

# REGIONAL STRATEGIC PLAN

## EXECUTIVE SUMMARY

**The CCCIPC** is a multi-stakeholder non-profit society dedicated to minimizing the spread and impacts of invasive plants. It is an inclusive organization composed of all levels of government, various economic sectors, First Nations, and other interests in the Cariboo, Chilcotin and Central Coast. The CCCIPC has prepared a **Regional Strategic Plan** to coordinate the efforts of all government agencies and industry sectors in managing current infestations and preventing new ones.



**Cariboo Chilcotin Coast  
Invasive Plant Committee**



# Invasive Plant Species Profiles

The recommended treatments have been used as effective means of control in our region. Other options do exist should jurisdictions prefer alternative treatments. Please check with your local government to confirm the correct treatment for the plant and area of concern.



## **Baby's Breath** (*Gypsophila paniculata*)

Location: Lac La Hache, Sugarcane, City of Williams Lake and Lee's Corner

Type: perennial

Method of Spread: seed spread by wind or by plant tumbling

Treatment: LOCAL LEVEL – hand-pulling

LANDSCAPE LEVEL – herbicide



## **Black Henbane** (*Hyoscyamus niger*)

Location: Limited distribution around Alexis Creek and Williams Lake

Type: annual or biennial

Method of Spread: exclusively by seed

Treatment: LOCAL LEVEL – hand-pulling

LANDSCAPE LEVEL – herbicide



## **Blueweed** (*Echium vulgare*)

Location: Hanson gravel pit near Quesnel, with scattered sites in City of Quesnel and along Hwy 97 between Quesnel and Alexandria; isolated sites at Churn Creek, Dog Creek, Riske Creek and Gustafson Lake

Type: biennial

Method of Spread: exclusively by seed sticking to hair, clothing or feathers

Treatment: LOCAL LEVEL – hand-pulling

LANDSCAPE LEVEL – herbicide



## **Burdock** (*Arctium* spp)

Location: Widespread throughout the Cariboo and Chilcotin

Type: biennial

Method of Spread: Exclusively by seed: hooked spines on the seeds readily catch on fur, feathers or clothing and potentially transporting them a considerable distance

Treatment: LOCAL LEVEL – repeated cutting or herbicide.

LANDSCAPE LEVEL – monitor and treat local infestations in conjunction with other species



## **Canada Thistle** (*Cirsium arvense*)

Location: Widespread throughout the Cariboo; scattered throughout the Chilcotin

Type: perennial

Method of Spread: seeds spread by wind and water, and in crop seed, hay or livestock manure. Roots

Treatment: LOCAL LEVEL – herbicide or repeated mowing

LANDSCAPE LEVEL – herbicide and biological control (once established)



## **Common Tansy** (*Tanacetum vulgare*)

Location: Widespread throughout the Cariboo; scattered throughout the Chilcotin

Type: perennial

Method of Spread: seed or creeping roots

Treatment: LOCAL LEVEL – repeated mowing, hand-pulling or herbicide

LANDSCAPE LEVEL – herbicide



## **Dalmatian Toadflax** (*Linaria dalmatica*)

Location: Scattered throughout the Cariboo and Chilcotin and under containment in Tatlayoko Valley

Type: perennial

Method of Spread: seed or creeping root

Treatment: LOCAL LEVEL – hand-pulling or cutting

LANDSCAPE LEVEL – biological control (once established) or herbicide



## **Diffuse Knapweed** (*Centaurea diffusa*)

Location: Along Hwy 97, Green Lake, Konni Lake Churn Creek, Riske Creek, Dog Creek and Tatlayoko Valley

Type: biennial or short-lived perennial

Method of Spread: exclusively by seed

Treatment: LOCAL LEVEL – hand-pulling

LANDSCAPE LEVEL – herbicide or biological control



## **Field Scabious** (*Knautia arvensis*)

Location: Sites around the City of Quesnel, Cottonwood River, Gaspard/Big Creek, Alexis Creek. Under containment in Cottonwood area.

Type: perennial

Method of Spread: exclusively by seed

Treatment: LOCAL LEVEL – mowing, digging or hand-pulling

LANDSCAPE LEVEL – herbicide



## **Flowering Rush** (*Butomus umbellatus*)

Location: Site at Bouchie Lake.

Type: perennial

Method of Spread: seed, root buds and root fragments

Treatment: LOCAL LEVEL – hand-pulling or manual dredging

LANDSCAPE LEVEL – hand-pulling or manual dredging



## **Himalayan Balsam** (*Impatiens glandulifera*)

Location: Dragon Lake, Quesnel, Williams Lake; mostly within gardens and garden waste dumps.

Type: annual

Method of Spread: seed

Treatment: LOCAL LEVEL – hand-pulling

LANDSCAPE LEVEL – hand-pulling



## **Hoary Alyssum** (*Berteroa incana*)

Location: Alexis Creek, Tatlayoko, Bull Canyon, Quesnel, Dragon Lake, Quesnel Hydraulic Road, Lac La Hache, 100 Mile House, Green Lake, Haggen's Point Road, Wiffle Lake Road, and 103 Mile house.

Type: biennial or short-lived perennial

Method of Spread: exclusively by seed

Treatment: LOCAL LEVEL – hand-pulling and herbicide

LANDSCAPE LEVEL – herbicide



## **Hoary Cress** (*Cardaria draba*)

Location: Frizzi and Hodgson roads in Williams Lake, Begbie Summit, knife Creek and 103 Mile

Type: perennial

Method of Spread: spreading roots, seed

Treatment: LOCAL LEVEL – frequent mowing

LANDSCAPE LEVEL – herbicide



## **Hound's Tongue** (*Cynoglossum officinale*)

Location: Churn Creek, Dog Creek, Stormy Road 70 Mile House, Bridge Lake, Alexis Creek and south of 100 Mile

Type: biennial to short-lived perennial

Method of Spread: exclusively by seeds encapsulated in burrs

Treatment: LOCAL LEVEL – cutting small accessible infestations, or herbicide

LANDSCAPE LEVEL – biological control, or herbicide



## **Knotweeds** including Himalayan Knotweed (*Polygonum polystachyum*), Japanese Knotweed (*Fallopia japonicus*), Giant Knotweed (*F. sachalinense*), and Bohemian Knotweed (*F. x bohemica*)

Location: 150 Mile House and Quesnel

Type: perennial

Method of Spread: seeds and vegetative through rhizomes and root fragments

Treatment: LOCAL LEVEL – repeated cutting, shading or herbicide

LANDSCAPE LEVEL – herbicide





**Leafy Spurge** (*Euphorbia esula*)  
 Location: Dog Creek, Gaspard Creek, Empire Valley Road, Narcosli Creek, West Fraser Road.  
 Type: perennial  
 Method of Spread: seed or lateral roots  
 Treatment: LOCAL LEVEL – herbicide  
 LANDSCAPE LEVEL – biological control or herbicide



**Marsh Plume Thistle** (*Cirsium palustre*)  
 Location: Blackwater Road, forested areas north of Quesnel, and Dunkley. Containment in Prince George area, and in northeast part of CCCIPC area.  
 Type: biennial  
 Method of Spread: exclusively by seed  
 Treatment: LOCAL LEVEL – hand-pulling  
 LANDSCAPE LEVEL – hand-pulling or herbicide



**Meadow Knapweed** (*Centaurea pratensis*, *Centaurea debauxii*, *Centaurea x monctonii*)  
 Location: Loch Lomond, and near 100 Mile House  
 Type: perennial  
 Method of Spread: primarily by seed, but also from root and crown fragments  
 Treatment: LOCAL LEVEL – frequent mowing or hand-pulling  
 LANDSCAPE LEVEL – herbicide or biological control



**Mountain Bluet** (*Centaurea montana*)  
 Location: Dragon Lake, Blackwater Road, Williams Lake, Canim Lake and 100 Mile House.  
 Type: annual  
 Method of Spread: primarily by seed, but also from rhizomatous roots  
 Treatment: LOCAL LEVEL – hand-pulling or herbicide  
 LANDSCAPE LEVEL – herbicide



**Nodding Thistle** (*Carduus nutans L.*)  
 Location: Alexis Creek, Hanceville, Taseko Lake Road, Vert Lake, Chimney Creek and Ahbau Road  
 Type: biennial  
 Method of Spread: primarily by seed  
 Treatment: LOCAL LEVEL – frequent mowing or hand-pulling  
 LANDSCAPE LEVEL – herbicide or biological control releases



**Orange Hawkweed** (*Hieraceum aurantiacum*)  
 Location: Widespread and abundant in the eastern portions of the region and along Hwy 97; containment area for both orange and yellow invasive hawkweeds includes the Cariboo  
 Type: perennial  
 Method of Spread: creeping roots and seed  
 Treatment: LOCAL LEVEL – hand-pulling, herbicide or fertilization  
 LANDSCAPE LEVEL – herbicide



**Oxeye Daisy** (*Leucanthemum vulgare*)  
 Location: Widespread in the Cariboo and Chilcotin.  
 Type: perennial  
 Method of Spread: spreads by seed or by underground rhizomes  
 Treatment: LOCAL LEVEL – tilling, sulphur soil amendments, cutting, mowing or herbicide  
 LANDSCAPE LEVEL – herbicide where important values are threatened



**Perennial Pepperweed** (*Lepidium latifolium*)  
 Location: single site along Hwy 97 at 91 Mile  
 Type: perennial  
 Method of Spread: seed or root fragments  
 Treatment: LOCAL LEVEL – hand-pulling, cutting, herbicide  
 LANDSCAPE LEVEL – herbicide



**Plumeless Thistle** (*Carduus acanthoides*)  
 Location: Williams Lake River Valley Trail, Horsefly, Likely, and Chilcotin.  
 Type: biennial  
 Method of Spread: primarily by seed  
 Treatment: LOCAL LEVEL – frequent hand-pulling and/or mowing  
 LANDSCAPE LEVEL – herbicide



**Purple Loosestrife** (*Lythrum salicaria*)  
 Location: Bouchie Lake area, Dragon Lake, Nazko Road, Alexandria, Lac La Hache.  
 Type: perennial  
 Method of Spread: plant parts and seed spread by water and wind  
 Treatment: LOCAL LEVEL – hand-pull and cut seed heads  
 LANDSCAPE LEVEL – cut seed heads, herbicide or biocontrol



**Russian Knapweed** (*Acroptilon repens*)  
 Location: Lone Butte, South Cariboo; prevalent in Southern BC.  
 Type: perennial  
 Method of Spread: primarily through seed; however, it can re-grow from root and crown fragments  
 Treatment: LOCAL LEVEL – frequently mowing and hand-pulling small infestations  
 LANDSCAPE LEVEL – herbicide and possible biological control for larger infestations



**Scentless Chamomile** (*Matricaria perforate*)  
 Location: Hwy 20 from Bella Coola to Williams Lake, Horsefly Road and 108 Mile.  
 Type: annual or weak perennial  
 Method of Spread: exclusively by seed  
 Treatment: LOCAL LEVEL – hand-pulling  
 LANDSCAPE LEVEL – biological control and herbicide



**Spotted Knapweed** (*Centaurea stoebe*)  
 Location: Widespread throughout Cariboo, especially along main Hwy corridors and utility rights of way; scattered sites in the Chilcotin  
 Type: biennial to short-lived perennial  
 Method of Spread: exclusively by seed  
 Treatment: LOCAL LEVEL – hand-pulling small infestations or herbicide  
 LANDSCAPE LEVEL – herbicide, biological control and hand pulling



**St. John's Wort** (*Hypericum perforatum L.*)  
 Location: Few infestations in Quesnel area and Hawks Creek Forest Service Road.  
 Type: perennial  
 Method of Spread: seed and roots  
 Treatment: LOCAL LEVEL – herbicide or tillage for agricultural sites  
 LANDSCAPE LEVEL – biological control



**Sulphur Cinquefoil** (*Potentilla recta*)  
 Location: Throughout the Central and South Cariboo, containment line east of Hwy 97; Lac La Hache, Tatlayoko, Quesnel, 1100 Road, Sulphurous Lake, 83 Mile Road, Big Lake, Sugarcane, San Jose River, Exeter Road, Beecher Prairie.  
 Type: perennial  
 Method of Spread: seed and roots  
 Treatment: LOCAL LEVEL – hand-pulling small infestations, herbicide  
 LANDSCAPE LEVEL – herbicide



**Yellow Flag Iris** (*Iris pseudacorus*)  
 Location: Scout Island in Williams Lake, Lac La Hache, Alexis Lake, Bridge Lake.  
 Type: perennial  
 Method of Spread: seed and roots  
 Treatment: LOCAL LEVEL – frequent hand-pulling and/or digging  
 LANDSCAPE LEVEL – herbicide where possible and hand-pulling



**Invasive Yellow Hawkweeds** (*Hieracium piloselloides*, *H. caespitosum*, *H. praecaltum*, *H. flagellare*)  
 Location: Widespread throughout the north east portion of the Cariboo, with a slight preference for drier conditions; prevalent in the Nazko area and scattered in the west Chilcotin. Containment area for both orange & yellow invasive hawkweeds includes the Cariboo.  
 Type: perennial  
 Method of Spread: seeds and creeping roots  
 Treatment: LOCAL LEVEL – hand-pulling new and small infestations, and herbicide  
 LANDSCAPE LEVEL – herbicide



# Priority Invasive Alien Plants by Plan Sub-Region in the Cariboo Chilcotin

Priority Ranking	Description
<b>1</b> <b>New Invaders</b>	Newly established species, current limited distribution, or at our borders. Expected to flourish if they become established, or if not managed. Management objective is elimination.
<b>2</b> <b>Containment</b>	Well established species in our region, but have not yet infested all potential habitats. New sites will be managed to contain them and prevent further spread.
<b>3</b> <b>Established</b>	Common and widespread species that occupy most or all potential habitats. Widespread control of these species is not currently possible.
<b>4</b> <b>Biological Control</b>	Well established species in our region, for which effective biocontrol agents exist.

Species ranks that are in WHITE indicate the species is **NOT** known to exist in that sub-region. If Black, the species is present.

## Footnotes:

<sup>1</sup>Provincial EDRR species.

<sup>2</sup>Biocontrol agent is present on dry sites, but not yet effective, it is effective in the TNRD near Canoe Creek

<sup>3</sup>Biocontrol agent is the primary means of control

<sup>4</sup>Biocontrol agent is present, but not yet effective

<sup>5</sup>In the Canoe/Dog/Churn Creek areas, species is mainly controlled by biocontrol agents.

<sup>6</sup>Species of growing concern in Williams Lake area

<sup>7</sup>Biocontrol appears to be affected by a parasite. Most sites are treatable.

Sub-Region Name	North Cariboo	Central Cariboo	South Cariboo	Nazko	Chilcotin
Regional District Electoral Areas	A, B, C	D, F	E, G, H, L	I	J, K
Baby's-Breath	1	1	1	1	1
Black Henbane <sup>1</sup>	1	1	1	1	1
Blueweed	1	1	1	1	1
Burdock	3	3	3	3	2
Canada Thistle	3	3	3	3	3
Common Tansy	2	2	2	2	1
Dalmatian Toadflax	4	4	4	1	2 <sup>3</sup>
Diffuse Knapweed	2	2	2	1	2
Field Scabious	2	1	1	1	1
Flowering Rush <sup>1</sup>	1	1	1	1	1
Himalayan Balsam	1	1	1	1	1
Hoary Alyssum	1	1 <sup>6</sup>	1	1	1
Hoary Cress	1	1	1	1	1
Hound's-Tongue	1	1	4 <sup>5</sup>	1	1
Knotweed Spp.	1	1	1	1	1
Leafy Spurge <sup>2</sup>	2	1	1	2	1
Marsh Plume Thistle	2	1	1	1	1
Meadow Knapweed	1	1	1	1	1
Mountain Bluet	1	1	1	1	1
Nodding Thistle	4	4	4	4	4
Orange Hawkweed	3	2	2	3	1
Oxeye Daisy	3	3	3	3	3
Perennial Pepperweed <sup>1</sup>	1	1	1	1	1
Plumeless Thistle	1	1	1	1	1
Purple Loosestrife	1 <sup>3</sup>	1	1 <sup>3</sup>	1	1
Russian Knapweed	1	1	1	1	1
Scentless Chamomile	3	3	2	2	3 <sup>3</sup>
Spotted Knapweed	2	2 <sup>4</sup>	2	1	1
St. John's Wort <sup>7</sup>	2	2	2	2	2
Sulphur Cinquefoil	1	2	2	1	1
Yellow Flag Iris	1	1	1	1	1
Yellow Hawkweeds, Invasive	3	3	2	3	2

## Sub-Regions within the CCCIPC Regional Strategic Plan

