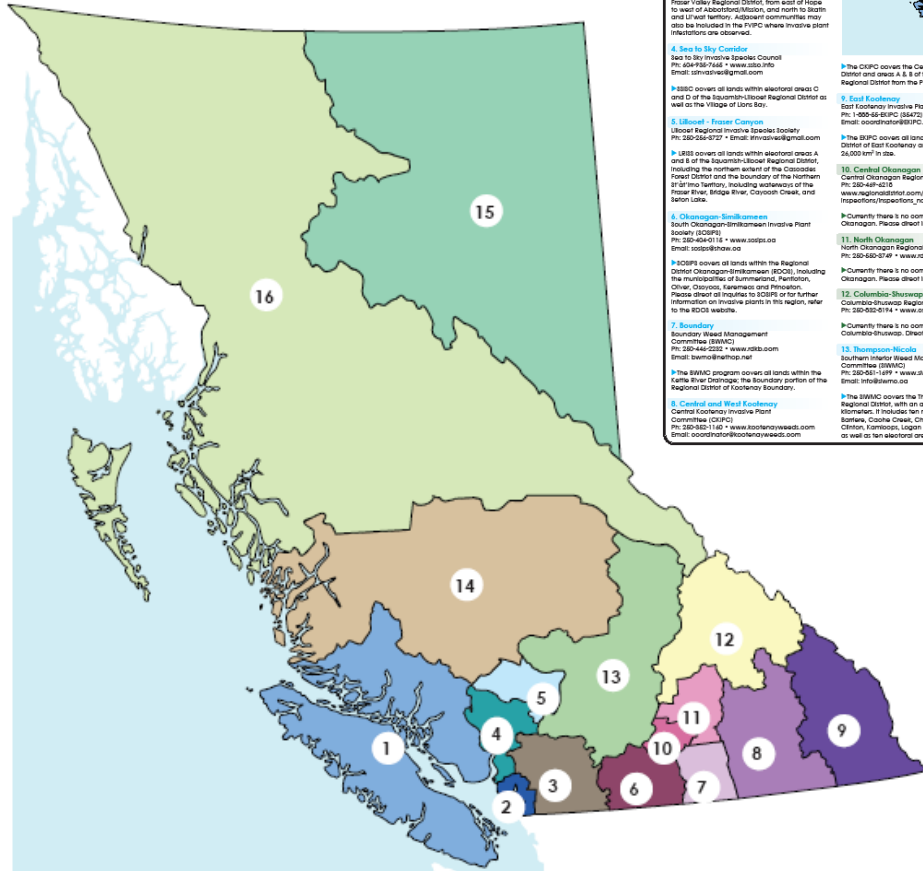




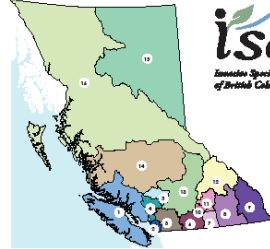
**LILLOOET REGIONAL
INVASIVE SPECIES SOCIETY**



What is LRISS?



Regional Committees



- 1. Coastal Invasive Plant Committee**
Coastal Invasive Plant Committee (CIPC)
Ph: 250-621-2471 • www.coastalinvplants.com
Email: info@coastalinvplants.com

► The CIPC covers the geographic area of Vancouver Island, the Gulf Islands and the Regional District of Fraser River, Triunfo, and Mount Washington, covering on the Mainland Coast.
- 2. Greater Vancouver**
Invasive Plant Council of Metro Vancouver (IPCMV)
Ph: 604-690-8310 • www.gvipo.ca
Email: info@gvipo.ca

► The IPCMV covers all lands within the Metro Vancouver Regional District.
- 3. Fraser Valley**
Fraser Valley Invasive Plant Council (FVIPC)
Ph: 604-115-6852/6933 • Email: frval@frval.ca
www.fraser-valley-weeds.com

► The FVIPC covers the boundaries inclusive in the Fraser Valley Regional District, from east of Hope to west of Abbotsford/Mirano, and north to Stearn and Uxal territory. Adjacent communities may also be included in the FVIPC where invasive plant infestations are observed.
- 4. Sea to Sky Corridor**
Sea to Sky Invasive Species Council
Ph: 604-938-7444 • www.s2skinfo.com
Email: info@sea2sky.com

► ISSC covers all lands within electoral areas C and D of the Squamish-Island Regional District as well as the Village of Lillooet.
- 5. Liberal - Fraser Canyon**
Liberal Regional Invasive Species Society
Ph: 250-544-8747 • Email: fraser@librisc.com

► LRSS covers all lands within electoral areas A and B of the Squamish-Island Regional District, including the northern extent of the Coquihale Forest District and the boundary of the Northern IT of the territory, including sub-sectors of the Fraser River, Bridge River, Cayash Creek, and Sabin Lake.
- 6. Okanagan-Similkameen**
South Okanagan-Similkameen Invasive Plant Society (SOIS)
Ph: 250-464-0114 • www.soisps.ca
Email: sois@soisps.ca

► SOISPS covers all lands within the Regional District Okanagan-Similkameen (ROCS), including the municipalities of Lumby, Kericho, Penticton, Osoyoos, Kamloops and Princeton. Please direct all inquiries to SOISPS or for further information on invasive plants in this region, refer to the ROCS website.
- 7. Boundary**
Boundary Weed Management Committee (BWMC)
Ph: 250-446-2322 • www.bwmc.com
Email: bwmc@bwmc.net

► The BWMC program covers all lands within the Kettle River drainage, the boundary portion of the Regional District of Kootenay Boundary.
- 8. Coastal and West Kootenay**
Coastal Kootenay Invasive Plant Committee (CKIPC)
Ph: 250-462-1148 • www.kootenayweeds.com
Email: coordinator@kootenayweeds.com

► The CKIPC covers the Thompson-Nicola Regional District, with an area of 46,279 square kilometers, 17 municipalities: Salmon, Barkan, Coche Cheak, Chasa, Clearwater, Clinton, Comstock, Logan Lake, Lytton and Merritt, as well as ten electoral areas.
- 9. Cariboo, Chilcotin, Coast**
Cariboo Chilcotin Coast Invasive Plant Committee (CCIPC)
Ph: 250-974-1407 • www.ccipcbo.ca
Email: info@ccipcbo.ca

Cariboo Regional District (CRD)
Ph: 1-800-665-5454 ext. 244
www.cariboodist.bc.ca/invasiveplants.aspx
Email: invasive@cariboodist.bc.ca

► The CCIPC covers the Cariboo Regional District and the Cariboo Coast Regional District. This ranges from Hixon north of Hazelton, south to 70 Mile House, east to Wells Grey Park, and west to the Pacific Ocean.
- 10. East Kootenay**
East Kootenay Invasive Plant Council (EKIPC)
Ph: 1-800-66-6KIPC (6472) • www.ekipc.com
Email: info@ekipc.com

► The EKIPC covers all land within the Regional District of East Kootenay and is approximately 34,000 km² in size.
- 11. Central Okanagan**
Central Okanagan Regional District (COKRD)
Ph: 250-441-4112
www.regionaldistrict.com/department/invasiveplantcontrol_newweeds.com

► Currently there is no committee in the Central Okanagan. Please direct inquiries to COKRD.
- 11. North Okanagan**
North Okanagan Regional District (NORD)
Ph: 250-860-8747 • www.nrdno.ca

► Currently there is no committee in the North Okanagan. Please direct inquiries to NORD.
- 12. Columbia-Shuswap**
Columbia-Shuswap Regional District (CSRD)
Ph: 250-420-8114 • www.csrd.ca

► Currently there is no committee for the Columbia-Shuswap. Direct inquiries to CSRD.
- 13. Thompson-Nicola**
Southern Inland Weed Management Committee (SIWMC)
Ph: 250-551-4871 • www.siwmo.com
Email: info@siwmo.ca

► The SIWMC covers the Thompson-Nicola Regional District, with an area of 46,279 square kilometers, 17 municipalities: Salmon, Barkan, Coche Cheak, Chasa, Clearwater, Clinton, Comstock, Logan Lake, Lytton and Merritt, as well as ten electoral areas.
- 14. Northeast**
Northeast Invasive Plant Committee (NEIPC), Peace River Regional District
Ph: 250-754-8227 • www.peacevalley.bc.ca
Email: neipc@peacevalley.bc.ca

Northwest Regional District (NWRD)/Fort Nelson Invasive Plant Management Area Steering Committee (INPMASC)
Ph: 250-774-1411
Email: steering@nwr.gov.bc.ca and sara.kerwin@nwr.gov.bc.ca

► The NEIPC covers all areas of the Peace River Regional District and the Northern Rockies Regional Municipality. There are 4 IRMA's in the NEIPC. The INPMASC covers the IRMA of all areas within the Northern Rockies Regional Municipality and is approx. 56,000 sq. km.
- 14. Northwest**
Northwest Invasive Plant Council (NWIPC)
Ph: 1-844-449-8328 (449-8337) • www.nwipc.org
Email: info@nwipc.org

► The NWIPC covers four regional districts: Bulkley-Nechako, Peace River, Fort George, Kitimat-Stikine, and Bulkley-Nechako-Chilcotin, and the Strathcona region adjacent to the Yukon border, and all municipalities within these regions.

LRISS is one of 17 Regional Invasive plant or species organizations in the province including the Invasive Species Council of British Columbia.

Who is the Inter-Ministry Working Group?

BC INTER-MINISTRY INVASIVE SPECIES WORKING GROUP



Invasive Species Strategic Plan

DECEMBER 2014

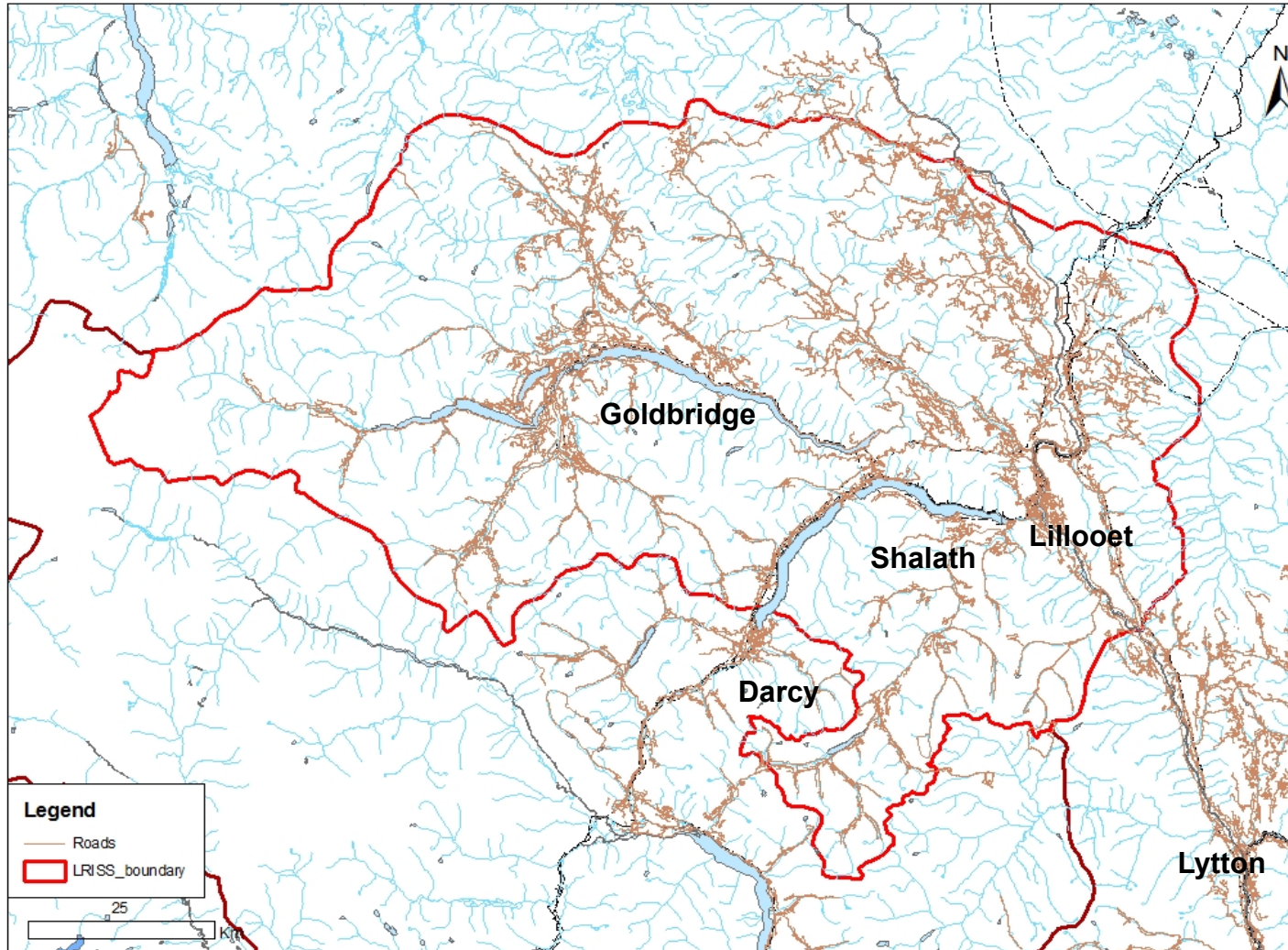


IMISWG

Inter-Ministry Invasive Species Working Group



LRISS Operating Area



What is an Alien *Invasive Species?*



An invasive plant can be defined as “*a species that is non-native to the ecosystem under consideration and whose introduction causes, or is likely to cause, economic or environmental harm or harm to human health*”.

Why should we care? Impacts



Invasive plants pose undesirable or detrimental impacts on humans, animals or ecosystems.

“As native plants are replaced by invasives, biodiversity declines and habitats change.”

~ *Alberta Invasive Plant Council*

Alien invasive species are recognized globally as the second largest threat to biological diversity and native species.



Why Manage Invasive Plants? Impacts



Giant Hogweed



Risk to human health



Giant Hogweed Burns

European Fire Ant



This is why we care: **IMPACTS**



Impacts to the Economy: Agriculture



Cow photo source:
newtonsapple.org.uk

Hoary Cress
taking over a
winter feeding
pasture near
Lillooet



This is why we care: **IMPACTS**



Impacts to the Economy: Property Values

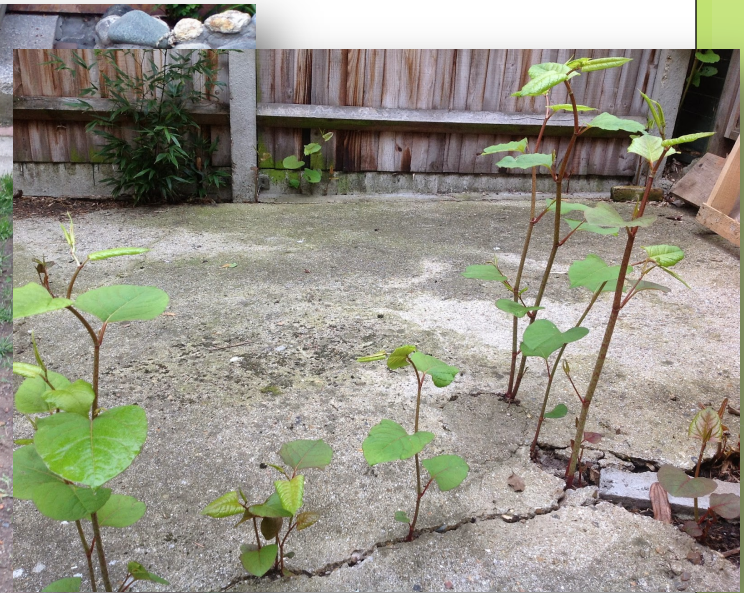


Photo Top Right Source:
www.tpknotweed.com

**Knotweed can crack
concrete foundations**

This is why we care: **IMPACTS**



Safety: Sightlines on Roads



Photo courtesy of Drinkwater & Associates

This is why we care: **IMPACTS**



Impacts to Biodiversity



Yellow Flag
Iris Infestation
at Beaver
Lake in
Stanley Park.

LRISS is
removing this
iris from
Tyaughton
Lake

This is why we care: **IMPACTS**



Wildfire Hazard



This is why we care: **IMPACTS**



Impacts to Wildlife



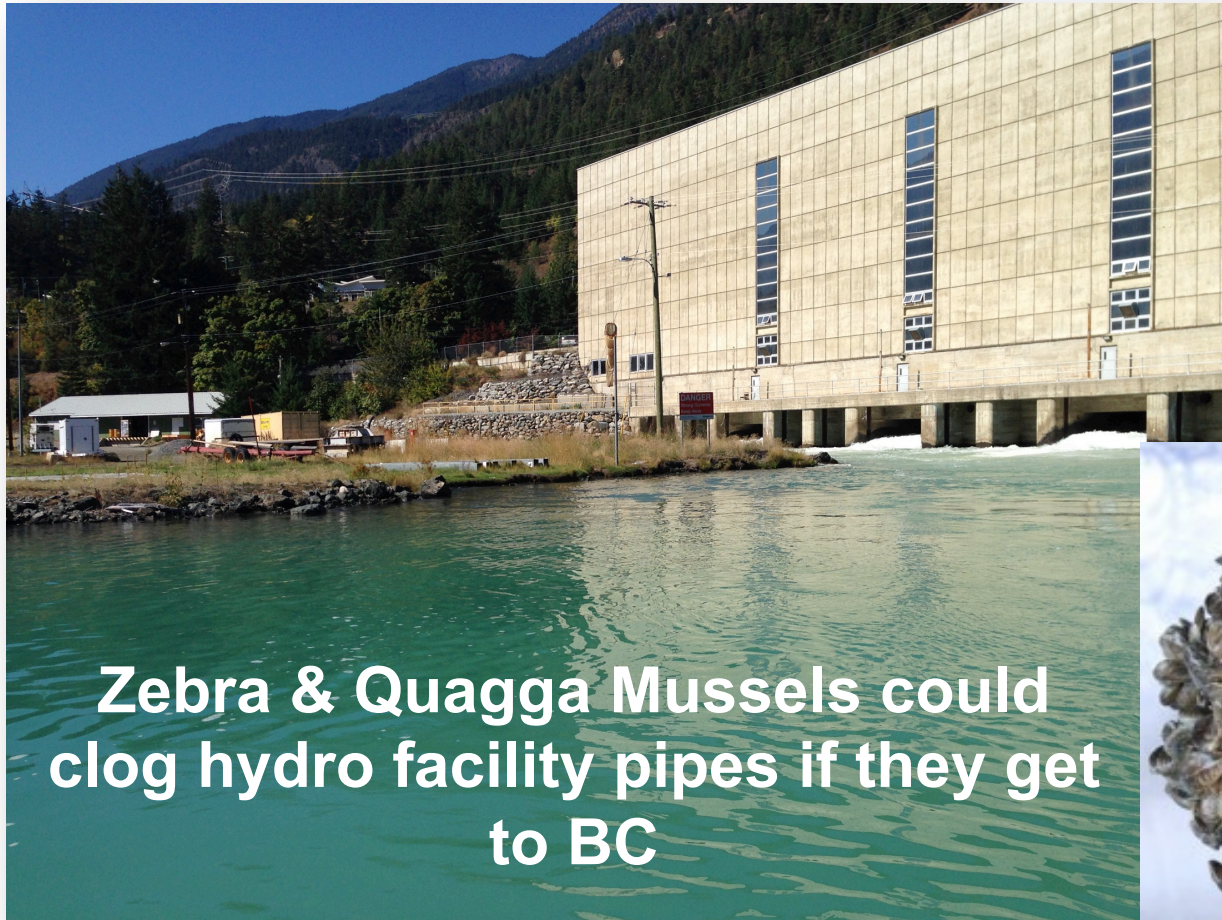
Photo sources: Dr. Ian
Routley (Bat in burdock);
Jacquie Rasmussen Bear



This is why we care: **IMPACTS**



Impacts to the Economy: Hydro and Energy costs



Zebra & Quagga Mussels could clog hydro facility pipes if they get to BC



This is why we care: **IMPACTS**



Impacts to Recreational Activities



**STOP INVASIVE SPECIES
IN YOUR TRACKS.**

PlayCleanGo.org



Photo sources: Michigan Sea Grant; Play,Clean,Go

Why Manage Invasives?



It's the Law



- **Forest and Range Practices Act**
- **BC Weed Control Act**

Integrated Pest Management Act

Seeds Act

Local Government Act

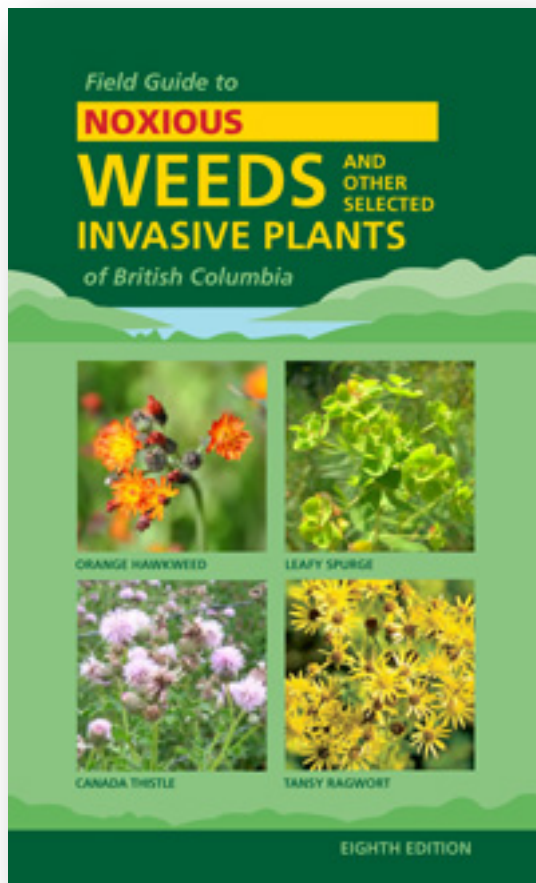
Community Charter Act

Municipal By-laws

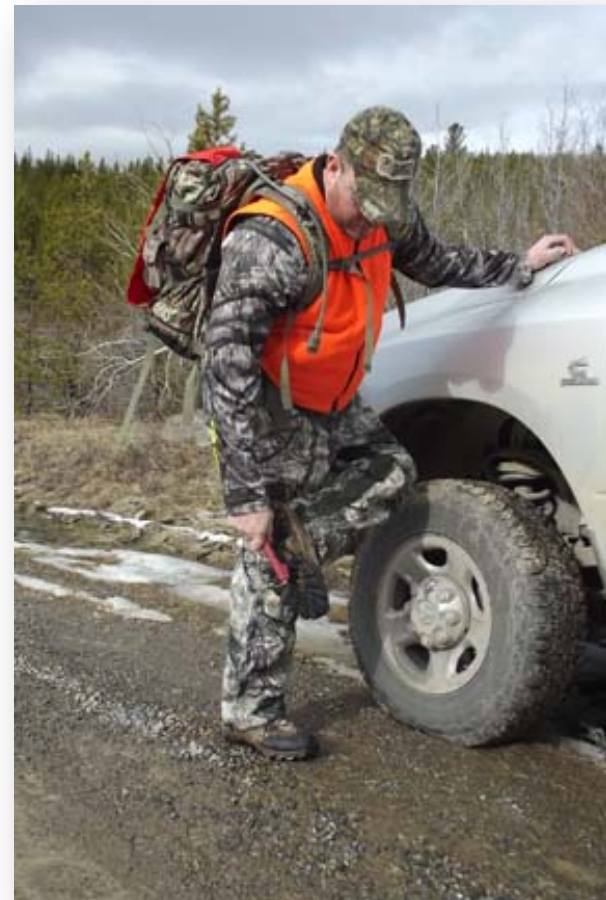
What can you do?



Identify Invasive Plants &
Report Them!



Stop the Spread....



LRISS's Top Invasive Plants



Japanese
Knotweed



Yellow Flag Iris



Hoary Cress

*Photo sources include Bugwood.org, wikiphotos, Jacquie Rasmussen, BC Government

LRISS's Top Invasive Plants

Orange
Hawkweed



Hoary
Alyssum



Spotted
Knapweed



Common
Tansy





Common
Bugloss



Leafy
Spurge



Bluweed



Tansy Ragwort



Himalayan
Blackberry

Other Species Common to our Area

**Dalmatian
Toadflax**



*Photo Source:
BC Ministry of
Agriculture*

Burdock



*Photo
Source:
BC Ministry
of
Agriculture*



**Russian
Olive Tree**

*Photo by
Lisa Scott*



**European
Collared
Dove**

*Source: All
About Birds*

Blueweed (*Echium vulgare*)



- Biennial to short-lived taprooted perennial growing to 1 metre high.
- Stems covered in stiff hairs with swollen reddish to black bases where attached to stem.
- Produces 500 to 2,000 seeds per plant.



Knapweed (*Centaurea* spp.)



- Knapweed arrived in BC's interior, from Europe, over 70 years ago.
- Perennial that can produce up to 25,000 seeds per plant!
- Typically, it distributes seeds by breaking off at the base and tumbling...



Copyright © 2011 Werner Eigelsreiter



Diffuse knapweed (*Centaurea diffusa*)

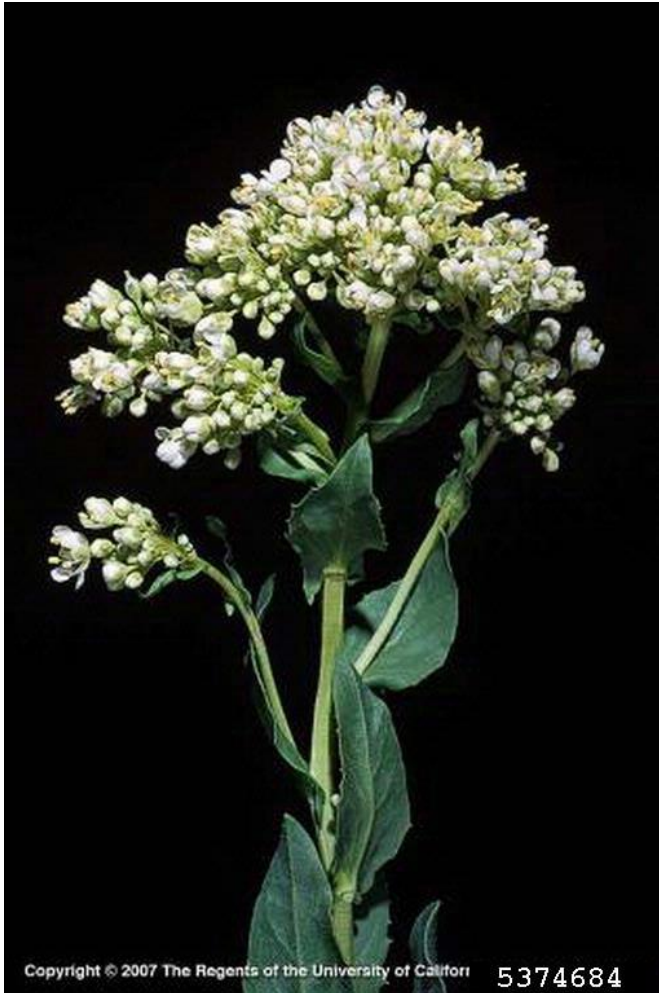
Spotted knapweed (*Centaurea maculosa*)

Hoary alyssum (*Berteroa incana*)



- Usually biennial (can behave as annual or short lived perennial)
- .3-1.1m (1-3') tall, has a taproot.
- Long continuous flowering and seed production June to October.
- 6-14 seeds per pod.
- Can be toxic to horses.

Hoary Cress (*Lepidium draba*)



Copyright © 2007 The Regents of the University of California 5374684

Joseph M. DiTomaso, University of California -
Davis, Bugwood.org

- Creeping rooted perennial in the Mustard Family .
- Grows from 0.1 to 0.6 metres tall
- Numerous white flowers produced at the top of the plant give rise to its other common name of "white-top" .



Knotweed (Polygonum spp.)



- Introduced from Asia as an ornamental **Bamboo**. It is highly invasive and is found along roadsides and wetland areas.
- Reproduces through long creeping rhizomes or by root fragments.

Orange Hawkweed (*Hieracleum aurantiacum*)



- European introduction, garden ornamental, wildflower seed mixes.
- Orange-red flowers clustered atop leafless stem, milky juice when broken.
- Grows .3-1.2m tall (1-4 ft.), Flowers June-Aug
Seeds July-August. Basal leaves covered in stiff hairs.
- Vegetative spread rapid by above ground runners (stolons) and below ground rhizomes can form dense mats quickly.



Leafy spurge (*Euphorbia esula*)



- Leafy spurge produces a milky latex that can cause skin irritation in humans and is toxic to some grazing animals.
- Its deep creeping root system makes controlling it quite challenging!
- Roots can extend up to 4.5 meters laterally and up to 9 meters deep.
- Seven biocontrol species.



Aphthona nigricutis flea beetle
feeding on leafy spurge.

Biocontrol: *Aphthona nigricutis*

Dalmatian toadflax (*Linaria dalmatica*)



- A perennial from southern Europe with waxy leaves and vibrant yellow 'snap-dragon' flowers.
- Be sure to remove ALL the roots because it can reproduce both by seed and the creeping root system!



Five bioagents have been released. *Mecinus janthinus* beetle has had success in reducing the infestation populations.

Common Tansy (*Tanacetum vulgare*)



- Aromatic perennial growing to 1.8 metres tall; deeply divided dark green leaves.
- Yellow "button" flowers in cluster at top of plant.
- No ray flowers
- Often confused with tansy ragwort (*Senecio jacobaea*) that has ray flowers.



Yellow Flag Iris (*Iris pseudacorus*)



- Introduced as a garden.
- Dense stands exclude native wetland species, threatening plant and animal diversity.
- Seed pods can float for up to a month in water.



More invasives.....



Eastern Gray Squirrel

Source: oldislandpestcontrol.com

American Bullfrog

Photo: Rylee Murray



Zebra & Quagga Mussels

Source:
nas.er.usgs.gov



Red Eared Slider Turtle

Source: Wiki



European Fire Ant

What is EDRR?

Early Detection
Rapid Response

Common Reed:
Phragmites spp.



BC EDRR Species



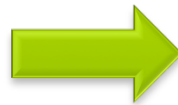
Photo Source: Steve Dewey, Utah State University, Bugwood.org

UGA1

Velvet Leaf



Black Henbane



Jan Samanek, Phytosanitary Administration, Bugwood.org

5341011

BC EDRR Species



Photo Source: Jil Swearingen, USDI National Park Service, Bugwood.org UGA0581051

Kudzu



Photo Source: Chris Evans, University of Illinois, Bugwood.org UGA1378079

Garlic Mustard

BC EDRR Species



Yellow Nutsedge



Purple Nutsedge

BC EDRR Species



Bighead Knapweed

Medusahead



BC EDRR Species



Photo Source: Richard Carter, Valdosta State University, Bugwood.org

UGA1452104

Mouse-eared Hawkweed



Photo Source: Bruce Newhouse, Bugwood.org

5458909

Shining Geranium



North Africa Grass

BC EDRR Species



Perennial Pepperweed



Meadow
clary



Flowering Rush



BC EDRR Species



Slender False Brome



Photo Source: Graham Calow - Sapcote - 23 July 2008

Jointed Goat Grass



Photo Source: Steve Dewey, Utah State University
Bugwood.org

UGA1459184

BC EDRR Species



Brazilian Elodea



Hydrilla

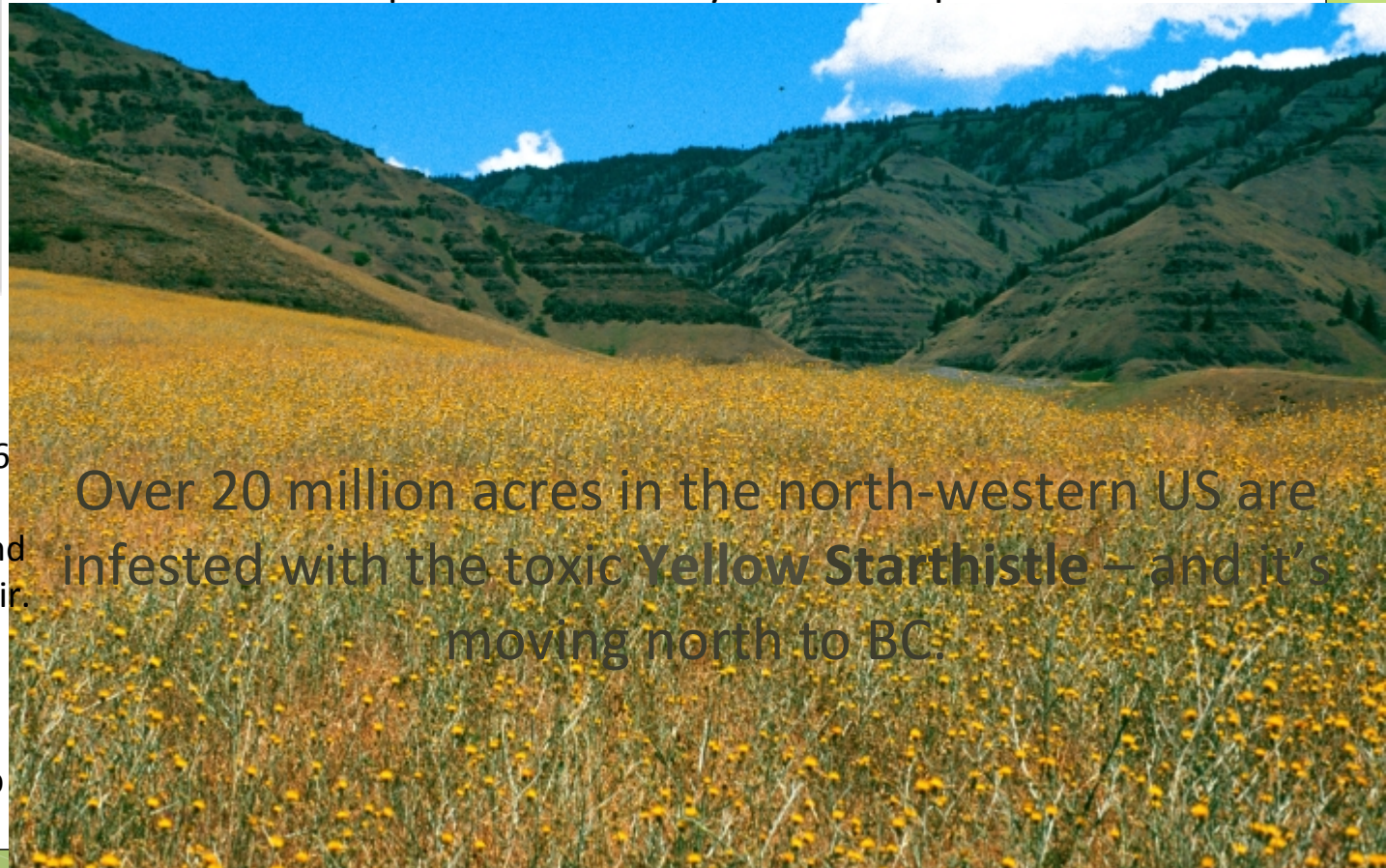
Yellow star thistle (*Centaurea solstitialis*)



HIGH ALERT

This species is currently not in our province.

- Annual.
- Tap rooted
- Heavily branched weed grows from 0.6 to 1 metre tall.
- Stems are winged and covered with fine hair. Yellow flowers are borne on ends of branches and armed with sharp thorns up to 2 cm long.



Over 20 million acres in the north-western US are infested with the toxic **Yellow Starthistle** – and it's moving north to BC.

Best Management Practices



Clean your Equipment and Personal Gear



BMP's: Industry



Clean your Equipment and Personal Gear



BMP's: Forestry



Re-vegetate/Seed Disturbed Areas

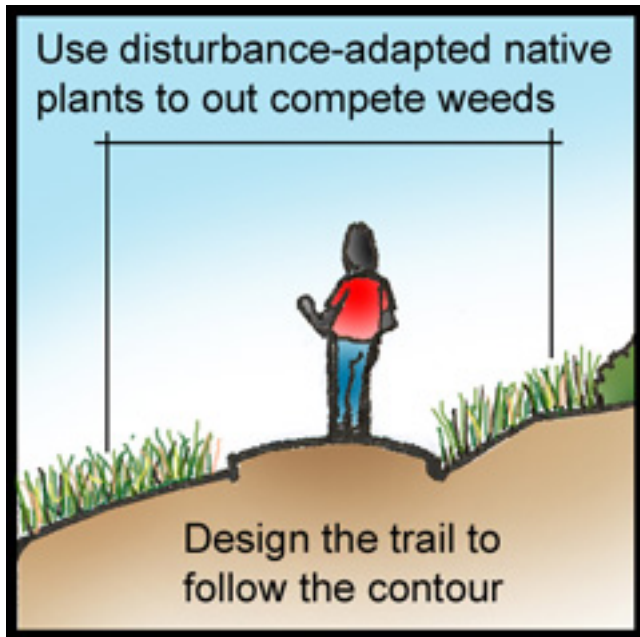


Photograph Source: Klaus Johansson Photography 2015

BMP's



Re-vegetate or
Seed Disturbed
Areas



Artwork Source: USDA National Agroforestry Center: www.nac.unl.edu.

BMP's



DO YOU KNOW WHAT IS HIDING IN YOUR SEED?



Undesirable plants
can be introduced through
contaminants in seed mixtures!

Before you buy seed, CHECK the
Certificate of Seed Analysis
to ensure that Invasive Plants are not
accidentally introduced to B.C.!

Source: Peace Forage
Seeding Tool:
www.peaceforagetool.ca

Germination - percent of
seeds that grow
Hard Seeds (only relevant
to legume seeds) -
seeds still included in
germination
Pure Living Seed - seed
that is pure and viable
Pure Seed = crop seed only
Inert Matter = stems, seed
husks, dirt, etc.

TZ = Tetrazolium test -
determines percent viable
seed

Signed and stamped by
accredited seed analyst
Place and date of analysis

Seed sealing number (lot number) Crop certificate number Crop kind and variety Seed testing certificate number

Report of Seed Analysis

This certifies that a sample of Creeping Red Fescue Boreal designated as 1357-9-060037 and was received from: _____ and was tested at: _____ Cert. No. 10-3772

with the following results:

WEED SEEDS: No. PER 25 GRAMS		OTHER WEED SEEDS		OTHER CROPS SEEDS	
Prohibited Noxious	0.0	None Found	0.0	None Found	
Primary Noxious	0.0				
Total Primary	0.0				
Secondary Noxious	0.0				
Total Primary plus Secondary		Total Weed Seeds of all Kinds	0.0	Total Other Crop Seeds Less than 1%	
Pure Seed	98.9%	Pure Living Seed	96%	Sweet Clover	0 per 25 grams
Other Crop Seeds	0.0%	Multiple Seed Units		Brassica Spp.	0 per 25 grams
Wheat Seeds	0.0%	Included in Pure Seed	0%	Sclerotia	
Inert Matter	1.1%	TZ	93%	Eroct	Less than 1%
				Germination	97.5%
				Hard Seeds	
				Germination	
				Inc. Hard Seeds	

Remarks:

This certifies that the sample of seed submitted from the lot designated above has been analyzed according to:
Methods & Procedures of Seed Testing, C.F.I.A.
C.F.I.A. Accredited Laboratory 1117

Date 18-Mar-11

Accredited Analyst

The responsibility for any seed sold under this Certificate with respect to Grade or any other specification rests entirely with the seller.



Play,Clean,Go



**STOP INVASIVE SPECIES
IN YOUR TRACKS.**

PlayCleanGo.org

STOP INVASIVE SPECIES IN YOUR TRACKS

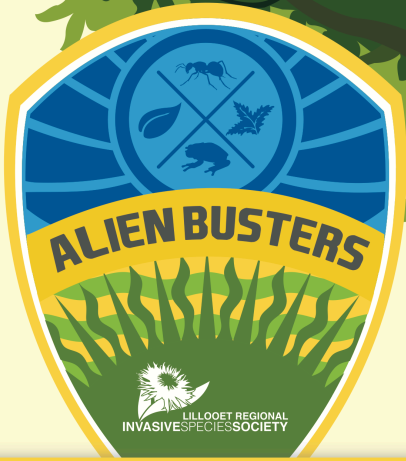


Help Prevent The Spread Of Invasive Plants And Animals

- REMOVE** plants, animals & mud from boots, gear, pets & vehicle
- CLEAN** your gear before entering & leaving the recreation site
- STAY** on designated roads & trails
- USE CERTIFIED** or local firewood & hay



Don't Plant or Grow invasives on your Property



SAVING THE LILLOET REGION
FROM ALIEN INVADERS

www.alienbusters.ca



GoodtoGrow

ALIENBUSTERS

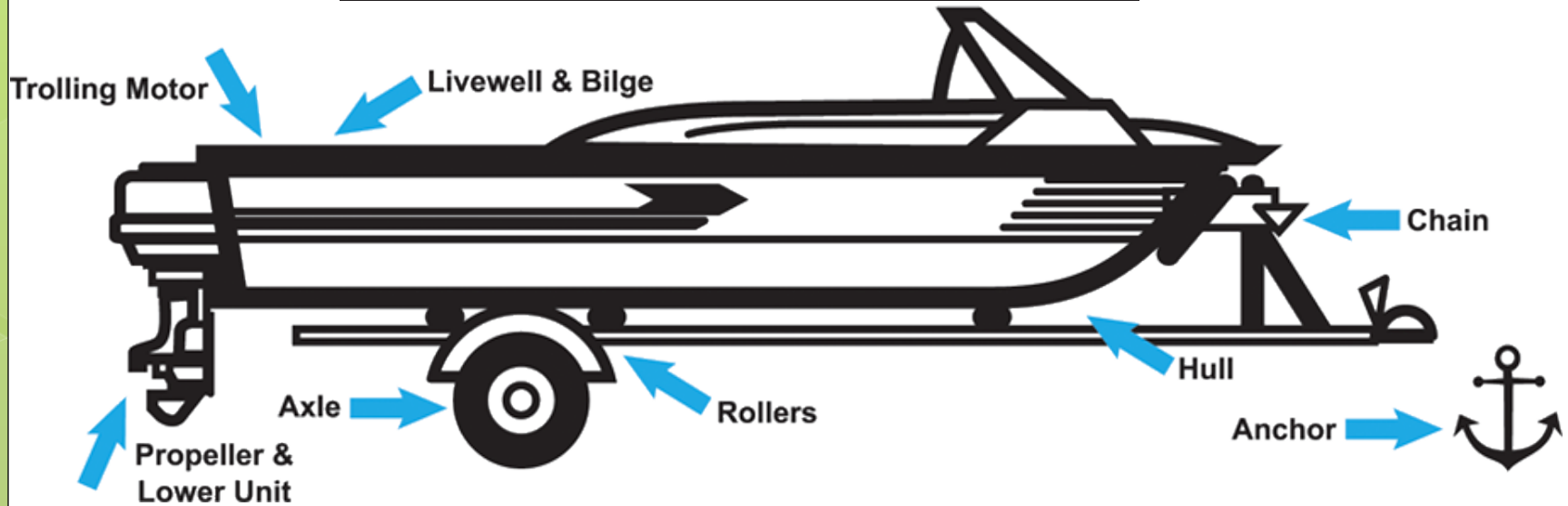
Don't Let your Pets Loose



Clean, Drain, Dry



DON'T MOVE A MUSSEL



HELP SPREAD THE MESSAGE, **NOT** THE MUSSEL.

DONTMOVEAMUSSEL.CA



One valley. One water.



oasiss

Okanagan and Similkameen
Invasive Species Society

BMP's



- Report infestations
- Remove small infestations
- Proper Disposal



Resources



Like our
Facebook Page



Tweet us at:
@Lrinvasives



Our website:
www.lriss.ca



Follow us on
Pinterest.



Report A Weed App



Plantwise App



Report an Invasive Species App

Funding

LRISS is generously funded by:



Including: BC Gaming and MOTI, SLRD Areas A & B

Questions?

Let us know if you have any questions.



Ministry of Forests,
Lands & Natural
Resource Operations

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MoFLNRO Invasive Plant Specialist:

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