

# Improving the EDRR Decision Framework for the Greater Everglades

July 23, 2015



South Florida Ecosystem Restoration Task Force/  
Office of Everglades Restoration Initiatives



# The Task Force

- The South Florida Ecosystem Restoration Task Force was established by the Water Resources Development Act of 1996
- The Task Force consists of 14 high-level policy/decision-makers from four sovereign entities
  - 7 federal, 2 tribal, and 5 state/local government representatives
- The Task Force is supported by its Florida-based Working Group and Science Coordination Group
- Duties include coordination of Everglades restoration activities within the 16-county ecosystem

# The Task Force and IES

- Noxious Exotic Weeds Task Team (est. 1997)
  - *Weeds Won't Wait* (2000)
- Florida Invasive Animal Task Team (est. 2004)
  - *Draft Strategic Plan for Invasive Animals* (2008)
- IES Information brief
  - *Invasive Exotic Animals: Managing a Threat to Everglades Restoration* (2010)





# Task Force Direction

- **July 2013 Task Force Meeting**

- The Working Group recommended the development of a comprehensive *Invasive Exotic Species Strategic Action Framework* including a cross cut budgeting tool
- The Office of Everglades Restoration Initiatives (OERI) was directed to hold high-level partnership workshops to develop the Framework
- OERI was also directed to continue providing coordination support for federal invasive species efforts

- **November 2014 Task Force Meeting**

- Final IES Framework document presented
- Framework utilizes the Invasion Curve



# IES Framework Activities

- Developed, in partnership, a core document (IES Framework) that describes the problem and outlines solution pathways
  - Conducted a strategic planning process to develop goals, objectives, and strategies based on the Invasion Curve
- Developed a Preliminary Action Assessment
  - Prioritizes strategies and includes list of current/needed actions
- Developed a Cross Cut Budget for IES
- Initiated leadership briefings
- Developed IES portal on:

**[www.EvergladesRestoration.gov](http://www.EvergladesRestoration.gov)**

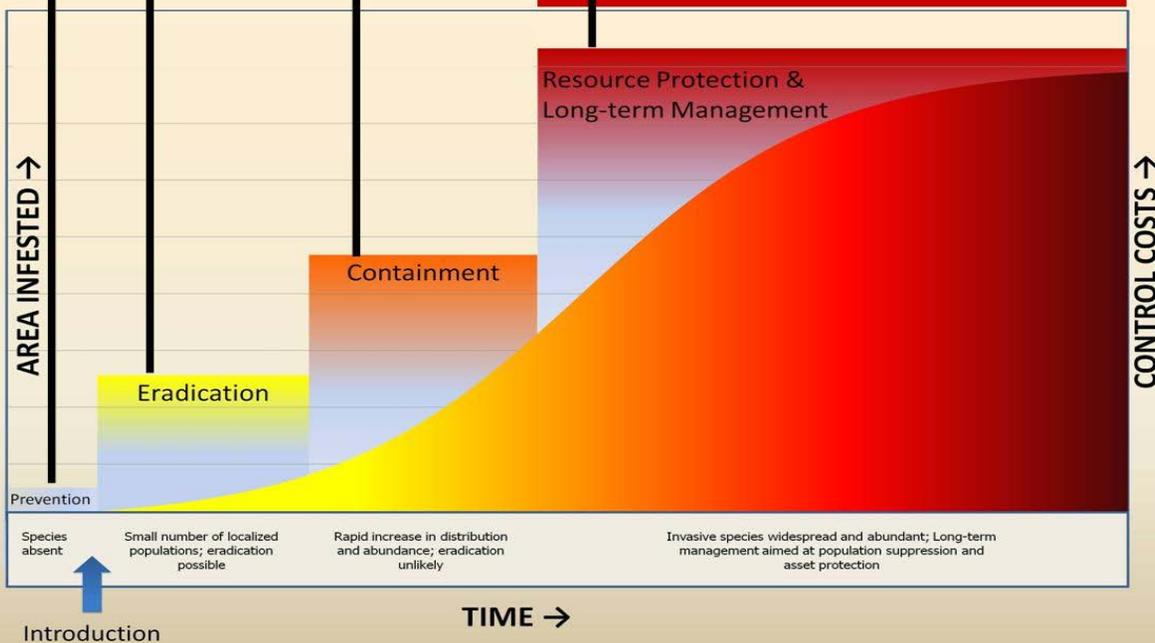
## THE INVASION CURVE AND STRATEGIC GOALS

**Goal 1:** Prevent the introduction of invasive exotic species.

**Goal 2:** Eradicate invasive exotic species by implementing Early Detection and Rapid Response (EDRR).

**Goal 3:** Contain the spread of invasive exotic species.

**Goal 4:** Reduce the populations of widely established invasive exotic species and maintain at lowest feasible levels.



# Priority Strategies for EDRR

## Goal 2: Eradicate Invasive Exotic Species by Implementing Early Detection and Rapid Response (EDRR).

### PREPARE & MONITOR

**Objective 2A: Prepare and monitor to enhance early detection.**

Strategy 2A1: Implement a systematic, prioritized, multi-species monitoring and inventory plan.

Strategy 2A2: Utilize existing and develop needed regional monitoring/reporting networks to increase likelihood of detection.

Strategy 2A3: Employ science and technology for development of early detection tools, e.g., surveys, traps, inspections.

Strategy 2A4: Engage the public and provide invasive exotic species reporting mechanisms.

Strategy 2A5: Establish rapid assessment and response programs/processes/cooperatives/tools that allow for nimble reactions aimed at eradication.

### ASSESS

**Objective 2B: Ensure rapid assessment of newly detected species.**

Strategy 2B1: Rapidly assess the status and potential threat of newly detected invasive exotic species populations and develop a response/no response plan.

### RESPOND

**Objective 2C: Rapidly respond to identified threats.**

Strategy 2C1: Initiate rapid response based upon the plan of action developed during the assessment phase.



Today



Sept 29-Oct 1



2A5: Establish rapid assessment and response programs/processes/cooperatives/tools that allow for nimble reactions aimed at eradication.

**Current Activities:**

- Utilize existing FWC on-call expert and responder lists (FWC)
- Continue to implement the Corridors of Invasiveness Vital Sign project for plants (SFCN NPS)
- Continue to implement the early detection of new exotic fish species in adjacent canals vital sign project (NPS)
- Strike Teams such as ECISMA EDRR and FISST (FWS, FDACS/USDA, and NPS)
- Everglades Invasive Reptile and Amphibian Monitoring Program (FWC/UF)
- Continue to assess the effects of exotic fish on Everglades structure and function: risk assessment (ENP/USGS)



2A5: Establish rapid assessment and response programs/processes/cooperatives/tools that allow for nimble reactions aimed at eradication.

**Gaps:**

- Formalize cooperative EDRR activities including emergency response
- Develop on-call expert and responder lists
- Assemble technical expert work groups for specific species of concern.
- Develop Response Action Plan (RAP) for each taxa, utilizing the ECISMA EDRR response protocol
- Expand and enhance training programs for rapid responders
- Reduce barriers to interagency EDRR efforts such as permitting issues for responders
- Establish dedicated resources (funding and staff) for an EDRR Team to conduct rapid assessment and initiate rapid response
- Update and provide access to EDRR guidelines, model response plans, and other resources



# Goals for Today

- Begin Implementation of Priority Strategies for EDRR Strategy 2A5 (Establish rapid assessment and response programs/processes/cooperatives/tools that allow for nimble reactions aimed at eradication)
  - Examine several existing EDRR programs
  - Develop a Table of Contents or list of “ingredients” to expand the current ECISMA EDRR Plan into a complete EDRR system for the South Florida Ecosystem
  - Identify possible new/additional information to include to fully flesh out EDRR process within the plan



# 7 Ingredients of an EDRR System

- Early Detection
- Identification/Verification
- Rapid Assessment/Alert Screening/Coarse Screening
- Risk Assessment/Delineation, Isolation, and Preliminary Evaluation **NO or NO GO DECISION**
- Plan Development/Treatment Selection and Design
- Rapid Response/Treatment Plan Implementation
- Monitor and Reassess/Monitor and Evaluate

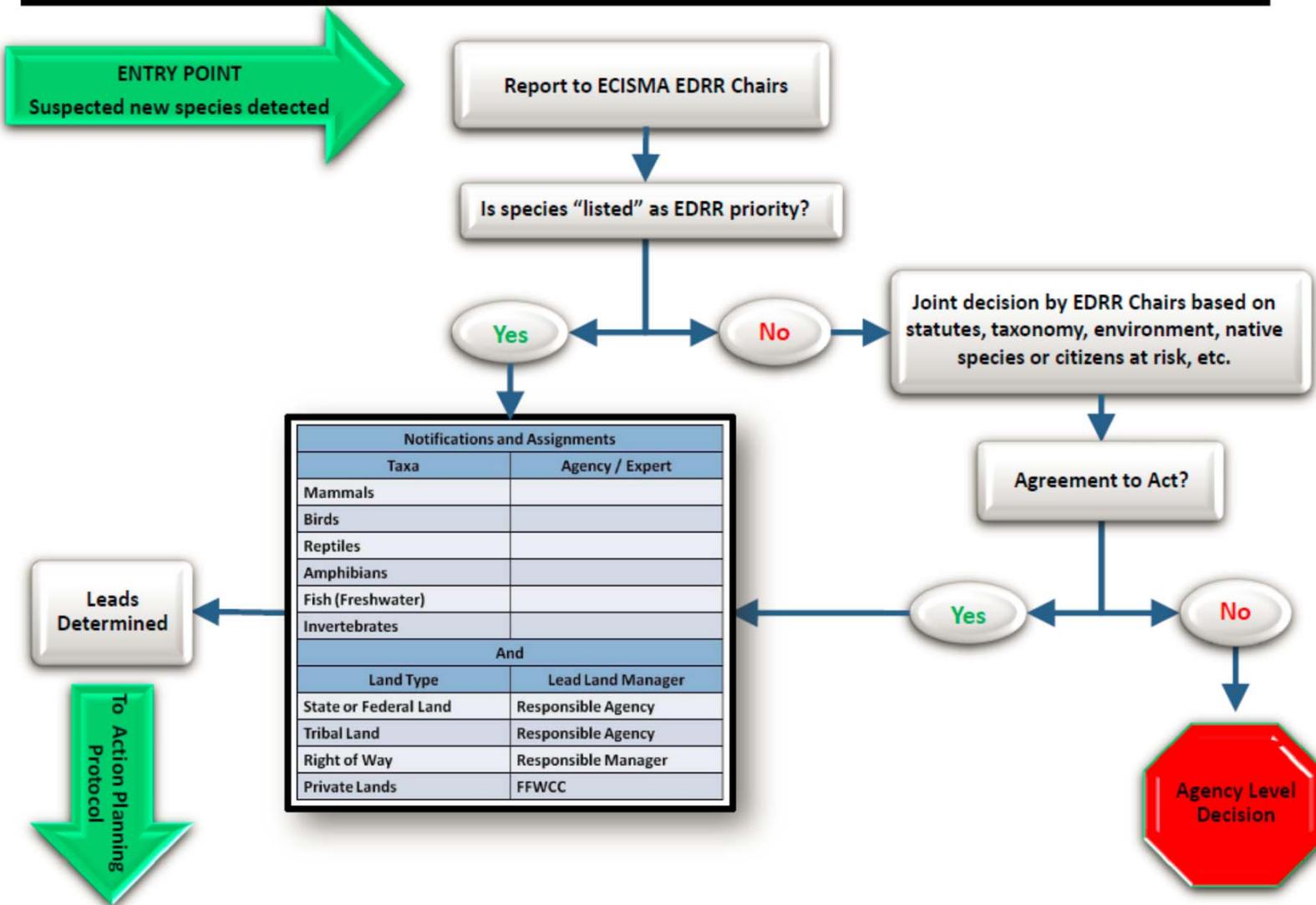


# ECISMA EDRR Plan

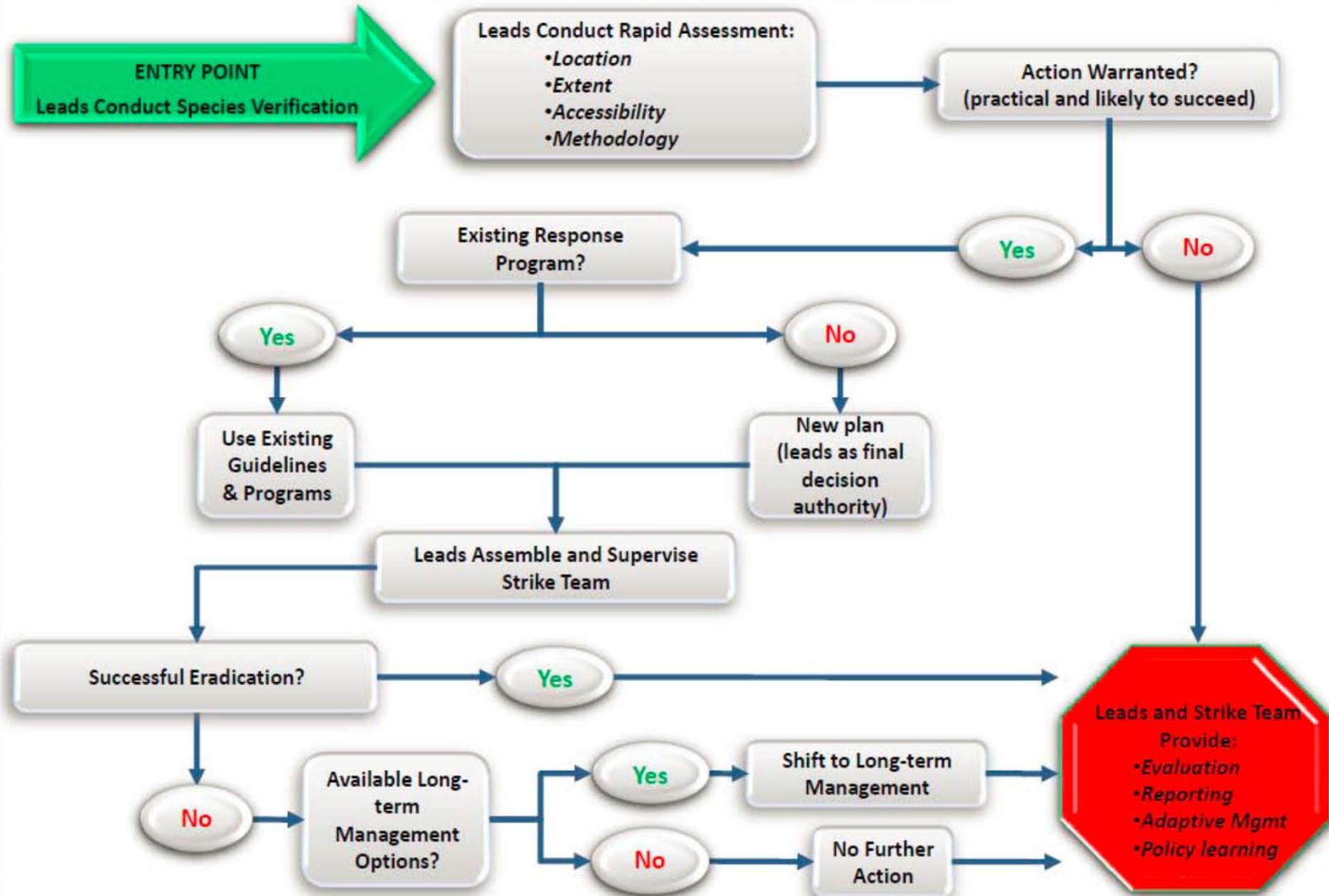
- Goal: To provide a conceptual design, framework, and set of strategies to minimize the establishment and spread of new invasive exotic species within the Everglades Cooperative Invasive Species Management Area (ECISMA) through a coordinated framework of partners and processes.
- Five objectives
  - Process/strategy is described in two flow-charts:
    - Lead selection
    - Action planning protocol

# Everglades CISMA Rapid Response Action

## LEAD SELECTION



# Everglades CISMA Rapid Response ACTION PLANNING PROTOCOL





# Lake Champlain example

- Narrative to explain each component of the flowcharts
- Extensive appendices including priority species lists and jurisdiction and permitting issues
- Species Evaluation Questionnaire (September Workshop)

# British Columbia example

- Tables to provide specific details on flowchart components: Who/What/How/Timeframe
- Links to resources and tools

### STEP 3 ALERT SCREENING

	Role	Responsibility	Tools	Timeline
<b>5. Species Regulated by CFIA?</b> <p>A flowchart starting with the question '5. Species Regulated by CFIA?'. A 'Yes' arrow points to the first row of the table. A 'No' arrow points to the second row of the table.</p>	Prov. EDRR Coordinator	Coordinate site containment.		(1-10 days)
	Prov. EDRR Coordinator OR FLNR Reg. Invasive Plant Specialist	Complete site containment. Enter treatments into IAPP, if any. Update species status on EDRR web page.	<sup>5</sup> IAPP Database	Season dependent (1-2 days)
	Prov. EDRR Coordinator	Notify CFIA. Remove species from EDRR process.		0.25 days
	CFIA	CFIA coordinates the EDRR response.		TBD
<b>6. Coarse Screening</b> <p>A flowchart starting with '6. Coarse Screening'. It leads to 'Assess Site Habitat &amp; Delimit Infestation', then 'Contain Site', and finally 'Coarse Screening'. The 'Coarse Screening' step is linked to the table rows for 'Assess Site Habitat &amp; Delimit Infestation' and 'Complete species coarse screening based on inventory and pathway results.'.</p>	Prov. EDRR Coordinator, in liaison with FLNR Reg. Invasive Plant Specialists.	Complete species coarse screening using IMISWG Prohibited Noxious Weed criteria. Note: This is a desktop activity.	Prohibited Noxious Weed Criteria (Appendix 4)	Day 5 (0.25 days)
	Prov. EDRR Coordinator OR FLNR Reg. Invasive Plant Specialist	Complete operational survey and targeted search in site vicinity OR extent survey to determine presence vs non-presence, active pathways and vectors for spread. Enter inventory into IAPP.	<sup>7</sup> FLNR Survey Standards <sup>5</sup> IAPP Database	Season dependent (1-3 days)
		Complete site containment. Enter treatments into IAPP, if any. Update species status on EDRR web page.	<sup>5</sup> IAPP Database	Season dependent (1-2 days)
	Prov. EDRR Coordinator, in liaison with FLNR Reg. Invasive Plant Specialists.	Complete species coarse screening based on inventory and pathway results.	Prohibited Noxious Weed Criteria (Appendix 4)	Day 10 (0.25 days)
	Prov. EDRR Coordinator	Proceed to next step in EDRR process.		Day 10
	<b>7. Species Prohibited in BC?</b> <p>A flowchart starting with '7. Species Prohibited in BC?'. A 'No' arrow points to the first row of the table. A 'Yes' arrow points to the fifth row of the table.</p>	Prov. EDRR Coordinator	Make recommendation to IMISWG Advisory to remove species from EDRR process.	
IMISWG EDRR Advisory		Approve/decline recommendation.		Day 11
Prov. EDRR Coordinator		Remove species from EDRR process. Update species status on EDRR web page.	<sup>2</sup> BC EDRR Website	Day 11
FLNR Reg. Invasive Plant Specialist		Refer site to Reg. Invasive Species Program.		Day 11
Prov. EDRR Coordinator		Make recommendation to IMISWG EDRR Advisory to proceed to next step in EDRR process.		Day 11
IMISWG EDRR Advisory		Approve/decline recommendation.		Day 11
Prov. EDRR Coordinator	Update species status on EDRR web page. Proceed to next step in EDRR process.	<sup>2</sup> BC EDRR Website	Day 11	

STEPS	ECISMA EDRR	Lake Champlain Basin	British Columbia
<b>Early Detection</b>	<ul style="list-style-type: none"> <li>• ECISMA EDRR Chairs receive report on suspected new species</li> <li>• If already listed as EDRR priority <i>or</i> if Chairs jointly agree to act, then determine Lead Agency</li> </ul>	IA: Lead Agency receives report of new infestation	<ol style="list-style-type: none"> <li>1. Unknown species found.</li> <li>2. Species identified (if possible) and reported.</li> <li>3. Provincial government invasive plant specialist determines if species is new or existing in BC.</li> <li>4. New species are reported to the BC EDRR Coordinator.</li> </ol>
<b>Identification/ Confirmation</b>	Lead Agency conducts species verification	IB: Lead Agency requests or collects sample  IC: Lead Agency IDs sample.  ID: Lead Agency confirms presence of species on site	5. Species identification confirmed by BC EDRR Coordinator in partnership with the Royal BC Museum and, if needed, a botanical network of specialists from the Pacific Northwest.
<b>Alert Screening/ Rapid Assessment/ Coarse Screening</b>	Lead Agency conducts Rapid Assessment: <ul style="list-style-type: none"> <li>• Location</li> <li>• Extent</li> <li>• Accessibility</li> <li>• Methodology</li> </ul>	IE: Lead Agency promptly notifies Task Force and recommends general course of action.  IF: Rapid Response Task Force decides whether or not further investigation is necessary before notifying public and proceeding	<ol style="list-style-type: none"> <li>6. Provincial government contains new species sites to prevent spread.</li> <li>7. If species regulated by the federal Canadian Food Inspection Agency (CFIA), EDRR coordination is transferred to that agency and BC participates as a stakeholder.</li> <li>8. If species is not regulated by CFIA, the BC EDRR Coordinator completes coarse screening.</li> <li>9. Site habitat is assessed and the local extent of the infestation is determined.</li> <li>10. Provincial government contains new species sites to prevent spread.</li> <li>11. BC EDRR Advisory, with support from the Coordinator, determines if species is or should be prohibited in BC.</li> </ol>

<p><b>Risk Assessment/ Delineation, Isolation, and Preliminary Evaluation</b></p> <p><b>GO/NO GO DECISION POINT</b></p>	<p>Determine if action is warranted (practical and likely to succeed)</p>	<p>IIA: Lead Agency determines, maps, and/or predicts extent of infestation and takes preliminary steps to limit dispersal</p> <p>IIB: Lead Agency and RR Task Force evaluate threat, risk of spread, and potential for eradication by completing the species evaluation questionnaire</p> <p>IIC &amp; IID: RR Task Force and Lead Agency determine whether or not eradication is warranted, technically possible, and feasible</p>	<p>12. Species risk is assessed and rated (Low, Medium, or High) by the BC EDRR Advisory, with support from the Coordinator. (Note: Many prohibited weeds will have risk assessments completed prior to their first detection in BC.)</p> <p>13. High and medium risk species are contained by the provincial government to prevent spread.</p>
<p><b>Plan Development/ Treatment Selection and Design</b></p>	<p>Determine if there is an existing response program and either use existing guidelines and programs or develop a new plan with leads as final decision authority.</p>	<p>IIIA: Lead Agency and RR Task Force evaluate treatment options, seek advice from other agencies, and begin permitting process</p> <p>IIIB: Lead Agency develops preliminary treatment plan in consultation with the RR Task Force</p> <p>IIIC: Lead Agency and RR Task Force determine regulatory jurisdiction for treatment</p>	<p>14. BC EDRR Coordinator, with support from subject experts, develops a rapid response plan.</p> <p>15. Treatment permits are obtained.</p>



<p><b>Rapid Response/ Treatment Plan Implementation</b></p>	<p>Lead Agency assembles and supervises Strike Team</p>	<p>IVA: Lead Agency and RR Task Force identify a partnership of organizations to implement treatment, consult internal operations procedures, and mobilize</p> <p>IVB: Lead Agency and partner organizations conduct treatment</p>	<p>16. Treatments are completed.</p>
<p><b>Monitor &amp; Reassess/ Monitoring and Evaluation</b></p>	<p>If eradication is successful, leads and Strike Team provide:</p> <ul style="list-style-type: none"> <li>• Evaluation</li> <li>• Reporting</li> <li>• Adaptive Management</li> <li>• Policy learning</li> </ul> <p>If not successful, utilize long-term management options, if available</p>	<p>VA: Lead Agency monitors effectiveness of rapid response treatment</p> <p>VB: Lead Agency reports result to RR Task Force and public stakeholders and develops recommendations for future action</p> <p>VC: If infestation persists, lead agency and RR Task Force develops a long-term management and spread prevention plan</p>	<p>17. Treatments are evaluated for efficacy.</p> <p>18. Response is adjusted.</p> <p>19. Annual report is completed and data entered into provincial database and mapping application.</p> <p>20. Monitoring plan is developed for eradicate species. Note: It may take several years before eradication can be achieved for some species.</p>

# DISCUSSION

