



Industry Taking Action!

Winning the War on Invasive Plants in BC

IVMABC 2016 Conference, Prince George

*David Ralph – ISCBC Project Manager
Planning and Practices*





Overview

1. *Meet the ISCBC*
 - *Some of the Things We Do*
2. *Horticulture Industry Programs*
 - *Focus on Grow Me Instead / PlantWise*
3. *Resource Industry & Invasive Plant Programs*
 - *Focus on MoTI Gravel Pit Program*
4. *Let's Work Together*



Meet the ISCBC

- *Non profit charitable organization*
- *26 Board members*
- *10 Core Staff*
- *Our Story*





Invasive Species Council of BC

Through province-wide cooperation and coordination, the Invasive Species Council of BC works to:

- minimize negative ecological, social, and economic impacts
- reduce introduction, establishment, and spread of invasive species.



Meet The ISCBC

The Work We Do

- Education and extension
- Training
- Pesticide Applicator, Industry Workshops, Spotters, Aquatics,





- Networking



Meet The ISCBC

Canada 



THOMPSON RIVERS
UNIVERSITY



Meet The ISCBC

Programs



**BUY IT WHERE
YOU BURN IT.**

Don't Move Firewood





Meet The ISCBC

Resources



Knapweeds
Spotted • *Centaurea biebersteinii*
Diffuse • *Centaurea diffusa*

Updated July 2014

Legal Status
Invasive Plant Regulation,
Forest and Range Practices
Act (Nelson, West Coast),
IC Weed Control Act

Distribution
Currently distributed throughout
southern BC and one of major
concern in the Okanagan,
Peace River, Kootenays,
Okanagan, Thompson, and
Cariboo regions. Coordinated
efforts in southern BC are
underway to prevent or
minimize the spread of spotted
knaps. Coordinated efforts
in northern BC have resulted in
the eradication or containment
of spotted knaps. In
invasions, true monitoring and
preventing the threat of sublethal spread.

Identification
Flowers: Spotted Petals, sometimes white, found individually,
non-clubbed, at the ends of branches. Black-Knap Flower
heads are white with yellow centers. Diffuse white
flowers are smaller and less numerous. Spotted knaps are
found in clusters or solitary at the ends of branches, heads are yellowish
with a terminal fringe, sometimes spotted, tinged on the sides
and terminating in a slender tube or spike.

Stems: Spotted height to 1.5 m. Diffuse height 0.1 to 0.4 m.

Leaves: Spotted stem leaves are multi-lobed and decrease
in size toward the shoot. Diffuse stem leaves are smaller,
obovate, less lobed, stalkless, and become bristly near the
flower clusters. Spotted leaves are stalked and divided into narrow,
fairy segments.

Roots: Spotted: Seeds are collected. Diffuse: Seeds are light brown
to black in color, non-stalked.

Similar Species: Meadow Knapsweed has undivided leaves
and larger flowerhead stalks with corolla fringes of the fls.
Black Knapsweed has smaller leaves and no black marks
on the leaves. Black Knapsweed has undivided leaves and

TOGETHER • PREVENT • RESTORE

BE PLANTWISE

grow me instead

AVOID USE (Prohibited)

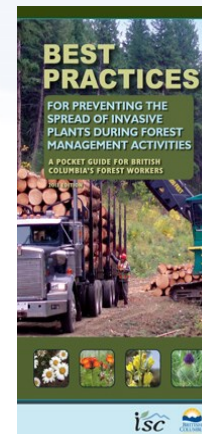
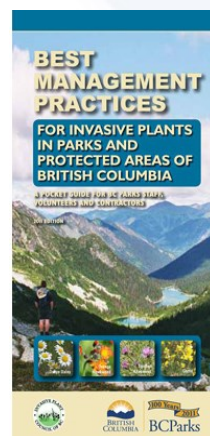
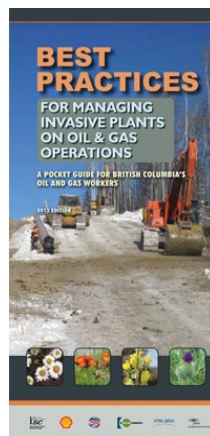
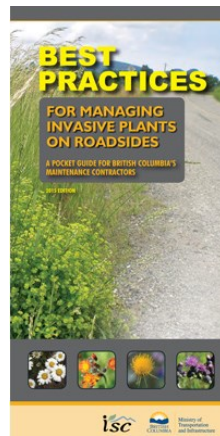
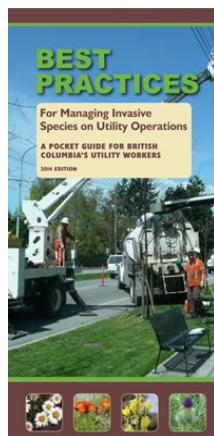
SAFER ALTERNATIVES (Recommended)

LEWIS' MACK ORANGE (Prohibited)

PROFITE SPACING (Recommended)

This Grow Me Instead Brochure profiles BC's most unwanted horticultural plants, along with their recommended alternatives.

A Guide for British Columbia 2013





Invasive Species Council of BC

ISCBC Programs

1. Behaviour Change Program

Clean Drain Dry

Don't Let It Loose

Play Clean Go

PlantWise

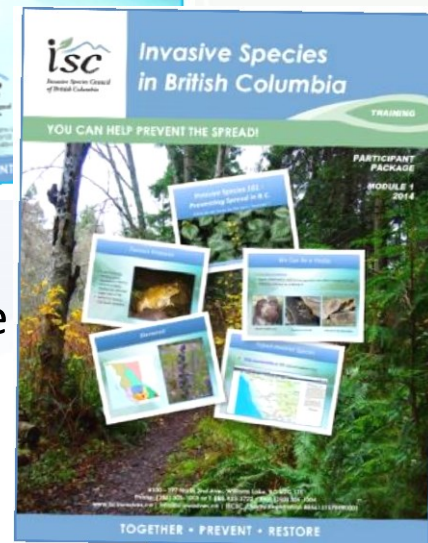
2. Education and Awareness

Teacher and youth resources, Girl Guides badge

Invader Ranger Program

3. Changing Practices

Training - oil and gas, forestry, transportation, utilities



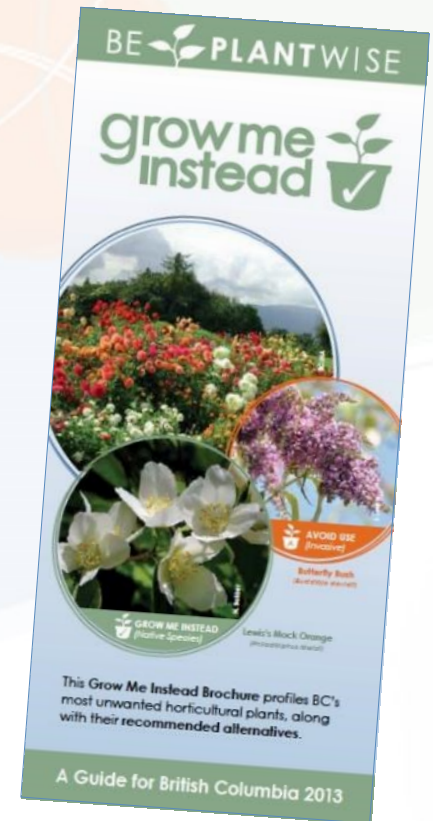


Horticulture Industry and Invasive Plants

Grow Me Instead

Grow Me Instead – a key component

- Supports gardeners and industry to reduce the distribution of invasive plants.
- Identifies 26 invasive plants frequently found in gardens across BC
- Offers *suitable alternatives* for all growing zones
- Available in multiple formats for use in garden centres and by the public

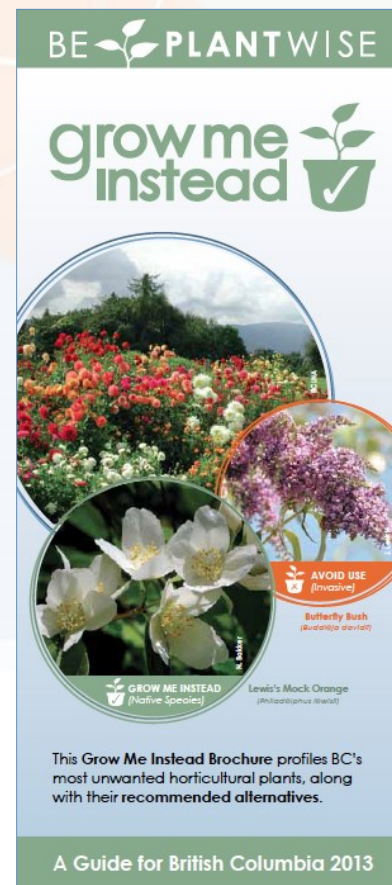


Developed in 2009

Grow Me Instead

Originally was 13 Species for Southern BC:

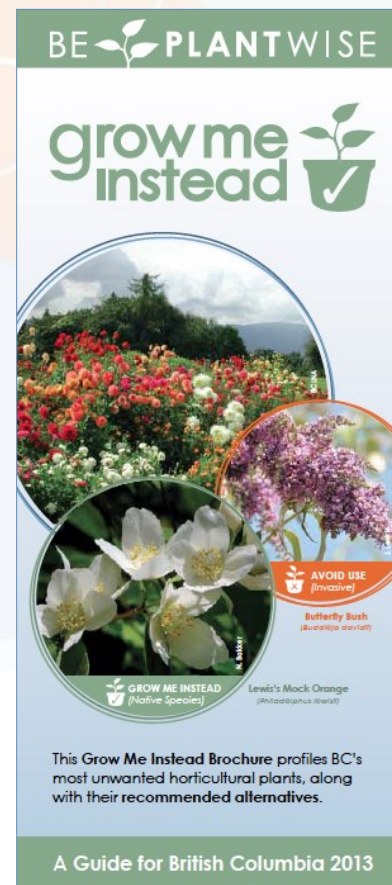
- Butterfly Bush
- Common Periwinkle
- Daphne
- English Holly
- English Ivy
- Giant Hogweed
- Himalayan Blackberry
- Himalayan Balsam
- Knotweeds
- Purple Loosestrife
- Scotch Broom
- Yellow Flag Iris
- Yellow Archangel



Grow Me Instead

Added 13 species to include all Growing Zones across BC:

- Baby's Breath
- Bachelor's Buttons
- Blueweed
- Common Tansy
- Field Scabious
- Flowering Rush
- Mountain Bluet
- Orange Hawkweed
- Oxeye Daisy
- Russian Olive
- Spurges
- Tamarisk
- Toadflax





Moved to PlantWise

Worked with Horticulture Industry

- To develop practical and effective program
- Focused on 'garden plants' that were in the trade- now or recently
- Ensured native and non-native alternatives
- Involved: BCNLA, Retailers, Landscapers, Growers, Invasive Species experts





PlantWise

PlantWise Program

- Combines industry initiatives with consumer purchasing tools and resources
- Supports the horticulture industry's transition to becoming invasive-free
- Builds consumer demand for non-invasive plants.

BE  PLANTWISE



Resources for Horticulture

INDUSTRY

- PW Industry Partnership Program Guide
 - Code of Conduct
 - Orientation & Info
- GMI Resources
- Signage
- Training (*optional*)
- Mobile App
- Microwebsite



Code of Conduct

- Stay informed about local invasive plants
- Educate folks to 'select the right plant for the right place'
- Select non-invasive plants to sell
- Phase out known invasive plants
- Offer alternatives
- Report sightings in your area
- Use proper disposal methods





PlantWise

Benefits for Industry

- Recognition as a “green” community leader
- Enhanced sales of non-invasive alternatives
- In-store promotional materials including signs and resource information
- Widespread promotion of partnership through websites, mobile app, print material and press releases, etc.

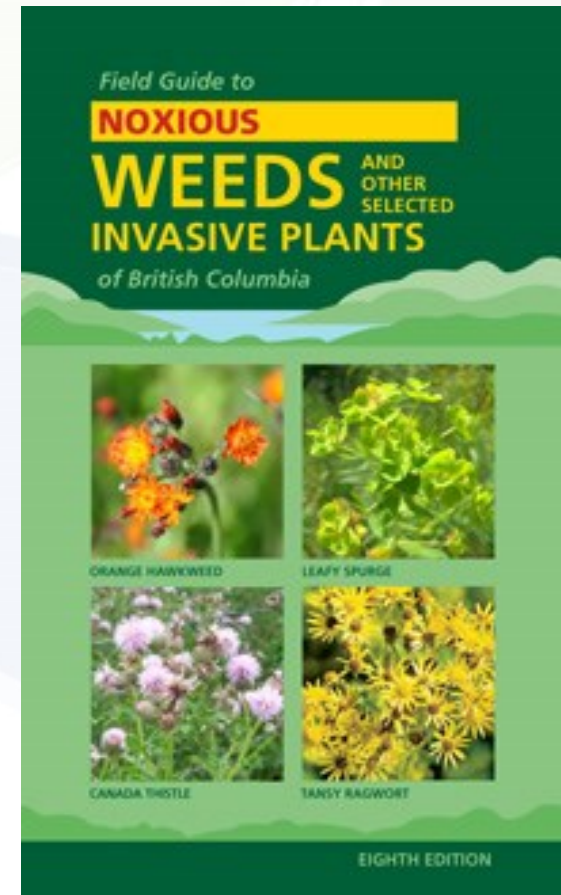
BE  PLANTWISE



Legislation

Revision of the BC Weed Control Act Regulations

Strengthen powers of the regulations to include potential changes in sales of listed noxious species in the nursery trade



Resources for Gardeners CONSUMERS

- Grow Me Instead resources
- Poster
- Mobile App
- Microsite

The collage features several PlantWise resources:

- BE PLANTWISE grow me instead**: A poster showing various plants and a warning to 'AVOID BUY (or using) Invasive Species'.
- BE PLANTWISE Good to Grow**: A poster showing three plants (Pearly Everlasting, Blackberry, and California Poppy) with checkmarks, indicating they are recommended alternatives.
- BE PLANTWISE**: A microsite showing a potted plant and the text 'Avoid purchasing 26 of BC's Most 'Unwanted' Horticulture Plants and choose the Recommended Alternatives instead'.
- BE PLANTWISE**: A mobile app interface showing the 'grow me instead' logo and a list of plants.



PlantWise

Ambassadors Outreach Program

Regional Committees, Master Gardeners,
stewardship groups, local governments

- Commitments, events, outreach

Province-wide!





Resource Industry and Invasive Plants

Any land-based activity that transports seed and soil and leaves soil exposed can lead to invasive plant spread.





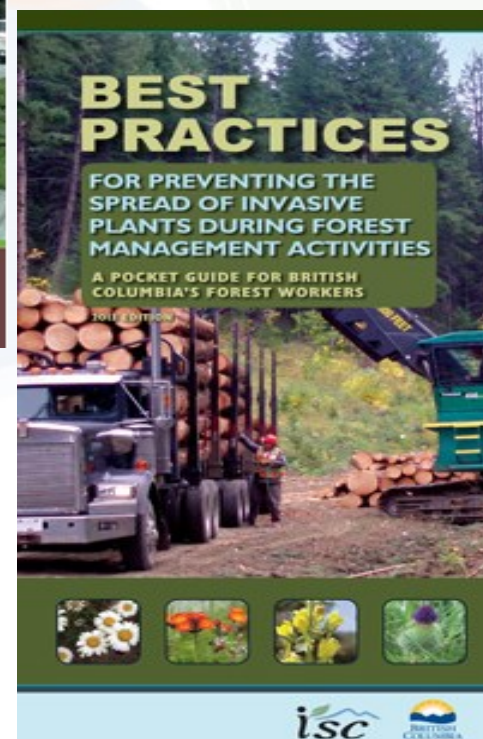
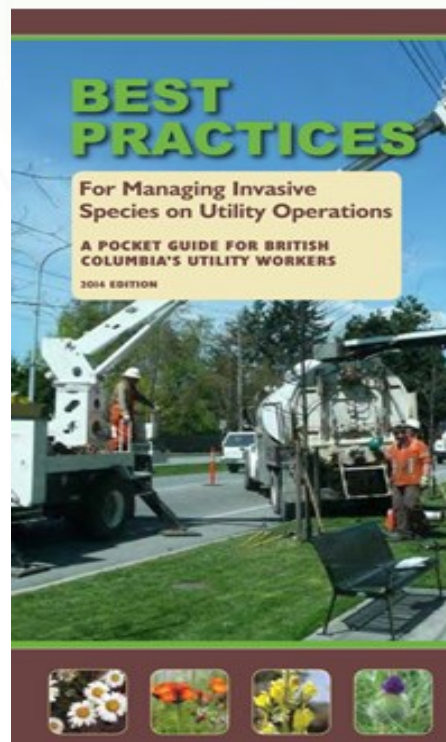
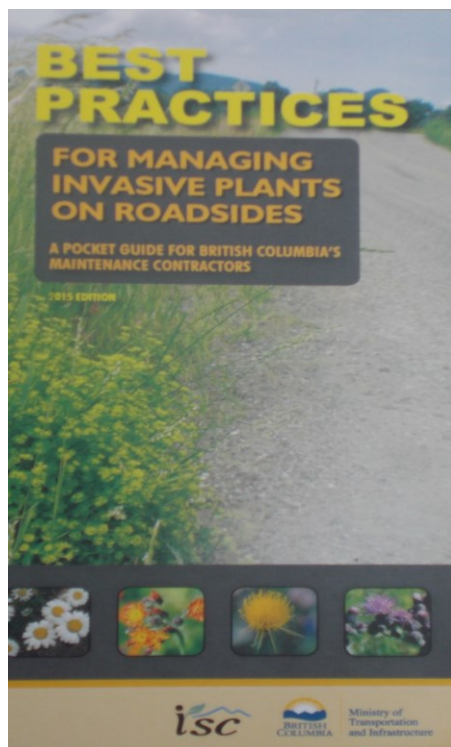
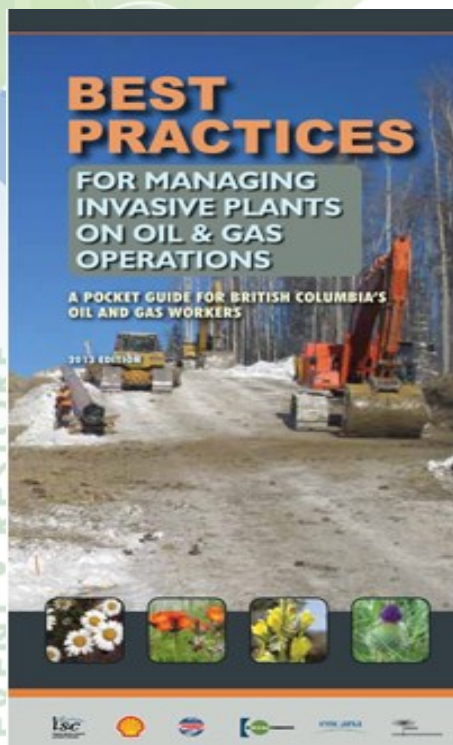
Prevention & Control

- *Identify sources of spread or introduction*
- *Take appropriate actions to prevent introduction and spread*
- *Identify infestations*
- *Report new occurrences*
- *Develop strategy to manage invasives*
- *Identify Goals (general direction) and Objectives (specific aims)*
- *In-house or source out*
- *Carry out management and keep records*
- *Monitor success or lack of*
- *Adjust prescription if required*





ISCBC Industry Programs





Pathways & Vectors

Powerlines





ISCBC Industry Programs

Utilities

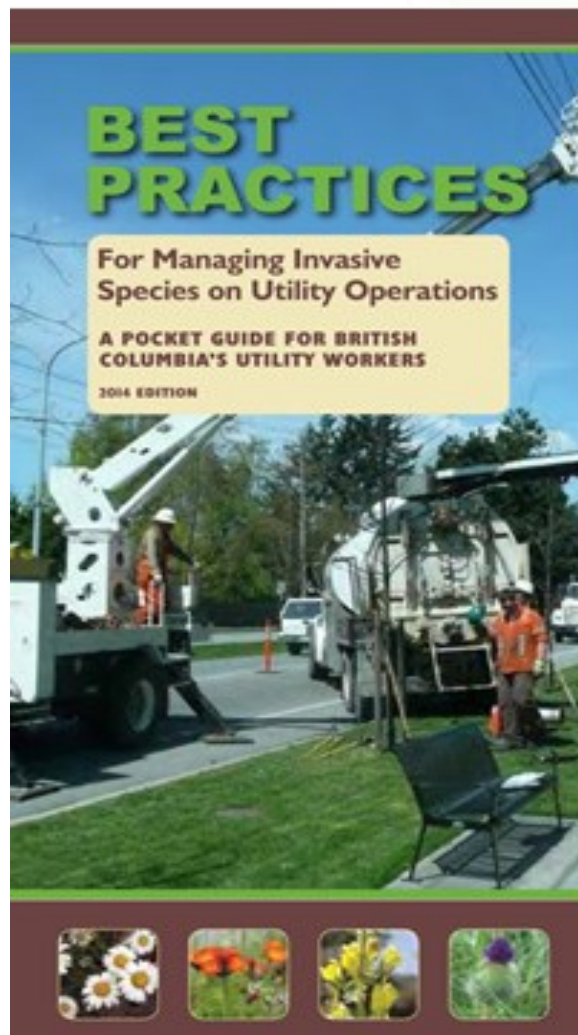


Table of Contents

Invasive Species and Why You Should Care.....	2
Invasive Species Regulations related to Utility Operations	7
Best Management Practices for Utility Workers	10
Key Best Practices	11
7 YHJUMY'cZGYX'5bUnglg	12
Aquatic Invasive Species	27
Other Invasive Species	29
Reporting Invasive Species	30
Priority Invasive Plants in BC	31
(see Invasive Species Index for complete list of plant species)	
Regional Invasive Plant/Species Committees	75
For More Information	77
Glossary	79
Invasive Species Index	80



Cleaning Station



Seismic Surveys

Pathways & Vectors



B.Purdon





ISCBC Industry Programs

Oil and Gas

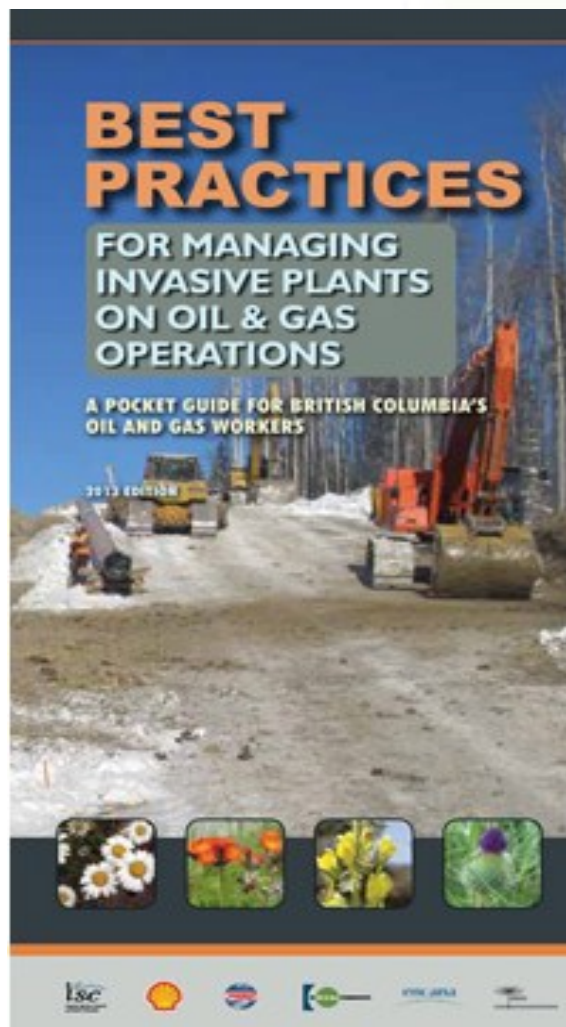


Table of Contents

Invasive Plants and Why You Should Care	2
Oil & Gas Regulations	6
Invasive Plant Best Practices for Oil & Gas Workers	9
Key Best Practices	10
Certificate of Seed Analysis	13
Aquatic Invasive Species	25
Invasive Diseases	26
Reporting Invasive Plants	27
Priority Invasive Plants in Northern BC	30
Regional Invasive Plant/Species Committees	48
Contact Information	49
For More Information	52
Glossary	54
Invasive Plant Index	55

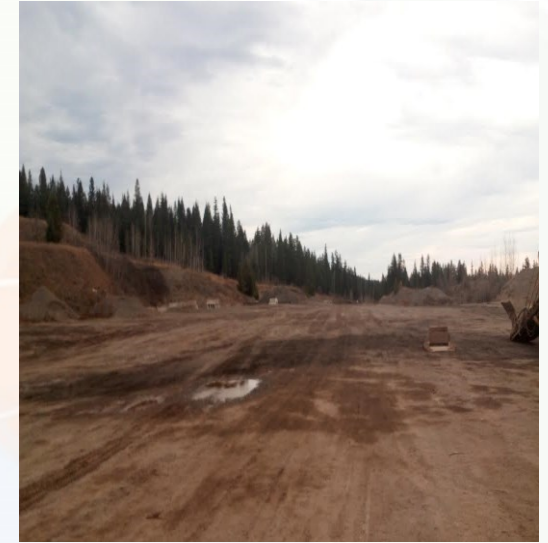


Scentless chamomile in a gravel pit.



Spectra and MoTI Working Together to Help Stop the Spread

122 Mile Pit



Lac La Hache Pipeline reconstruction





Pathways & Vectors

Contaminated Equipment





ISCBC Industry Programs

Forestry

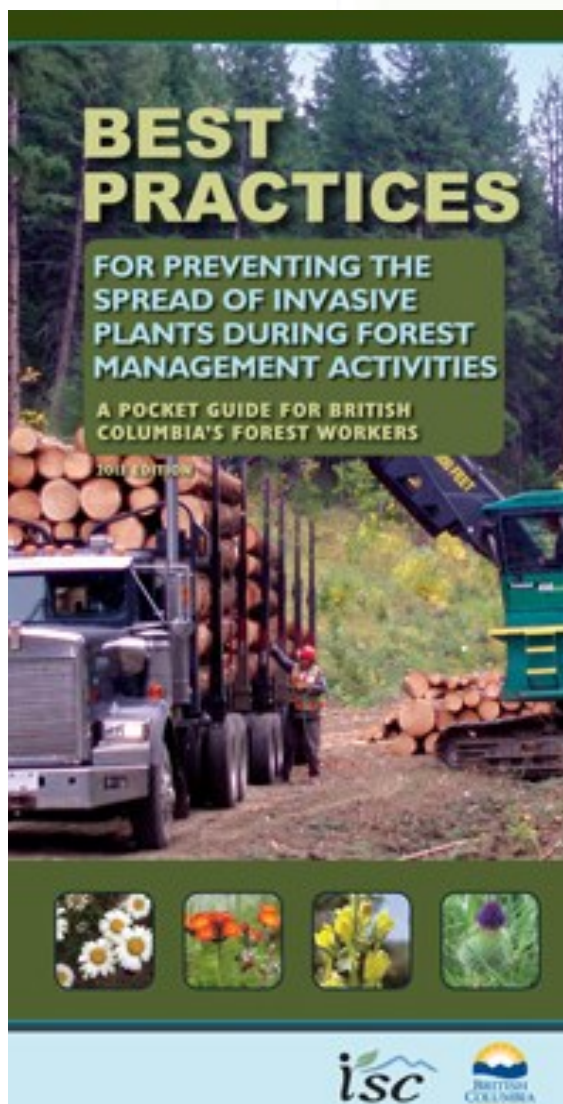


Table of Contents

Invasive Plants and Why You Should Care	2
Legislation and Commitments	4
Forestry Activities that Affect Invasive Plant Establishment and Spread	6
Invasive Plant Best Practices	8
Reporting Invasive Plants	19
Priority Invasive Plants Affecting Forest Management in B.C.	21
<i>(see Invasive Plant Index for complete list of plant species)</i>	
Assistance With Invasive Plants	62
Regional Invasive Plant/Species Committees	63
For More Information	65
Glossary	67
Invasive Plant Index	68



Field scabious in pine plantation.



Pathways & Vectors

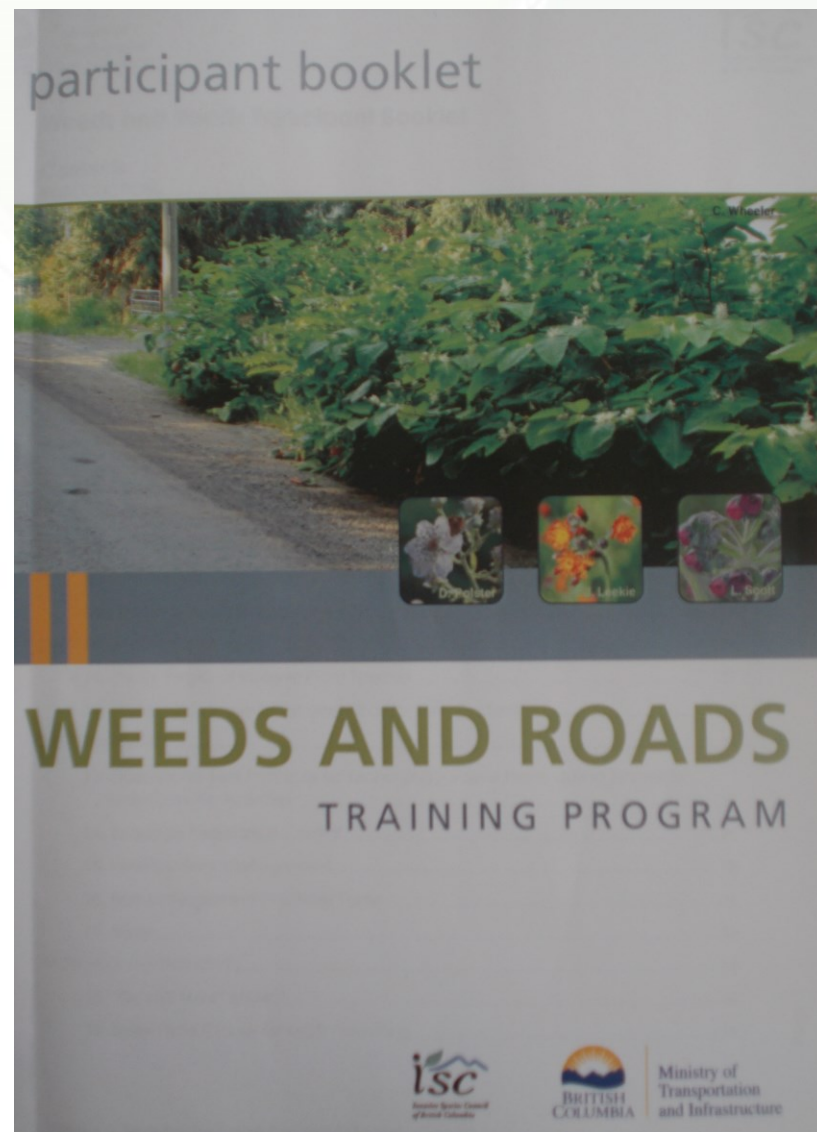
Gravel Pits and Quarries- contaminated material





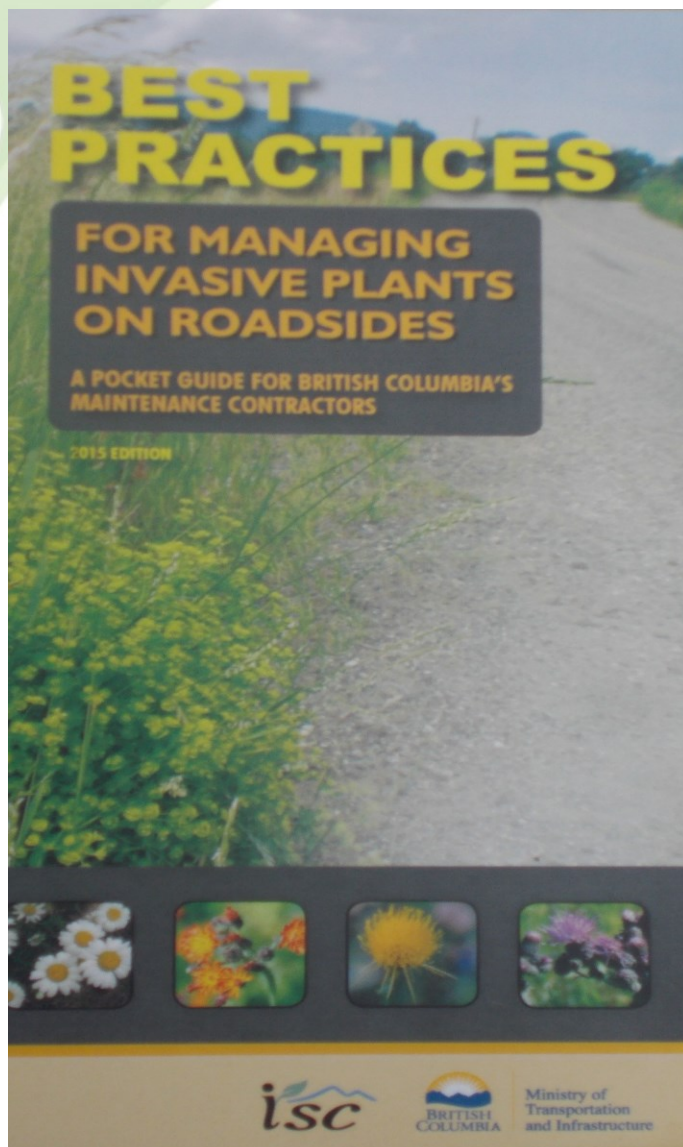
ISCBC Industry Programs

- ISCBC and MoTI collaboration designed to bring together Ministry staff, Maintenance Contractors and Regional Invasive Species Councils to focus on preventing spread of invasive plants along roadways during routine maintenance operations.
- Training sessions are one day and interactive focusing on practical solutions





ISCBC Industry Programs



Ministry of Transportation
and Infrastructure
Gravel Pit Program

- *MoTI Regional and District Managers*
- *Maintenance Contractors*
- *ISCBC*
- *ISCBC/JCP Teams*
- *Contractors*



ISCBC Industry Programs

- *Develop Management Plans for each pit*
- *Identify areas for glyphosate use*
 - *Transient aggregate*
 - *Sand piles, rock piles, surfacing material, winter abrasives*
- *Identify area for aminopyralid use*
 - *Areas where non-transient materials exist*
 - *Perimeter areas, roads, roadsides, parking areas, vegetated areas*
- *All noxious species treated*
- *Pit areas treated and product used mapped*
- *RoW outside pit perimeter also treated*



ISCBC Industry Programs

- *Identify Priority Pits*
 - *Vectors for spread*
 - *Pit Run*
 - *High Fines for surfacing*
 - *Winter sand*
 - *Winter abrasives*
 - *Shoulder gravelling*
- *22 Pits in Thompson Nicola and Cariboo in 2015*
- *13 Additional Pits in Thompson Nicola and Cariboo in 2106*
- *92 other pits attended by JCP teams in 5 regions*



ISCBC Industry Programs

- *Glyphosate treatment site area*





ISCBC Industry Programs

*Aminopyralid treatment
site areas*





ISCBC Industry Programs

*Aggregate piles
would have
invasive species
plants pulled,
bagged and
disposed of if
mature and
possible
glyphosate
treatment*





ISCBC Industry Programs

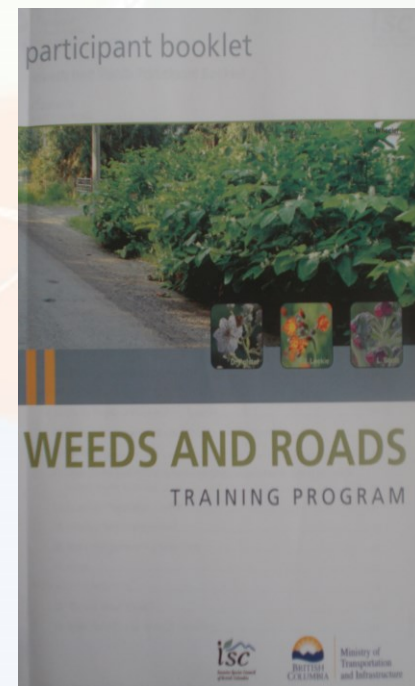
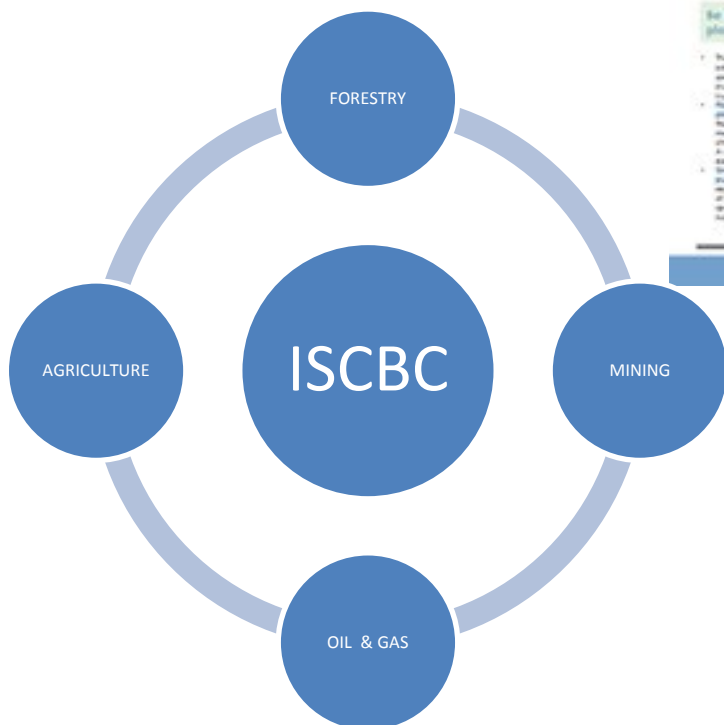
- *High Vector Pit - Savona*
- *Use both glyphosate and aminopyralid effectively and*
- *Grasslands enhanced*
- *Major transportation corridors addressed*





Lets Work Together

- Prevention
- Education
- Partnership
- Training



Webinar Archive

Welcome to ISCBC's Webinar Archive!

We hope you enjoy these completed webinars, provided for those who were unable to attend. See below for PDFs of speaker powerpoints (where applicable) as well as links to view each recorded webinar. For scheduled webinars as they are offered, please [click here](#).



Becky Brown, P.Ag.
Invasive Plant Specialist - Provincial Early Detection Rapid Response Coordinator, B.C. Ministry of Forests, Lands & Natural Resource Operations (MFLNRO)

Title: B.C. Invasive Plant Early Detection Rapid Response: Boot Camp Without the Sweat (slender false brome, flowering rush shiny geranium)
Date: Wednesday June 29th, 2016 from NOON - 1PM PST
Description: Find out how to become involved in the BC Invasive Species Early Detection Rapid Response Program by learning how to identify and report three important candidate species for eradication. Find out where these species are located, why they are problematic, what is being done about them and how you can help!

Bio: Becky Brown is a Professional Agrologist and an Invasive Plant Specialist (MFLNRO). She has a B.Sc. in Environmental Science from Royal Roads University and a Technical Diploma in Environmental Planning from Selkirk College. Becky has been working in BC's natural resource industry in the public, private and non-profit sectors since 1996 and draws on a broad range of experience in land use planning, management and environmental science to support development and implementation of the



Thank you for your Attention

Do You Have Any Questions

David Ralph, Project Manager

Invasive Species Council of BC

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(250) 319-5646

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HIGHWAY SHOULDER MAINTENANCE AND GRAVELLING

	 Remove invasive plants prior to seed set.
	 Only use invasive plant free fill materials.
	 Minimize unnecessary disturbance of vegetation and soils.
	 Do not park in infested areas.
	 Wash equipment to remove invasive plants.





INVASIVE SPECIES

Why should you care?



OUR ENVIRONMENT

Invasive species can alter habitats and the essential ecosystem functions. They are the **second greatest threat to biodiversity** after habitat loss.

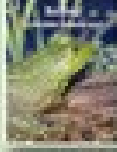


OUR ECONOMY

Once established, invasive species can be **difficult to manage, that's expensive to eradicate**. According to Environment Canada, the estimated annual cost of invasive species is between \$1.1 to \$2.6 billion, and invasive species that damage the agricultural and forestry industries result in an estimated \$1.5 billion of lost income annually.

Prevention is key! An economic risk outlined by the Ministry of Environment has estimated that if weeds and invasive insects entered at 50%, they would create costs of \$71.7 million per year in damages to industrial firms, transportation facilities, and the public from soil failure and environmental damage. Greater agricultural impact from native fish species.

"Government has prevented flooding in the range of 16 million to 18 million acres the years in invasive species. It takes only weeks to be identified to have an effective response."



OUR COMMUNITIES

Once established, invasive species can result in:

- loss of income or industry (e.g. reduced tourism, productivity)
- reduced water quality and quantity (from increased erosion and sedimentation)
- reduced property values
- damage to private property and infrastructure
- loss of native vegetation
- reduced food and water recreational opportunities
- increased control and management costs
- export and import trade restrictions
- risk to health and safety (e.g. allergens and toxins potentially released for people, pets, livestock, and wildlife)



REPORT INVASIVE SPECIES

- Call 1-800-960-0700 (ICBC)
- Report it **Now** (app or online) www.reportinvasivespecies.ca
- Contact your **regional invasive species committee** or regional government (e.g. province, territory, or country)
- Report sightings of invasive species to the nearest ICBC office and contact (ICBC) hotline 1-877-960-0700

INVASIVE SPECIES COMMITTEE OF BRITISH COLUMBIA
2014-2015
This report is for informational purposes only. It is not intended to be used as a legal document. For more information, please contact the ICBC office.







TOGETHER • PREVENT • RESTORE



Prevention & Control

Prevention and Control Can....

- Control erosion
- Decrease wildfire fuel loads
- Eliminate a health hazard
- Preserve existing valuable vegetation
- Maintain line-of-sight
- Save you \$\$\$\$\$\$

HIGHWAY SHOULDER MAINTENANCE AND GRAVELLING





Impacts

Economic

- Control and management costs
- Reduce productivity (industry)
- Cause trade restrictions
- Reduce property values

The estimated damage from invasive species worldwide totals more than \$1.4 trillion, or five percent of the global economy.

The annual U.S. cost from invasives is estimated to be \$120 billion, with more than 100 million acres affected (i.e., about the size of California).

The economic impact caused by the six invasive plants in Canada was predicted to be a minimum of \$65 million in 2008, rising to \$139 million by 2020.

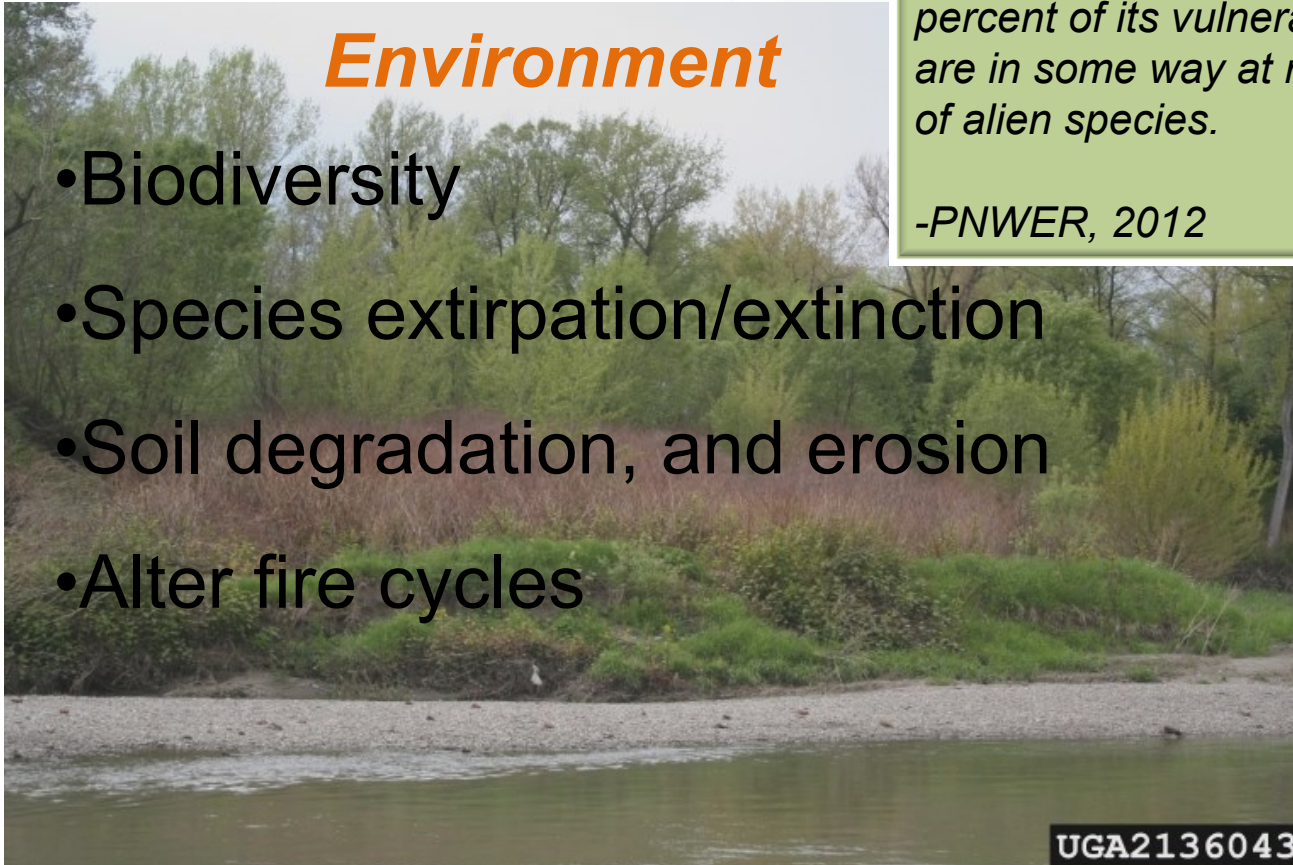
- PNWER, 2012

Environment

- Biodiversity
- Species extirpation/extinction
- Soil degradation, and erosion
- Alter fire cycles

About 25 percent of Canada's endangered species, 31 percent of its threatened species and 16 percent of its vulnerable species are in some way at risk because of alien species.

-PNWER, 2012



UGA2136043

Social

- Disease
- Human/animal suffering
- Reduce recreational opportunities



Severe skin damage from Giant Hogweed (*Heracleum mantegazzianum*)

What is Giant Hogweed, and where is it found?

Giant Hogweed (scientific name: *Heracleum mantegazzianum*), also known as the Giant Cow Parsnip, is a large perennial (survives for more than one year) plant in the Parsley family. It thrives near streams, creeks, ditches, roads, and in vacant lots (areas that are moist to wet), throughout south and central Vancouver Island, the Gulf Islands, and Greater Vancouver. It is not native to B.C. and was originally imported from Asia as a garden curiosity. The plant is very large, growing up to 6 metres tall, with leaves as much as 1.5 metres across. After a few years of growth, the plant will bloom in summer, forming large clusters (up to 1 metre in diameter) of small white flowers.



Giant Hogweed growing in a ditch

Which parts of the plant are poisonous?

The toxins are concentrated in the sap of the stalk, stems, and leaves. Giant Hogweed is listed as a poisonous plant with the Canadian Poisonous Plants Information System.

What happens if I touch parts of the plant?

The plant sap contains photosensitive chemicals (furanocoumarins) that become toxic on contact with sunlight. The reaction can take place in as little as 15 minutes; however, you will not see or feel any effects for many hours. This makes the plant particularly dangerous for children, who have used the thick, hollow stems for "pea shooters" and "telescopes." The skin will redden and blister, followed by inflammation, two or three days later. After a week, the affected skin will darken and this pigmentation can last for months or years.



Giant Hogweed flowers



Pathways & Vectors

Pipelines

