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Invasive Plant Management: Provincial Program

*IVMA Forum
November 7, 2018*

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Operations and Rural Development

AGENDA

- Inter-Ministry Invasive Species Working Group
- BC Invasive Species Early Detection and Rapid Response Plan
 - New Invaders to the Province
- Setting IP Priorities for Crown land
- Delivery of Management Actions
- Wildfire Recovery
- Aquatic Invasive Plants



Inter-Ministry Invasive Species Working Group

- Established 2004 – focus on invasive plants
- 2008 – expanded to invasive species
- Broad membership across government
- Report to IMISWG Assistant Deputy Minister's Committee





Inter-Ministry Invasive Species Working Group

PURPOSE:

To ensure coordinated, collaborative, and cost-effective delivery of provincial government invasive species programs through science-based strategic planning, harmonized robust legislation, acquisition of resources, and reporting.

IMISWG

Membership:

- Forests, Lands, Natural Resource Operations and Rural Development
- Environment and Climate Change Strategy
- BC Parks
- Agriculture
- Transportation and Infrastructure
- Energy, Mines, and Petroleum Resources
- Municipal Affairs and Housing
- Indigenous Relations and Reconciliation
- Royal BC Museum
- OGC

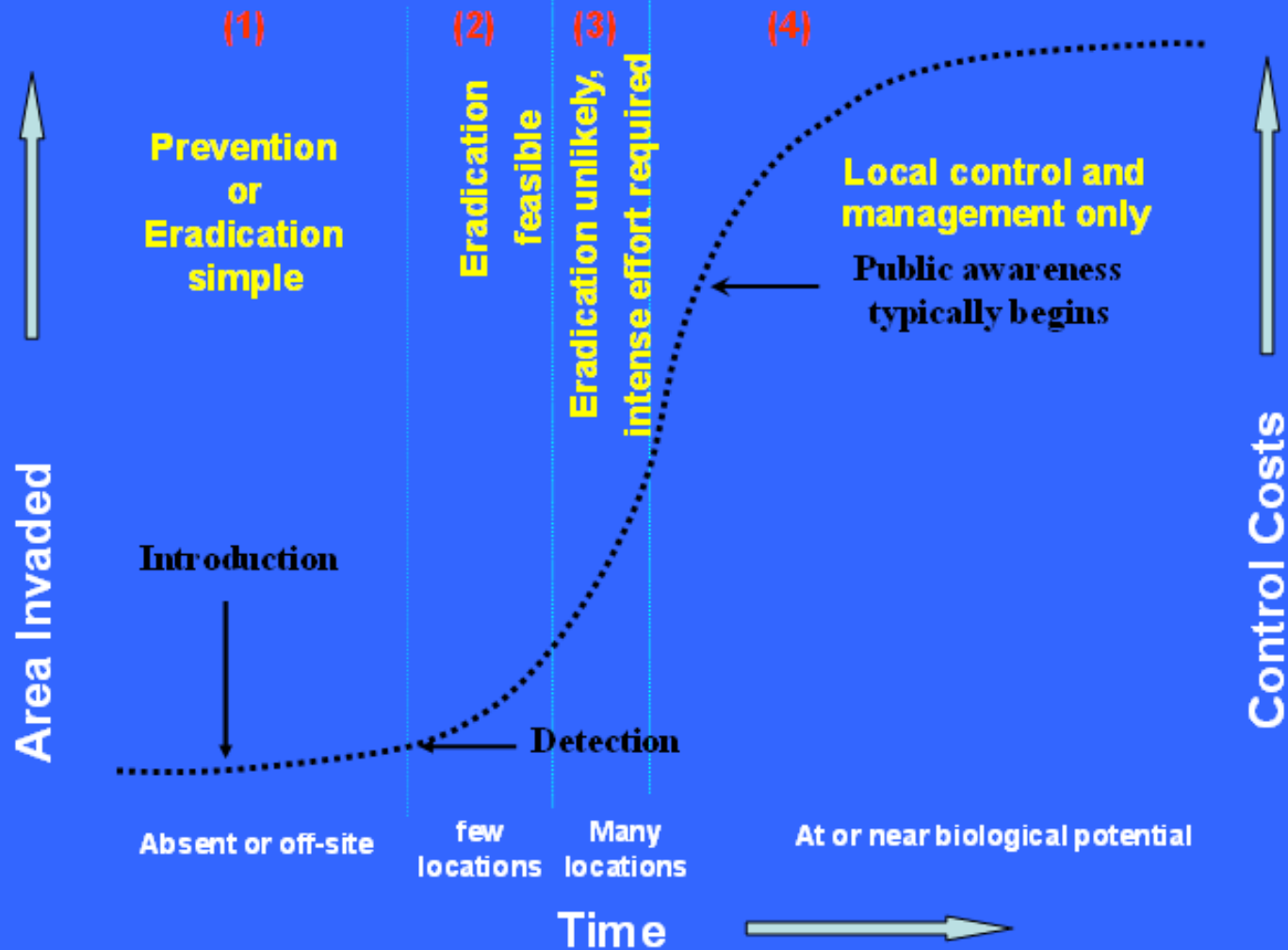
IMISWG

RESULTS TO DATE:

- Cross Ministry resource sharing (staff & \$)
- Establishment of common Invasive Plant priorities
- Collaborative projects ongoing
- Risk Assessments of species / pathways
- Legislative GAP analysis completed
- Invasive species Policy established & in development



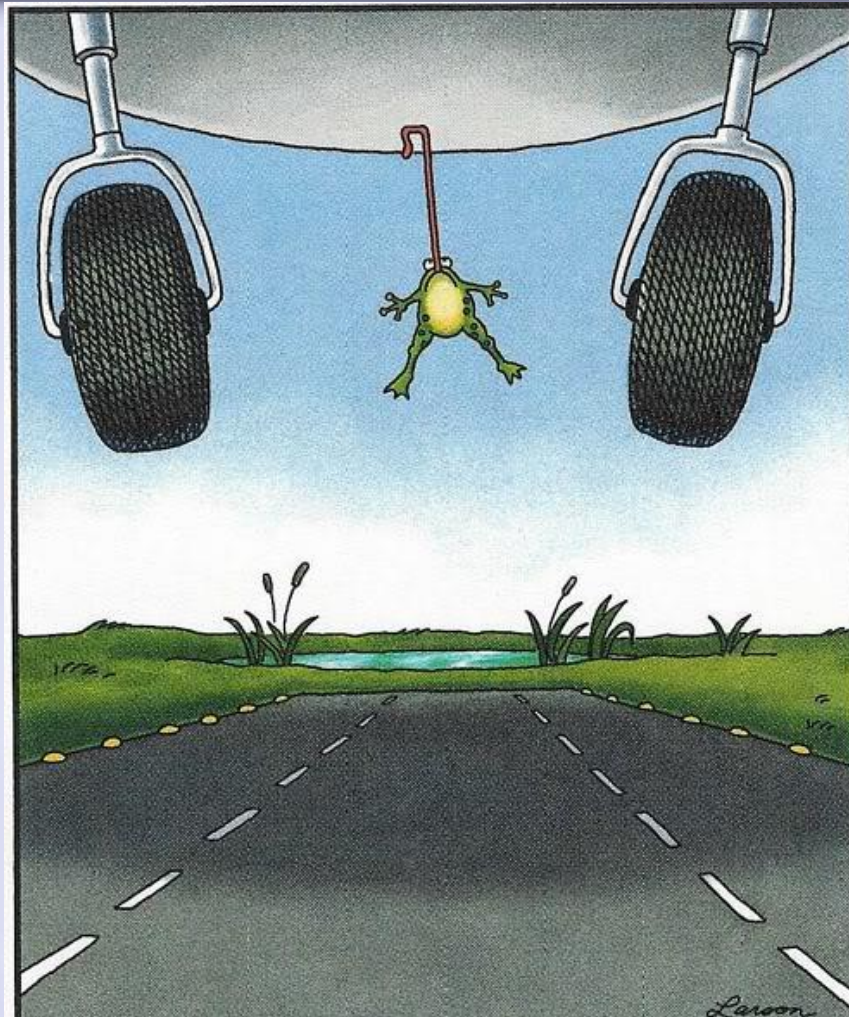
Invasive Species Increase Over Time and Control Potential



Modified from Hobbs & Humphries 1995



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Fly Away, Stanley! Be Free!

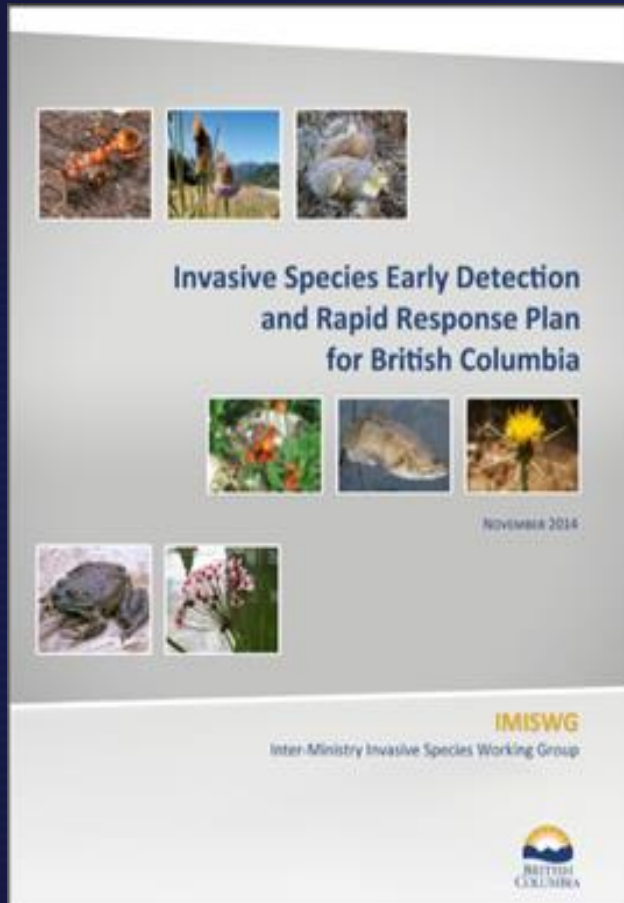
Principles of EDRR:

- # 1:** Prevention and early intervention provide the most cost-effective means of invasive plant management.
- # 2:** Early detection and a rapid response provide opportunities to eradicate or minimize the impacts
- # 3:** Risk assessment on the level of threat informs the level of response.
- # 4:** Coordinated response planning and implementation with key stakeholders provides the greatest likelihood of success.
- # 5:** Landowner awareness and community involvement are essential for timely and effective EDRR.



BC Invasive Species Early Detection and Rapid Response (EDRR) Plan (2014)

www.invasive-species.gov.bc.ca



SCOPE OF PLAN:

INCLUDED

- Newly detected terrestrial or aquatic species on any jurisdiction in BC
- Species thought to have been eradicated through previous management efforts
- Species that have been known to occur in B.C. for some time, but thought to exist at a density and distribution where eradication/containment is still possible
- Species on the prohibited list

EXCLUDED

- Species that are widespread in BC
- Regional EDRR species
- Species identified on a federally regulated plant list
- Species that are determined to be of low risk to BC



Flowering rush, *Butomus umbellatus*

EARLY DETECTION RAPID RESPONSE PROCESS FOR B.C.



**Contain Known
Infestations**



New Invaders and threats



Patterson's curse



Dyers woad



Yellow starthistle



Kudzu



Texas blueweed

Not found in BC.... Yet



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New Invaders and Threats



Shiny geranium



Common reed



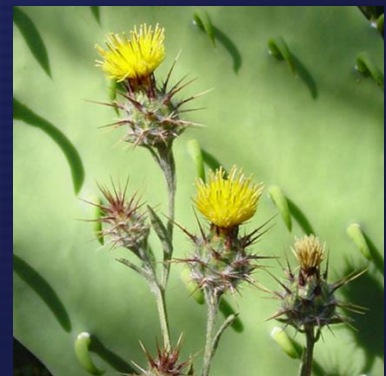
Mouse-ear hawkweed



Black henbane



Spartina spp.



Maltese starthistle



Perennial pepperweed

Confirmed in BC -
treating/containing all

New Invader: North Africa Grass (*Ventenata dubia*)



New Invader: Maltese Starthistle

(Centaurea melitensis)



Sites: Salt Spring;
Samuel &
Georgeson Islands;
Saturna Island;
Mayne Island; DND
land North of
Nanaimo

EDRR LESSONS LEARNED

- Ensure legislation is **STRONG**
- “Shelf ready” risk assessments
- Streamline permitting process for herbicides
- Dedicated resources are needed
- **COMMUNICATE** and **COOPERATE!**
- Contain/treat known sites ASAP



Yellow starthistle,
Centaurea solstitialis



Kudzu, *Pueraria lobata*



Medusa head,
Taeniatherum caput-medusae



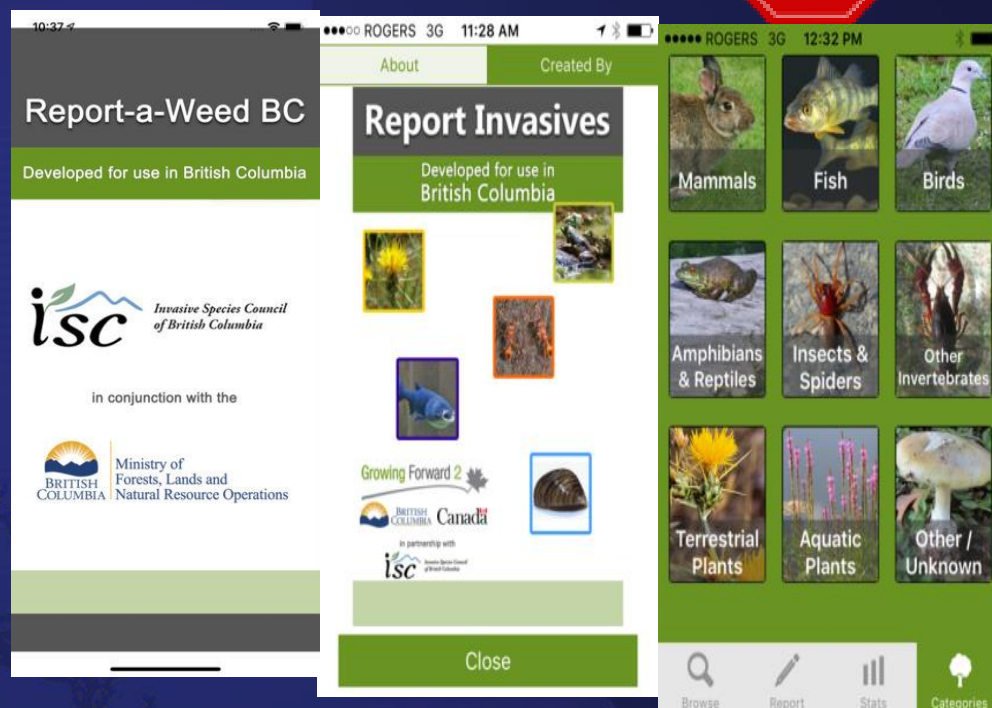
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Reporting & Website



- Smartphone apps
- Online form
- IAPP



www.gov.bc.ca/invasive-species

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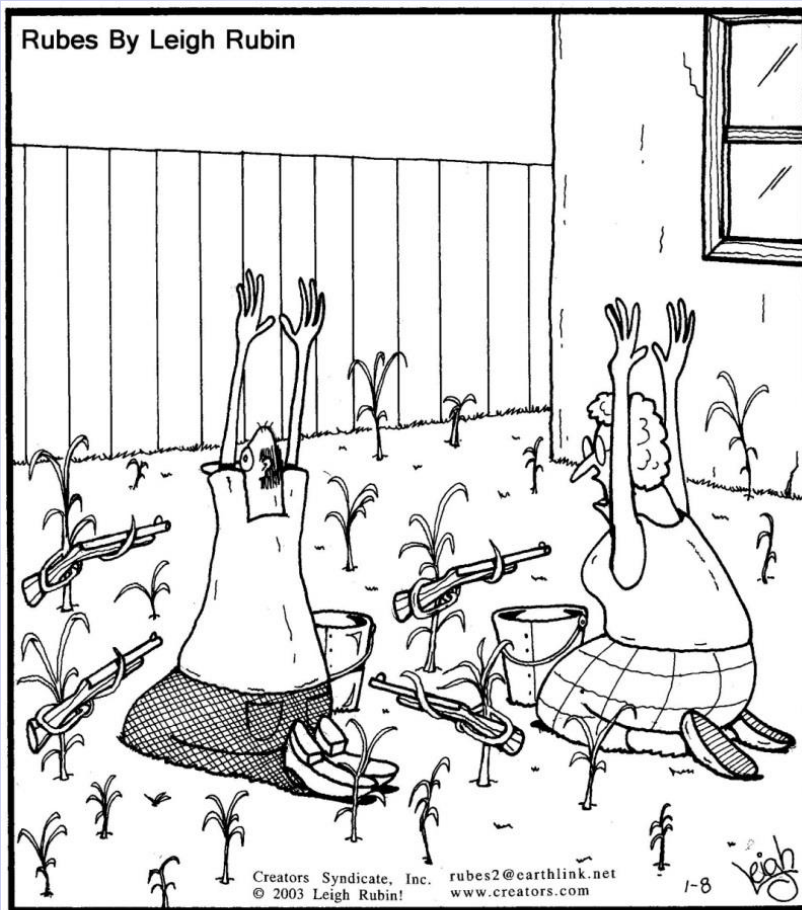


How are Invasive Plant Species Priorities Determined???





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Controlling Established HIGH RISK Invasive Plant Species

"We never should have waited this long ...
Now the weeds have *completely*
taken over."



Ensuring a Scientific Base in Decision Making

Factors reviewed:

1. Presence/absence in the province
2. Potential/actual impacts
3. Likelihood of spread (vectors)
4. Current and potential distribution
5. Confidence in current inventory data



Ensuring a Scientific Base in Decision Making

Factors reviewed:

6. Threat to special values (e.g. rare & endangered species; seed industry)
7. Threat to human and animal health
8. Longevity of the problem in BC
9. Difficulty to control
10. Invasiveness - disturbance Y/N



“Top 25”

- Identification of highest risk species
 - Provincial scope
 - Science based review
 - Annual update
- Analysis of distribution across BC
- Foundation to determine funding allocations amongst partners



IP Management Delivery

1. Government Staff
2. Contracts – joint TRAN/FLNRORD;
some BC Parks
3. Partnership Delivery –
 - Regional invasive species organizations
 - Local governments





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Wildfire Recovery

- Analysis
- Identifying opportunities
- Improving future practices
- Collaborating across Ministries





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AQUATICS, AQUATICS, AQUATICS..... And Riparian areas too.





CHALLENGE: Knotweed

Issue - Water to 1m
above HWM

Impacts to:

- Streamside stability
- Water quality
- Fisheries values





SOLUTION: Pesticide Use Permit

- Nimpkish River
 - September 2018 treatments
 - 40 sites treated





AQUATIC IP CHALLENGES

- Introduction of new species
 - Horticulture; watercraft movement
- Finding established populations
- Tools to address high risk species
 - Limited options
 - \$\$\$\$\$\$



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CONTROL & MANAGEMENT APPROACHES

Mechanical Treatment Trials

- Provincial In-stream Work Notifications
- Fisheries Act Project Reviews - DFO
- Access
- Private Land Owner Permission to Treat



**SUBSTRATE
BARRIERS**



SUCTION DREDGING TRIALS



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CONTROL & MANAGEMENT APPROACHES

Mechanical Treatments

- Bouchie Lake Flowering Rush Suction Dredging





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CONTROL & MANAGEMENT APPROACHES

Aquatic Herbicide Treatments

- Federal Emergency Registrations
- Provincial Pesticide Use Permits - Public Consultation
- Provincial In-stream Work Notifications
- Fisheries Act Project Assessment
- Private Land Owner Permission to Treat
- Access



Date & Time: 10 Aug 10 05:46:00 PDT 2010
Position: +050.14142 N -122.04500 W
Altitude: 644m
Datum: WGS-84
Azimuth/Bearing: 031° N31E 0551mils (True)
Elevation Angle: -10.8°
Horizon Angle: +01.6°
Zoom: 1X



CONTROL & MANAGEMENT APPROACHES

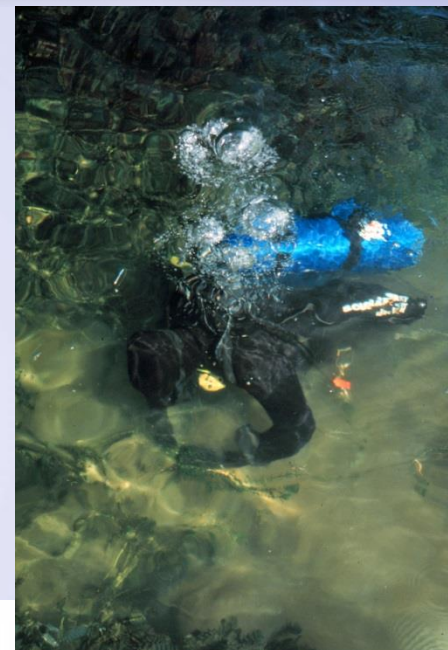
Aquatic Herbicide Treatments

- Spartina – (2013-present) intertidal EUR and PUP
- Flowering Rush – (2016 & 2018) private golf pond
- Knotweed – (fall 2018) PUP - Nimpkish River
- Knotweed – (in progress) PUP – Victoria Lake



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Solutions?





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"Never, ever, think outside the box."

Unlike the cat...
**DO THINK
OUTSIDE THE
BOX!**



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THANK YOU!

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