

Invasive Plant Identification and Management Training Workshop

COLUMBIA SHUSWAP INVASIVE SPECIES SOCIETY

KIM KAISER JUNE 2020

Agenda



- ▶ Housekeeping
- ▶ Introduction to CSISS
- ▶ What is an invasive species?
- ▶ CSISS Priority 'Plant' List
- ▶ Plant ID
- ▶ Quizzes!
- ▶ Reporting
- ▶ Questions
- ▶ Contact us

Who we are

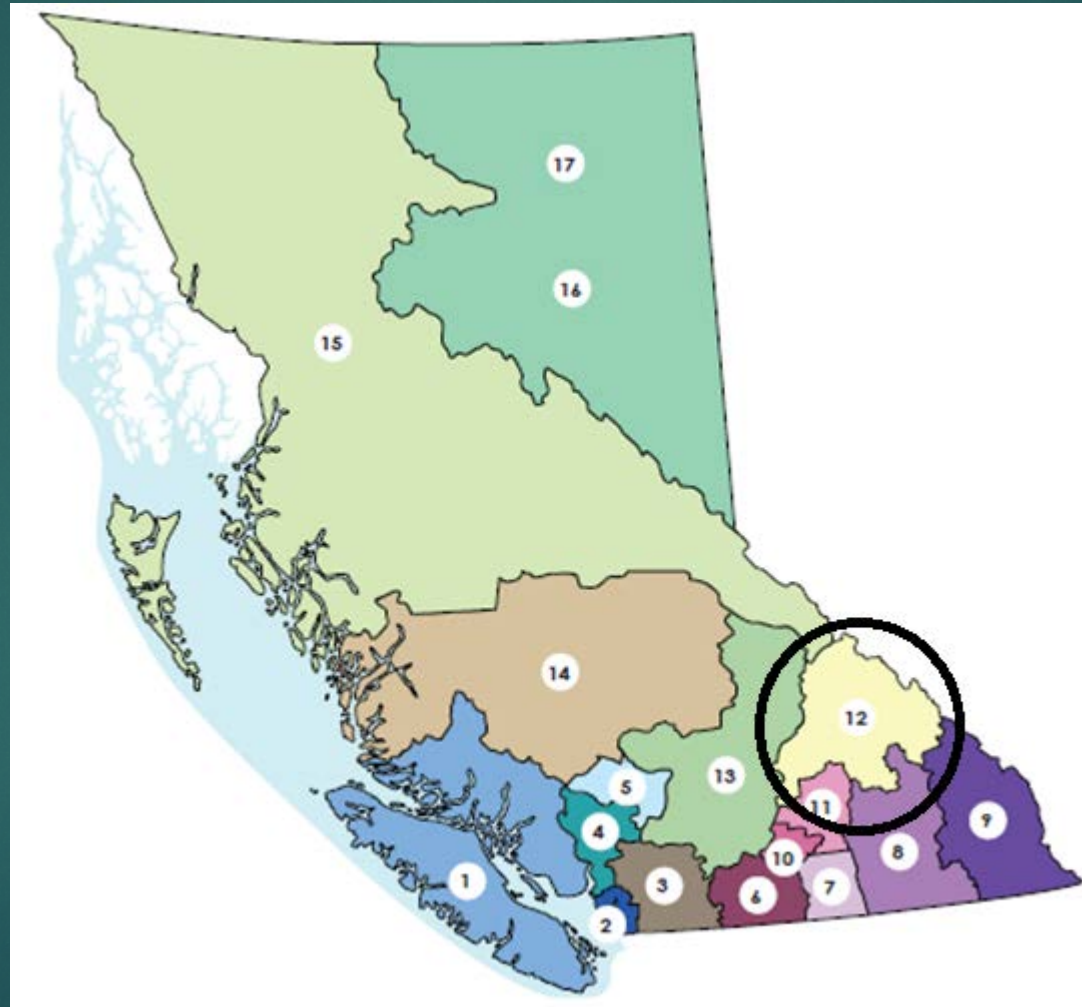


The Columbia Shuswap Invasive Species Society is a network of partners who facilitate the prevention, reduction and management of invasive species through collaboration, engagement and education.





Invasive Species Organizations of BC



What does invasive mean?



- ▶ "non-indigenous" or "non-native"
- ▶ Adversely affect and cause damage to the habitats and bioregions they invade
- ▶ Fast growth
- ▶ Rapid reproduction
- ▶ High dispersal ability
- ▶ Adaptable
- ▶ Tolerance of a wide range of environmental conditions
- ▶ May not have pathogens or predators in new environment

Why are invasive species important?



- ▶ Environmental Impacts
- ▶ Social Impacts
- ▶ Economic Impacts

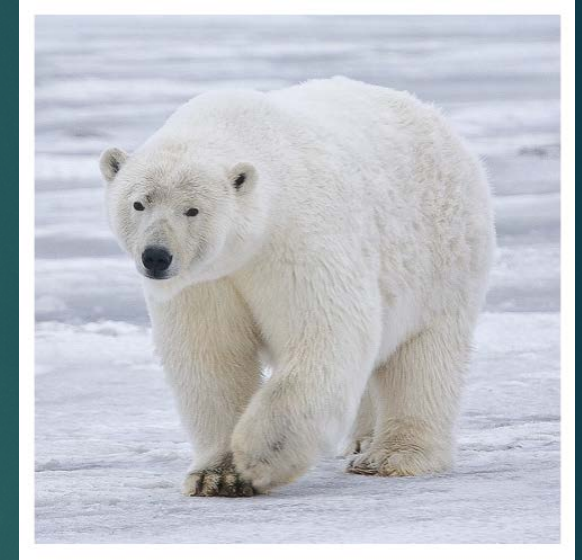
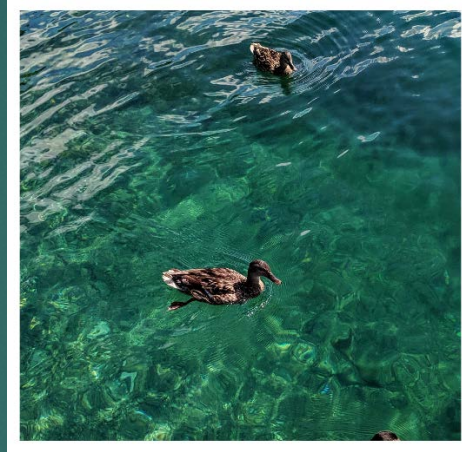
Environmental Impacts

*“Second **greatest** threat to global biodiversity after habitat loss”*



Biodiversity (Biological Diversity)

- ▶ The variety of life on earth, number and variety of plants, animals and other organisms that exist and their relationship to each other



Environmental Impacts

- ▶ Reduces biodiversity



Social Impacts



Economic Impacts



Economic Impacts

Zebra & Quagga mussels



Zebra Mussel Shells on the Shore of Lake Winnebago, Wisconsin (photo by Andrew Sabai)



Legislation



- ▶ The BC Weed Control Act
- ▶ CSRD Noxious Weed Bylaw
- ▶ Municipal Bylaws
- ▶ Other Federal and Provincial Legislation

Invasive Plant Management Areas



Prioritization of Species

- ▶ New/ less established species
- ▶ Effectiveness of treatment options
- ▶ Risks for not managing
- ▶ Priorities in neighbouring regions
- ▶ Local input

Prioritization



REGIONAL EDRR

**ERADICATION
OR ANNUAL
CONTROL**

CONTAINMENT

**ESTABLISHED
(BIOCONTROL
OR SITE-
SPECIFIC
APPROACH)**

**INSUFFICIENT
INFORMATION**

Treatment Options



Mechanical

Biological

Cultural

Chemical- spot herbicide treatment



Dig out small infestations, treat
larger infestations chemically



Mechanical treatment is an
effective control



Herbicide treatment is the most
effective control

Learn to Identify Invasive Plants



Caraway

Wild parsnip

Poison hemlock

Wild chervil

Giant hogweed

Queen Anne's lace



Don't Tumble with These Umbel!

Leslie J. Mehrhoff, Univ. of Connecticut, Bugwood.org

Invasive Plants of the Carrot Family (Apiaceae)

Family Characteristics

General

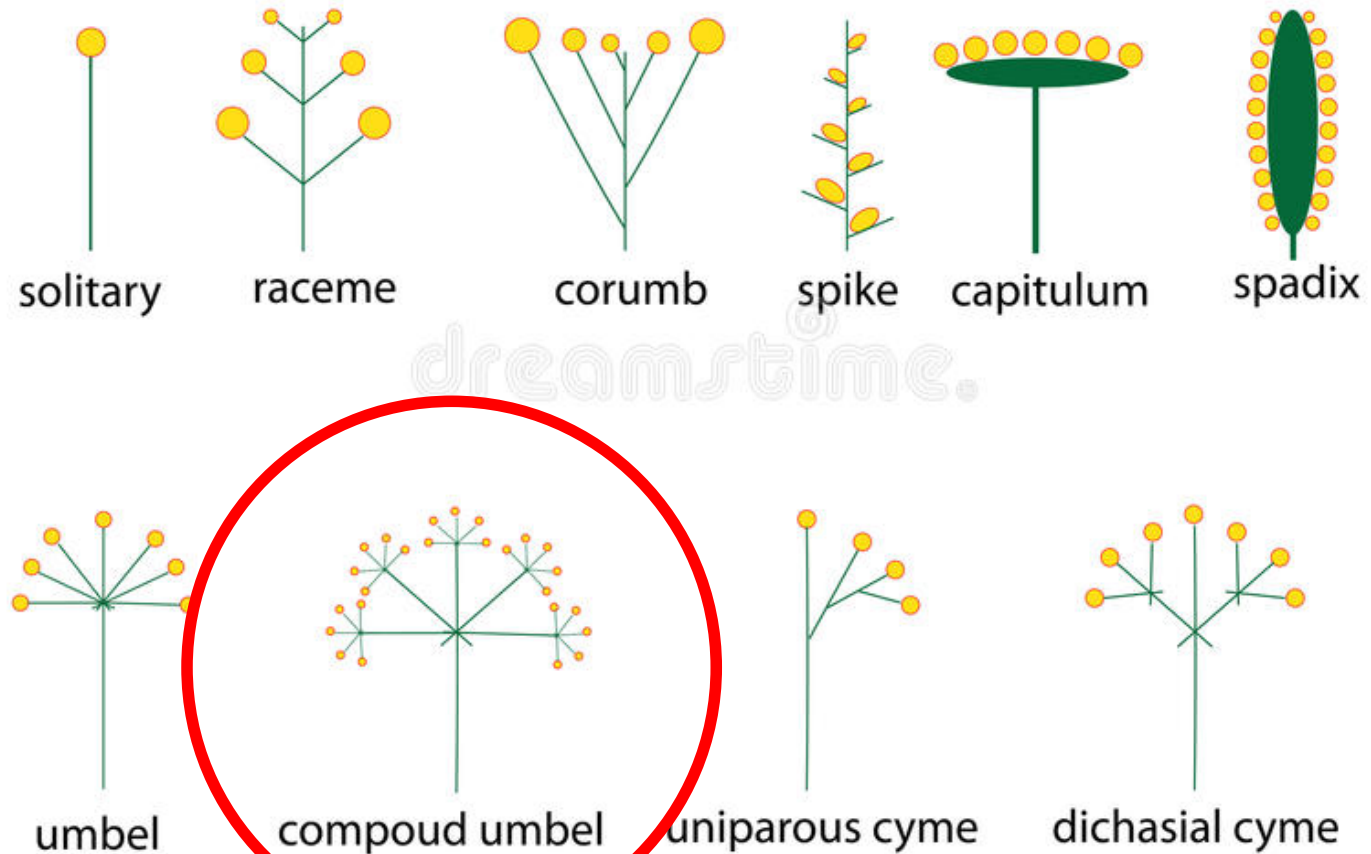
- ▶ Biennial to perennial herb
- ▶ Flowers arranged in compound umbels
- ▶ Stems usually hollow
- ▶ Wide range of edibility
 - ▶ **USE CAUTION WHEN IDENTIFYING PLANTS**



Plant Structures

FLOWER

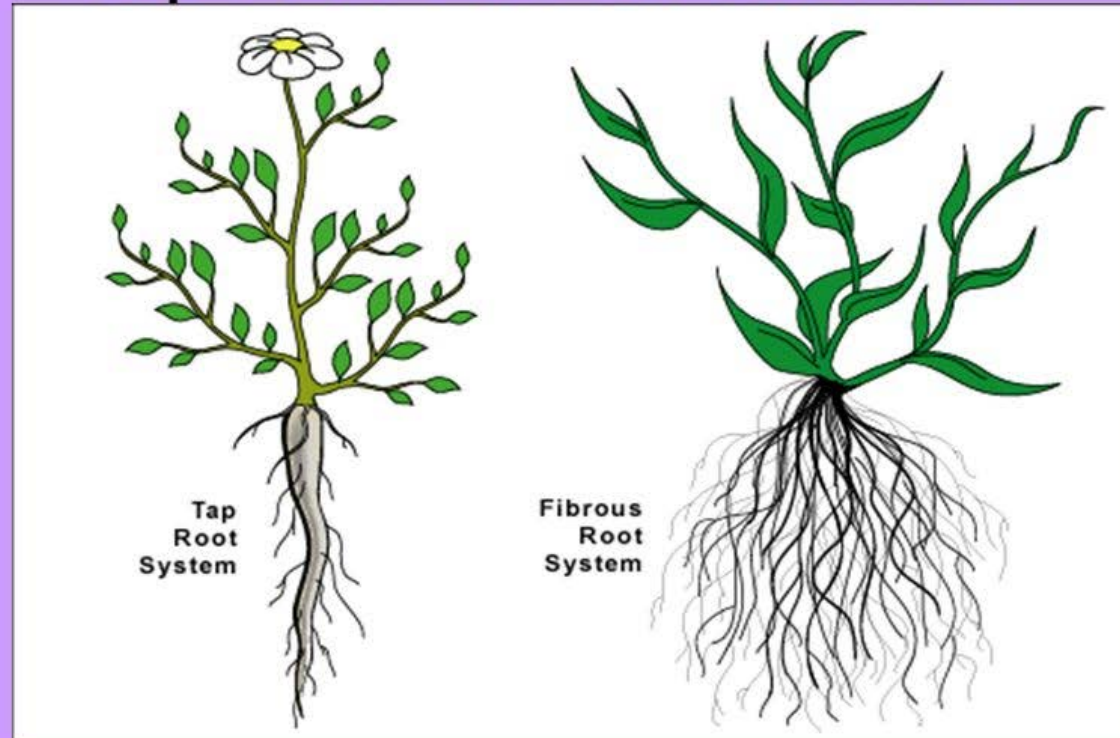
Types of inflorescence



Plant Structures

ROOTS

Tap root vs. Fibrous root



the primary root grows longer and thicker than the secondary roots

the secondary roots continue to grow, and eventually all the roots are of equal or nearly equal size

TYPES OF LEAF

SIMPLE

COMPOUND



Entire



Trifoliate



Pinnate



Lobed



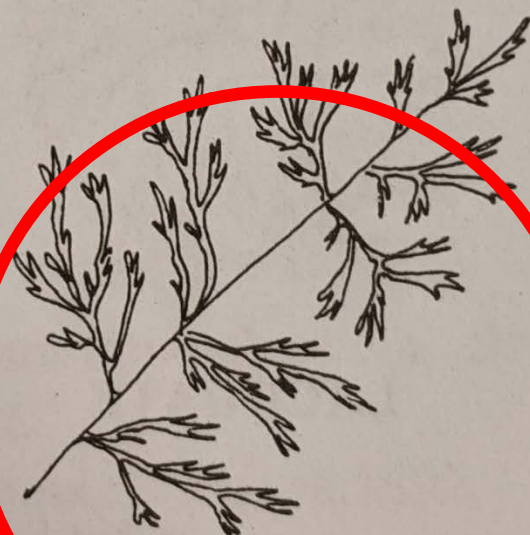
Palmate



Bipinnate



DIGITATE



DISSECTED



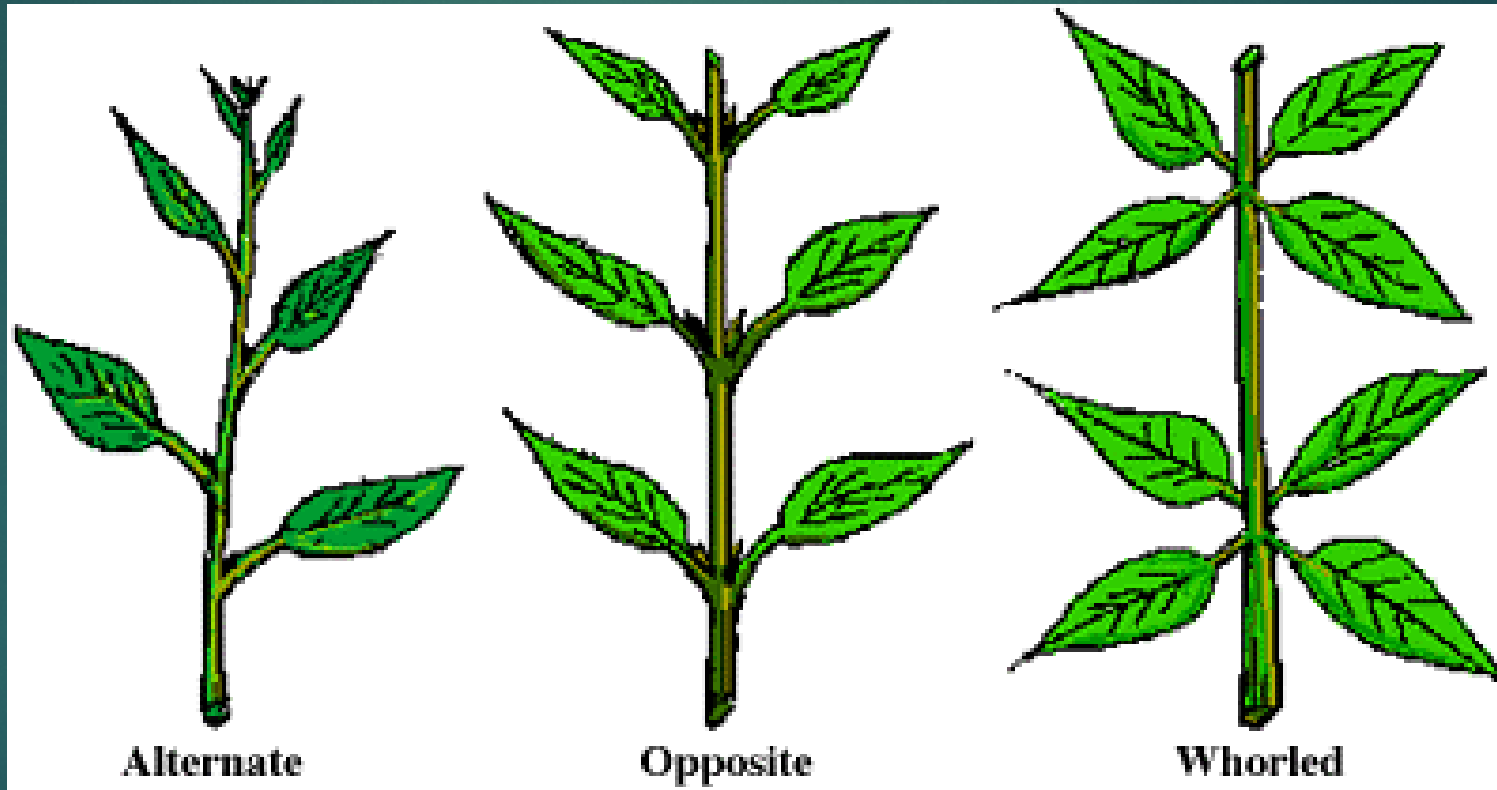
DIVIDED



ENTIRE

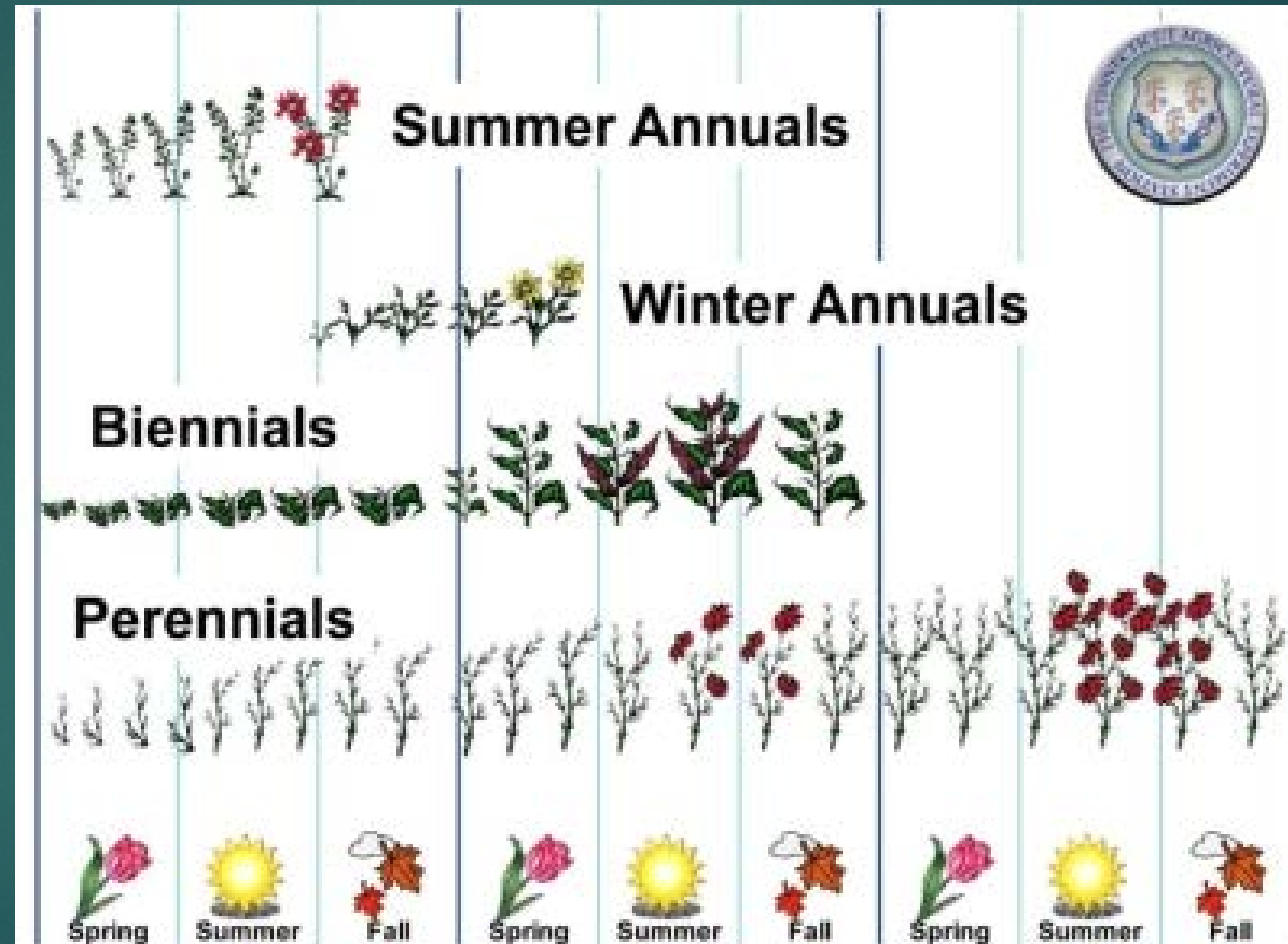
Plant Structures

Leaf arrangement



Plant Structures

LIFE CYCLE



Giant hogweed

- ▶ Sharply toothed leaves with hairs on underside
- ▶ White umbrella shaped flowers
- ▶ Hollow stems, 2 - 5 m tall
- ▶ Highly toxic sap

**ERADICATION OR
ANNUAL CONTROL**



Dig out small infestations, treat
larger infestations chemically

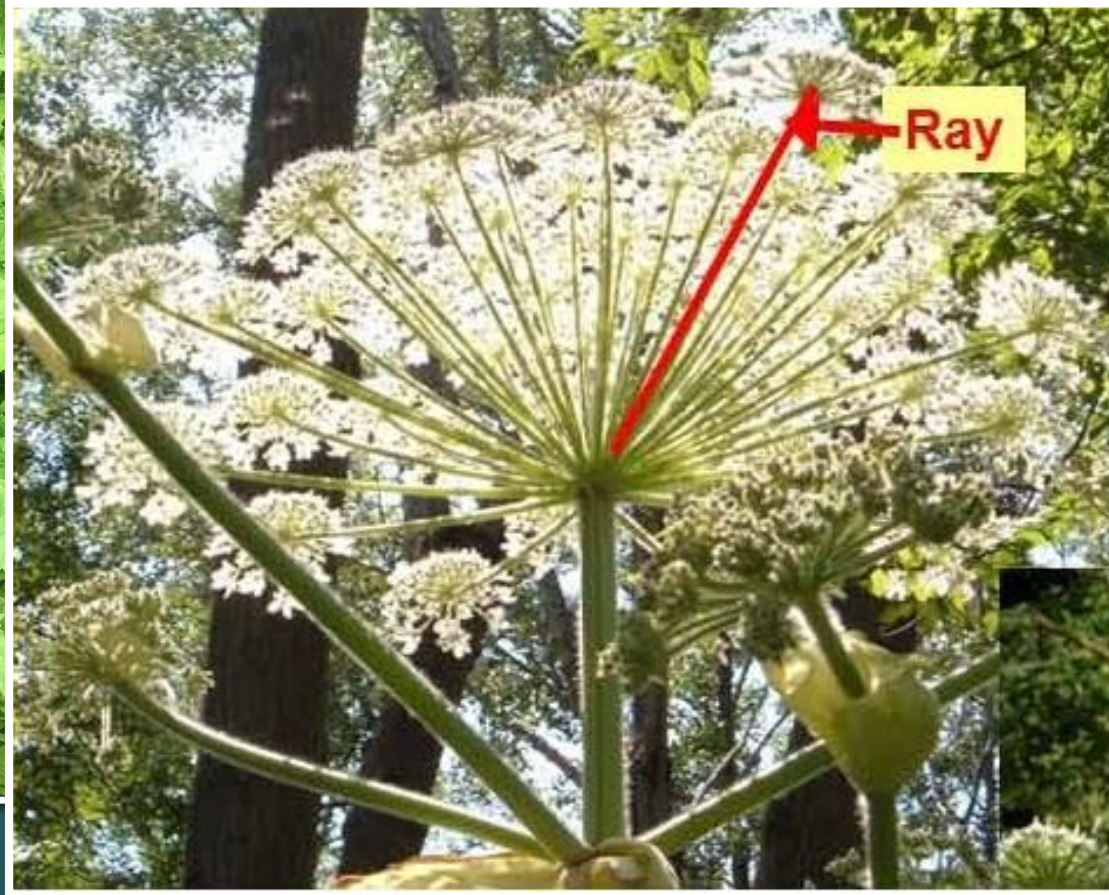


Report to CSISS

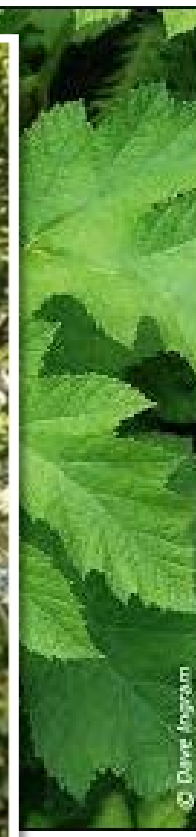




Giant hogweed VS Cow parsnip

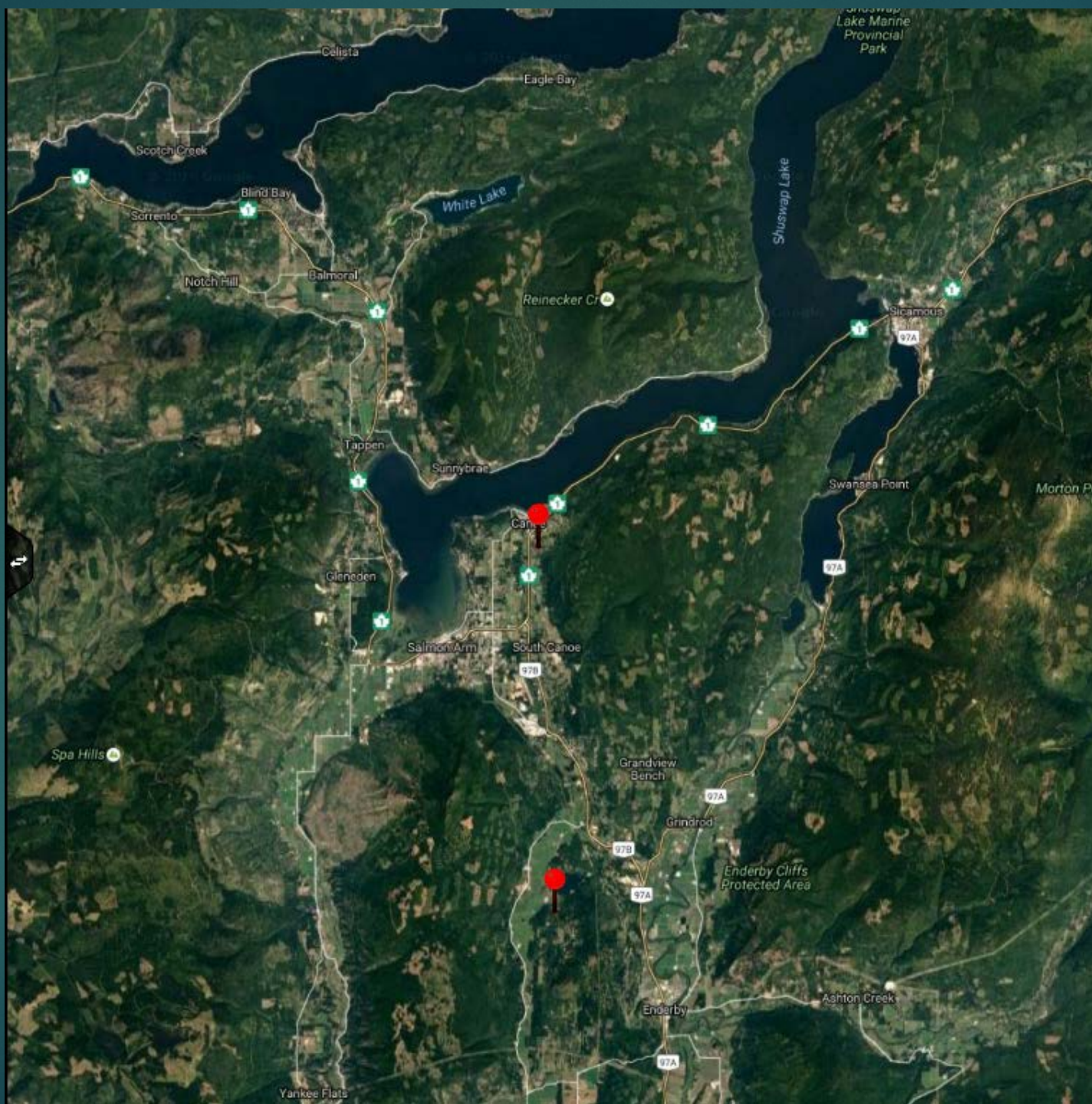


umbel



- 1 – 2 m tall
- Stem 2 – 5 cm diameter
- Fuzzy hairs
- Less divided/
palmate leaf
- 15 – 30 rays in
umbel





Wild Chervil

- ▶ Smooth, highly branched stems up to 1 m tall
- ▶ Deep woody root system
- ▶ Can produce 13,000 seeds per plant
- ▶ Outcompetes crop and forage plants
- ▶ Found in wet areas



**ERADICATION OR
ANNUAL CONTROL**



Dig out small infestations, treat
larger infestations chemically

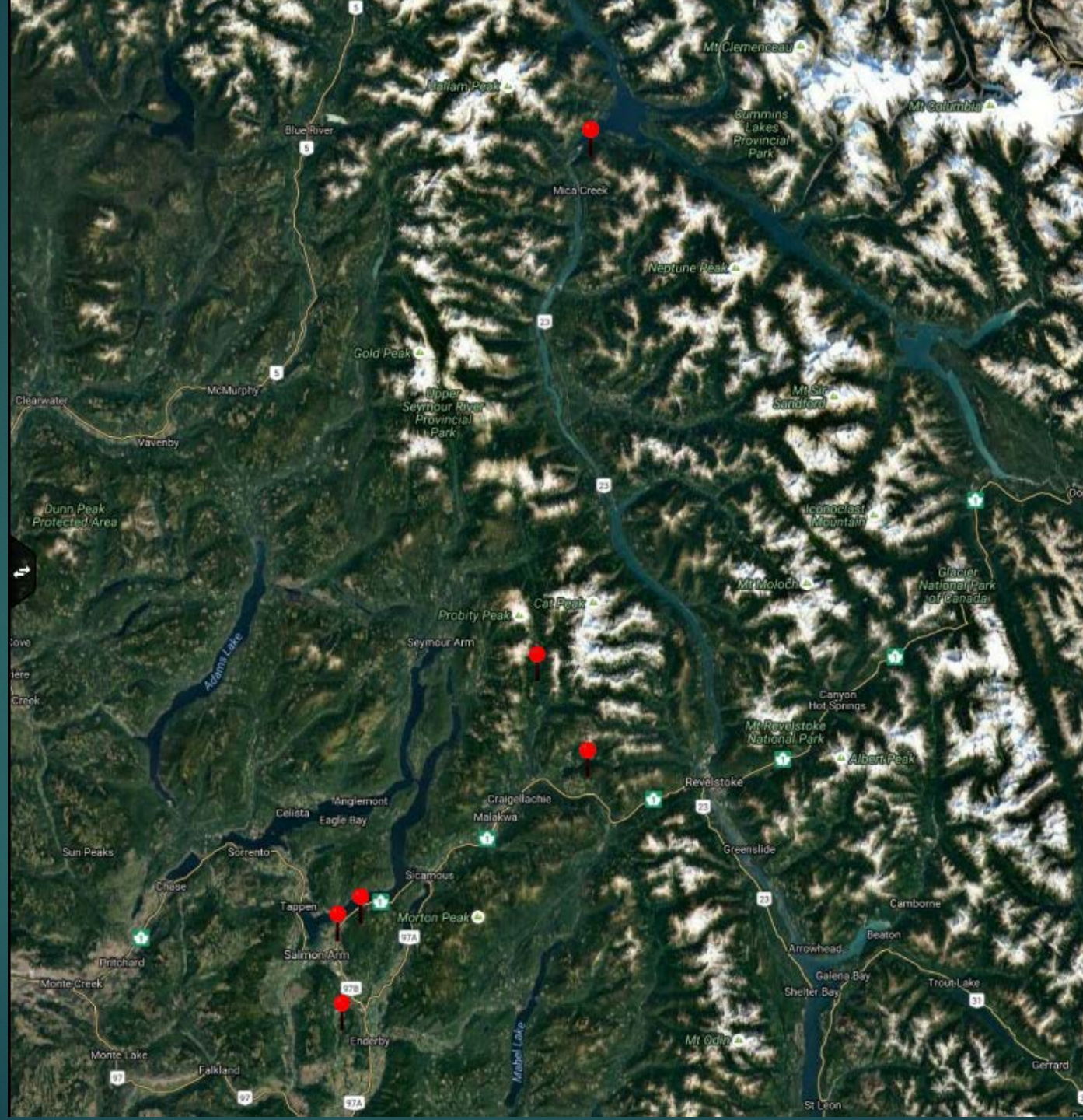


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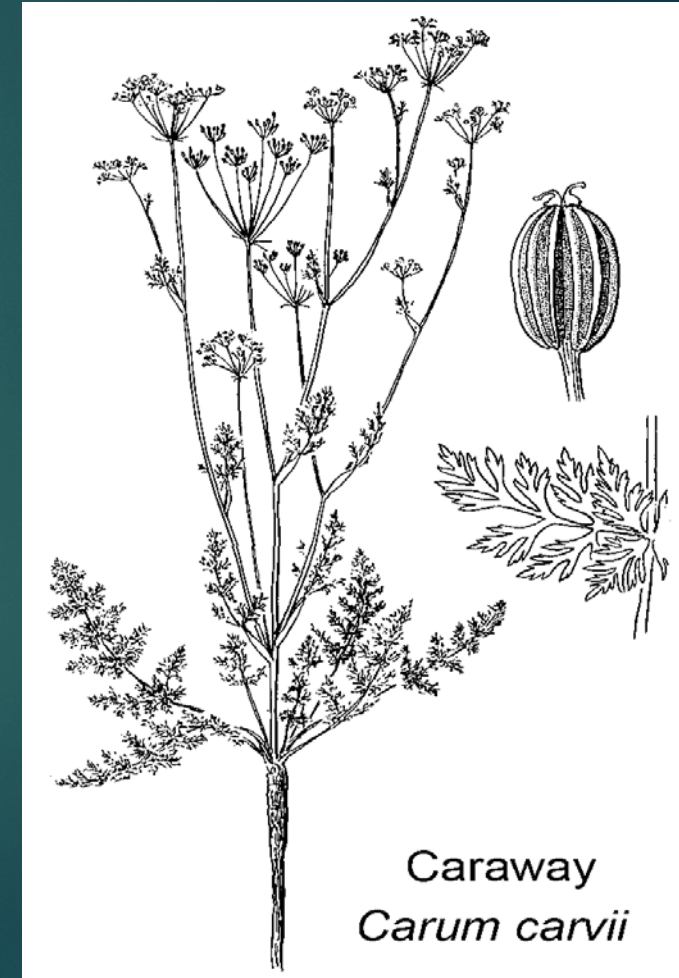


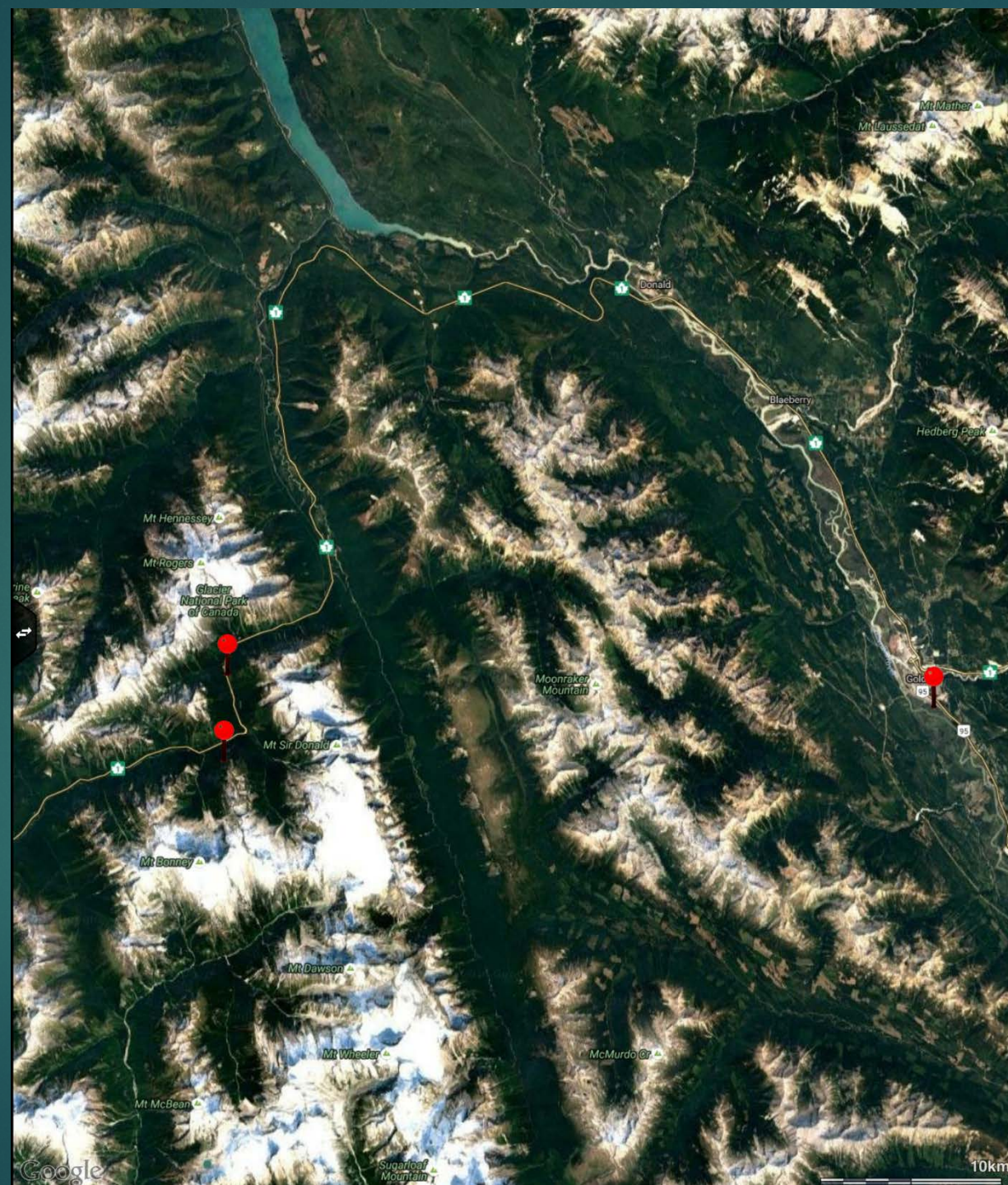




Caraway

- ▶ Entered Canada as a spice crop
- ▶ Alternate leaves, very finely divided
- ▶ Parsnip-like taproot
- ▶ Groups of small white flowers at top of several branched stems 60-90 cm tall, sometimes pinkish in color.





Poison hemlock

- ▶ Extensively branching plant 0.5-3m tall
- ▶ Robust hollow stems; distinctive purple blotches on hairless (smooth) stems.
- ▶ Bright green triangular leaves are finely-divided and fern-like with a strong musty odour.
- ▶ Small white flowers form a broad umbrella-shaped inflorescence, 0.5m across

ERADICATION OR
ANNUAL CONTROL



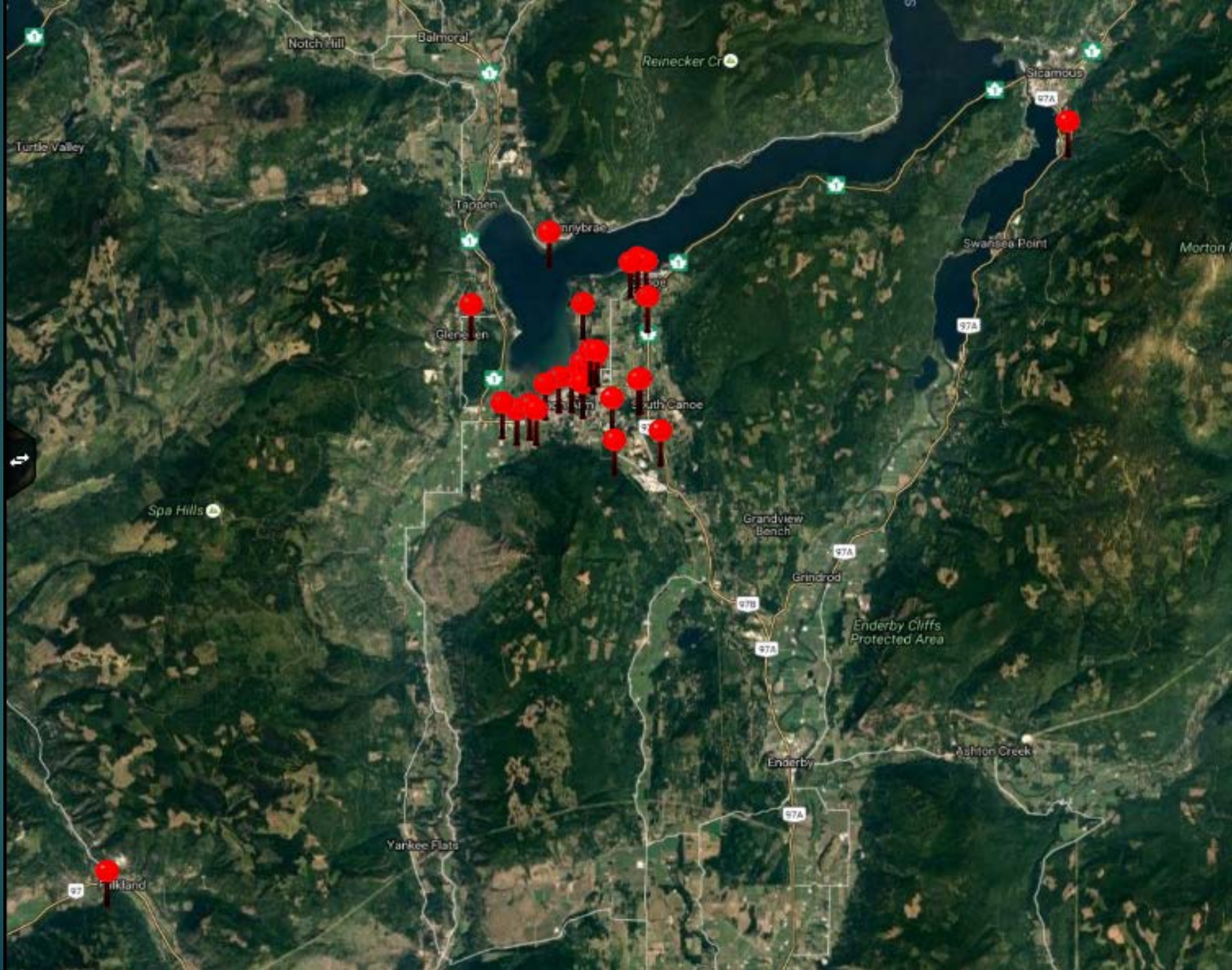
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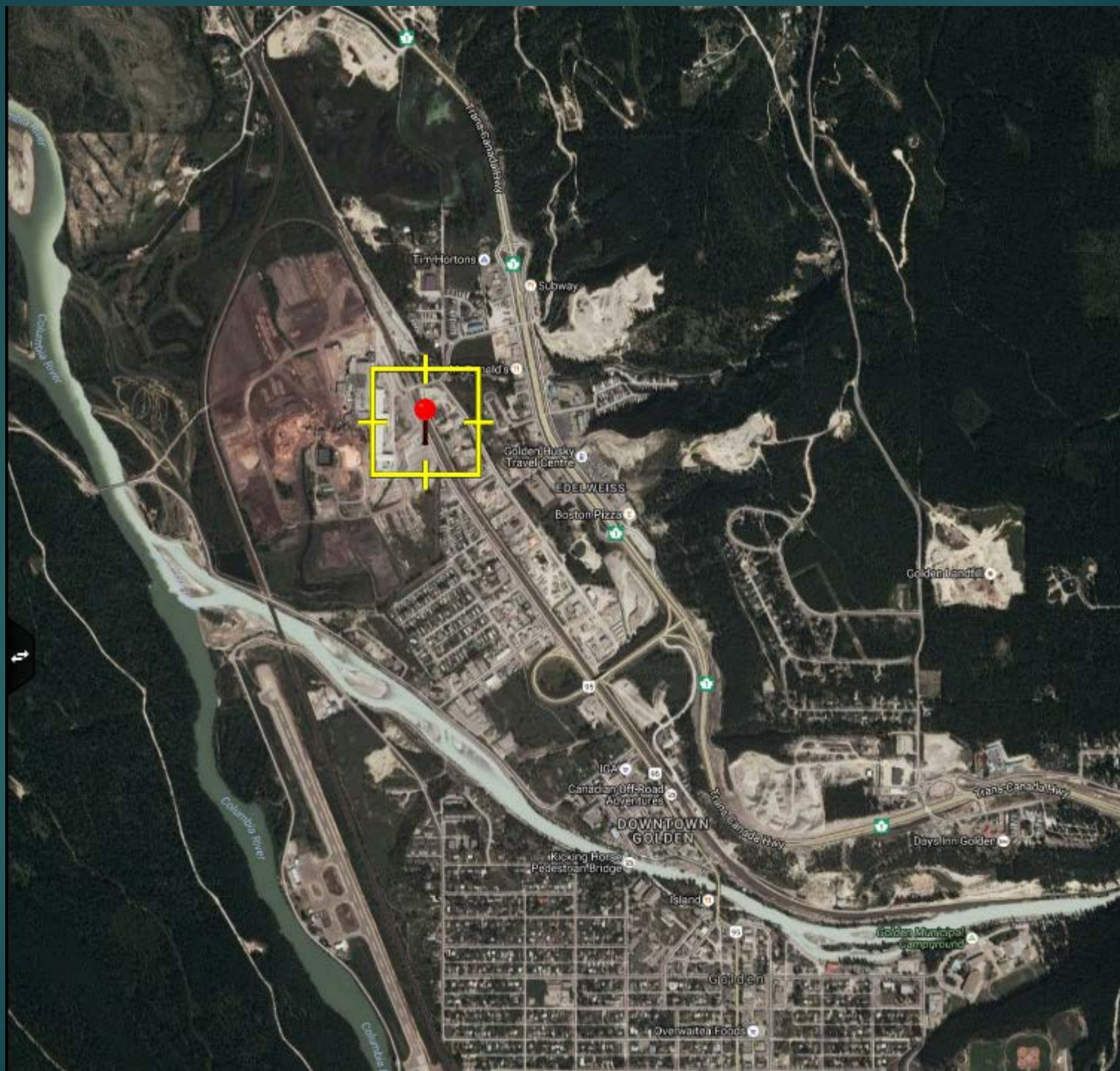


Report to CSISS









Wild parsnip

- ▶ Grows up to 1.5 metres tall.
- ▶ The single green stem is 2- 5 cm thick and smooth with few hairs.
- ▶ Compound leaves are arranged in pairs, with sharply toothed leaflets that are shaped like a mitten.
- ▶ Yellowish green flowers form umbrella-shaped clusters 10 to 20 centimetres across.

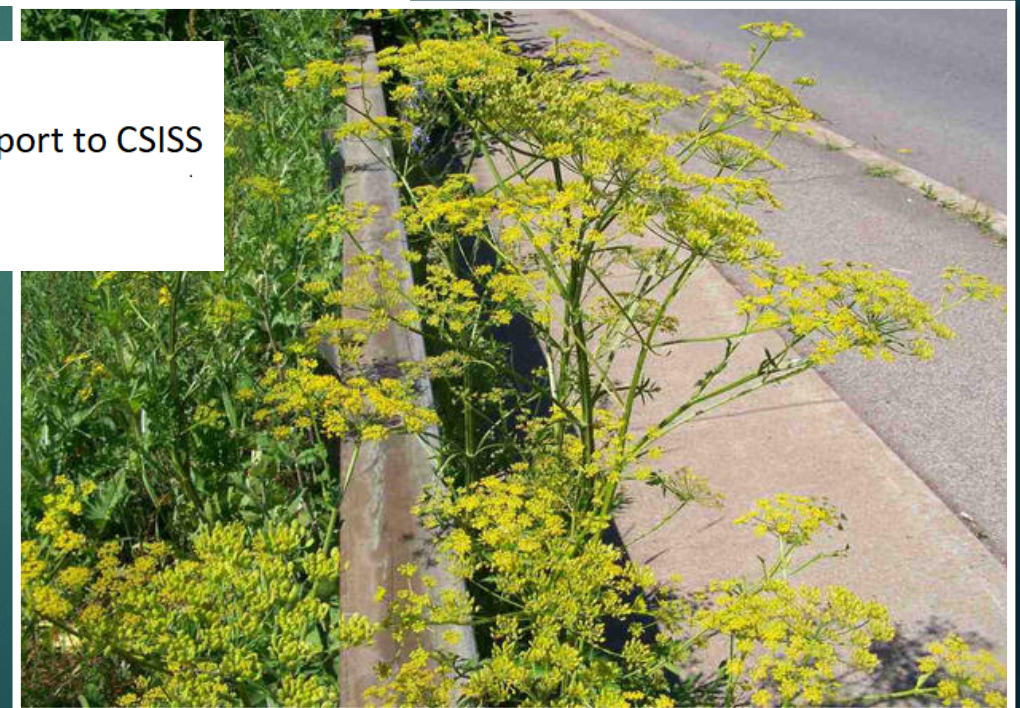
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Report to CSISS





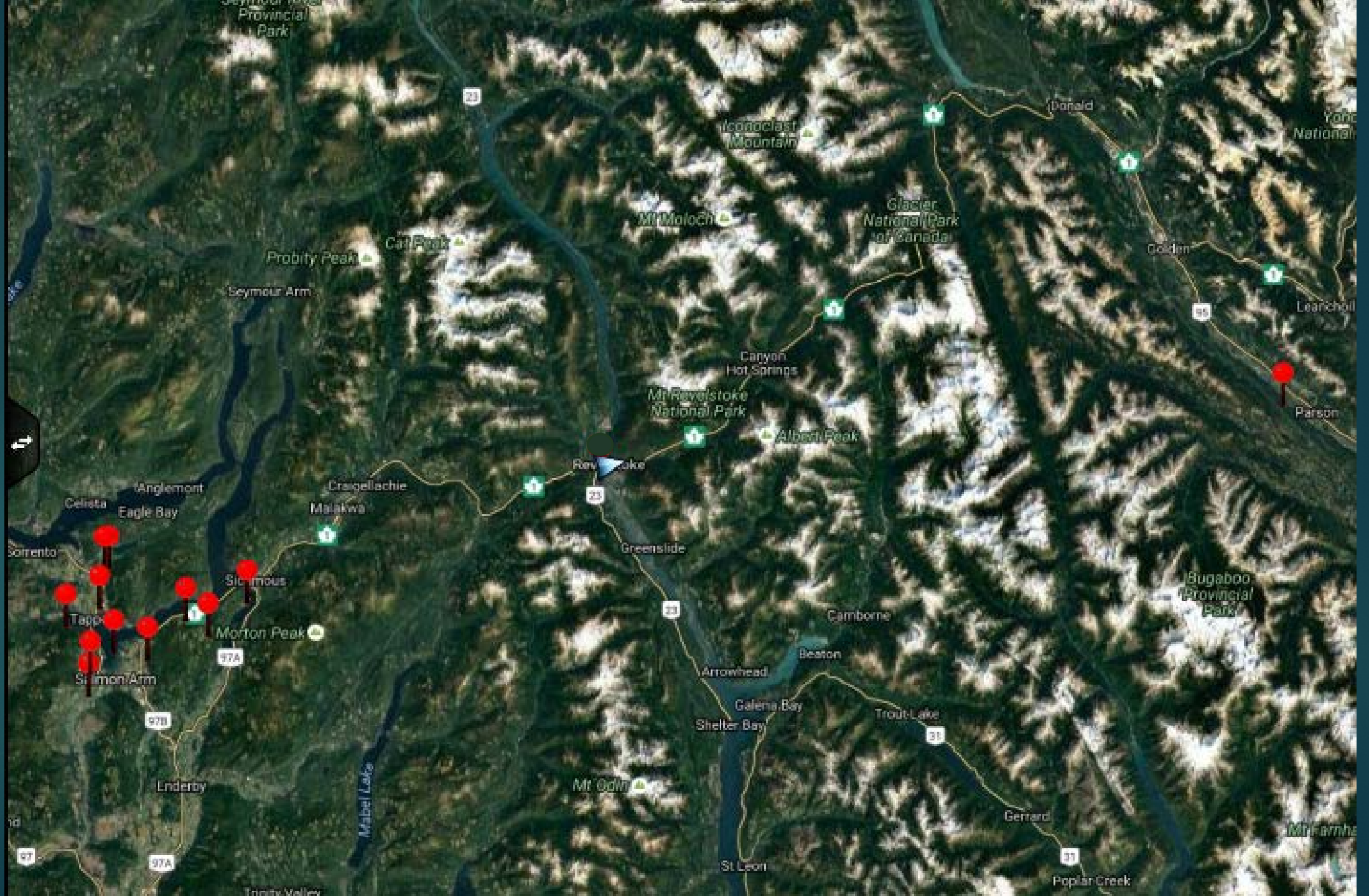


Queen Anne's lace

- ▶ Biennial herb that smells like a carrot and grows 2-4 feet tall
- ▶ Leaves are pinnately divided and deeply dissected into narrow segments
- ▶ One or more additional hairy hollow stems.
- ▶ It's slender, woody taproot is carrot-like in smell and taste.







Name that plant!



Name that plant!

Giant Hogweed



Caraway



Queen Anne's
Lace







Wild
Chervil



Poison
Hemlock



Wild
Parsnip

Invasive Plant Management Tools



Invasive Alien Plant Program (IAPP)

Data base of Invasive Plants

Long term monitoring of growth and control

Data collection and analysis

[Home](#) > [Environmental Protection & Sustainability](#) > [Plants, Animals & Ecosystems](#) > [Invasive Species](#) >

Early Detection & Rapid
Response

[Amphibians & Reptiles](#)

[Birds](#)

[Fish](#)

[Fungus](#)

[Insects & Spiders](#)

[Invertebrates Other than Insects
& Spiders](#)

[Mammals](#)

► [Plants](#)

[Infested Soil](#)

[Reporting Invasive Species](#)

Reporting Invasive Species

Invasive species are plants and animals not naturally found in B.C. that can potentially harm the province's natural environment or adversely affect people's health. Report invasive species before they cause harm through the invasive plant database or through the mobile apps.

Invasive Alien Plant Program (IAPP) Database & Map Display

The invasive plant map and database are central information sharing and repositories that can be used by any agency or non-government organization develop and deliver effective invasive plant management programs throughout B.C.

Invasive Alien Plant Program (IAPP) Database

Access to the invasive plant database is through a BC Public Service staff IDIR or a [business BCellD](#). To get access to the database:

1. Request access by email: Invasive.Plants@gov.bc.ca
2. Access the [Invasive Alien Plant Program \(IAPP\) Database](#)

Users can search invasive plant surveys, treatments and activities plans. Data is entered by variety of user groups such as ministries, regional districts, weed committees, forest licensees, utilities, conservation groups, federal departments, and others on an on-going basis.

Invasive Species Mobile App

Report invasive plants before they cause harm.



Download the free reporting apps for Android devices:

- [Report a Weed](#)
- [Report Invasives](#)

Download the free reporting apps for iPhone or iPad:

- [Report a Weed](#)



BRITISH
COLUMBIA

Invasive Alien Plant Program

Navigation

Drawing

Query

IAPP Tools



Report-A-Weed



Home



Pan



Zoom In



Zoom Out



Initial View



Full Extent



Back



Forward



My Layers



GeoTIFF Image



Print

Report-A-Weed

Home

Navigation

Print



Albers



Lat / Long



UTM



Feature Location

Zoom To

Filter Invasive Plant



This tool will filter Sites that contain the selected invasive plant(s).

Invasive Species *

Common reed

Common tansy

Creeping buttercup

Cudweed

Curled dock

Curly leaf pondweed

Filter

Clear Filter

I want to...

Shuswap Lake

Broadview

Salmon Arm

South Canoe

Canoe Creek

East Canoe Creek

Leonard Creek

Hobbs Creek

97B



Topography

0 1 2km



CSISS

COLUMBIA SHUSWAP INVASIVE
SPECIES SOCIETY

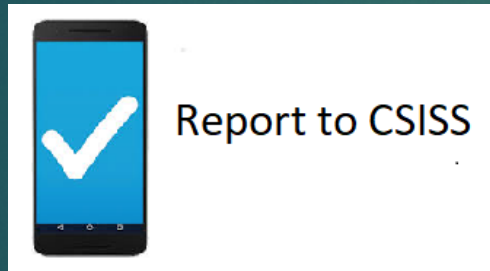
Reporting Options



CSISS

Report-An-Invasive App

Report to a supervisor



Invasive Non-Plant List



MAMMALS	Latin Name	Presence/ Absence in CSRD	Known Location(s)
Black rat	<i>Rattus rattus</i>	Present	Revelstoke
Brown rat / Norway rat	<i>Rattus norvegicus</i>		Nelson (unconfirmed)
Eastern cottontail rabbit	<i>Sylvilagus floridanus</i>		
Eastern fox squirrel	<i>Sciurus niger</i>		
Eastern grey squirrel	<i>Sciurus carolinensis</i>	Present	Revelstoke
European rabbit	<i>Oryctolagus cuniculus</i>	Unconfirmed	
Feral swine	<i>Sus scrofa</i>		Lumby? Christina Lake? Williams Lake?
House mouse	<i>Mus musculus</i>	Present	CSRD
Nutria	<i>Myocastor coypus</i>		South Vancouver/ Oregon
Virginia opossum	<i>Didelphis virginiana</i>		

<https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/invasive-species/priority-species>

Economic Impacts

Zebra & Quagga mussels



Zebra Mussel Shells on the Shore of Lake Winnebago, Wisconsin (photo by Andrew Sabai)



Decontamination vs Clean Drain Dry



VS



Clean Drain Dry



Contact CSISS



Website:

www.columbiashuswapinvasives.org

Toll Free: 1-855-PUL-WEED (1-855-785-9333)

E-mail: info@columbiashuswapinvasives.org

Thank you!

- ▶ Check your e-mail for the following resources:
 - ▶ Priority species lists for Columbia Shuswap Region
 - ▶ Guide to Apiaceae
 - ▶ Top invasive plants of Columbia Shuswap
 - ▶ Course feedback/evaluation form



THANK YOU!



Public Conservation
Assistance Fund



Canada

Columbia
Basin **trust**



isc
*Invasive Species Council
of British Columbia*

Sicamous
LIVE MORE



BC hydro



Salmon Arm



CITY OF
REVELSTOKE