperation with the Washington State Department of Ecology (ECY) were conducted, with approximately 1500 lbs. of vegetation removed. (See sidebar, page 2.) While infestations were found in new locations, the overall amount of floating primrose-willow appears to be significantly less than when originally found.

A combination of manual and chemical treatments is being planned for 2026, and landowners will be contacted to obtain or update permission for chemical control. Chemical treatment is planned for August with a manual follow-up in September on those parcels where permission to spray is not obtained and any areas requiring follow-up treatment.

Variable Leaf Milfoil: Blue Lake

Variable-leaf milfoil (VLM) (*Myriophyllum heterophyllum*) is a Class A aquatic weed in Washington State. VLM crowds out native vegetation and degrades habitat and water quality, and eradication is required. In Thurston County, VLM is present only in Blue Lake and Clear Lake. (See map, page 8.) Initial eradication efforts are focusing on Blue Lake as the primary source.

In August 2025, TCNW hired Aquatechnex LLC to chemically control VLM. The crew applied 0.61 lbs. (equivalent to 2.92 gallons) of ProcellaCOR, an herbicide approved for repeated use in aquatic systems, to all 12.3 acres of Blue Lake. (See Table 7, Appendix B.) In October, a snorkel crew from Evergreen Diving Service was contracted to survey and determine the effectiveness of the chemical application. Results showed that many plants survived treatment with



Photo, top: Sarah Watkins pulls floating primrose-willow plants from native vegetation. **Above:** Wes Glisson from ECY joins TCNW crew for pulling and collecting data. **Below:** Noxious Weed Specialist Abbi Haley rakes a variable-leaf milfoil sample from Blue Lake during a survey with Omfishient Consulting.



only foliar damage, and 350 lbs. were subsequently removed manually. Chemical treatment followed by survey and manual control of surviving VLM is also planned for 2026.

TCNW coordinated with Lauren Kuehne of Omfishient Consulting to support her study of the effectiveness of ProcellaCOR on VLM in Washington State by sampling populations in Blue Lake. Kuehne, Wes Glisson of ECY, and TCNW staff conducted a gridded survey to sample the lake for the presence of VLM. (See photo, previous page.) The data from this survey will help inform future management decisions for the control of VLM and other milfoil species.



Photo: A Variable-leaf milfoil infestation in Blue Lake before treatment.

Table 3: Showing total weight of Brazilian elodea removed from the Chehalis River from 2004 – 2025. No control was conducted in 2019.

Brazilian Elodea

Brazilian elodea (*Egeria densa*) is a Class B aquatic weed designated for control in Thurston County by the WSNWCB. Brazilian elodea crowds out native vegetation, reduces water quality, and causes problems for boats and swimmers. Because Brazilian elodea grows fully submersed in water, chemical control can be challenging. In Thurston County, it is currently found on the Chehalis River and the south basin of Long Lake. (See map, page 8.)

Chehalis River Brazilian Elodea

Contracted divers from Evergreen Diving Services removed 25,995 lbs. of Brazilian elodea from approximately four river miles of the Chehalis River with grant funding provided by the Washington State Department of Natural Resources (DNR.) This is a significant increase from the 17,050 lbs. pulled in the same

Chehalis River Brazilian Elodea Removed Annually: 2004- 2025	
Treatment Year	Pounds Removed
2025	25,995
2024	17,135
2023	17,050
2022	13,300
2021	10,515
2020	10,565
2019	N/A
2018	6,386
2017	3,655
2016	2,360
2015	8,617
2014	806
2013	851
2012	839
2011	913
2010	5,519
2009	25,963
2008	47,425
2007	106,772
2006	76,708
2005	44,910
2004	7,740

10-day period in 2024. (See Table 3, right.) Brazilian elodea control is a good example of the importance of coordinated, watershed-scale efforts across jurisdictions. Plans for coordinated control of Brazilian elodea and other species in the Chehalis River watershed are being developed, and once implemented, a subsequent decrease of Brazilian elodea populations is predicted, not only in Thurston County but basin-wide.

Long Lake Brazilian Elodea

Brazilian elodea was discovered in Long Lake in 2015 by Evergreen Diving Services, and a small amount (6.5 lbs.) was manually removed. Surveys conducted from 2016 to 2021 found no Brazilian elodea. It was assumed to be eradicated until a 2022 survey by ECY confirmed its continued presence. Evergreen Diving Services was hired in 2023 to survey the lake, and treatment resumed in 2024.

In 2025, with funding from ECY, divers located 48 separate infestations in the lake. Forty-two of those were pulled manually, removing 160 lbs. of Brazilian elodea. The remaining infestations were significantly larger, and TCNW is working with the Long Lake Management District to determine the most efficient and cost-effective methods for ongoing management.

Parrotfeather: Chehalis River

Parrotfeather (*Myriophyllum aquaticum*) is a Class B noxious aquatic weed designated by the WSNWCB for control in Thurston County. Parrotfeather can form dense mats that crowd out native vegetation and alter aquatic habitat and water quality. Unlike Brazilian elodea, parrotfeather foliage does not remain submerged, providing enough emergent leaf area to make foliar applications of herbicide effective.



Photo, top: A diver from Evergreen Diving Services showing some of the Brazilian elodea removed from Long Lake. **Bottom:** A small amount of the 350 lbs. of parrotfeather manually removed from the Chehalis River in August.



TCNW completed the survey and treatment of nine river miles on the Chehalis River over two days with grant funding by the DNR. (See map, page 8.) Staff hand pulled 30 lbs. of parrotfeather from numerous small infestations and applied 1.19 gallons of an aquatically approved imazapyr solution to larger infestations. (See Table 7, Appendix B.) This amount is an 8-gallon decrease from 2024, indicating a significant reduction of the infestations as a result of the treatment.

Yellow Flag Iris

Yellow flag iris (YFI) (*Iris pseudacorus*) is a Class C noxious weed selected by the TCNWCB for control at Lake Lawrence, Deep Lake, Thurston County properties, and ROWs throughout the county. (See map, page 8.) YFI is a serious threat to aquatic environments and can cause problems for stormwater infrastructure such as ditches and retention ponds. We completed treatment at 31 sites county-wide. (See Table 5, Appendix B.) TCNW is planning to resurvey and treat YFI at Deep Lake in 2026. While YFI is not selected for control outside of these areas nor designated by the WSNWCB, TCNW staff continues to provide detailed technical assistance to landowners wanting to control it on their properties.

Rights-of-Way

In 2025, we chemically treated 11 YFI sites along ROWs in Thurston County, applying 4.24 gallons of mixed imazapyr solution. (See Table 8, Appendix C.) Most of these sites are stormwater ditches in which YFI can interfere with drainage. Ditches also allow for easy dispersal of seeds and rhizomes to new and potentially sensitive locations.

Lake Lawrence Yellow Flag Iris

TCNW has collaborated with the Lake Lawrence LMD (Lake Management District) to control YFI on Lake Lawrence since 2015. In May, contractors completed chemical treatment of YFI with funding provided by the LMD and the DNR. Contractors applied 114.32 gallons of an aquatically approved imazapyr solution to 20 sites. (See Table 8, Appendix C.) Though the lake has historically been heavily infested, annual treatments have kept populations controlled and have reduced seed dispersal into the neighboring Deschutes River. The bulk of the infestations have been located on large, undeveloped parcels. Infestations on developed parcels have been nearly eradicated and are now being managed by landowners.



Photo: Yellow flag iris, growing inconspicuously near the shoreline of Lake Lawrence.

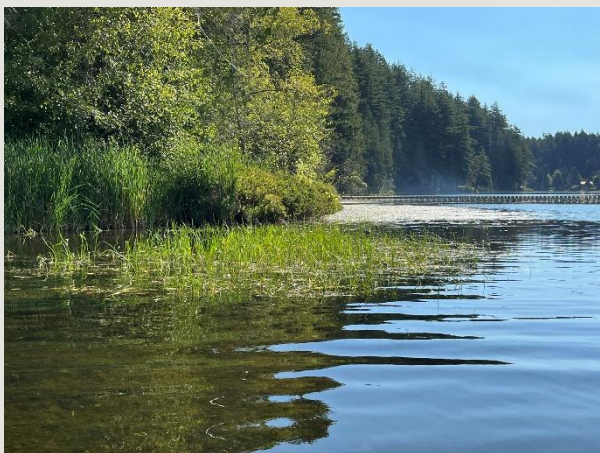
New and Returning Noxious Weeds

Delta Arrowhead

Delta arrowhead (*Sagittaria platyphylla*) was newly listed as a Class A noxious weed for 2026. Delta arrowhead is an aquatic species discovered in 2022 in Deep Lake, which is currently the only known location in Washington State. (See map, page 8.) TCNW collaborated with ECY and Washington State Parks staff to manually pull a large delta arrowhead infestation at Millersylvania State Park, removing over 4000 lbs. from a densely infested pilot area at a popular boat launch. (See sidebar, page 2.)

TCNW coordinated a survey with ECY along the slough flowing north from Deep Lake to locate and map any delta arrowhead infestations downstream. Significant populations were noted close to Deep Lake, but only isolated populations were found beyond that point. A beaver dam appears to have been an effective barrier to delta arrowhead expansion in the downstream areas of the slough. Methods for effective control (and ultimately, eradication) are in discussion with ECY and will be finalized in 2026.

Deep Lake Delta Arrowhead Photo Gallery



Blueweed

Blueweed (*Echium vulgare*) is a Class B noxious weed designated for control by the WSNWCB. A prolific seed producer, this borage relative can easily outcompete desired vegetation. Blueweed has never become firmly established in Thurston County, and the last active blueweed site was dropped from our database in 2018 after several years of monitoring. In 2025, a small infestation was reported and confirmed, and Noxious Weeds staff manually removed the plants from the site. This infestation was reported on iNaturalist, which has become an important resource for noxious weed programs in recent years.



Photo, top: Blueweed, a historically uncommon species in Thurston County. **Bottom:** John Johnson, listening to questions from a visitor at the Thurston County Earth Day Celebration.

Education and Outreach

The need for managing noxious weeds countywide exceeds the capacity of our program. TCNW relies heavily on the efforts of landowners and residents. Educating the public about noxious weed species and laws, notifying them about new and spreading species, and providing information about control are critical to the success of our program. This year, education and outreach activities included community events, presentations, and social media posts. Presentations for the Thurston County Master Gardener Program and the Washington Conservation Corps, focused on understanding noxious weed laws, plant identification, and control strategies.

TCNW operated booths at five community events in 2025: Thurston Conservation District Plant Sale, Thurston County Earth Day Celebration, Prairie Appreciation Day, Colvin Ranch Day, and the Thurston County Fair. Through these events, staff engaged



directly with approximately 1,300 community members and distributed over 2,000 publications about noxious weeds. Additionally, educational resources and booklets were distributed to local clubs, nonprofit organizations, nurseries, feed stores, and countless residents upon request. TCNW continued to offer help with plant identification, onsite consultations on request, and free educational resources.

Through Thurston County's Facebook page, TCNW was able to highlight our efforts to control floating primrose-willow. Social media has become an influential resource for sharing vital information about noxious weed identification and control to a broad audience, and plans for increasing social media presence in 2026 are being developed to encourage people to seek assistance and take action. A newly-established iNaturalist account will offer landowners, residents, and visitors to Thurston County a new way to identify, monitor, and report noxious weeds across the county and can provide timely information to TCNW staff for Early Detection/Rapid Response of new invasive species.

TCNW contributed support to events with other Thurston County outreach teams. In August, TCNW specialists joined Thurston County Stream Team and Thurston County Solid Waste at Tumwater Historical Park for an event hosted by Camp Wa-Ya, an organization that promotes outdoor knowledge, skills, and leadership through week-long summer day camps. Staff developed field notebooks for children to draw selected native plants growing at the park and learn the basics of plant identification. Hands-on observation was prioritized as much as possible to hopefully inspire further interest on their own time.

Staff assisted Thurston County's Environmental Coordinator Elena Fernandez in identifying and flagging invasive species in preparation for a Thurston County WIN (Work Involvement Now) volunteer event at the new Gate-Belmore Trail



Photo, top: Michael Murphy representing TCNW at Colvin Ranch Day. **Bottom:** Environmental Coordinator Elena Fernandez marking weeds at the Gate-Belmore stormwater pond before the Thurston WIN volunteer event.

trailhead. Marking undesirable species, including noxious weeds, helped the young volunteers learn to recognize species they needed to pull to protect the native prairie species recently planted around the new stormwater retention pond.

Learning to identify new noxious weed species is critical for staff, too. False brome is a Class A noxious grass species not yet present in Thurston County. To ensure that staff can recognize it in the field, TCNW coordinated with Cowlitz County Noxious Weed Control Board staff to visit false brome sites on DNR roads near Kalama in April and November, before and after chemical treatments. Grasses are difficult to identify, and this hands-on experience with the species was critical for “Early Detection/Rapid Response”: detecting infestations in early stages when eradication is still feasible.

Looking Forward Into 2026

In 2026, TCNW will continue to build on its success. The decrease in knotweed on the Deschutes over 11 years of treatment will allow staff to broaden the scope of that and other projects. Combined with the planned increase in treatment on private properties, this will create a substantial impact on knotweed populations across the county. TCNW will continue to work with other counties, agencies, tribes, and other stakeholders through the Chehalis River Cooperative Weed Management Area group to identify funding opportunities and develop working partnerships for basin-wide aquatic weeds such as parrotfeather, Brazilian elodea, knotweed, and other species. By fostering cooperation with landowners and collaboration with other local and regional stakeholders, the capacity to effectively address serious noxious weeds issues in Thurston County will increase, working synergistically to affect the impact of noxious weeds across our region.



Photo: Abbi Haley in kayak, surveying for garden loosestrife at Chambers Lake.

Appendix A: Noxious Weeds Site History

Table 4: Showing the number of sites from 2016-2025 for selected noxious weed species, including historic highs. Red cells with bolded numbers = Historic high. * = Historic high is prior to 2008.

Number of Selected Noxious Weed Sites in Thurston County from 2016-2025												
Species	Historic High	Year High	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Tansy ragwort	2,716	2008	2,099	1,865	1,631	1,533	1,333	1,219	1,135	1,100	1,102	1,145
Knotweed spp.	1,323	*	1,198	1,156	1,323	1,259	1,163	968	894	851	900	863
Spurge laurel	490	2013	310	285	270	289	311	356	341	387	374	350
Poison hemlock	706	*	429	418	435	410	389	388	365	343	330	299
Yellow flag Iris	240	2017	240	240	234	226	208	194	185	186	182	181
Sulfur cinquefoil	113	*	61	93	113	109	98	95	82	83	85	84
Wild Chervil	360	2008	153	132	108	90	71	61	61	64	57	58
Mouseear hawkweed	63	*	53	63	52	55	47	46	59	58	55	57
Purple loosestrife	141	*	49	43	44	44	44	46	44	50	54	54
Spotted knapweed	794	*	100	90	91	75	68	62	60	54	42	46
Brazilian elodea	161	2009	27	27	27	27	40	40	40	33	33	41
Common fennel	464	2010	118	91	94	68	60	62	48	40	38	37
Meadow knapweed	230	*	105	97	81	54	44	46	38	35	32	34
Lesser celandine	34	2025	-	-	-	-	-	2	11	29	32	34
Parrotfeather	31	2022	11	11	14	21	25	31	31	24	29	28
Hanging sedge	17	2025	-	-	-	-	-	1	3	12	12	17
Gorse	151	*	23	24	24	23	22	12	12	12	12	14
Garden loosestrife	9	2025	-	-	-	5	5	5	5	7	8	9
Wild basil	9	2025	-	-	-	-	-	-	2	3	4	9
Diffuse knapweed	439	*	12	14	14	8	6	6	6	6	6	4
Giant hogweed	138	*	4	5	5	6	7	7	3	4	3	3
Dalmation toadflax	67	*	2	2	2	2	3	3	2	3	3	3
Thistle, Scotch	13	*	1	2	2	2	3	2	2	3	3	3
Thistle, milk	7	2008	1	-	-	-	1	1	2	2	2	2
Blueweed	2	2012	1	-	-	-	-	-	-	-	-	1

Appendix B: Manual and Chemical Treatment Summaries

2025 Overview of Manual and Chemical Control by Species

Table 5: Listing all species controlled by TCNW staff and hired contractors. * = Species selected for control by TCNWC. ** = Species not selected for control but treated at specific sites. All other species are designated for control by the WSNWC. **X** = Manual control was the primary method for treatment. **x** = Manual control was used.

2025 Overview of Manual and Chemical Control by Species					
Species	Scientific Binomial	Noxious Weed Class	Total Sites	Sites Chemically Treated	Manual Control
Blueweed	<i>Echium vulgare</i>	B	1		X
Brazilian Elodea	<i>Egeria densa</i>	B	41		X
Cheril, rough	<i>Chaerophyllum temulum</i>	B	1	1	X
Chervil, wild	<i>Anthriscus sylvestris</i>	B	58	2	X
Common fennel	<i>Foeniculum vulgare</i>	B	37		X
Dalmation toadflax	<i>Linaria dalmatica</i>	B	3		X
Delta arrowhead	<i>Sagittaria platyphylla</i>	A	9		X
Floating primrose-willow	<i>Ludwigia pepoides</i>	A	32		X
Garlic mustard	<i>Alliaria petiolata</i>	A	3	2	
Giant hogweed	<i>Heracleum mantegazzianum</i>	A	3		X
Gorse	<i>Ulex europaeus</i>	B	14		X
Hanging sedge	<i>Carex pendula</i>	B	17		X
Hawkweed, mouseear	<i>Hieracium pilosella</i>	B*	57		X
Hawkweed, orange	<i>Hieracium aurentiacum</i>	B			X
Hawkweed, yellow	<i>Hieracium caespitosum</i>	B*		1	x
Knapweed, meadow	<i>Centaurea x moncktonii</i>	B	34	5	x
Knapweed, spotted	<i>Centaurea stoebe</i>	B	46	2	X
Knotweed, Bohemian	<i>Polygonum x bohemicum</i>	B*	842	144	
Knotweed, giant	<i>Polygonum sachalinense</i>	B	18	2	
Knotweed, Himalayan	<i>Persicaria walichii</i>	B	3	1	
Lesser celandine	<i>Ficaria verna</i>	B	34	6	
Loosestrife, garden	<i>Lysimachia vulgaris</i>	B	9	2	
Loosestrife, purple	<i>Lythrum salicaria</i>	B	54	3	X
Parrotfeather	<i>Myriophyllum aquaticum</i>	B	28	4	x
Perennial sowthistle	<i>Sonchus arvensis</i>	C*	2		X
Poison hemlock	<i>Conium maculatum</i>	B	299		X
Scotch broom	<i>Cytisus scoparius</i>	B**	2	2	
Shiny geranium	<i>Geranium lucidum</i>	B*	1	1	
Spurge laurel	<i>Daphne laureola</i>	B	350		X
Sulfur cinquefoil	<i>Potentilla recta</i>	B*	84	5	x
Tansy ragwort	<i>Jacobaea vulgaris</i>	B*	1,145	8	X
Thistle, milk	<i>Sylbium marianum</i>	A	2		X
Variable-leaf milfoil	<i>Myriophyllum heterophyllum</i>	A	2	1	x
Wild basil	<i>Clinopodium vulgare</i>	B	9	6	x
Yellow flag iris	<i>Iris pseudacorus</i>	C*	181	29	
Grand Total			3,229	191	

2025 Herbicide Application Summaries

Table 6: Showing total application of product by brand in ounces and gallons. **Table 7:** Showing number of applications and per-species total application of product by active ingredient. One application = herbicide applied on one species on one site per day.

2025 Summary of Total Herbicide Applied				
Herbicide	EPA Registration	Active Ingredient	Product Applied (oz.)	Herbicide Mix Applied (gal.)
Milestone ¹	62719-519	Aminopyralid	1.06	5.00
ProcellaCOR ²	67690-80	Florpyrauxifen-benzyl	9.80	2.92
Alligare 4SL ³	81927-24	Imazapyr	146.38	114.32
Ecomazapyr 2SL ⁴	81927-22	Imazapyr	226.85	87.25
Polaris ⁵	228-534	Imazapyr	190.28	86.91
Triclopyr 3 ⁶	81927-22	Triclopyr 3	61.42	24.18
Grand Total			635.79	320.58

¹ Milestone contains 2 lbs. active ingredient per gallon of product. ² ProcellaCOR-EC contains 0.21 lbs. active ingredient per gallon of product. ³ Alligare 4SL contains 4 lbs. active ingredient per gallon of product. ⁴ Ecomazapyr 2SL contains 2 lbs. active ingredient per gallon of product. ⁵ Polaris contains 2 lbs. active ingredient per gallon of product. ⁶ Triclopyr 3 contains 3 lbs. active ingredient per gallon of product.

2025 Summary of Herbicide Applied per Species					
Species	Code	Herbicide Applied (active ingredient)	Number of Applications	Product Applied (oz.)	Herbicide Mix Applied (gal.)
Garlic mustard	ALPE4	Triclopyr 3	2	6.14	2.40
Chervil, wild	CHER	Triclopyr 3	2	1.92	0.75
Yellow flag iris	FLAG	Imazapyr	30	152.35	118.56
Loosestrife, garden	GARD	Imazapyr	3	10.87	4.25
Shiny Geranium	GERM	Aminopyralid	2	1.06	5.00
Shiny Geranium	GERM	Imazapyr	1	4.16	3.25
Shiny Geranium	GERM	Triclopyr 3	1	2.56	1.00
Knotweed, Bohemian	KNBH	Imazapyr	159	372.61	152.22
Knotweed, giant	KNGT	Imazapyr	2	1.04	0.74
Knapweed, meadow	MEKN	Triclopyr 3	5	6.11	2.39
Parrotfeather	PARR	Imazapyr	4	2.28	1.19
Loosestrife, purple	PULY	Imazapyr	3	3.38	1.31
Lesser celandine	RAFI	Triclopyr 3	6	4.04	1.58
Chervil, rough	ROCH	Triclopyr 3	1	2.56	1.00
Scotch broom	SBRM	Imazapyr	7	16.01	6.46
Scotch broom	SBRM	Triclopyr 3	5	5.51	1.28
Knapweed, spotted	SPKN	Imazapyr	1	0.48	0.25
Knapweed, spotted	SPKN	Triclopyr 3	2	5.76	2.25
Sulfur cinquefoil	SULF	Triclopyr 3	5	3.84	1.50
Tansy ragwort	TARA	Imazapyr	1	0.32	0.25
Tansy ragwort	TARA	Triclopyr 3	9	14.44	6.25
Wild basil	WBAS	Triclopyr 3	6	8.47	3.75
Yellow hawkweed	YHWD	Triclopyr 3	1	0.06	0.03
Variable-leaf milfoil	VARI	Florpyrauxifen-benzyl	1	9.80	2.92
Grand Total			259	635.79	320.58

Appendix C: 2025 IPM Data Per Application

Table 8: Showing all herbicide application information per site for 2025.

Date	Species	Site	Site ID	Type	Product	Mix Applied (gal)	Mix Rate	Product Applied (oz)	Dye	Dye Rate	Surfactant	Surf. Rate	Method	Infested Acres
3/25/2025	RAFI	QUINCE ST NE	C7341	UPLAND	Triclopyr 3	0.21	2%	0.54	Turfmark	1%	Competitor	1%	Foliar	0.02
3/25/2025	RAFI	PIONEER AVE NE	C7336	UPLAND	Triclopyr 3	0.06	2%	0.15	Turfmark	1%	Competitor	1%	Foliar	0.01
3/25/2025	RAFI	41ST AVE NE	C7325	UPLAND	Triclopyr 3	0.25	2%	0.64	Turfmark	1%	Competitor	1%	Foliar	0.02
3/25/2025	RAFI	PERCIVAL ST NW	N5643	UPLAND	Triclopyr 3	0.90	2%	2.30	Hi-Light	1%	Competitor	1%	Foliar	0.03
4/1/2025	SBRM	WALDRICK RD SE	E0001	PIT/MINE	Triclopyr 3	0.19	2%	0.46	Turfmark	1%	Competitor	1%	Foliar	10.00
4/4/2025	RAFI	WEST BAY DR NW	N7312	UPLAND	Triclopyr 3	0.15	2%	0.38	Turfmark	1%	Competitor	1%	Foliar	0.01
4/4/2025	RAFI	SKAGICOWLIB012	E4630	SHOULDER	Triclopyr 3	0.01	2%	0.03	Turfmark	1%	Competitor	1%	Foliar	0.01
4/11/2025	SBRM	WALDRICK RD SE	E0001	PIT/MINE	Polaris	0.06	1%	0.08	Hi-Light	1%	Competitor	1%	Foliar	10.00
4/11/2025	SBRM	WALDRICK RD SE	E0001	PIT/MINE	Polaris	2.00	2%	5.12	Hi-Light	1%	Competitor	1%	Foliar	10.00
4/14/2025	ALPE4	8TH AVE SE	C7106	UPLAND	Triclopyr 3	1.90	2%	4.86	Turfmark	1%	Competitor	1%	Foliar	0.89
4/14/2025	ALPE4	CHAMBERS ST SE	C7107	UPLAND	Triclopyr 3	0.50	2%	1.28	Turfmark	1%	Competitor	1%	Foliar	0.65
4/18/2025	GERM	TILLEY RD S	S4446	THUCO	Polaris	3.25	1%	4.16	Hi-Light	1%	Competitor	1%	Foliar	1.00
4/18/2025	GERM	TILLEY RD S	S4446	THUCO	Milestone	2.00	0.137	0.35	Hi-Light	1%	Competitor	1%	Foliar	1.00
4/18/2025	GERM	TILLEY RD S	S4446	THUCO	Triclopyr 3	1.00	2%	2.56	Hi-Light	1%	Competitor	1%	Foliar	1.00
4/18/2025	GERM	TILLEY RD S	S4446	THUCO	Milestone	3.00	0.185	0.71	Hi-Light	1%	Competitor	1%	Foliar	1.00
5/8/2025	ROCH	OLD HWY 99 SE	N7352	SHOULDER	Triclopyr 3	1.00	2%	2.56	Turfmark	1%	Agridex	1%	Foliar	0.00
5/13/2025	FLAG	LAKE LAWRENCE	E3306	LAWRENCE	Alligare 4SL	3.92	1%	5.03			Syltac EA	1%	Foliar	0.10
5/13/2025	FLAG	LAKE LAWRENCE	E3307	LAWRENCE	Alligare 4SL	3.92	1%	5.03			Syltac EA	1%	Foliar	0.10
5/13/2025	FLAG	LAKE LAWRENCE	E3309	LAWRENCE	Alligare 4SL	3.92	1%	5.03			Syltac EA	1%	Foliar	0.10
5/13/2025	FLAG	LAKE LAWRENCE	E3313	LAWRENCE	Alligare 4SL	2.72	1%	3.48			Syltac EA	1%	Foliar	0.20
5/13/2025	FLAG	LAKE LAWRENCE	E3341	LAWRENCE	Alligare 4SL	3.92	1%	5.03			Syltac EA	1%	Foliar	0.10
5/13/2025	FLAG	LAKE LAWRENCE	E3800	LAWRENCE	Alligare 4SL	0.78	1%	1.00			Syltac EA	1%	Foliar	0.50
5/13/2025	FLAG	LAKE LAWRENCE	E3277	LAWRENCE	Alligare 4SL	2.72	1%	3.48			Syltac EA	1%	Foliar	5.00
5/13/2025	FLAG	LAKE LAWRENCE	E3799	LAWRENCE	Alligare 4SL	1.00	1%	1.28			Syltac EA	1%	Foliar	0.10
5/13/2025	FLAG	LAKE LAWRENCE	E3249	LAWRENCE	Alligare 4SL	30.00	1%	38.40			Syltac EA	1%	Foliar	1.00
5/13/2025	FLAG	LAKE LAWRENCE	E3315	LAWRENCE	Alligare 4SL	46.00	1%	58.88			Syltac EA	1%	Foliar	12.00
5/13/2025	FLAG	LAKE LAWRENCE	E3440	LAWRENCE	Alligare 4SL	3.50	1%	4.48			Syltac EA	1%	Foliar	0.50
5/13/2025	FLAG	LAKE LAWRENCE	E3404	LAWRENCE	Alligare 4SL	3.92	1%	5.02			Syltac EA	1%	Foliar	0.10
5/13/2025	FLAG	LAKE LAWRENCE	E3317	LAWRENCE	Alligare 4SL	1.00	1%	1.28			Syltac EA	1%	Foliar	0.10
5/13/2025	FLAG	LAKE LAWRENCE	E3316	LAWRENCE	Alligare 4SL	1.00	1%	1.28			Syltac EA	1%	Foliar	0.20

Date	Species	Site	Site ID	Type	Product	Mix Applied (gal)	Mix Rate	Product Applied (oz)	Dye	Dye Rate	Surfactant	Surf. Rate	Method	Infested Acres
5/13/2025	FLAG	LAKE LAWRENCE	E3318	LAWRENCE	Alligare 4SL	1.00	1%	1.28			Syltac EA	1%	Foliar	0.10
5/13/2025	FLAG	LAKE LAWRENCE	E3403	LAWRENCE	Alligare 4SL	1.00	1%	1.28			Syltac EA	1%	Foliar	0.10
5/13/2025	FLAG	LAKE LAWRENCE	E3405	LAWRENCE	Alligare 4SL	1.00	1%	1.28			Syltac EA	1%	Foliar	0.10
5/13/2025	FLAG	LAKE LAWRENCE	E4795	LAWRENCE	Alligare 4SL	1.00	1%	1.28			Syltac EA	1%	Foliar	0.01
5/13/2025	FLAG	LAKE LAWRENCE	E4794	LAWRENCE	Alligare 4SL	1.00	1%	1.28			Syltac EA	1%	Foliar	0.01
5/13/2025	FLAG	LAKE LAWRENCE	E3408	LAWRENCE	Alligare 4SL	1.00	1%	1.28			Syltac EA	1%	Foliar	0.20
5/14/2025	FLAG	LAWRENCE LAKE	E3249	LAWRENCE	Polaris	1.50	1%	1.92	Hi-Light	1%	Competitor	1%	Foliar	1.00
5/21/2025	FLAG	HUNTESALTYC018	N4101	SHOULDER	Polaris	0.40	2%	0.10	Hi-Light	1%	Agri-dex	1%	Foliar	0.10
5/21/2025	FLAG	LIBBYWOODAD039	C6170	SHOULDER	Polaris	0.05	2%	0.13	Hi-Light	1%	Agri-dex	1%	Foliar	0.10
5/21/2025	FLAG	BOSTO73RDAA014	C6179	SHOULDER	Polaris	0.03	2%	0.06	Hi-Light	1%	Agri-dex	1%	Foliar	0.10
5/22/2025	FLAG	AFFLERBAUGH RD SE	C6311	THUCO	Polaris	0.10	2%	0.26	Hi-Light	1%	Agri-dex	1%	Foliar	0.97
5/27/2025	FLAG	CHEHALIS WEST TRL	C6180	THUCO	Polaris	0.06	2%	0.16	Hi-Light	1%	Agri-dex	1%	Foliar	1.62
5/27/2025	SBRM	WALDRICK RD SE	E0001	PIT/MINE	Polaris	0.40	2%	1.02	Hi-Light	1%	Agri-dex	1%	Foliar	10.00
6/5/2025	CHER	101ST AVE SW	S5002	UPLAND	Triclopyr 3	0.50	2%	1.28	Hi-Light	1%	Competitor	1%	Foliar	0.05
6/5/2025	CHER	101AVDEMPSB006	S4463	SHOULDER	Triclopyr 3	0.25	2%	0.64	Hi-Light	1%	Competitor	1%	Foliar	0.10
6/5/2025	MEKN	ANGUS DR SE	S4983	THUCO	Triclopyr 3	1.25	2%	3.20	Hi-Light	1%	Competitor	1%	Foliar	0.01
6/10/2025	MEKN	GRAND MND WY SW	S4878	UPLAND	Triclopyr 3	0.25	2%	0.64	Hi-Light	1%	Competitor	1%	Foliar	0.10
6/10/2025	MEKN	GRAND MND WAY SW	S0668	UPLAND	Triclopyr 3	0.13	2%	0.32	Hi-Light	1%	Competitor	1%	Foliar	1.00
6/10/2025	MEKN	GMDWYOLD99C030	S0679	SHOULDER	Triclopyr 3	0.06	2%	0.16	Hi-Light	1%	Competitor	1%	Foliar	0.50
6/16/2025	FLAG	113THCASERA050	S5014	SHOULDER	Polaris	0.50	2%	1.30	Hi-Light	1%	Competitor	1%	Foliar	0.10
6/17/2025	FLAG	54TH AVE NW	N7418	SHOULDER	Polaris	0.20	1%	0.25	Turfmark	0.5%	Agri-dex	1%	Foliar	0.00
6/17/2025	FLAG	49TH AVE NW	N7417	SHOULDER	Polaris	1.30	1%	1.66	Turfmark	0.5%	Agri-dex	1%	Foliar	0.01
6/17/2025	FLAG	STEAMBOAT ISL RD NW	N4480	SHOULDER	Polaris	0.10	1%	0.13	Turfmark	0.5%	Agri-dex	1%	Foliar	0.10
6/17/2025	SBRM	WALDRICK RD SE	E0001	PIT/MINE	Polaris	0.50	2%	1.30	Hi-Light	1%	Competitor	1%	Foliar	10.00
6/17/2025	SBRM	WALDRICK RD SE	E0001	PIT/MINE	Triclopyr 3	0.50	2%	1.30	Hi-Light	1%	Competitor	1%	Foliar	10.00
6/23/2025	SBRM	WALDRICK RD SE	E0001	PIT/MINE	Polaris	0.25	1%	0.33	Turfmark	0.5%	Agri-dex	1%	Foliar	10.00
7/10/2025	GARD	CHEHALIS WEST TRL	C6955	THUCO	Polaris	2.25	2%	5.75	Turfmark	1%	Competitor	1%	Foliar	0.10
7/17/2025	GARD	WESTLAKE ST SE	C6956	UPLAND	Polaris	0.80	2%	2.05	Hi-Light	1%	Competitor	1%	Foliar	0.10
7/17/2025	GARD	CHEHALIS WEST TRL	C6955	THUCO	Polaris	1.20	2%	3.07	Hi-Light	1%	Competitor	1%	Foliar	0.10
7/18/2025	SBRM	WALDRICK RD SE	E0001	PIT/MINE	Polaris	3.00	2%	7.68	Turfmark	1%	Competitor	1%	Foliar	10.00
7/23/2025	MEKN	KYRO RD SE	C7502	SHOULDER	Triclopyr 3	0.70	2%	1.79	Turfmark	1%	Competitor	1.5%	Foliar	0.00
7/23/2025	SBRM	WALDRICK RD SE	E0001	PIT/MINE	Triclopyr 3	0.30	2%	0.77	Turfmark	1%	Competitor	1%	Foliar	10.00
8/18/2025	KNBH	SR507JOHNSA044	E4152	DESCHUTES	Polaris	0.13	2%	0.32	Turfmark	1%	Competitor	1.5%	Foliar	0.10
8/18/2025	KNBH	STATE ROUTE 507 SE	E4732	DESCHUTES	Polaris	0.31	2%	0.80	Turfmark	1%	Competitor	1.5%	Foliar	0.01
8/18/2025	KNBH	SILVER CREEK DR SE	E4210	DESCHUTES	Polaris	0.50	2%	1.28	Turfmark	1%	Competitor	1.5%	Foliar	0.10

Date	Species	Site	Site ID	Type	Product	Mix Applied (gal)	Mix Rate	Product Applied (oz)	Dye	Dye Rate	Surfactant	Surf. Rate	Method	Infested Acres
8/18/2025	KNBH	JOHNSON CREEK LN SE	E4207	DESCHUTES	Polaris	0.25	2%	0.64	Turfmark	1%	Competitor	1.5%	Foliar	0.10
8/19/2025	KNBH	SILVER CREEK DR SE	E4210	DESCHUTES	Polaris	0.58	2%	1.47	Turfmark	1%	Competitor	1.5%	Foliar	0.10
8/19/2025	KNBH	126TH AVE SE	E4212	DESCHUTES	Polaris	0.13	2%	0.32	Turfmark	1%	Competitor	1.5%	Foliar	0.20
8/19/2025	KNBH	126TH AVE SE	E4212	DESCHUTES	Polaris	0.33	2%	0.83	Turfmark	1%	Competitor	1.5%	Foliar	0.20
8/19/2025	KNBH	OFFUT LAKE RD SE	E4385	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	0.10
8/20/2025	KNBH	STEDMAN RD SE	E4371	DESCHUTES	Polaris	0.50	2%	1.28	Turfmark	1%	Competitor	1.5%	Foliar	0.10
8/20/2025	KNBH	STEDMAN RD SE	E4401	DESCHUTES	Polaris	2.00	2%	5.12	Turfmark	1%	Competitor	1.5%	Foliar	1.00
8/20/2025	KNBH	SE COMM AREA	E4758	DESCHUTES	Polaris	1.04	2%	2.66	Turfmark	1%	Competitor	1.5%	Foliar	0.01
8/20/2025	KNBH	SHERMER LN SE	E4392	DESCHUTES	Polaris	0.13	2%	0.32	Turfmark	1%	Competitor	1.5%	Foliar	0.10
8/20/2025	KNBH	CENTRAL ST SE	C7117	UPLAND	Polaris	0.50	2%	1.28	Turfmark	1%	Competitor	1%	Foliar	0.10
8/20/2025	KNBH	BRANDON CT NE	C7281	UPLAND	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1%	Foliar	0.10
8/20/2025	KNBH	JUMPASTUMP LN SE	E4303	DESCHUTES	Polaris	0.03	2%	0.08	Turfmark	1%	Competitor	1.5%	Foliar	0.10
8/21/2025	KNBH	DESCHUTES DR SE	E3528	DESCHUTES	Polaris	0.13	2%	0.32	Turfmark	1%	Competitor	1.5%	Foliar	0.10
8/21/2025	KNBH	DESCHUTES DR SE	E4770	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	0.01
8/21/2025	KNBH	DESCHUTES DR SE	E4611	DESCHUTES	Polaris	0.13	2%	0.32	Turfmark	1%	Competitor	1.5%	Foliar	0.10
8/21/2025	KNBH	DECHUTES DR SE	E4677	DESCHUTES	Polaris	0.78	2%	1.98	Turfmark	1%	Competitor	1.5%	Foliar	0.01
8/21/2025	KNBH	DESCHUTES DR SE	E3520	DESCHUTES	Polaris	0.03	2%	0.08	Turfmark	1%	Competitor	1.5%	Foliar	0.10
8/21/2025	KNBH	CORBIN DR SE	E4772	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	0.01
8/21/2025	KNBH	DESCHUTES DR SE	E3530	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	0.10
8/21/2025	KNBH	DESCHUTES DR SE	E2719	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	1.00
8/21/2025	KNBH	DESCHUTES DR SE	E2719	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	1.00
8/21/2025	KNBH	CORBIN DR SE	E3540	DESCHUTES	Polaris	0.13	2%	0.32	Turfmark	1%	Competitor	1.5%	Foliar	0.10
8/21/2025	KNBH	LAWRENCE LAKE RD SE	E4679	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	0.01
8/21/2025	KNBH	LAWRENCE LAKE RD SE	E4682	DESCHUTES	Polaris	0.25	2%	0.64	Turfmark	1%	Competitor	1.5%	Foliar	0.01
8/21/2025	KNBH	LAWRENCE LAKE RD SE	E4681	DESCHUTES	Polaris	0.25	2%	0.64	Turfmark	1%	Competitor	1.5%	Foliar	0.01
8/21/2025	KNBH	LAWRENCE LAKE RD SE	E3555	DESCHUTES	Polaris	0.25	2%	0.64	Turfmark	1%	Competitor	1.5%	Foliar	0.50
8/21/2025	KNBH	NEAT RD SE	E3554	DESCHUTES	Polaris	1.15	2%	2.94	Turfmark	1%	Competitor	1.5%	Foliar	1.00
8/21/2025	KNBH	LAWRENCE LAKE RD SE	E3324	DESCHUTES	Polaris	0.25	2%	0.64	Turfmark	1%	Competitor	1.5%	Foliar	1.00
8/25/2025	KNBH	SAPP RD SW	N4356	UPLAND	Polaris	0.25	2%	0.64	Turfmark	1%	Competitor	1%	Foliar	0.25
8/28/2025	PULY	LITTLEROCK RD SW	S4384	BLACK	Polaris	0.75	2%	1.92	Turfmark	1%	Competitor	1%	Foliar	10.00
8/28/2025	PULY	BLACK RIVER	S4953	BLACK	Polaris	0.50	2%	1.30	Turfmark	1%	Competitor	1%	Foliar	0.10
8/28/2025	PULY	BLACK RIVER	S4839	BLACK	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1%	Foliar	3.00
9/2/2025	KNBH	DELPHI RD SW	N4391	UPLAND	Polaris	2.00	2%	5.12	Turfmark	1%	Competitor	1%	Foliar	0.10
9/2/2025	KNBH	HARRISON AVE NW	N3275	UPLAND	Polaris	0.13	2%	0.32	Turfmark	1%	Competitor	1%	Foliar	0.10
9/2/2025	KNBH	SHERMAN ST NW	N3463	UPLAND	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1%	Foliar	0.15

Date	Species	Site	Site ID	Type	Product	Mix Applied (gal)	Mix Rate	Product Applied (oz)	Dye	Dye Rate	Surfactant	Surf. Rate	Method	Infested Acres
9/2/2025	KNBH	DIVISION ST NW	N5448	UPLAND	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1%	Foliar	0.30
9/2/2025	KNBH	VIEWCREST LN SE	N7376	UPLAND	Polaris	1.00	2%	2.56	Turfmark	1%	Competitor	1%	Foliar	0.01
9/2/2025	KNBH	LAWRENCE LAKE RD SE	E4858	SHOULDER	Polaris	0.50	2%	1.28	Turfmark	1%	Competitor	1%	Foliar	
9/2/2025	KNBH	DESCHUTES DR SE	E4676	DESCHUTES	Polaris	0.15	2%	0.38	Turfmark	1%	Competitor	1%	Foliar	0.01
9/2/2025	KNBH	DESCHUTES DR SE	E4677	DESCHUTES	Polaris	2.00	2%	5.12	Turfmark	1%	Competitor	1%	Foliar	0.01
9/2/2025	KNBH	DESCHUTES DR SE	E3610	DESCHUTES	Polaris	2.00	2%	5.12	Turfmark	1%	Competitor	1%	Foliar	0.10
9/2/2025	KNBH	NEAT RD SE	E3554	DESCHUTES	Polaris	1.50	2%	3.84	Turfmark	1%	Competitor	1%	Foliar	1.00
9/4/2025	KNBH	CHEHALIS RIVER	S4932	CHEHALIS	Ecomazapyr 2SL	0.25	2%	0.65	Hi-Light	0.5%	Agridex	1%	Foliar	0.10
9/4/2025	KNBH	CHEHALIS RIVER	S4934	CHEHALIS	Ecomazapyr 2SL	3.75	2%	9.75	Hi-Light	0.5%	Agridex	1%	Foliar	1.00
9/4/2025	KNBH	CHEHALIS RIVER	S4935	CHEHALIS	Ecomazapyr 2SL	5.00	2%	13.00	Hi-Light	0.5%	Agridex	1%	Foliar	1.00
9/8/2025	KNBH	VAIL RD SE	E2845	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	VAIL CUT OFF RD SE	E3628	DESCHUTES	Polaris	0.13	2%	0.32	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	VAIL RD SE	E3632	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	LAND LN SE	E3635	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	STARRY LN SE	E3637	DESCHUTES	Polaris	0.13	2%	0.32	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	VAIL CUT OFF RD SE	E4748	DESCHUTES	Polaris	0.09	2%	0.24	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	STARRY LN SE	E3642	DESCHUTES	Polaris	0.13	2%	0.32	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	PLUM NELLY LN SE	E3651	DESCHUTES	Polaris	0.19	2%	0.48	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	VILLAGE DR SE	E4753	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	VILLAGE DR SE	E4754	DESCHUTES	Polaris	0.25	2%	0.64	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	VILLAGE DR SE	E4756	DESCHUTES	Polaris	0.13	2%	0.32	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	VILLAGE DR SE	E4760	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	BEAVER DR SE	E4762	DESCHUTES	Polaris	0.03	2%	0.08	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	BEAVER DR SE	E3897	DESCHUTES	Polaris	0.19	2%	0.48	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	BEAVER DR SE	E3658	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	BEAVER DR SE	E4763	DESCHUTES	Polaris	0.10	2%	0.24	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/8/2025	KNBH	BEAVER DR SE	E3895	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	0.10
9/9/2025	KNBH	DESCHUTES RIVER	E3569	DESCHUTES	Polaris	0.75	2%	1.92	Turfmark	1%	Competitor	1.5%	Foliar	1.00
9/9/2025	KNBH	LAWRENCE LAKE RD SE	E3563	DESCHUTES	Polaris	0.31	2%	0.80	Turfmark	1%	Competitor	1.5%	Foliar	1.00
9/9/2025	KNBH	LAWRENCE LAKE RD SE	E3550	DESCHUTES	Polaris	0.44	2%	1.12	Turfmark	1%	Competitor	1.5%	Foliar	1.00
9/9/2025	KNBH	76TH AVE NE	C6413	UPLAND	Polaris	0.90	1%	1.15	Turfmark	0.5%	Competitor	1%	Foliar	0.10
9/9/2025	KNBH	15TH AVE SE	C5755	THUCO	Polaris	0.10	1%	0.13	Turfmark	0.5%	Competitor	1%	Foliar	0.29
9/9/2025	KNBH	MARTIN WAY E	C7363	SHOULDER	Polaris	0.40	1%	0.50	Turfmark	0.5%	Competitor	1%	Foliar	0.10
9/9/2025	KNBH	CHEHALIS RIVER	S4936	CHEHALIS	Ecomazapyr 2SL	16.00	2%	41.60	Hi-Light	0.5%	Agridex	1%	Foliar	1.00
9/9/2025	KNBH	CHEHALIS RIVER	S4940	CHEHALIS	Ecomazapyr 2SL	4.00	2%	10.40	Hi-Light	0.5%	Agridex	1%	Foliar	1.00

Date	Species	Site	Site ID	Type	Product	Mix Applied (gal)	Mix Rate	Product Applied (oz)	Dye	Dye Rate	Surfactant	Surf. Rate	Method	Infested Acres
9/9/2025	KNGT	15TH AVE SE	C4170	THUCO	Polaris	0.60	1%	0.77	Turfmark	0.5%	Competitor	1%	Foliar	0.10
9/10/2025	KNBH	4TH AVE E	C6617	UPLAND	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1%	Foliar	0.20
9/10/2025	KNBH	KAISER RD SW	N3500	UPLAND	Polaris	0.50	2%	1.28	Turfmark	1%	Competitor	1%	Foliar	0.10
9/10/2025	KNBH	63RD CT SW	N5555	UPLAND	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1%	Foliar	0.40
9/10/2025	KNBH	BLACK LAKE PARK HOA	N4156	UPLAND	Polaris	0.13	2%	6.40	Turfmark	1%	Competitor	1%	Foliar	0.00
9/10/2025	KNBH	SHERMAN ST NW	N5524	UPLAND	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1%	Foliar	0.20
9/10/2025	KNBH	WOODBROOK LN SE	E4724	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	0.01
9/10/2025	KNBH	WOODBROOK LN SE	E4725	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	0.01
9/10/2025	KNBH	WOODBROOK LN SE	E3673	DESCHUTES	Polaris	0.06	2%	0.16	turfmark	1%	Competitor	1.5%	Foliar	0.20
9/10/2025	KNBH	WOODBROOK LN SE	E3674	DESCHUTES	Polaris	0.16	2%	0.40	Turfmark	1%	Competitor	1.5%	Foliar	0.20
9/10/2025	KNBH	SQUAW WOOD LN SE	E3678	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1.5%	Foliar	0.20
9/10/2025	KNBH	VAIL LP RD SE	E3681	DESCHUTES	Polaris	0.09	2%	0.24	Turfmark	1%	Competitor	1.5%	Foliar	0.20
9/10/2025	KNBH	VAIL LP RD SE	E3680	DESCHUTES	Polaris	0.03	2%	0.08	Turfmark	1%	Competitor	1.5%	Foliar	0.20
9/11/2025	KNBH	JOHNSON RD SE	E3511	DESCHUTES	Polaris	0.13	2%	0.32	Turfmark	1%	Competitor	1%	Foliar	0.20
9/11/2025	KNBH	O'TOOLE RD SE	E2602	DESCHUTES	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1%	Foliar	0.10
9/11/2025	KNBH	BLUE OX TRL SE	E3247	DESCHUTES	Polaris	0.25	2%	0.64	turfmark	1%	Competitor	1%	Foliar	2.00
9/11/2025	KNBH	BLUE OX TRL SE	E3504	DESCHUTES	Polaris	1.25	2%	3.20	Turfmark	1%	Competitor	1%	Foliar	0.30
9/11/2025	KNBH	YELM AVE W	E2546	UPLAND	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1%	Foliar	0.10
9/11/2025	KNBH	56TH AVE SW	N5000	UPLAND	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1%	Foliar	0.50
9/11/2025	KNBH	OLD HWY 410 SW	N3157	UPLAND	Polaris	0.50	2%	1.28	Turfmark	1%	Competitor	1%	Foliar	1.00
9/11/2025	KNBH	8TH AVE SE	C7372	UPLAND	Polaris	0.01	1%	0.01	Turfmark	0.5%	Competitor	1%	Foliar	0.01
9/11/2025	KNBH	11TH AVE SE	C4077	UPLAND	Polaris	0.02	1.5%	0.03	Turfmark	0.5%	Competitor	1%	Foliar	0.20
9/11/2025	KNBH	11TH AVE SE	C4078	UPLAND	Polaris	0.25	1.5%	0.48	Turfmark	0.5%	Competitor	1%	Foliar	0.20
9/11/2025	KNBH	CARPENTER RD SE	C7385	SHOULDER	Polaris	0.02	1.5%	0.03	Turfmark	0.5%	Competitor	1%	Foliar	0.01
9/12/2025	KNBH	PINE AVE NE	C7304	UPLAND	Polaris	0.25	1.5%	0.48	Turfmark	0.5%	Competitor	1%	Foliar	0.01
9/12/2025	KNBH	OVERHULSE RD NW	N7374	UPLAND	Polaris	1.25	1.5%	2.40	Turfmark	0.5%	Competitor	1%	Foliar	0.30
9/12/2025	KNBH	DRAHAM ST NE	C4119	UPLAND	Polaris	0.03	1.5	0.06	Turfmark	0.5%	Competitor	1%	Foliar	0.50
9/12/2025	KNBH	CENTRAL ST SE	C5093	UPLAND	Polaris	0.10	1.5%	0.19	Turfmark	0.5%	Competitor	1%	Foliar	0.14
9/12/2025	KNBH	CHEHALIS RIVER	S4943	CHEHALIS	Ecomazapyr 2SL	10.00	2%	26.00	Hi-Light	0.5%	AgriDex	1%	Foliar	1.00
9/12/2025	KNBH	CHEHALIS RIVER	S4944	CHEHALIS	Ecomazapyr 2SL	4.00	2%	10.40	Hi=Light	0.5%	AgriDex	1%	Foliar	1.00
9/15/2025	KNBH	REICHEL RD SE	E4693	DESCHUTES	Polaris	0.25	2%	0.64	Turfmark	1%	Competitor	1%	Foliar	0.01
9/15/2025	KNBH	STEDMAN RD SE	E4435	UPLAND	Polaris	0.06	2%	0.16	Turfmark	1%	Competitor	1%	Foliar	0.20
9/15/2025	KNBH	LITTLEROCK RD SW	S4872	UPLAND	Polaris	0.75	2%	1.92	Turfmark	1%	Competitor	1%	Foliar	0.10
9/15/2025	KNBH	PATSY DR SE	S4722	UPLAND	Polaris	0.25	2%	0.64	Turfmark	1%	Competitor	1%	Foliar	0.20
9/15/2025	KNBH	MOTTMAN RD SW	N5328	UPLAND	Polaris	0.03	2%	0.08	Turfmark	1%	Competitor	1%	Foliar	0.30

Date	Species	Site	Site ID	Type	Product	Mix Applied (gal)	Mix Rate	Product Applied (oz)	Dye	Dye Rate	Surfactant	Surf. Rate	Method	Infested Acres
9/15/2025	KNBH	WAGON WHEEL LN SE	E3321	UPLAND	Polaris	0.13	2%	0.32	Turfmark	1%	Competitor	1%	Foliar	0.10
9/15/2025	KNBH	14TH AVE NW	N4127	UPLAND	Polaris	0.25	2%	0.64	Turfmark	1%	Competitor	1%	Foliar	0.25
9/16/2025	KNBH	40TH AVE SE	C4861	UPLAND	Polaris	3.00	1.5%	5.80	Turfmark	0.5%	Competitor	1%	Foliar	0.25
9/16/2025	KNBH	40TH AVE SE	C4861	UPLAND	Polaris	0.01	1.5%	0.02	Turfmark	0.5%	Competitor	1%	Foliar	0.25
9/16/2025	PARR	CHEHALIS RIVER	S3760	CHEHALIS	Polaris	0.25	1.5%	0.48	Turfmark	1%	Competitor	1%	Foliar	0.10
9/16/2025	PARR	CHEHALIS RIVER	S4766	CHEHALIS	Polaris	0.25	1.5%	0.48	Turfmark	15	Competitor	1%	Foliar	0.10
9/17/2025	KNBH	RICH RD SE	N7389	UPLAND	Polaris	0.60	1.5%	1.15	Turfmark	0.5%	Competitor	1%	Foliar	0.10
9/17/2025	KNBH	MCCORMICK ST SE	C4321	UPLAND	Polaris	0.03	1.5%	0.06	Turfmark	0.5%	Competitor	15	Foliar	0.17
9/17/2025	KNBH	8TH AVE NE	C7362	UPLAND	Polaris	0.25	1.5%	0.48	Turfmark	0.5%	Competitor	1%	Foliar	0.01
9/17/2025	PARR	CHEHALIS RIVER	S4726	CHEHALIS	Polaris	0.44	1.5%	0.84	Turfmark	1%	Competitor	1%	Foliar	1.00
9/17/2025	PARR	CHEHALIS RIVER	S4992	CHEHALIS	Polaris	0.25	1.5%	0.48	Turfmark	1%	Competitor	1%	Foliar	0.00
9/18/2025	KNBH	SHELDON RD SE	S4546	UPLAND	Polaris	0.13	2%	0.32	Turfmark	1%	Competitor	1.5%	Foliar	2.00
9/18/2025	KNBH	X ST SE	E3214	UPLAND	Polaris	0.03	2%	0.08	Turfmark	1%	Competitor	1%	Foliar	0.10
9/18/2025	KNBH	ALPINE DR SW	N5136	UPLAND	Polaris	0.06	1.5%	0.12	Hi-Light	0.5%	Competitor	1%	Foliar	0.10
9/18/2025	KNBH	GALLOWAY ST SE	N7379	UPLAND	Polaris	0.25	1.5%	0.48	Hi-Light	0.5%	Competitor	1%	Foliar	0.02
9/19/2025	KNBH	LYBARGER ST SE	C5041	UPLAND	Polaris	0.75	1.5%	1.43	Turfmark	1%	Competitor	1%	foliar	0.91
9/19/2025	KNBH	28TH AVE NW	N7495	SHOULDER	Polaris	0.02	1.5%	0.03	Turfmark	1%	Competitor	1%	Foliar	0.00
9/19/2025	KNBH	LAWRENCE LAKE RD SE	E3324	DESCHUTES	Polaris	5.50	2%	10.56	Turfmark	1%	Competitor	1%	Foliar	1.00
9/19/2025	KNBH	CHEHALIS RIVER	S4943	CHEHALIS	Ecomazapyr 2SL	12.00	2%	31.20	Hi-Light	0.5%	Agri-dex	1%	Foliar	1.00
9/19/2025	KNBH	CHEHALIS RIVER	S4944	CHEHALIS	Ecomazapyr 2SL	0.75	2%	1.95	Hi-Light	0.5%	Agri-dex	1%	Foliar	1.00
9/19/2025	KNBH	CHEHALIS RIVER	S4949	CHEHALIS	Ecomazapyr 2SL	9.25	2%	24.05	Hi-Light	0.5%	Agri-dex	1%	Foliar	1.00
9/22/2025	KNBH	KIRSOP RD SW	N5620	UPLAND	Polaris	0.81	1.5%	1.56	Turfmark	1%	Competitor	1%	Foliar	0.20
9/22/2025	KNBH	RAINIER RD SE	N0723	UPLAND	Polaris	0.25	1.5%	0.48	Turfmark	1%	Competitor	1%	Foliar	0.10
9/22/2025	KNBH	STEDMAN RD SE	E4435	UPLAND	Polaris	0.75	1.5%	1.43	Turfmark	1%	Competitor	1%	Foliar	0.20
9/22/2025	KNBH	STEDMAN RD SE	E3967	UPLAND	Polaris	0.13	1.5%	0.24	Turfmark	1%	Competitor	1%	Foliar	0.50
9/22/2025	KNBH	MCDUFNATURC000	S4503	SHOULDER	Polaris	0.03	1.5%	0.06	Turfmark	1%	Competitor	1%	Foliar	0.10
9/22/2025	KNBH	SARGENT RD SW	S2338	PIT/MINE	Polaris	0.13	1.5%	0.24	Turfmark	1%	Competitor	1%	Foliar	1.00
9/22/2025	KNBH	STEDMAN RD SE	E3979	UPLAND	Polaris	0.06	1.5%	0.12	Turfmark	1%	Competitor	1%	Foliar	0.50
9/22/2025	KNBH	CARPENTER RD SE	C4691	UPLAND	Polaris	1.33	1.5%	2.60	Turfmark	0.5%	Competitor	1%	Foliar	0.20
9/22/2025	KNBH	CARPENTER RD SE	C5966	UPLAND	Polaris	4.00	1.0%	5.10	Turfmark	0.5%	Competitor	1%	Foliar	2.41
9/22/2025	KNBH	CHEHALIS RIVER	S4949	CHEHALIS	Ecomazapyr 2SL	4.00	2%	10.40	Hi-Light	0.5%	Agri-dex	1%	Foliar	1.00
9/22/2025	KNBH	CHEHALIS RIVER	S4995	CHEHALIS	Ecomazapyr 2SL	14.00	2%	36.40	Hi-Light	0.5%	Agri-dex	1%	Foliar	1.00
9/22/2025	KNBH	CHEHALIS RIVER	S4996	CHEHALIS	Ecomazapyr 2SL	0.25	2%	0.65	Hi-Light	0.5%	Agri-dex	1%	Foliar	1.00
9/22/2025	KNBH	CHEHALIS RIVER	S4950	CHEHALIS	Ecomazapyr 2SL	4.00	2%	10.40	Hi-Light	0.5%	Agri-dex	1%	Foliar	1.00
9/24/2025	KNBH	JOPPA ST SW	N2782	UPLAND	Polaris	1.00	1.5%	1.90	Turfmark	1%	Competitor	1%	Foliar	0.20

Date	Species	Site	Site ID	Type	Product	Mix Applied (gal)	Mix Rate	Product Applied (oz)	Dye	Dye Rate	Surfactant	Surf. Rate	Method	Infested Acres
9/24/2025	KNBH	FRENCH RD NW	N5547	SHOULDER	Polaris	0.03	1.5%	0.06	Turfmark	1%	Competitor	1%	Foliar	0.10
9/24/2025	KNBH	OVERHEVERGC040	N1723	SHOULDER	Polaris	0.03	1.5%	0.06	Turfmark	1%	Competitor	1%	Foliar	0.10
9/24/2025	KNBH	BLACKBLACKB002	N1750	SHOULDER	Polaris	0.06	1.5%	0.12	Turfmark	1%	Competitor	1%	Foliar	0.10
9/24/2025	KNBH	ADAMS ST SE	C7288	UPLAND	Polaris	0.06	1.5%	0.12	Turfmark	0.5%	Competitor	1%	Foliar	0.01
9/24/2025	KNBH	4TH AVE E	C4848	UPLAND	Polaris	0.02	1.5%	0.04	Turfmark	0.5%	Competitor	1%	Foliar	0.20
9/24/2025	KNGT	WIGGINS RD SE	C4860	UPLAND	Polaris	0.14	1.5%	0.27	Turfmark	0.5%	Competitor	1%	Foliar	1.45
9/25/2025	KNBH	SE OLD BARN RD	E4688	DESCHUTES	Polaris	0.06	2%	0.12	Turfmark	1%	Competitor	1.5%	Foliar	0.02
9/25/2025	KNBH	SE OLD CAMP LN	E4777	DESCHUTES	Polaris	0.06	1.5%	0.12	Turfmark	1%	Competitor	1.5%	Foliar	0.20
9/25/2025	KNBH	OLD CAMP LN SE	E3505	DESCHUTES	Polaris	0.50	1.5%	0.96	Turfmark	1%	Competitor	1.5%	Foliar	0.20
9/25/2025	KNBH	11TH AVE SE	C4067	UPLAND	Polaris	0.08	1.5%	0.15	Turfmark	0.5%	Competitor	1%	Foliar	0.30
9/25/2025	KNBH	LAWRENCE LAKE RD SE	E3324	DESCHUTES	Polaris	0.25	1.5%	0.48	Turfmark	1%	Competitor	1.5%	Foliar	1.00
9/25/2025	KNBH	OLD CAMP LN SE	E4685	DESCHUTES	Polaris	0.50	1.5%	0.96	Turfmark	1%	Competitor	1%	Foliar	0.01
9/25/2025	KNBH	FISH POND CRK DR SW	N5683	UPLAND	Polaris	2.00	1.5%	3.84	Hi-Light	0.5%	Competitor	1%	Foliar	0.10
9/26/2025	KNBH	LYBARGER ST NE	C7305	UPLAND	Polaris	0.75	1%	0.96	Turfmark	0.5%	Competitor	1%	Foliar	0.01
9/26/2025	KNBH	MARION ST NE	C7306	UPLAND	Polaris	0.75	1%	0.96	Turfmark	0.5%	Competitor	1%	Foliar	0.01
9/26/2025	KNBH	FISH POND CRK DR SW	N5683	UPLAND	Polaris	4.33	1%	8.30	Turfmark	0.5%	Competitor	1%	Foliar	0.10
10/2/2025	KNBH	DELPHI RD SW	N5621	UPLAND	Polaris	0.06	1.5%	0.12	Turfmark	0.5%	Competitor	1%	Foliar	0.10
10/7/2025	KNBH	MARION ST NE	C7615	UPLAND	Polaris	0.25	1.5%	0.48	Turfmark	0.5%	Competitor	1%	Foliar	0.01
10/7/2025	KNBH	PIONEER AVE SW	N3281	UPLAND	Polaris	0.01	1.5%	1.00	Turfmark	0.5%	Competitor	1%	Foliar	0.30
10/9/2025	KNBH	KAISER RD SW	N7500	SHOULDER	Polaris	0.02	1.5%	0.03	Turfmark	0.5%	Competitor	1%	Foliar	0.01
10/9/2025	KNBH	GULL HARBOR RD NE	C6454	UPLAND	Polaris	0.60	1.5%	1.20	Turfmark	0.5%	Competitor	1%	Foliar	0.50
10/9/2025	KNBH	11TH AVE SE	C4078	UPLAND	Polaris	2.85	1.5	5.50	Turfmark	0.5%	Competitor	1%	Foliar	0.20
10/9/2025	KNBH	CENTRAL ST SE	C7480	UPLAND	Polaris	0.23	1.5%	0.40	Turfmark	0.5%	Competitor	1%	Foliar	0.10
10/9/2025	KNBH	CENTRAL ST SE	C7616	UPLAND	Polaris	0.43	1.5%	0.82	Turfmark	0.5%	Competitor	1%	Foliar	0.01
10/13/2025	SBRM	WALDRICK RD SE	E0001	PIT/MINE	Polaris	0.25	1.5%	0.48	Hi-Light	0.5%	Competitor	1.5%	Foliar	10.00
10/16/2025	KNBH	36TH AVE NE	C7029	UPLAND	Polaris	0.05	1.5%	0.10	Turfmark	0.5%	Competitor	1%	Foliar	0.30
10/23/2025	SBRM	WALDRICK RD SE	E0001	PIT/MINE	Triclopyr 3	0.25	1.5%	0.48	Hi-Light	0.5%	Competitor	1.5%	Foliar	10.00
12/11/2025	SBRM	TILLEY RD S	S5065	THUCO	Triclopyr 3	0.04	50%	2.50	Hi-Light	0.5%	Competitor	1%	Cut Stump	2.25