

# State of our Waters

Presentation for The People's Great Lakes Summit 2.0: Planning Policy Action

Monday, November 13, 2017

William Doo Auditorium, New College, University of Toronto

# Outline

- ▶ State of the Great Lakes 2017
- ▶ Watershed Reports
- ▶ Some initial takeaways

# STATE OF THE GREAT LAKES 2017

United States Environmental Protection Agency

Environment and Climate Change Canada

# Nine Great Lakes Indicators of Ecosystem Health

Indicator	Status	Trend
Drinking water	Good	Unchanging
Beaches	Fair to Good	Unchanging
Fish consumption	Fair	Unchanging
Toxic chemicals	Fair	Unchanging to Improving
Habitat & species	Fair	Unchanging
Nutrients & algae	Fair	Unchanging to Deteriorating
Invasive species	Poor	Deteriorating
Groundwater quality	Fair	Undetermined
Watershed impacts & climate change	Fair	Unchanging

# Climate Trends

- ▶ Across the Great Lakes, precipitation increasing and ice cover decreasing
- ▶ Surface water temperature increasing for Lakes Superior and Huron (undetermined for Lakes Erie and Ontario)
- ▶ Water levels decreasing for Lakes Superior, Huron, Erie (undetermined for Lake Ontario)

“Lake Superior’s ecosystem is in good condition and the trend is unchanging.”

- ▶ Fisheries and major habitats in good condition
- ▶ Fish consumption advisories due to legacy PCBs and mercury
- ▶ Aquatic invasive species (Sea Lamprey) are causing harm
- ▶ Microplastics detected

“Lake Huron’s ecosystem is in fair condition and the trend is unchanging.”

- ▶ Extensive beaches and nearshore areas are recreational attraction
- ▶ Harmful and nuisance algal blooms on southeast shore, Saginaw Bay, and parts of eastern Georgian Bay
- ▶ Aquatic invasive species (Zebra and Quagga Mussels) are associated with nuisance algae growth and are suspected to facilitate episodic botulism outbreaks

“Lake Erie’s ecosystem is in poor condition and the trend is deteriorating.”

- ▶ Harmful algal blooms in western Lake Erie and Lake St Clair
- ▶ Beach closures and habitat loss/degradation in eastern Lake Erie



“Lake Ontario’s ecosystem is in fair condition and the trend is unchanging.”

- ▶ Less restrictive fish consumption advisories, due to declining PCBs and other contaminants
- ▶ Bald Eagles and Lake Sturgeon populations recovering
- ▶ Nearshore nuisance algae

# For more information on the State of the Great Lakes:

<https://www.canada.ca/en/environment-climate-change/services/great-lakes-protection/how-great-lakes-are-doing.html>

# WATERSHED REPORTS

WWF Canada

# Four indicators of health

Indicator	Great Lakes	Ottawa River	St Lawrence
Water flow	Fair	Good	Good
Water quality	Fair	Fair	Data deficient
Fish	Data deficient	Good	Fair
Benthic invertebrates	Data deficient	Data deficient	Fair
OVERALL	Data deficient	Data deficient	Data deficient

# Seven indicators of threats

Indicator	Great Lakes	Ottawa River	St Lawrence
Pollution	Very high	Very high	Very high
Habitat loss	Moderate	Moderate	High
Habitat fragmentation	Very high	Very high	Very high
Overuse of water	Very high	Low	Moderate
Invasive species	Very high	High	Moderate
Climate change	Moderate	Moderate	Moderate
Alteration of flows	Moderate	High	Moderate
OVERALL	Very high	High	Moderate



For more information on the  
Watershed Reports:

<http://watershedreports.wwf.ca>

# Some initial takeaways ...

- ▶ Concern that trends are unchanging/deteriorating
- ▶ Concern that so many indicators are “fair” (or lower)
- ▶ Data deficiencies, particularly for measuring “health”
- ▶ Invasive species consistently highest threat
- ▶ “Emerging chemicals of concern” (toxics)



# Canadian Environmental Law Association

EQUITY. JUSTICE. HEALTH.

Subscribe to our monthly e-Bulletin



- HOME
- ABOUT CELA ▾
- BLOG
- E-BULLETIN ▾
- FRANÇAIS
- LIBRARY
- ARCHIVE
- CONTACT US

- News
- Publications
- Our Services
- Frequently Asked Questions
- CELA in the Courts
- Access to Environmental Justice
- Water

## Healthy Great Lakes

*Seeking robust, holistic, well-implemented public policy and engaged Great Lakes - St Lawrence River citizenry*

Canadians tend to take water for granted. But threats to water quantity and quality are all around us, whether from poorly planned development, water diversions and uncontrolled consumption, or from direct pollution. As a result, and as stated in the preamble to Ontario's **Great Lakes Protection Act, 2015**, "three of Ontario's four Great Lakes are in decline". We all need to work together to reverse this trend.



With funding from the **Charles Stewart Mott**



# Thank you for your attention!

Anastasia M Lintner, Special Projects Counsel, Healthy Great Lakes  
Canadian Environmental Law Association  
anastasia@cela.ca

CELA's Website: [www.cela.ca](http://www.cela.ca)

Twitter: @lintner @CanEnvLawAssn

Facebook: CanadianEnvironmentalLawAssociation

Subscribe to CELA's monthly E-bulletin: <http://www.cela.ca/bulletin>