

To: Regional and Corporate Services Committee
From: Hafsa Salihue, Environmental Services Technician

Date: 2020-01-14
File No: 5310-25

Subject: Invasive Weed Control Program 2019 Summary

RECOMMENDATION

THAT the Fraser Valley Regional District Board direct staff to draft a letter to the BC Ministry of Transportation and Infrastructure requesting them to continue providing the FVRD with funding to help cover costs associated with the FVRD's ongoing invasive weed control efforts within Provincial road rights-of-way not treated by the Province.

STRATEGIC AREAS OF FOCUS

Support Environmental Stewardship
Support Healthy & Sustainable Community
Provide Responsive & Effective Public Services

BACKGROUND

The Fraser Valley Regional District (FVRD) operates an annual Invasive Weed Control Program for Chilliwack, Abbotsford, and Electoral Areas C, D, E, G, and H. It targets invasive weeds that are considered to be a high priority due to their negative, or potentially negative, impacts on the economy and on human health. For these reasons, the program focusses the majority of its efforts on four priority weeds: Giant Hogweed, Wild Chervil, Tansy Ragwort, and Knotweed. The FVRD program utilizes an integrated approach to manage these weed species, which includes landowner engagement and education, pickup and disposal offered for landowners, mapping and surveying of infestations, and treatment of infestations found in public areas such as along roadsides or ditches.

DISCUSSION

Giant Hogweed

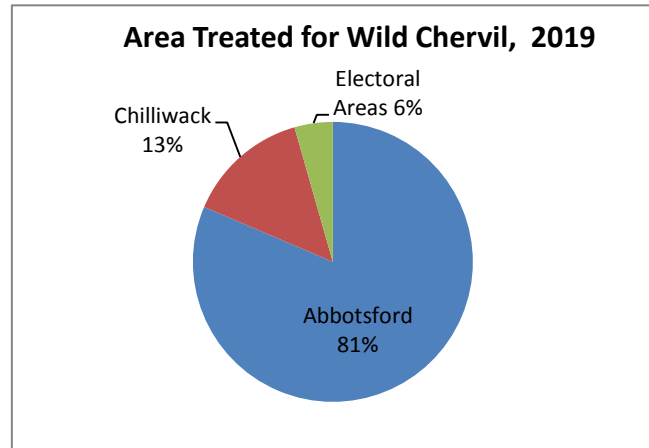
Giant Hogweed has been found in several sites throughout the region. Each Giant Hogweed plant can produce 50,000 seeds per year, which can spread long distances via wind or water. This is why early treatment is so important to prevent it from producing seeds and spreading even further. As the seed bank eventually depletes itself, long-term control will occur with a continued combination of monitoring, removal, and awareness. There were 12 Giant Hogweed sites surveyed and successfully treated in 2019, many of which were visited two or more times within the year to remove subsequent

re-growth. Continued efforts demonstrate that the hogweed infestation has been kept stable and there is encouraging indications for eradication with continued monitoring and early treatments.

Wild Chervil

FVRD crews continued to treat significant amounts of Wild Chervil in 2019, an invasive weed of concern for the agricultural sector. Most infestations were found within Abbotsford, along roadways and near ditches.

The FVRD provides two methods for mechanical control of this weed: cutting and digging. Cutting is quicker, but digging reduces the potential for re-growth. FVRD weed control contractors also educate landowners where it is found on private properties.

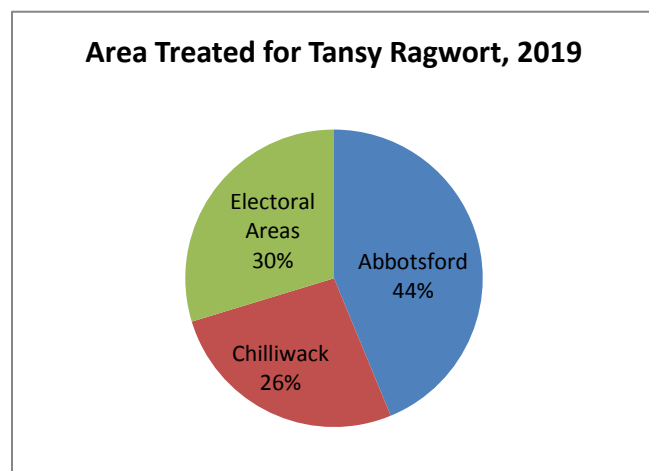


The Province, which provides treatment for Wild Chervil along the Highway 1 median, the single largest infestation within the region, has been using selective herbicides on Wild Chervil since 2017. While this method has some potential for future use by the FVRD at select locations, the cost of these pesticides are prohibitive for the FVRD to consider at this point and it remains uncertain if the use of herbicides for the control of Wild Chervil provides any significant difference in control compared to repeated mechanical removal.

Tansy Ragwort

Tansy Ragwort is a fast growing, rapid to spread, yellow flowering weed that displaces forage plants and is toxic to livestock. The FVRD provides aggressive treatment for Tansy Ragwort by hand pulling then collecting and disposing of the plants, and providing pick up and disposal of plants collected by private landowners.

Infestations occur throughout much of the region, but sites appear to be slowly thinning out, suggesting that the ongoing treatment efforts are making progress.



In addition to mechanical removal, the program also conducts landowner engagement through personal visits and the distribution of letters and brochures to landowners where Tansy Ragwort was

observed. This resulted in private landowners filling a total of 150 bags of Tansy from their property in 2019. These bags are then collected by FVRD crews and safely disposed.

Knotweed

The various species of Knotweeds all have the ability to grow through concrete and asphalt, which could lead to infrastructure damage and loss in property value. They can also spread through seeds, stem, and root fragments, so mowing, digging, and weed whacking can cause it to spread. The FVRD controls Knotweeds with herbicide, either through foliar application or stem injection. Knotweeds generally require up to 3-5 years of annual treatment for a site to be eradicated. Treatments on a site are conducted at least twice a year or as necessary.

Approximately 100 sites out of the 264 sites in the FVRD Knotweed inventory have received treatment in the past 3 years. It is important to remain vigilant with previously treated sites and to continue treating them until eradicated or they will just regrow and all the control investment will be wasted. **Of the 100 sites previously treated, over one-third showed no Knotweed plants re-growing.** This is exciting progress showing that the efforts are paying off. 47 sites were re-treated in 2019. All treatment sites will be monitored and re-treated in 2020 if needed, as well as new sites added as budget allows. Progress is slow due to budget constraints, but the results so far have been encouraging.

The FVRD also delivered a Knotweed training session to municipal operations crews focussed on identification and reporting. As a result of the training, several new Knotweed sites were reported and added to the FVRD inventory rather than being accidentally mowed and spread.

Milfoil Study

With funding provided by the Cultus Lake Park Board, the FVRD helped to coordinate a multi-year study looking at the effectiveness of temporary benthic mats to reduce the prevalence of Eurasian watermilfoil (aka "milfoil"). Permanent mats have limited effectiveness as sediment accumulates on top of them (hence becoming a substrate for new milfoil plants to anchor and grow from) and are detrimental on native plants or animals that also live on or in the bottom of the lake where the mats are placed. Temporary mats however are only placed down for a couple months during the milfoil growing season and are then removed and re-used the following year, preventing sediment accumulation and minimizing long-term damage to ecological communities.

The study, conducted on both Hatzic Lake and Cultus Lake between 2016 and 2019, has demonstrated that temporary mats are not effective at controlling milfoil at Hatzic Lake. Likely due to loose sediment that makes up much of the bottom of Hatzic Lake, rather than taking root and growing for the season, milfoil there tends to dislodge frequently, float around, re-settle and re-root repeatedly throughout the year, causing continual spread. As a result, milfoil rapidly recolonizes into areas where mats are removed and the treatment has no residual effectiveness. Consequently, mats are not recommended for use in Hatzic Lake. The north end of Cultus Lake showed much more potential however. Mats that were placed along Cultus Lake Park beaches for 11 week periods starting in early May did not recolonize for 2-3 years. While the method is not likely to be economically feasible to conduct on a larger scale

and will not reduce the overall amount of infestation, it may be considered for use along some select high priority recreation areas (e.g., around Main Beach) within Cultus Lake. Additional monitoring of previously treated areas at Cultus Lake in 2020 will confirm the rate of re-growth and will help identify possible operational costs, should the Cultus Lake Park Board choose to use the results to move forward with implementing a treatment program of their high priority sites.

2020 Season

In 2020, the FVRD will continue to focus control efforts towards the four priority invasive weed species. Knotweed and Hogweed control efforts have shown significant promise in reducing infestations. While the FVRD treats all known and reported Giant Hogweed, treatment is only possible for priority Knotweed areas due to limited resources. Knotweed sites within the region have been inventoried and prioritized based on sites that have the best chance for eradication and sites that are in need of control due to concern about spread, damage to infrastructure, or becoming issues for sightlines along roadways. To date, treatment efforts have been applied to approximately one-third of the known Knotweed sites within the FVRD's inventory, with new sites slowly getting added to the treatment list as prior sites become eradicated as is permitted within the existing budget.

Tansy Ragwort and Wild Chervil remain challenging to control due to their rapid spread, their prolific seed production, and the abundance of seeds that remain viable in the soil. The FVRD's mechanical control efforts are essential to help keep the infestation from getting worse, but they have not succeeded in eradicating the plants from the region, unfortunately. There is some evidence to suggest Tansy Ragwort is growing less dense and it is starting to become controlled, but it requires continued diligence. With Wild Chervil though, while control efforts help to contain plants to existing infestation sites, its abundance remains prevalent. Maintaining control efforts on priority sites will need to continue, but re-allocating efforts away from lower priority Chervil sites (where potentially affected agricultural crops are not in the vicinity) may be a consideration to allow for more Knotweed control.

While the FVRD focusses control efforts on priority invasive weeds on municipal jurisdiction, the FVRD also provides control within Provincial road rights-of-way not treated by the Province, such as along some areas of North and South Parallel Roads and along some roadways within participating Electoral Areas. MOTI has continued to provide a small amount of funding (\$5,000/year) to the FVRD in recognition of these efforts. Last year though MOTI staff suggested they may discontinue this funding due to their own limited budget and the higher costs they are incurring with using pesticides on Wild Chervil along the Highway 1 median. The loss of revenue would be a disappointing setback for the FVRD's program and for the recognition that the FVRD and MOTI need to continue to work together on coordinating invasive weed control efforts. Staff will reach out to MOTI to seek clarification and to attempt to obtain a funding commitment for moving forward.

COST

The costs for the 2019 invasive weed control program were within budgetary expectations.

CONCLUSION

The FVRD's Invasive Weed Control Program provides active control, mapping, monitoring, and education for high priority weed species within the region: Giant Hogweed, Wild Chervil, Tansy Ragwort, and Knotweed. These species, which remain a threat to human health, agricultural productivity, or damage to infrastructure, all spread aggressively and displace native plant species. Due to control provided by this program, the distribution of these weeds is generally stable or decreasing, but ongoing management is essential to ensure that progress continues.

COMMENTS BY:

Stacey Barker, Director of Regional Services: Reviewed and supported.

Mike Veenbaas, Director of Financial Services: Confirmation that 2019 program is within approved budget.

Jennifer Kinneman, Acting Chief Administrative Officer: Reviewed and supported.