

Improving Wetland Management Outcomes in Canada

Options and Considerations

CAES Conference
February 14, 2019

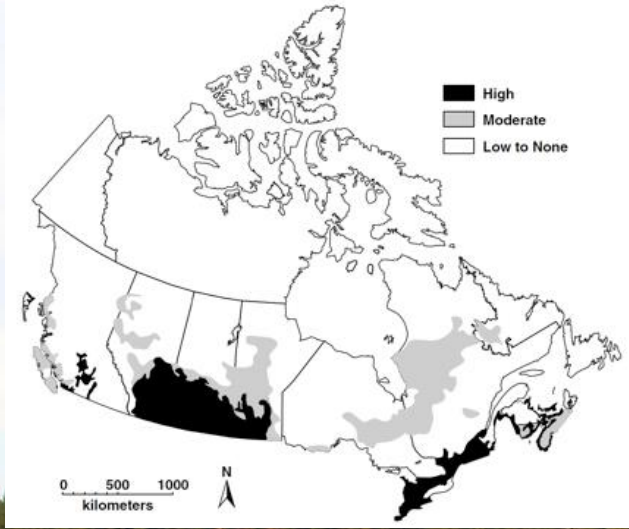
Shari Clare, PhD, PBIOL



FIERA
Biological Consulting



Wetland Loss in Canada – The Context

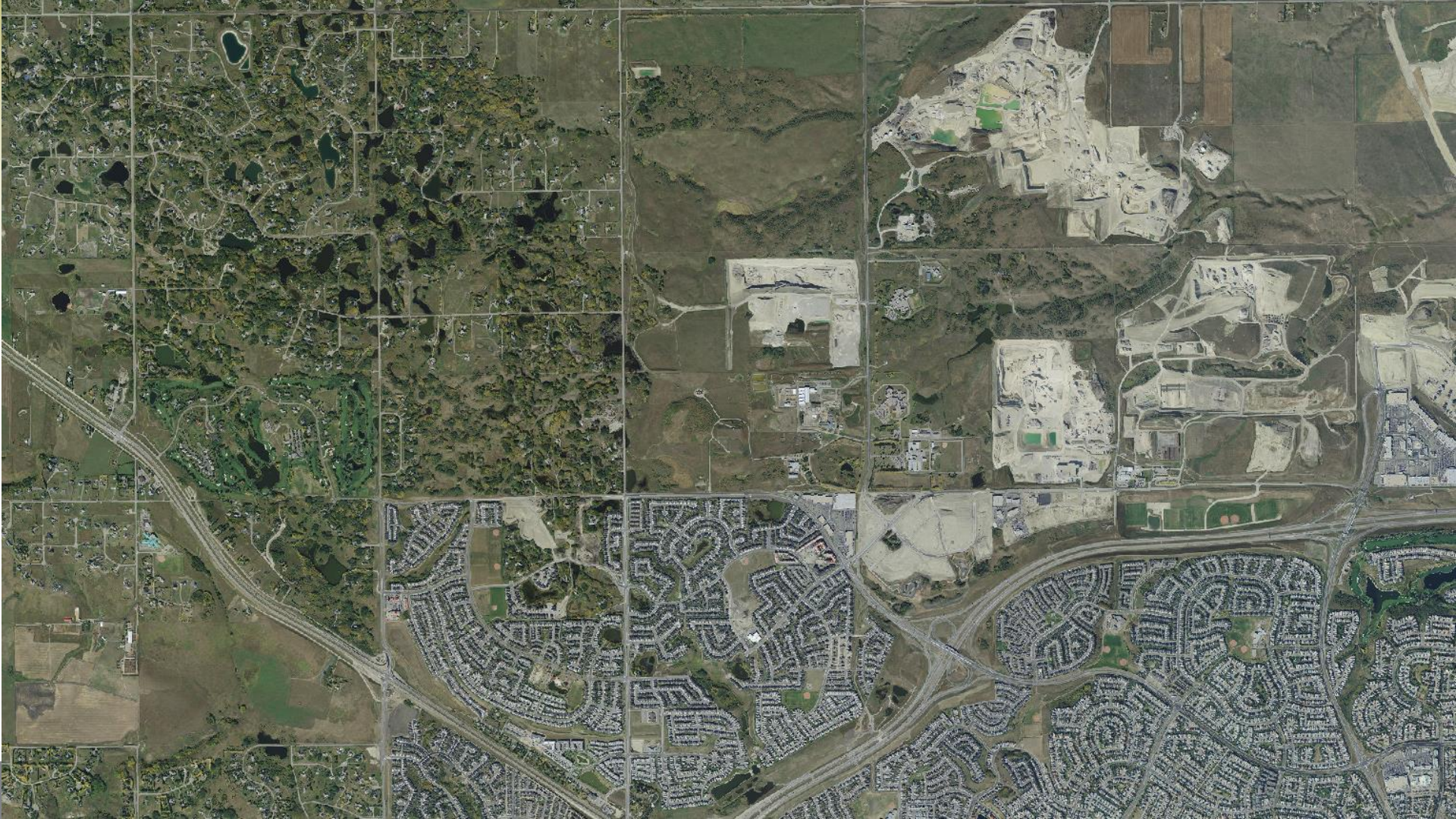


The highest rates of wetland loss have occurred in the settled areas of Canada where most land is in private ownership

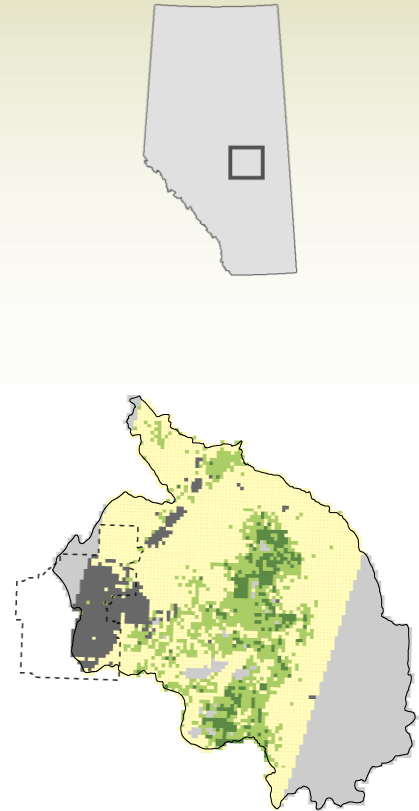
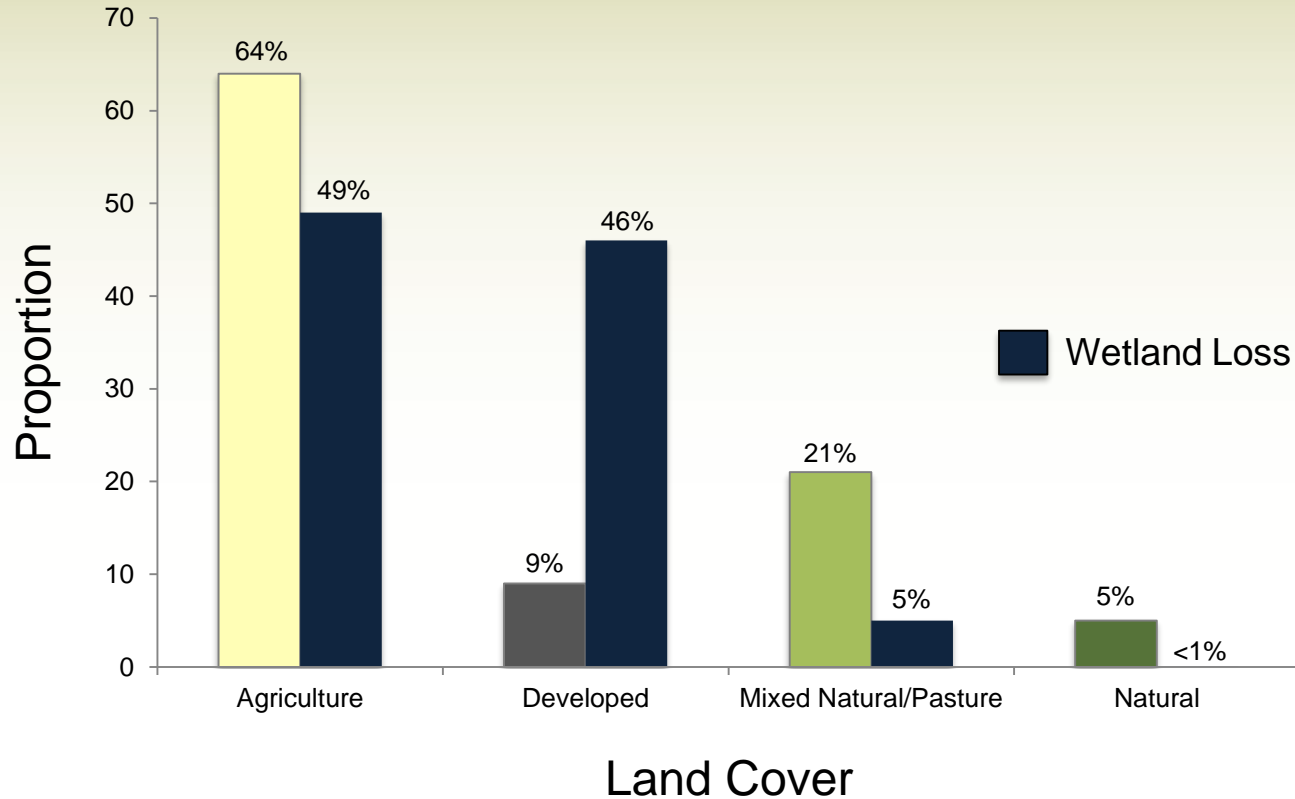




Photo courtesy of Ducks Unlimited



Contemporary Loss - Beaverhill Subwatershed (1999-2009)







The Mitigation Hierarchy

Avoid

Minimize

Replace

The Mitigation Hierarchy

Avoid

(Minimize)

Replace

The failure to avoid:

“I’ve never encountered somebody saying ‘no, don’t touch this wetland’... so I always skip right to compensation.”

(Environmental Consultant from Alberta)

The Mitigation Hierarchy

Avoid

(Minimize)

Replace

The Problem:

- Losses continue with the expectation that previously lost or degraded wetlands (on private land) will be restored

The Mitigation Hierarchy

Avoid

Minimize

Replace

The challenge of replacement:

“The controlling factor [is that] the ownership of that land is private ... if you could just go out and rebuild [wetlands] wherever you wanted it'd be easy to do, but you have to have approval from those landowners.”

(Wetland Restoration Agent from Alberta)

Can we create an incentive to restore *and* retain?



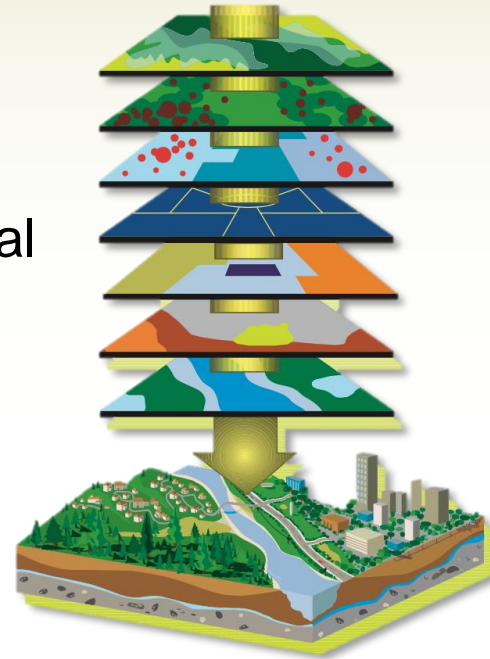
Where: Creating Functional “Wetscapes”

- Larger scale ecological and hydrologic function needs to be considered when designing policies and incentive programs, and when making regulatory management decisions
- High priority conservation and restoration areas should be identified at a regional/watershed scale
- Climate change needs to be integrated into planning and decision making



How: Data and Information

- Reliable spatial inventories are required to enable better planning
 - Identifying priority areas for conservation and restoration allows for better targeting of limited resources
- Information on community preferences and environmental issues (e.g., flooding, water quality) would also allow for management that is more responsive to local concerns



How: Tools for Management

- We need to have regulatory tools to say **no**
 - Where avoidance is the priority compliance needs to be enforced
- More tools that enable wetland *retention* are required, and these tools may need to differ from those that enable restoration in relation to:
 1. Conservation security
 2. Permanence of protection
 3. Management purpose



How: Tools for Management

- A larger variety of options for the delivery of wetland restoration and/or enhancement need to be enabled:
 1. Functional banking systems
 2. Offsetting mechanisms that can effectively measure ecological lift
 3. A wider range of delivery agents and restoration practices



Who: It Takes a Village

- Federal and Provincial governments are critical for setting overall direction but enabling local control and activating social capital is essential to conservation and restoration success
 - Municipalities have a key roll to play, but have limited tools & resources
 - Landowners are essential, but many have deeply held negative views that are not simply overcome through economic incentives
- ENGOs have expertise and resources, but greater coordination is needed and more effort should be directed to evaluating outcomes



Final Thoughts

- Wetland management is fraught with regulatory, social, and economic complexity
- Larger scale planning processes that meaningfully engage local municipalities and land owners will allow for better spatial targeting of priority conservation and restoration areas
- More emphasis needs to be placed on avoidance and more tools that incentivize habitat conservation are needed



Thank you

Literature Cited:

Clare S, Krogman N, Foote L, Lemphers N. 2011. Where is the avoidance in the implementation of wetland law and policy? *Wetlands Ecology and Management* 19:165–182

Clare S., and I. F. Creed. 2013. Tracking wetland loss to improve evidence-based wetland policy learning and decision making. *Wetlands Ecology and Management* 22: 235-245.

Contact Information: Shari Clare | sclare@fieraconsulting.ca | 780.466.6554 | www.fieraconsulting.ca