



2023 CVRD Invasive Plants Work Plan

Background

CVRD Invasive Plants Strategy

In 2014, the CVRD developed a regional strategy for invasive plant management including a bylaw, inventory, waste management strategy and training of facilities staff, removal of key species, and a community awareness campaign. The strategy outlines an integrated invasive plant management approach to make efficient use of available resources while minimizing the negative impacts that invasive plants have on social, economic and environmental imperatives. Collaboration, education, outreach and regulation play a key role in the program.

The CVRD noxious weeds control bylaw was established as a model for which municipal partners may adopt to coordinate regulatory activities. When the bylaw was adopted in 2016, it included only one invasive plant, Giant Hogweed, so that monitoring, notification and enforcement activities could be pilot tested for expansion to other plants. Now in its 7th year, the CVRD Bylaw enforcement division have indicated that minimal effort from their staff have been needed to enforce the bylaw. Giant Hogweed public education materials were developed to inform folks about the plant, the new bylaw and management. A sample of the educational material is included in Appendix A.

Monitoring and evaluation of strategic activities are also a critical step in the invasive plants management program. This report presents a summary of actions since the strategy was implemented, an update on the prioritization of plant species and an identification of additional plant species for inclusion within the scope of a bylaw.

Identification and Prioritization

An updated 2022 prioritization of invasive plants in the CVRD indicated:

- 84 invasive plants species have been reported, representing an increase of 5 plant species since 2017 and 22 new plants since 2012.
- An increase in invasive plant area coverage of 1% since 2017 and 25% since 2012
- An increase in invasive plant site count of 7% since 2017 and 29% since 2012.

An impact assessment was conducted on all invasive plants based on their attributes (human health and safety, ecological, economic and invasiveness). At this time, the focus is on invasive plants rather than invasive animals or pathogens. The following table summarizes the impact assessment for the top 10 invasive plants in the CVRD.

Impact Assessment Summary

Species	CISC Management Category ¹	2021 Total Area (ha) ²	2017 Total Area (ha) ²	2012 Total Area (ha) ²	Health Safety Impact &	Ecological Impact	Economic Impact	Impact Assessment Score ³
Giant Hogweed	Eradicate	0.0045	0.012	0.871	High	High	High	24.0
Poison Hemlock	Eradicate	3.60	0.97	0	High	High	High	19.0
Yellow Iris	Contain	28.1	32.8	32.4	High	High	High	17.1
Daphne/ Spurge Laurel	Control	8.75	8.00	7.71	High	Medium	High	15.0
Milk Thistle	Eradicate	0.0001	0.002	0.015	High	Medium	High	15.0
Knotweed Species	Contain	25.0	23.9	28.5	Medium	High	High	14.3
Scotch Broom	Control	394	399	389	High	Medium	High	14.1
Eurasian watermilfoil	Control	118	118	0	Medium	High	High	14.0
Parrot feather	Contain	2.75	2.75	0	Medium	High	High	14.0
English ivy	Control	20.8	21.2	19.8	High	Medium	Medium	13.6

¹CISC Management Categories were assigned through a 2017 invasive plant prioritization project led by the CISC. The categories include:

Prevent: These species are not known to occur in the region, but are likely to establish if introduced. Plants noted in the prevent category include those noted in Appendix B
Action → Eradicate if found.

Eradicate: These species are known to occur in limited distribution and low density
Action → Eradicate if found

Contain: These species have established infestation in portions of the region
Action → Contain existing infestation and prevent spread to un-infested areas.

Control: Established infestations common and widespread throughout the Coastal ISC region.
Action → Focus control in high value conservation areas. Use biological control, if available, on a landscape scale.

²Total Area (ha) is the area coverage recorded in the BC Invasive Alien Plant Program (IAPP) database for all lands in the CVRD boundary (Private, Municipal, Regional District, BC Hydro, BC Rail, Fortis BC, CN Rail, CP Rail, First Nations Reserves, Mining Companies, MoE, FLNRO, TRAN and BC Parks)

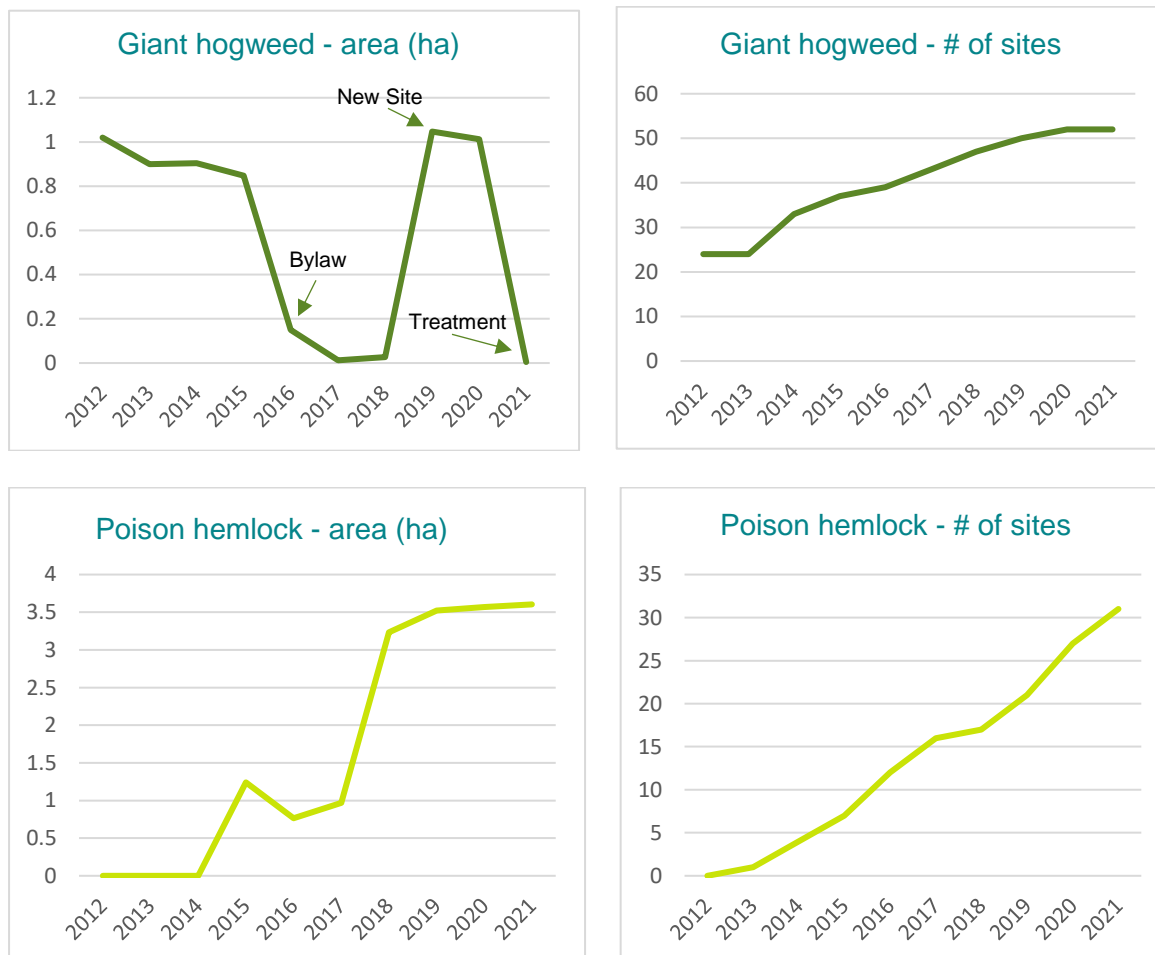
³Impact Assessment Score is based on the impact attributes (human health and safety, ecological, economic and invasiveness). Each of the attribute scores are added together to determine the impact assessment score.

Monitoring

Monitoring is an important step in an invasive plant management program. Monitoring enables:

- affected property owners to be informed of the presence of plants with high health and safety impacts
- affected property owners to be effective participants in addressing the invasive plants problem
- the effectiveness of approaches for managing invasive plants to be evaluated

Monitoring data available in the BC IAPP database (June 2022) indicates how the spread of the two highest priority plants in the region has occurred since 2012.



In the case of Giant Hogweed, the plant was noted in IAPP since data recording was available in 2012. The adoption of a bylaw in 2016 coordinated with an education and monitoring campaign supported the reduction in area of Giant Hogweed from 1 hectare in 2014 to 0.01 of a hectare in 2017. A new site identified in 2019 resulted in a large increase in area to over 1 hectare with identification and treatment enabling the reduction back down to <0.01 hectare in 2021.

In the case of Poison Hemlock the first sites were identified in 2013. Since that time, we saw a rapid spread of the plant up until 2018. In recent years, municipal partner and community steward programs have supported less rapid expansion of the plant. However, the total area of the plant

continues to increase. The inclusion of Poison Hemlock in the CVRD Noxious Weed Control bylaw and a coordinated education campaign would support more robust control and work towards eradication of this high priority plant.

2023 Work Plan & Budget

In response to the growing threat of invasive plants, it is recommended that a slightly expanded 2023 work plan is implemented to focus on additional priority plants in the region. The 2023 work plan is described below including recommended actions, benefits and effort/cost for the three management approaches to be applied (regulatory, monitoring and education & awareness). The total estimated budget for 2023 invasive plant management is \$3,000.

Approach	2022 and 2023 Workplan	Current Status
Regulatory (Bylaw)	<p>Action</p> <p>→ Add Poison Hemlock to Noxious Weeds Control Bylaw</p> <ul style="list-style-type: none"> ○ Refer draft bylaw to affected partners and stakeholders <p>Benefits</p> <ul style="list-style-type: none"> • Poison Hemlock has high health and safety impacts. The Bylaw will reduce its extent. • The plant occurs in limited distribution and density in the region. There is an opportunity to eradicate before it expands more broadly. Current locations include places where children frequently gather including parks, schools and road sides. This is additionally concerning as Poison Hemlock can have severe health impacts for those who may ingest plant parts. <p>Effort</p> <p>35 hours CVRD Environmental Services staff time</p>	<p>On February 11, 2016, the Board adopted the Noxious Weeds Control Bylaw 3966. The bylaw is now in effect in all Electoral Areas to prohibit the growth of specified invasive plants. Currently, one plant, Giant Hogweed, is currently included in the scope of the bylaw.</p> <p>The total area of Giant hogweed in the region has decreased from 1.02 ha (2012) to 0.004 ha (2021).</p> <p>The CVRD Bylaw Enforcement Division have indicated that there has been minimal involvement from staff to enforce the bylaw</p> <p>As of June 2021, the total area of Poison Hemlock in the region is 3.6 hectares over 31 sites. The area of Poison Hemlock within the Electoral Areas (scope of the bylaw) is 0.04 hectares over 15 sites.</p>
Monitoring	<p>Action</p> <p>→ Monitoring of Giant Hogweed and Poison Hemlock</p> <p>Benefits</p> <ul style="list-style-type: none"> • Informs affected property owners of the presence of plants with high health and safety impacts • Enables affected property owner to be effective participants in addressing the invasive plants problem <p>Effort & Cost</p>	<p>In 2016 to 2018, the Coastal Invasive Species Committee, on behalf of the CVRD, notified owners of residential properties with potential Giant Hogweed infestations. The non-residential sites are on Ministry of Transportation and Infrastructure (TRAN) lands. TRAN conducted monitoring and treatment, where necessary, of the sites on their lands. Monitoring has indicated that 100% of the sites are under control</p>

	<p>\$1500 for monitoring by consultant 35 hours CVRD Environmental Services staff time</p>	
<p>Education & Awareness</p>	<p>Action</p> <p>→ For Poison Hemlock and Giant Hemlock:</p> <ul style="list-style-type: none"> • develop and print postcards describing impacts and distinguishing features • update website to reflect change to bylaw • work with partners to educate folks on bylaw update <p>Benefits</p> <ul style="list-style-type: none"> • Informs the broader community of the impacts and management of priority invasive plants. • Warmer temperatures will enhance the potential for invasive species to spread across the region and compromise native species, our agricultural lands and threaten our health <p>Effort and Cost</p> <p>\$1,500 for communication materials and advertising 70 hours of CVRD Environmental Services staff time</p>	<p>In 2016 to 2018 CVRD Environmental Services staff carried out the following activities:</p> <ul style="list-style-type: none"> • Targeted notification to affected property owners using postcards and door to door visits • Removal of Giant Hogweed at sites confirmed to have the plant by the Coastal Invasive Species Committee on behalf of the CVRD • Releasing adverts in the CVRD recreation guide • Maintaining the website and hotline for Giant Hogweed information
<p>Partnerships & Collaboration</p>	<p>Action</p> <p>→ Continue building capacity through collaboration with community partners.</p> <p>→ Annual reporting of invasive plant activities</p> <p>→ Review practices and develop educational materials for handling of these priority invasive plants at green waste management facilities.</p> <p>Benefits</p> <p>Invasive Plants affect many jurisdictions through the region including CVRD parks, Municipal parks, Cowichan Tribes lands, Ministry of Transportation and Infrastructure right of ways, provincial parks, agriculture and forestry. To have an effective response to the priority invasive plants noted in the attached progress update, it is necessary to coordinate actions and share information between partners.</p> <p>Effort</p> <p>35 hours of CVRD Environmental Services staff time</p>	<p>In 2016 to 2018, staff worked with the CISC and partners to update the operational framework for invasive plants in the CVRD which supported the prioritization of plant species for management.</p> <p>In 2019, staff worked with internal partners to develop a treatment inventory for all CVRD lands.</p> <p>In 2020, staff hosted a workshop to discuss the Eurasian watermilfoil problem and solutions.</p>

In addition to these new proposed activities for control of invasive plants within our communities, the Parks and Trails division has invasive plants management plans for each of its electoral areas. Actions within the plans include:

- Inventories of plants for each park
- Treatments by coordinated groups of volunteers
- Planting of native species
- Outreach and education through signage and volunteer programs

Projected 5 Year (2023 to 2027) Activities

- Identification of additional priority plants for potential inclusion in the bylaw. Evaluation criteria for including a plant in the bylaw will include a relative ranking through a CVRD Invasive Plants prioritization and recommended actions noted in the Coastal Invasive Species Committee's Priority Invasive Plant Lists.
- Explore expansion of priority invasive plants monitoring and education to include additional priority plants. Warmer temperatures will enhance the potential for invasive species to spread across the region and compromise native species, our agricultural lands and threaten our health. Monitoring and education programs will help inform our communities to ensure they are effective participants in addressing the invasive plants problem.
- Coordinate with the Modernized Official Community Plan development and zoning bylaw amendment to align the goals and objectives and to support management of invasive plants at the time of development applications or subdivision application.
- Continue building capacity through collaboration with community partners.
- Consider extending or expanding the strategy to include other species of concern affecting the region's ecosystem function, economic health, infrastructure and public health.
- Warmer temperatures will also enhance the potential for invasive species, pests, and pathogens to increase across the region, which are likely to compromise native species. Collaboration with the Ministry of Environment and Climate Change Solutions, Ministry of Agriculture, Ministry of Forests, Lands and Natural Resource Operations through the CVRD Conservation Strategy development will be needed to understand more specifically which plants and which areas will be priorities for management.
- Collaborate with our municipal partners on expansion of high-risk species (e.g. Parrot Feather) to track issues and share insights on best practices for management.

Appendix A – Giant Hogweed Information Sheet



REPORT SIGHTINGS

Please call the
Coastal Invasive
Species Committee
1.844.298.2532

Giant Hogweed, an invasive plant, has been identified in our region. Residents are cautioned that if touched, the plant can cause skin to become severely irritated.



Photo courtesy of the Invasive Species Council of Metro Vancouver

IDENTIFICATION

SIZE	A large plant, growing up to 4.5 - 6 meters tall.
LEAVES	Deeply incised, hairs on underside are stiff, dense, stubby, and can exceed 2.5 m in length.
STEMS	Dark reddish purple blotches on the stalks.
FLOWERS	Large white “umbrella-like” flower clusters.

Giant Hogweed is easily mistaken for Cow Parsnip. The leaves can help to identify Giant Hogweed.



Photo courtesy of the BC Ministry of FLNRO

Cow Parsnip (*Heracleum Maximum*)

Cow parsnip leaves are NOT shiny, are broader and less serrated than giant hogweed.



Photo courtesy of the BC Invasive Species Council

Giant Hogweed (*Heracleum Mantegazzianum*)

Giant hogweed leaves are shiny and large, with leaf edges very coarse and serrated, like a jagged saw edge.

COWICHAN VALLEY REGIONAL DISTRICT
For more information on Giant Hogweed please visit: www.cvrld.bc.ca/invasives