



Protecting the nature we depend on

Kawartha Land Trust, November 15, 2018

Dianne Saxe, Environmental Commissioner of Ontario

Overview

- **The ECO and the EBR**
- The Missing 68,000 km²
- Woodlands and Wetlands



The ECO and the EBR



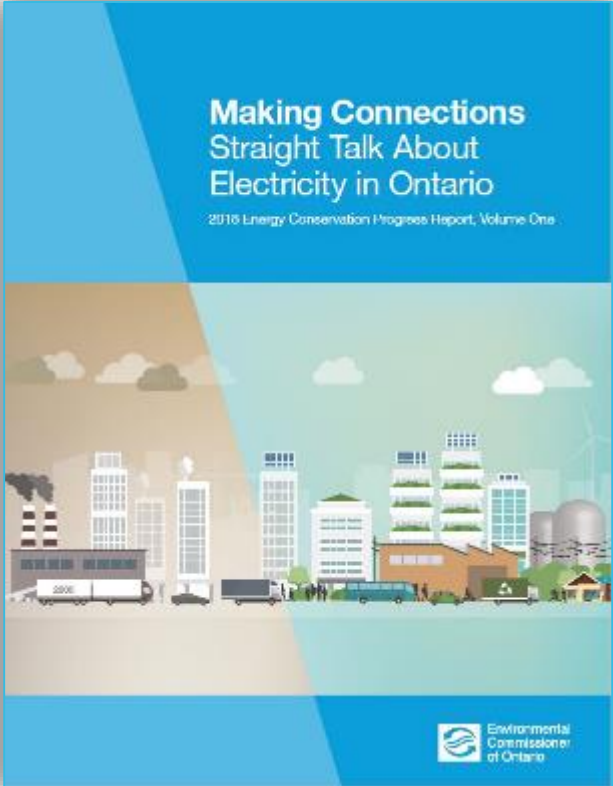
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- Watchdog on:
 - Greenhouse gas emissions in Ontario
 - Energy conservation
 - Environmental protection
- It's my job to report the facts without fear or favour.

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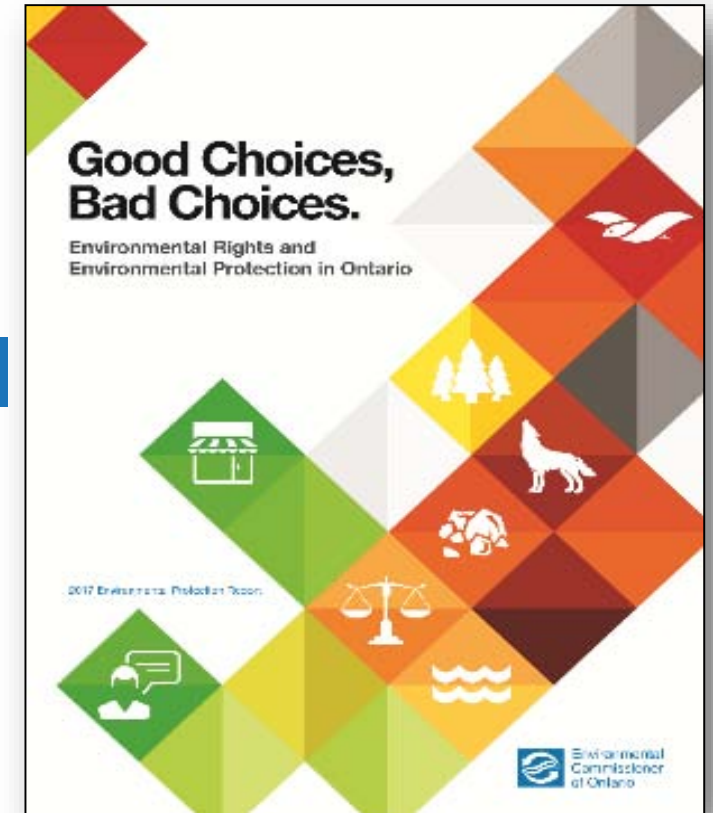
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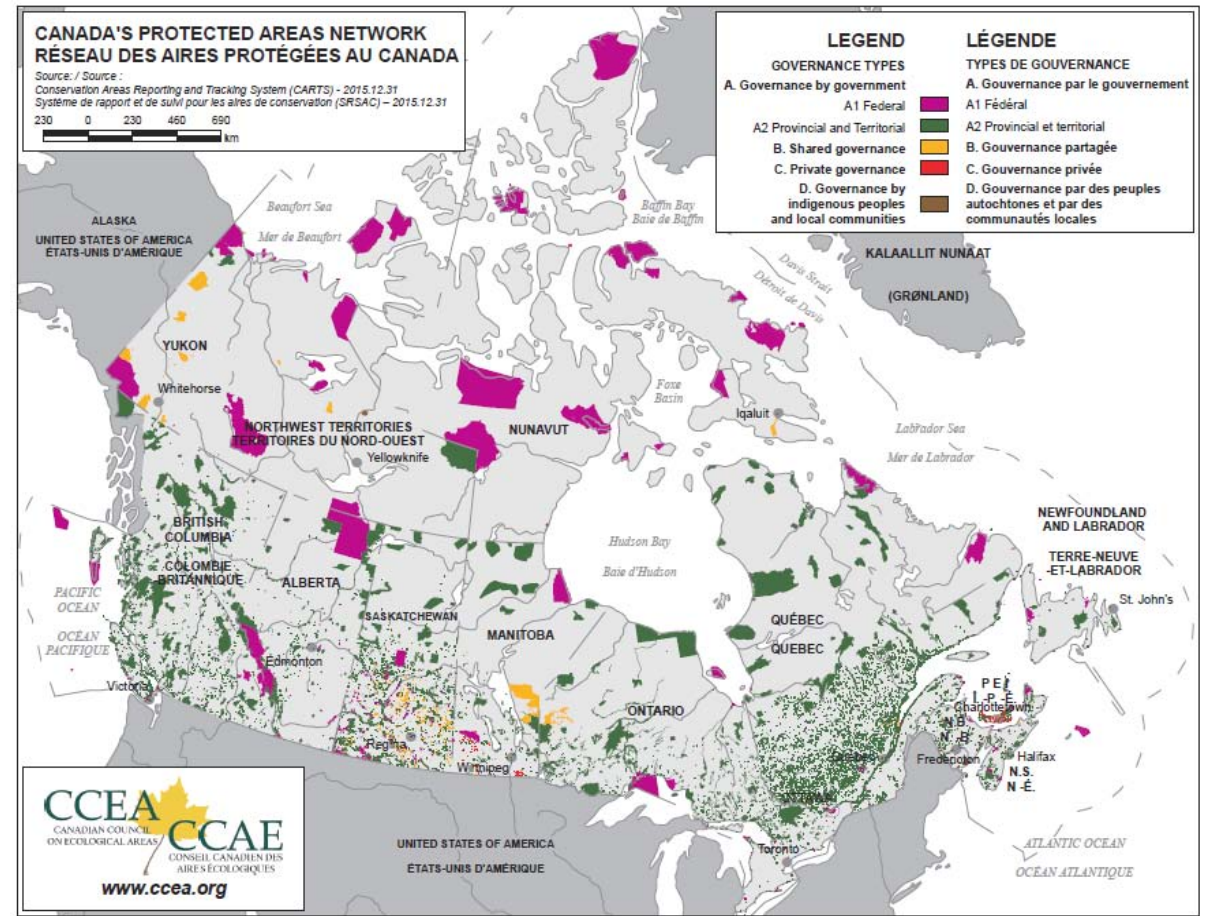
The Missing 68,000 km²: Ontario's Protected Areas Shortfall

Chapter 6



What is a protected area?

- Defined areas
- Permanently set aside and managed to conserve nature
- So plants, animals and natural processes are not negatively affected by humans
- E.g., parks, conservation reserves, wilderness areas, dedicated protected areas



Why are protected areas important?

Essential for:

- Biodiversity
- Climate change adaptation & mitigation
- Ecosystem health including clean water
- Human mental and physical health
- Economy

Protected areas matter: biodiversity

- Conserve habitat – habitat loss is the biggest single driver of species extinctions and extirpations
- Diversity and abundance of species is often higher within protected areas
- Safe-haven for species at risk
 - E.g., Rondeau Provincial Park is home to over 75 species at risk
- Source habitat to support biodiversity outside their boundaries
 - E.g., Algonquin Provincial Park is source habitat for eastern wolves

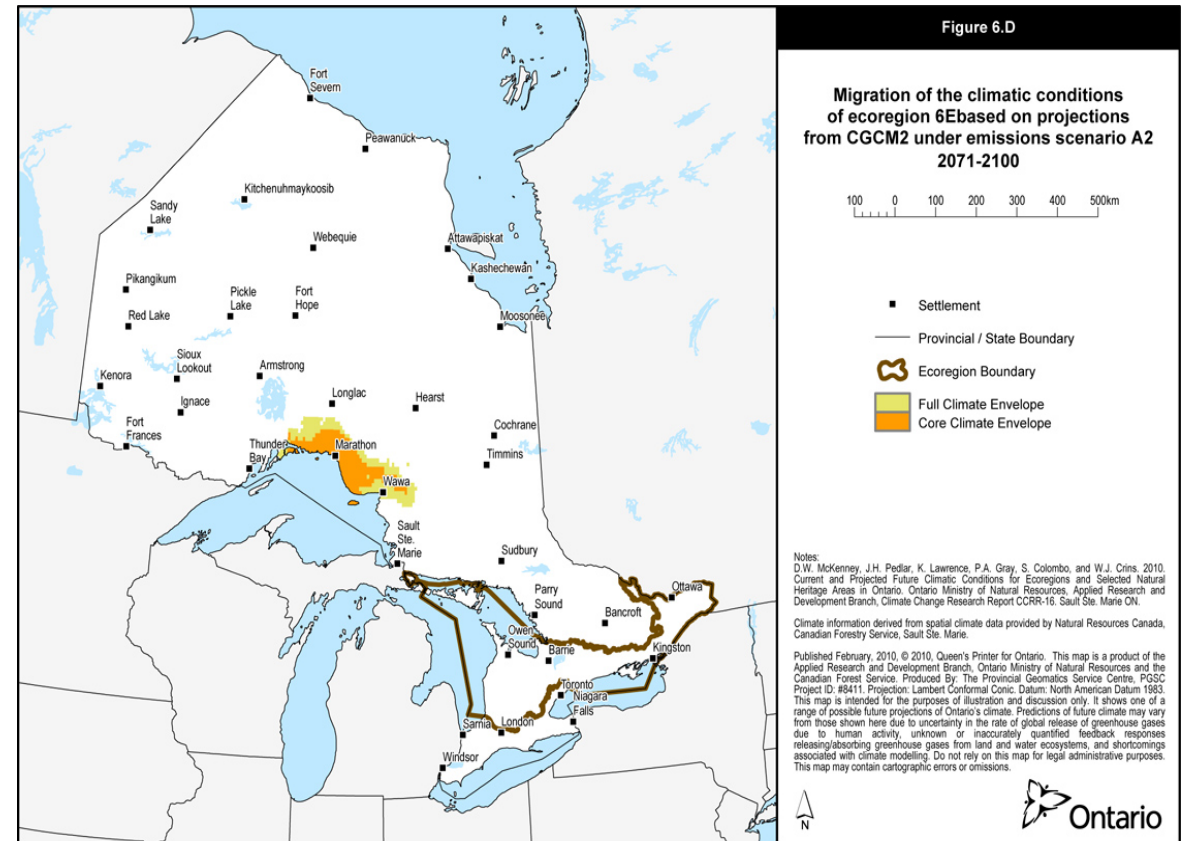
Protected areas matter: ecosystem services

- Ecosystem benefits like clean air and water, nutrient cycling, flood control
- The huge value of ecosystem services often goes unrecognized
 - Thousand Islands National Park: ecosystem services of this 22.3 km² park valued between \$12.5 and \$14.7 million per year
 - One km² of forest in southern Ontario provides about \$1.9-2 million in ecosystem services every year

Protected areas matter: climate change adaptation and mitigation

- Climate refugia
- Migration corridors for species
- Moderating temperatures
- Carbon sequestration

- Ontario warming faster than world average



Protected areas matter: social, economic and cultural benefits

- Ontario's protected areas support tourism
 - More than 9.4 million visitors per year
 - More than 6,400 full-time jobs
 - \$304.6 million in labour income
 - \$48 million in tax revenue
 - Contributes more than \$466 million to Ontario's GDP
- Physical, psychological and spiritual benefits
- Conserve areas of cultural, historic, archaeological significance
- Many also conserve areas of importance to Indigenous communities
 - E.g., Petroglyphs Provincial Park has the largest concentration of Aboriginal rock carvings in Canada

Commitment: 17% by 2020

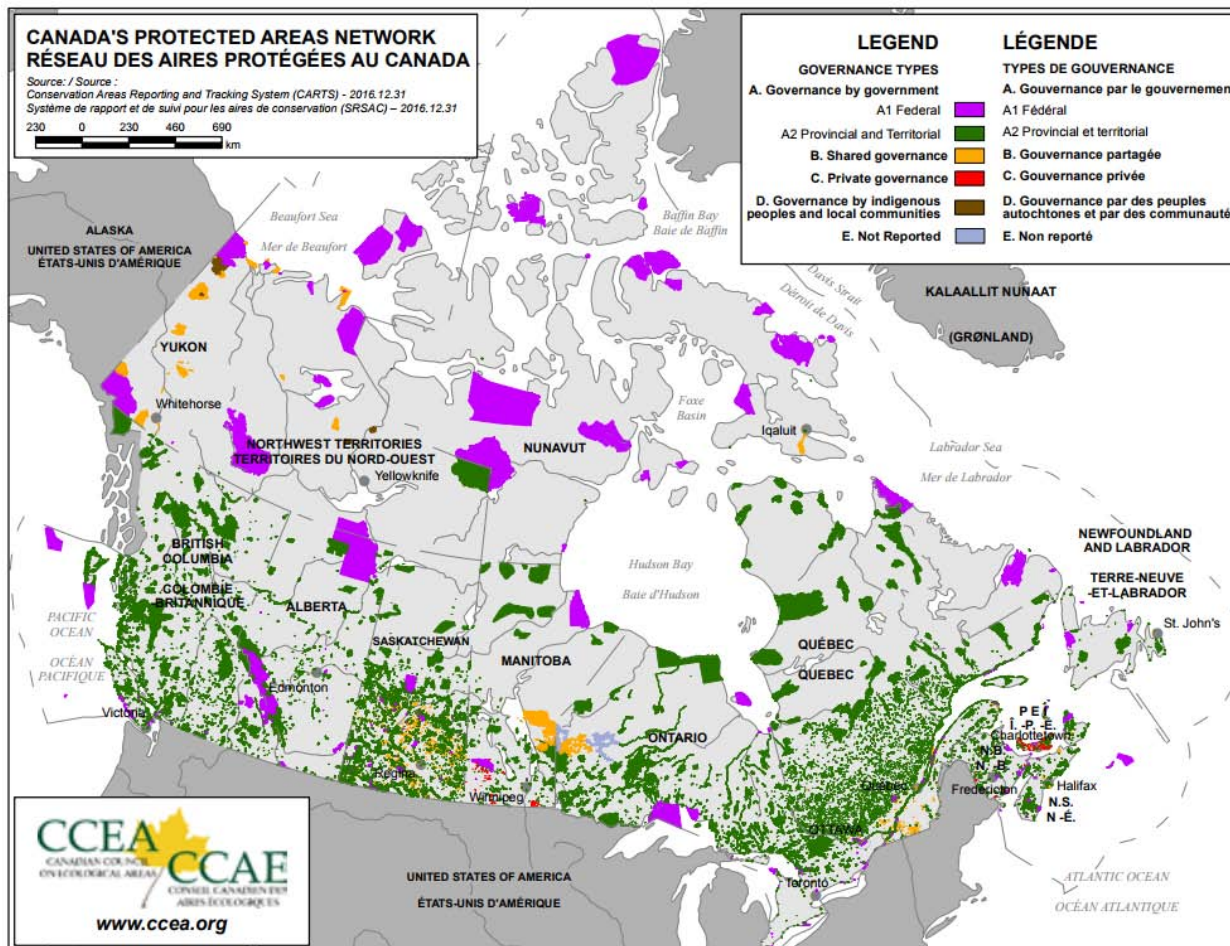
- Canada committed to the Aichi Biodiversity Targets under the Convention on Biological Diversity

- Target 11:

By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

Canada's commitment to protect 17% by 2020

- Ontario is not on track to meet Canada's international commitment of conserving 17% of lands and inland waters (Aichi Target 11)



17% is not a magic number – there is a strong argument for 50%, but Aichi Target 11 is achievable, and provides a foundation to build on.

Ontario's commitment?

- 17% target in the Ontario Biodiversity Council's conservation strategy
- Biodiversity: It's in Our Nature – Ontario Government Plan to Conserve Biodiversity 2012-2020
 - committed to “explore opportunities” to expand Ontario's system of protected areas and conservation lands, but no target
- Relevance today?

How much progress has Ontario made?

- Still only 10.7% protected

World average is 14.7%

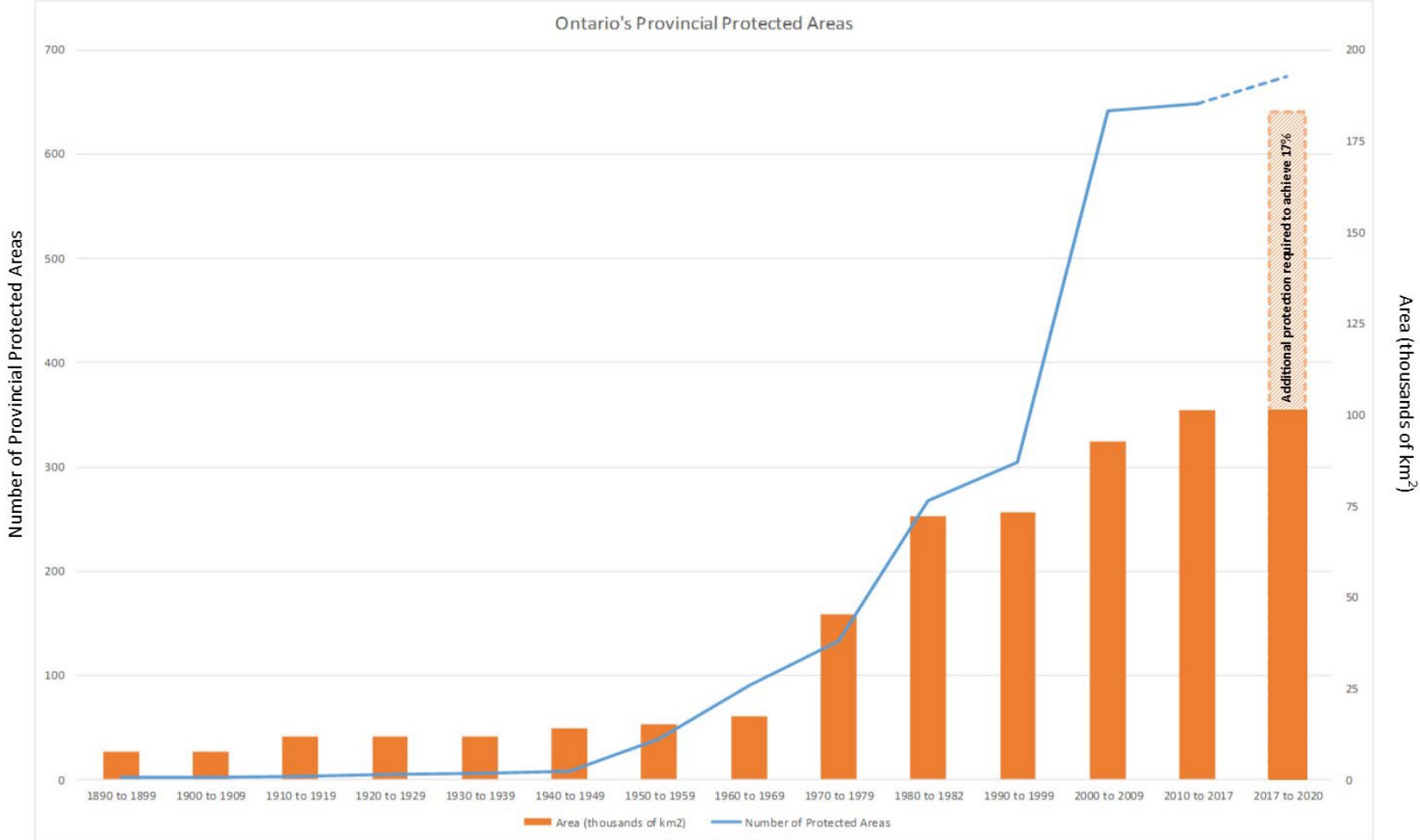
Government Regulated Protected Areas in Ontario			
	Number	km ²	% of Province
Regulated Provincial Park	334	74,193	6.9%
Regulated Conservation Reserve	295	15,142	1.4%
Dedicated Protected Area – Regulated under PPCRA	5	3,495	0.3%
Dedicated Protected Area – Non-regulated	4	8,800	0.8%
Wilderness Area	11	8	<0.1%
Total Provincial Protected Areas	649	101,637	9.4%
National Park	5	2,056	0.2%
National Urban Park	1	19	<0.1%
National Marine Park	1	114	<0.1%
National Marine Conservation Area	1	10,880	1.0%
National Wildlife Areas	10	54	<0.1%
Migratory Bird Sanctuary	8	319	<0.1%
National Capital Commission Area	16	82	<0.1%
Total National Protected Areas	42	13,523	1.3%
Total	691	115,160	10.7%

No plan to meet target

- No plan, and no commitment from the Ontario government
- Ontario needs to protect another 68,000 km² by 2020 (that is equivalent to nine Algonquin Provincial Parks)

**ONTARIO DOES NOT EVEN
HAVE A PLAN TO MEET THE 17%
CONSERVATION TARGET.**

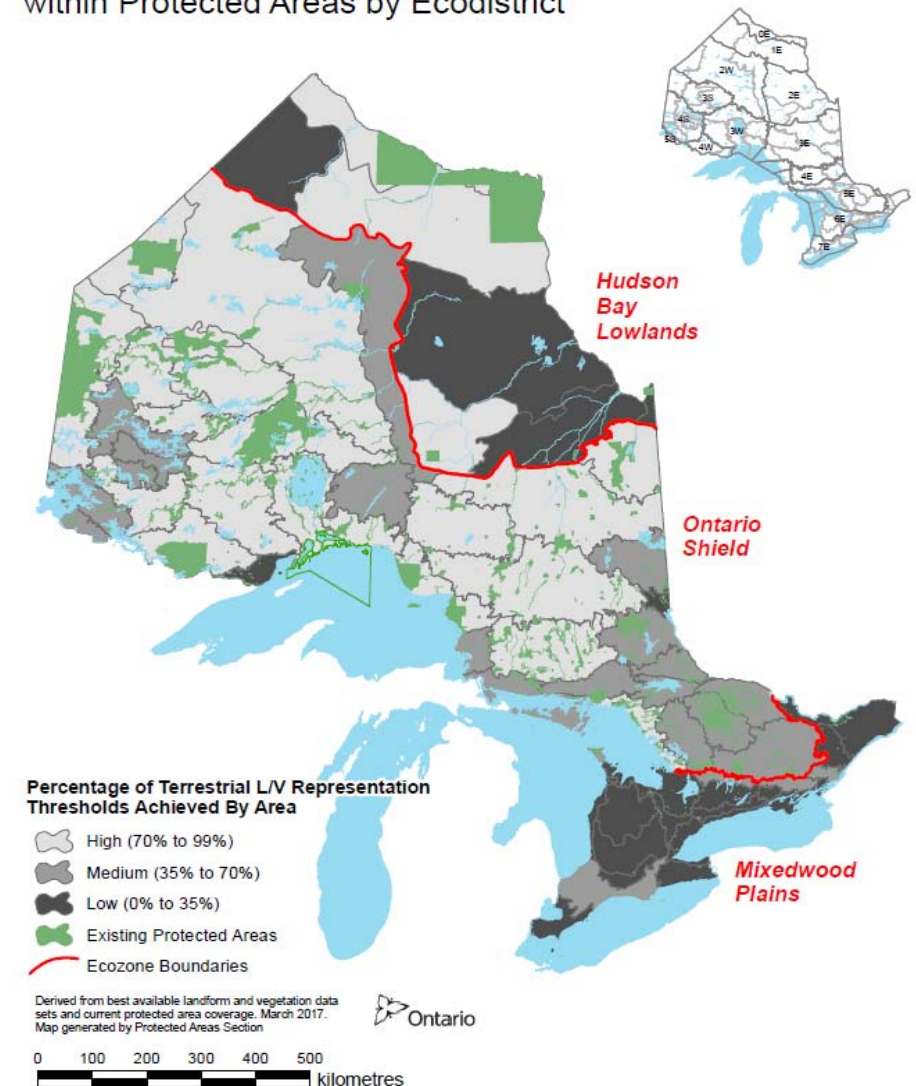
The gap: 68,000 km²



Where are protected areas needed?

- Improve ecoregional representation
 - Southern Ontario needs more protected areas
- Plan for connectivity between areas
- Protect biodiversity hotspots
 - E.g., Important Bird Areas
- Protect climate refugia
- Protect significant carbon sinks
- Flood/ erosion protection

Representation of Ecological Features within Protected Areas by Ecodistrict



What counts?

- Government-regulated protected areas
- “Other effective area-based conservation measures”
 - Could include private conservation lands, conservation authority lands, areas of natural and scientific interest, etc.
 - Ontario has over 40 types of natural heritage areas that could potentially count



Criteria

- Under development by the CCEA and IUCN:
 - Defined geographical space
 - Biodiversity conservation objectives
 - Prioritization of nature conservation objectives
 - Governance
 - Effective means of protection
 - Long-term protection
 - Dedicated protection
 - Year-round protection mechanism

To get there from here

- A public commitment
- Assess what we have already
 - Partially protected lands
- Leverage the work of partners
 - No funding for land acquisition
- Make tough choices
- Indigenous protected areas and co-management with First Nations

ECO recommendations

- The MNRF fund the work required to inventory and assess Ontario's natural heritage areas as protected areas and other conservation lands

See p. 208 of *Good Choices, Bad Choices*

ECO recommendations

The MNRF develop a plan to achieve 17% conservation in the province, including:

- Identifying priority lands for protection (e.g., biodiversity hotspots, improving ecoregional representation, protecting climate refugia)
- Identifying priorities for ecological restoration in the protected areas system
- Identify opportunities for co-management with Indigenous communities
- Provide financial and capacity-building support to increase protection of partially protected natural heritage areas
- Restore land acquisition funding programs

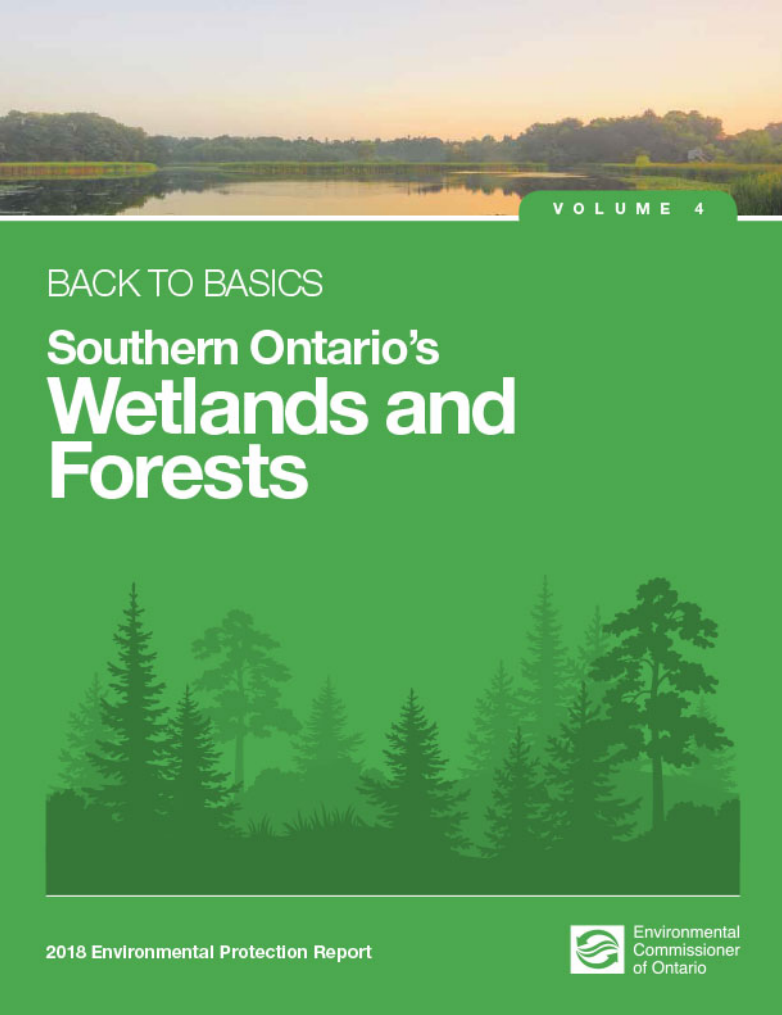


Source: MNRF.

Complementing Protected Areas: Wetlands and Woodlands

from Back to Basics – ECO's 2018 Environmental Protection Report

Wetlands



The many services wetlands provide



Photo Credit: Ken Lund, (CC BY-SA 2.0).



Photo Credit: Larissa Sage.

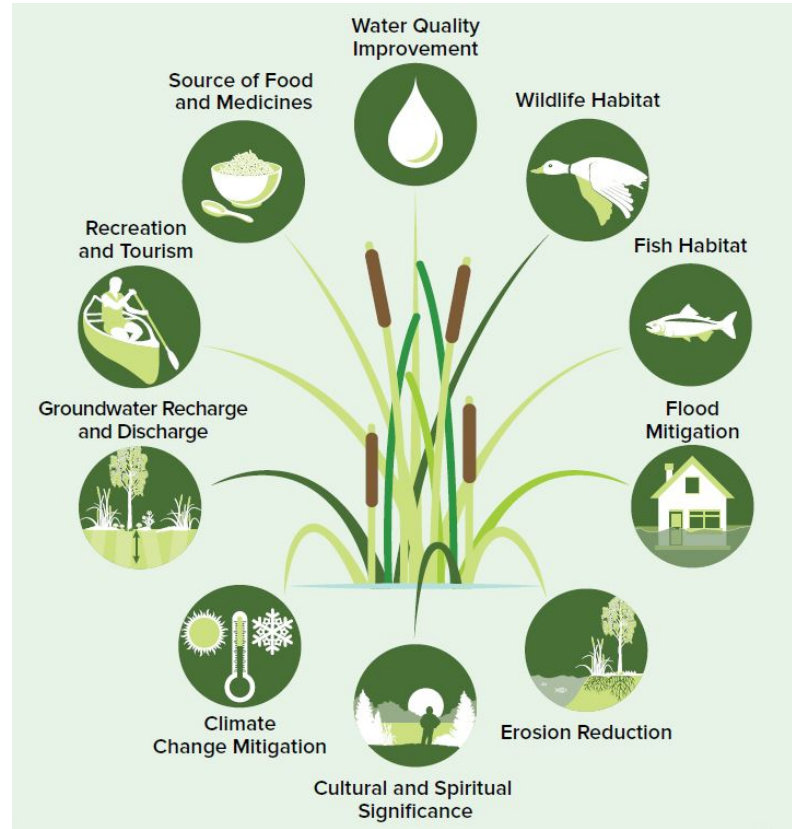


Photo Credit: Jean Hilscher.



Photo Credit: Ross Dunn, (CC BY-SA 2.0).

- Almost all wetland services contribute to climate change adaptation
- Wetlands provide habitat and breeding grounds for dozens of species at risk

The sad state of wetlands in southern Ontario

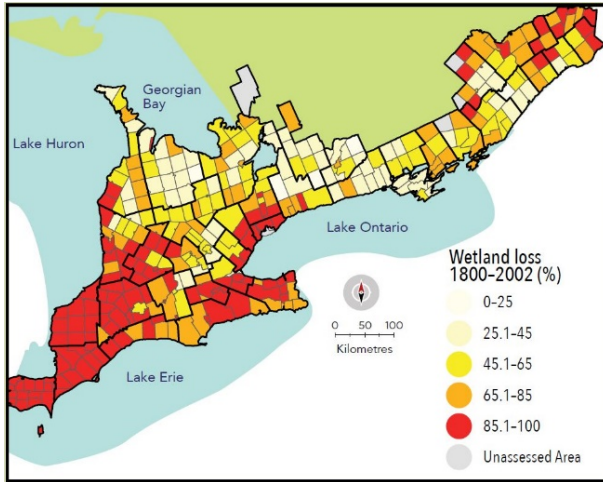


Photo Credit: Ducks Unlimited Canada, 2010.

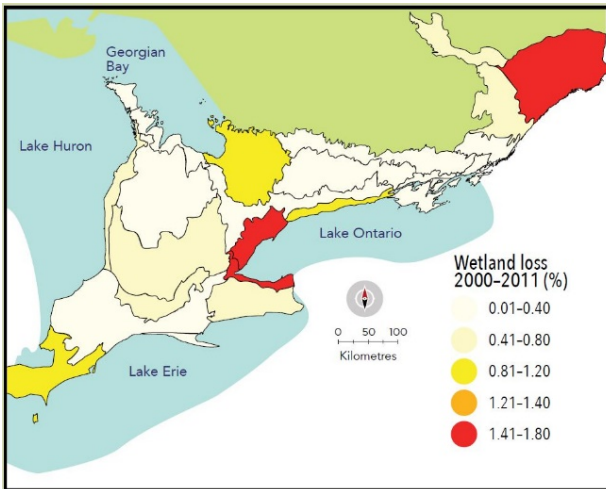
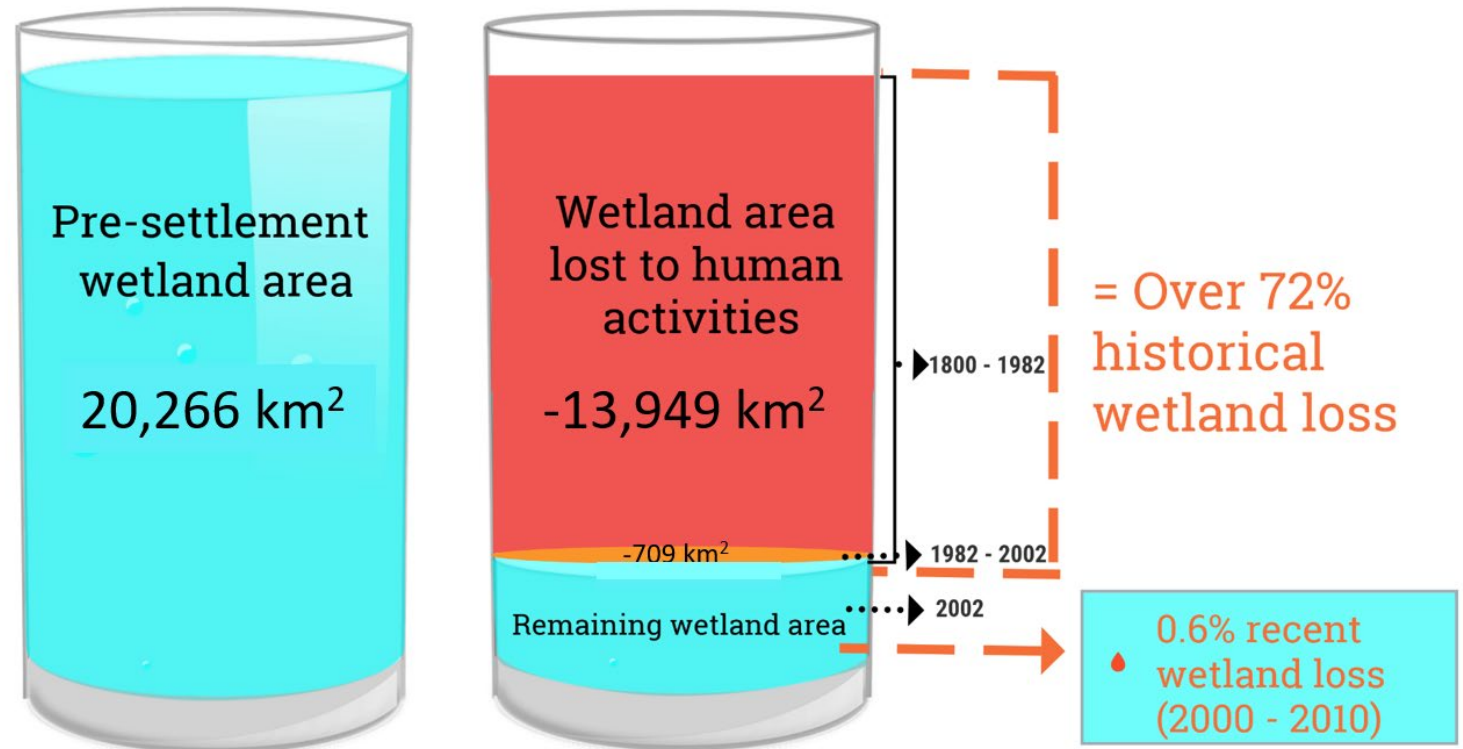
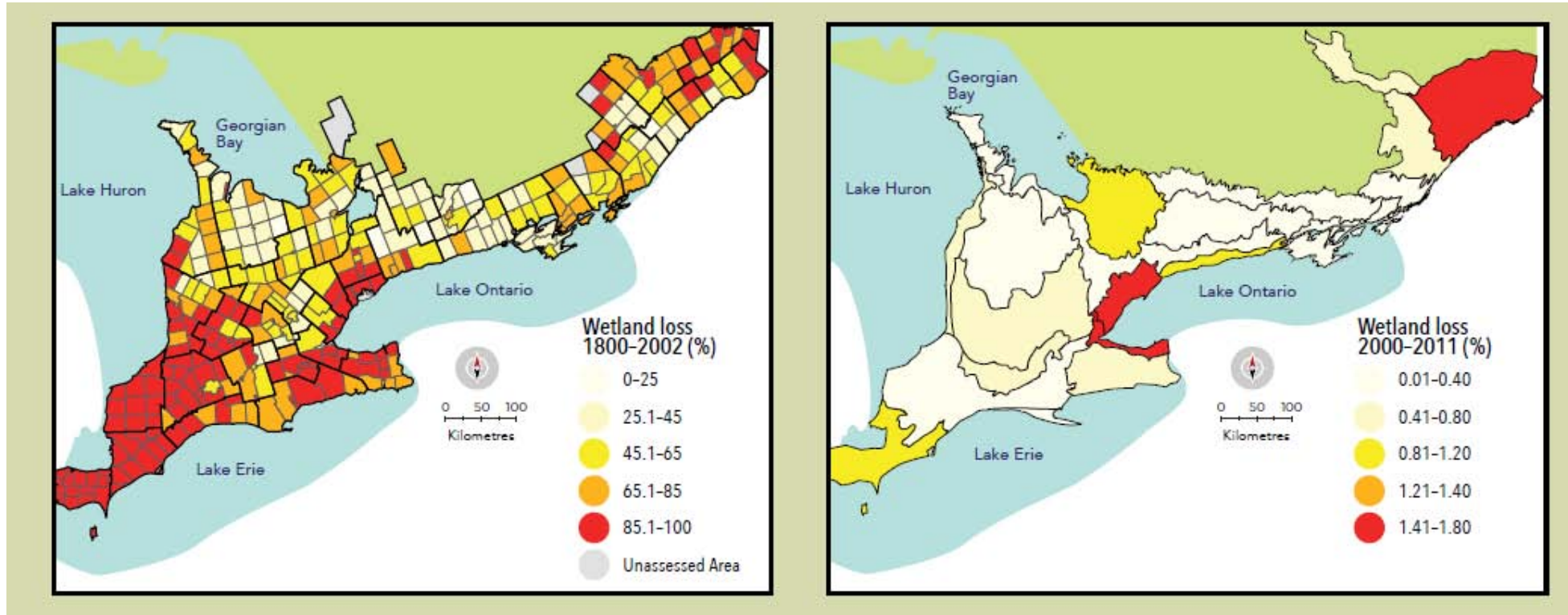


Photo Credit: Ontario Biodiversity Council, 2015.

- Southern Ontario has lost nearly three quarters of its original wetland cover
- Our remaining wetlands are still being destroyed



Extreme wetland losses



- Essex County - 1.5% wetland
- St. Clair Conservation watershed – 0.1% wetland
- Russell & Prescott – greater than 85% loss of wetland

2017 floods



Photo credit: Viv Lynch. Used under CC BY-NC-ND 2.0



Photo credit: The Canadian Press



Photo credit: Associated Press

Why are southern Ontario's wetlands disappearing?

Activities responsible for wetland loss	Area of loss (km ²)	Percent of total loss
Agriculture (cultivated fields, orchards, nurseries, vineyards, hay and pasture land and agricultural buildings)	26.8	43
Development and infrastructure	15.0	24
Built-up area (impervious surfaces)	12.5	20
Built-up area (pervious surfaces)	1.4	2
Transportation infrastructure	1.1	2
Undifferentiated (includes variety of additional agricultural and development and infrastructure activities)	11.5	19
Peat and topsoil extraction	4.6	7
Aggregate extraction	3.6	6
Stormwater management, clearing vegetation for swimming, and soil removal	0.2	<1

Source: MNRF data.

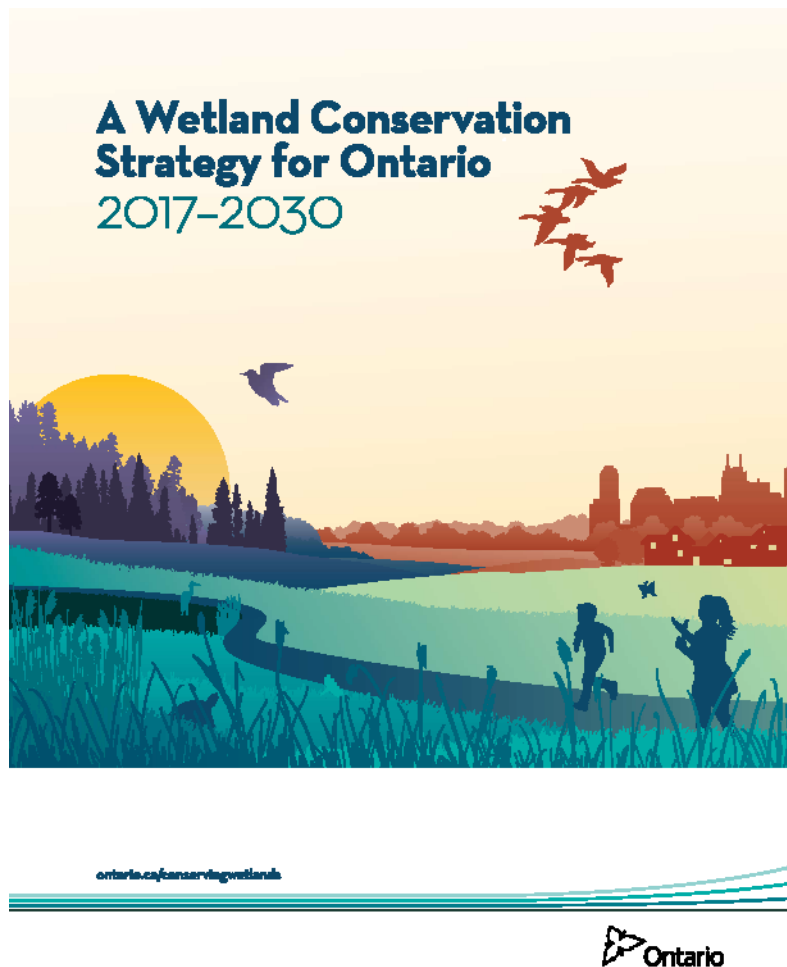


Photo credit: OMAFRA.



Photo Credit: Andrew McLachlan, Ducks Unlimited Canada.

Ontario's Wetland Conservation Strategy



- The Ministry of Natural Resources and Forestry released a new Wetland Conservation Strategy in July 2017
 - By 2025, halt the net loss of wetland area and function where wetland loss has been greatest; and
 - By 2030, achieve a net gain of wetland area and function where wetland loss has been greatest.

Source: MNRF

Identifying the gaps and moving forward

Major gaps

- Allows for ongoing loss of wetlands for the next seven years
- No concrete actions for achieving targets
- Emphasis on wetland offsetting to achieve net gain

Instead we should:

1. Overhaul Ontario's Wetland Evaluation System
2. Strengthen wetland protections
3. Empower conservation authorities to effectively regulate wetlands
4. Encourage wetland stewardship on private land
5. Develop strict criteria for wetland offsetting

The first hurdle: identifying significant wetlands

The government's approach to wetland protection is fundamentally flawed

- Wetlands not protected until officially identified as “provincially significant”
- 260 year backlog
- Only 51% of wetland area evaluated to date in southern Ontario
- 90% of this evaluated area identified as Provincially Significant Wetlands (PSWs)



Photo Credit: Douglas Wilhelm Harder, (CC-BY SA-3.0).

The government should treat all wetlands in southern Ontario as PSWs until proven otherwise

Real wetland protections

The Provincial Policy Statement provides baseline protections for wetlands in southern Ontario

- But there are still major gaps, even for “significant” wetlands
 - Key protections apply only to PSWs and significant coastal wetlands
 - Discretionary wording
 - Narrow definition of “development”
 - De facto exemption for agricultural activities
 - Nothing in policy 2.1 is intended to limit the ability of agricultural uses to continue
 - Risky caveats allow for development and site alternation adjacent to PSWs



Photo credit: Bob Hilscher. Used with permission.

Conservation authorities?

Conservation authorities can prohibit or regulate activities capable of “changing or interfering in any way with a wetland”

.... but they are limited by:

- lack of provincial direction
- missing or problematic definitions of “interference” and “wetland”
- insufficient resources
- 11th hour involvement



St. Luke's Marsh is a PSW adjacent to an internationally important wetland, but it is currently vulnerable to agricultural drainage

Conservation authorities

The consequence:
inconsistencies, uncertainty
and even reluctance to
enforce regulations

A key solution:

Empower conservation
authorities and ensure they
are involved in the early
stages of relevant planning
decisions



Photo Credit: Janet Baine, (CC BY-NC-ND 2.0).

Wetland stewardship on private land

Stronger policies and enforcement can only go so far

- Need better incentives for wetland conservation and restoration
- Conservation Land Tax Incentive Program (CLTIP) is one solution, but there is room for improvement
 - Simply and reframe CLTIP
 - Make all wetlands eligible for a rebate through CLTIP
 - Increase awareness about wetland ecosystem services for farmers and other landowners



Is offsetting the answer?

- The government's wetland strategy is focused too heavily on offsetting
- Limited effectiveness
- No substitute for protecting our remaining wetlands



Photo credit: Ian Adams. Used with permission.

When wetland offsetting is essential

- Currently no consistent approach
- Helps to show true social and environmental costs
- Successful projects contribute to net gain of wetland area and function
- Can help support much needed restoration projects



Photo credits: Toronto and Region Conservation Authority. Used with permission.

Wetland offsetting: a last resort

1. Eligibility

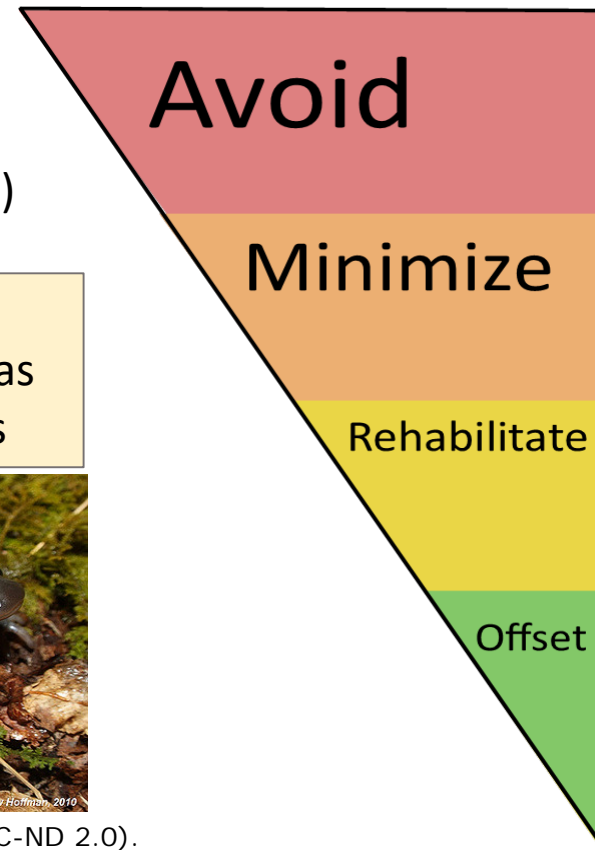
- PSWs, costal wetlands and unevaluated wetlands should be off-limits
- Some wetland features simply are not replaceable (e.g., bogs and fens)



Offsetting should be further limited in areas with high historic loss



2. Mitigation hierarchy



3. Recommended criteria

- Require high replacement ratios
- Ensure key wetland functions are replicated
- Account for uncertainty and time lags
- Confirm project locations are as close as possible to wetlands lost
- Design offsets to last in perpetuity
- Subject to long-term monitoring and maintenance

Photo credit: Tim Moore. Andrew Hoffman, (CC BY-NC-ND 2.0).

Protecting what we have left

1. Identify all unevaluated wetlands as significant until proven otherwise
2. Strengthen protections in the Provincial Policy Statement
3. Empower conservation authorities to effectively regulate all activities in all wetlands
4. Encourage wetland stewardship on private land
5. Ensure wetland offsetting is truly a last resort

Provincially Significant Wetlands, coastal wetlands and unevaluated wetlands	→	Strictly off limits to <i>all</i> activities that reduce wetland area or function, except in the rarest of circumstances (i.e., some linear infrastructure projects)
Locally significant wetlands	→	To be regulated by conservation authorities. Activities can be prohibited or permitted with high offsetting ratios
Limited value wetlands and degraded non-PSWs	→	To be regulated by conservation authorities. Development and site alteration permitted with offsetting

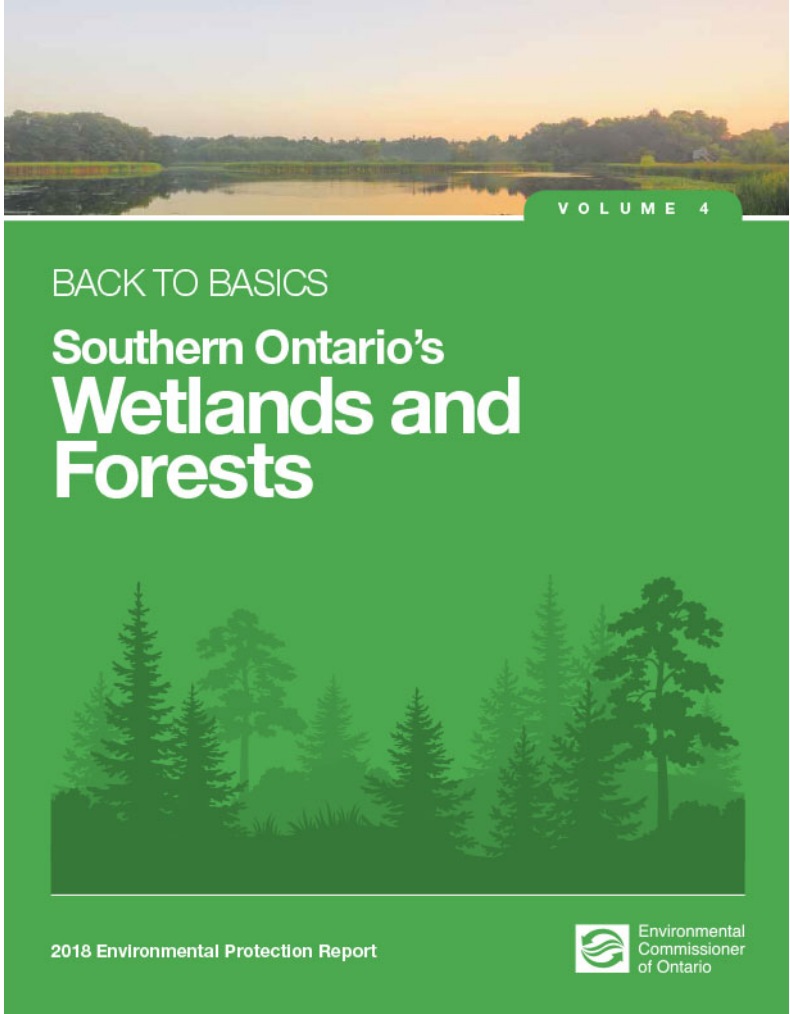


Photo Credit: John Oyston, North American Native Plant Society.



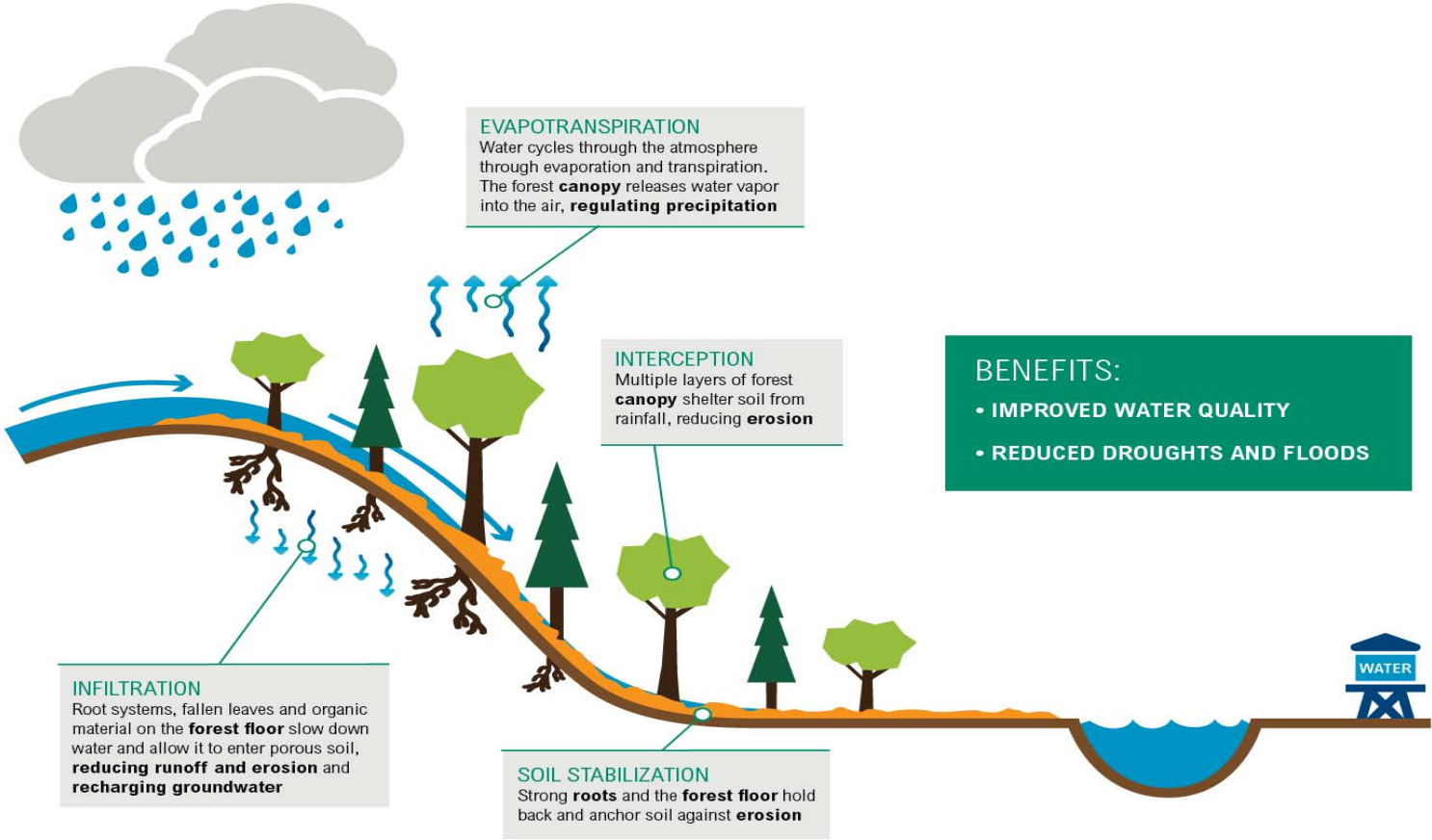
Photo credit: Scott Wootton. Used with permission.

Woodlands



Benefits of forests

How Natural Infrastructure Supports Water Security



More benefits of forests

- Healthy trees and forests are essential for healthy communities:
 - improve the physical, emotional, spiritual and mental health of residents
 - provide habitat for species of concern
 - cushion the effects of warming temperatures and changing precipitation patterns



Photo credit: Dan Bowes/MNRF

Forest loss in southern Ontario

Forest Habitat

30%

FOREST COVER

Minimum forest cover threshold. High-risk approach that may only support less than one half of the potential species richness, and marginally healthy aquatic systems.

40%

FOREST COVER

Minimum-risk approach that is likely to support more than one half of the potential species richness, and moderately healthy aquatic systems.

50%

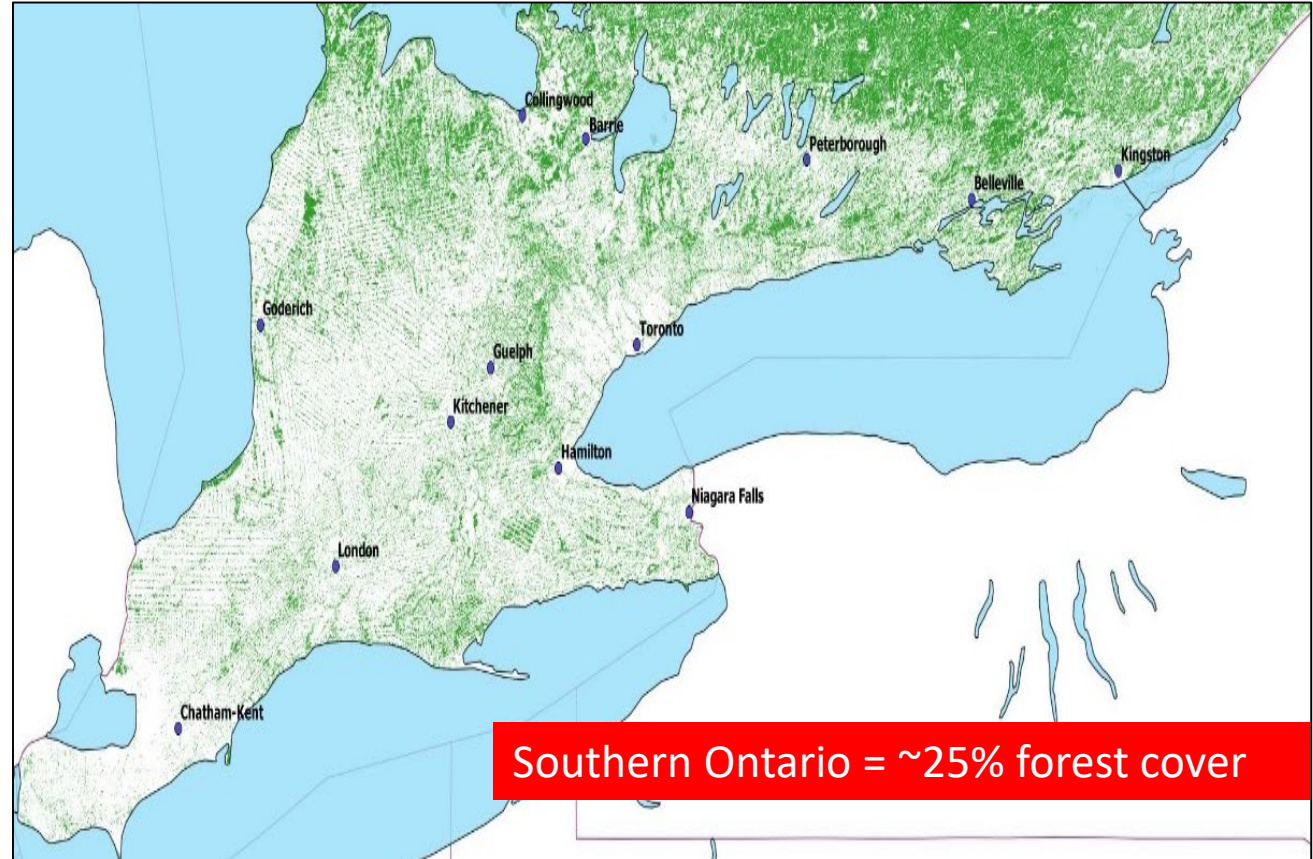
FOREST COVER

Low-risk approach that is likely to support most of the potential species and healthy aquatic systems.



Forest cover thresholds and consequences for biodiversity & aquatic systems within a watershed

Source: Adapted by the ECO from Environment Canada's *How Much Habitat is Enough? Third Edition*.



Forest cover (dark green) in southern and parts of central Ontario

Source: ECO-created map from Land Information Ontario data

Threats to forests

Most forests are privately owned and chipped away bit by bit...

Development



A road and backyards in a new subdivision encroach on woodlands in a municipality in York Region.

Agriculture



Aerial photos showing incremental woodland loss in Oxford County, Ontario, to agriculture.

Inadequate protections for remaining forest

- Provincial Policy Statement, 2014 (PPS) prohibits development or site alteration on “significant woodlands” (designated by municipalities)

Issues:

- not all municipalities identify and designate “significant woodlands”
- Ministry of Natural Resources and Forestry recommended size thresholds for establishing “significance” don’t consider uneven distribution of tree cover across large municipalities leaving smaller woodlands vulnerable
- PPS exempts road sewage, septage treatment, electricity transmission corridors
- PPS exempts agricultural activity on private land (also cases where woodland cleared for “agriculture” is developed shortly thereafter)

Inadequate protections for remaining forest

Municipal Forest Conservation by-laws promote responsible, sustainable stewardship of woodlots (on private land as well)

Issues:

- no provincial requirement for municipalities to enact by-laws (26 upper and single-tier municipalities have them, 14 do not)
- some by-law provisions harm forest health (e.g. “diameter limit cutting” or “high-grading”)

Barriers to afforestation on private land

- Managed Forest Tax Incentive Program (MFTIP) not competitive compared with breaks for agricultural use
- Many afforestation programs no longer exist and Ontario Tree Seed Plant may close
- 50 Million Trees Program
 - participants not eligible for MFTIP due to MFTIP enrollment criteria of 10 acres or more
 - participants find planting costs prohibitive
 - Not enough knowledge about tax breaks or recognition for participating



Photo credit: Melissa Spearing, Forest Gene Conservation Association (2012)

Barriers to afforestation in urban areas

Urban forests

- Municipalities bear the brunt of maintaining urban forests despite the broader public good to the province
- lack of political will among elected officials
- significant costs (\$\$ and human resources) needed to establish and maintain trees in face of competing needs within municipalities
- legacy issues from poor planning (e.g. poor soil quality, too little soil, invasive or inappropriate tree species)



Photo credit: Georgia Silvera Seamans, localecology.org

How many trees do we need?

- When the 50 Million Tree Program reaches its goal in 2025, participants will have planted 250 km².

To restore forest cover to 30% in southern Ontario, the minimum amount needed for functioning ecological systems, we need to afforest 6,800 km².

How do we get there?

Set provincial goal of net forest cover gain for every upper-tier southern Ontario municipality

- Stopping further loss:
 - amend the PPS to achieve a better balance between the protection of significant woodlands and agricultural uses
 - require all southern Ontario municipalities to implement forest conservation by-laws, and prohibit diameter-limit cutting within forest conservation by-law frameworks

How do we get there?

- Stopping further loss – improve evaluations:
 - require S. Ontario municipalities to evaluate woodlands for significance, and designate woodlands in official plans
 - adjust guidelines for size criteria for evaluating woodlands for significance to ensure percent forest cover is measured at appropriate scales, and small woodlands are protected where there is little forest cover

How do we get there?

- Stopping further loss - supporting afforestation
 - further subsidize costs of seedlings and planting and assist forest owners in sustainable forest management
 - establish an Ontario urban forest centre, a NPO dedicated to healthy urban forests (with municipalities and others)
 - guarantee funding for the essential services formerly provided by Tree Seed Plant



How do we get there?

- **Stopping further loss – make MFTIP better**
 - reduce minimum size of forest required to enroll in MFTIP so all 50 Million Tree Program participants are eligible
 - increase MFTIP rebate to provide 100% provincially-funded tax rebates to participants and bear the full cost
 - strategically market MFTIP and the 50 Million Trees Program to landowners

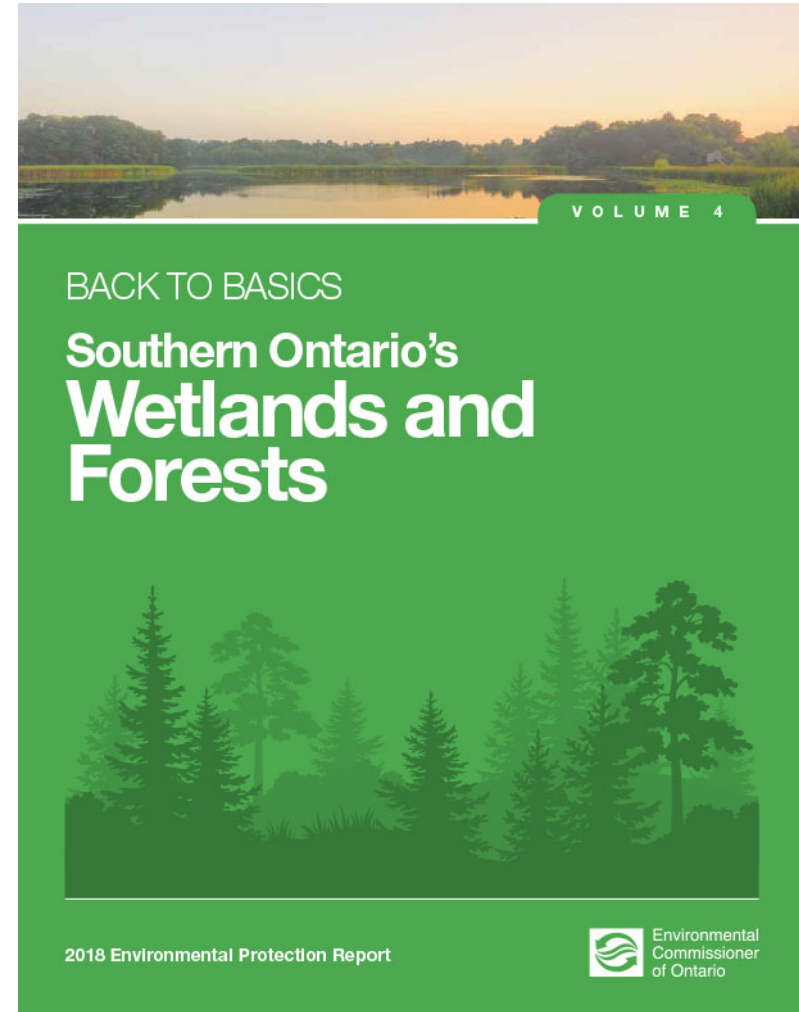


Photo credit: Christopher Dias

2018 Environmental Protection Report

Our wetlands and woodlands are too valuable and now too scarce to lose. Ontario should:

- Give them strong, immediate legal protection and
- Encourage farmers and property owners to protect them with more tax relief and less red tape.



Will we protect nature?

*We are lucky to live in this beautiful province.
If we want it to stay that way, we have to look after it.*

Thank you! Questions?

eco.on.ca



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