

# CROWN LAND INVASIVE PLANT MANAGEMENT IN THE THOMPSON-NICOLA 2020 PROGRESS REPORT



## Background

The three year, \$2.2-million pilot project “Protecting Ecosystem Health and Agricultural Values: A Strategy for Crown Land Invasive Plant Management in the Thompson-Nicola” (the Pilot) was announced and initiated in 2017. Following continued progress for the first three years of the Pilot, in late 2019, the project was extended to a fourth and final year, with slightly reduced funding provided for management in 2020 on provincial public lands throughout the Pilot area. The final year of the Pilot was delivered by the B.C. Government in partnership with local Indigenous communities, the Thompson-Nicola Regional District (TNRD) and the Thompson-Nicola Invasive Plant Management Committee (TNIPMC) with support of the BC Cattlemen’s Association. The pilot project was established to help support B.C.’s ranching industry and rural communities in the region affected by the spread of non-native invasive plants. These species can inhibit the growth of desirable plants and have a negative impact on grazing areas and the health of grassland ecosystems.

## 2020 Accomplishments

- Over \$650,000 was invested on provincial public (Crown) land invasive plant management in 2020 by the Ministries of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD), Transportation and Infrastructure (MOTI) and Environment - BC Parks (BC PARKS).
  - » While lower than the previous year, this total investment was still significantly higher than pre-Pilot funding levels.
- Treatment areas were again selected based on the following main criteria:
  - » Presence of high priority invasive plants, including new invaders to the region, or spotted knapweed;
  - » Areas that had a high potential for spread, such as recreation sites, roadside pullouts, and gravel pits; and,
  - » Areas where private landowners adjacent to provincial public lands were investing in managing their invasive plants (via “The Good Neighbour Program”).





- A total of 17 provincial public land contracts were administered, including:
  - » Seven joint contracts managed by FLNRORD for treatment of FLNRORD, MOTI, BC Parks and FORTIS sites.
  - » Four FLNRORD issued partnership agreements and contracts with First Nations and local ranchers.
  - » Six contracts for MOTI roadside treatment including one First Nation contract administered on behalf of MOTI by the TNRD.
- As in the previous three years of the pilot project, a substantial amount of provincial public land within the Thompson-Nicola was managed for invasive plants in 2020, including:
  - » 895 sites surveyed through joint contracts on FLNRORD and MOTI jurisdictions. The total area surveyed was over 760 hectares.
  - » 658 sites treated through joint contracts on FLNRORD and MOTI jurisdictions. The total area treated was 50 hectares.
  - » All known hoary alyssum sites in the TNRD and recorded in the Invasive Alien Plant Program (IAPP) database were included in the large joint contracts for treatment.
    - FLNRORD managed joint contracts and completed survey and treatment of an additional 25 km of MOTI roads that were heavily infested with hoary alyssum to reduce further transmission to un-infested or previously treated areas.
  - » 191 of the 895 sites surveyed were FLNRORD linear road segment sites that totaled 57.3 hectares.
  - » 79 of these sites were chemically treated (7.79 hectares).
  - » 22 of these sites were mechanically treated (0.09 hectares).
- Focused work continued on regional early detection and rapid response species (i.e., invasive plant species that is new to the region and limited in extent) which included successful treatment of a high-risk logging area infested with field scabious.
  - » Treated BC Hydro field scabious sites in this area as well to improve success through the joint effort.
- 15 hectares of grasslands were surveyed and treated where invasive plants were found. Fall seeding occurred in these areas with a formulated mix selected to be competitive against cheatgrass germination in the spring.
- Approximately 110 kilometres of MOTI right-of-ways (ROW) was managed with 47 hectares of invasive plants treated.
  - » This was accomplished through contracts administered by the TNRD on MOTI's behalf.
- 58 MOTI gravel pits managed with 44 hectares of invasive plants treated in priority pits, through an ongoing partnership with the Invasive Species Council of BC.
- Year 3 of the 'Good Neighbour' coordination approach where provincial public lands are treated adjacent to treated private lands resulted in:
  - » 24 hectares surveyed and one hectare treated on FLNRORD lands.
  - » 41 kilometers surveyed and over 15 hectares treated on MOTI ROW.
- Broadcast seeding was carried out on Highway 5 between Merritt and Kamloops in areas that were treated in 2019 with the goal of determining if post-treatment seeding would slow re-invasion of the treated sites by cheatgrass or other invasive plants compared to treated sites with no seeding.

## Target Invasive Plants in the TNRD

- More than 30 Invasive Plant species were prioritized for treatment throughout the Thompson-Nicola due to their invasive nature and risk to ecological, environmental, and social values:
  - » 17 Regional Early Detection Rapid Response Species
    - Yellow flag iris, black knapweed, brown knapweed, bohemian knotweed, giant knotweed, Himalayan knotweed, Japanese knotweed, common bugloss, field scabious, rush skeletonweed, scotch broom, scotch thistle, tansy ragwort, teasel, whiplash hawkweed, wild chervil, poison hemlock
  - » 8 High Priority Species
    - Common tansy, hoary cress, orange hawkweed, spotted knapweed, sulphur cinquefoil, blueweed, hoary alyssum and, in specific areas only, burdock
  - » 8 Medium and Lower Priority Species
    - Leafy spurge, bachelor's button, baby's breath, chicory, plumeless thistle, policeman's helmet, Russian knapweed, yellow hawkweed complex





## Successes

- Improved engagement with Thompson-Nicola stakeholders.
- Increasing involvement and interest with eight First Nations bands taking part in annual planning as well as mechanical, chemical, and biological control management activities.
- Successful completion of contracts by local ranchers and First Nations, plus ongoing discussions and information sharing with additional interested First Nations on partnership and training opportunities for future joint management.
- Research focusing on management of invasive plant species in grasslands continued in the Nicola, led by Thompson Rivers University in collaboration with the Ministries, First Nations, and stakeholder groups.
- Continued projects to address grassland restoration including invasive plant treatments, biological control monitoring, seeding, and grazing management changes.
- Continued planning early in the year to ensure a coordinated and efficient management approach and more timely treatments.
- FLNRORD District staff assistance with establishing invasive plant management priorities with stakeholders and implementing local invasive plant treatment contracts and monitoring.
- Enhanced work and awareness of private landowner invasive plant control investments through targeted "Good Neighbour" work.
- Fourth year treatment or revisit of many sites is now showing a significant reduction in the density and distribution of the target invasive plants, recognizing that in most cases, residual herbicide was still present in the soil so regrowth from the existing seed bank is possible once the residual products are no longer active in the soil.



## Challenges

- Delayed contract advertisements and start dates due to Covid-19 related impacts, and reduced scope of work (e.g. smaller site lists) due to unknown increased Covid-related contractor expenses.
- Challenges with contract delivery by the major contractors employed under the Pilot resulted in issues completing all work assigned and providing quality data.
- Legally required pesticide-free zones that exist around waterbodies and wells etc. continue to create challenges for complete linear or area-based control. Fortunately, biological control agents are present within most of these areas on the targeted invasive plant species.
- The total area of established species like spotted knapweed will always exceed available resources.
- Multiple stakeholders and competing priorities continue to be a challenge.
- Construction, logging and grazing practices in some areas, as well as an unmanaged motor vehicle access continue to be a challenge for reintroduction of invasive plants and ongoing soil disturbance.

## Next steps

- With the conclusion of the Thompson-Nicola Invasive Plant Management Pilot Project, MOTI and FLNRORD are completing a full review of the Pilot, which will include recommendations for future invasive plant management across Provincial Public Lands within the TNRD as well as across BC. This review will include consideration of the resources that would be required to scale successes seen within the Pilot to other areas of the Province, with the understanding that balancing the results of the Pilot with additional Invasive Plant Management Priorities across BC will always be required.
- A final summary report will be completed in 2021.
- Ongoing communication and coordination with stakeholders and Indigenous communities will remain a priority to ensure a coordinated approach across all lands within the Thompson-Nicola.

