

# Wetland regulation and policy in Canada



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*EARTH 444  
BIOLOGY 462*

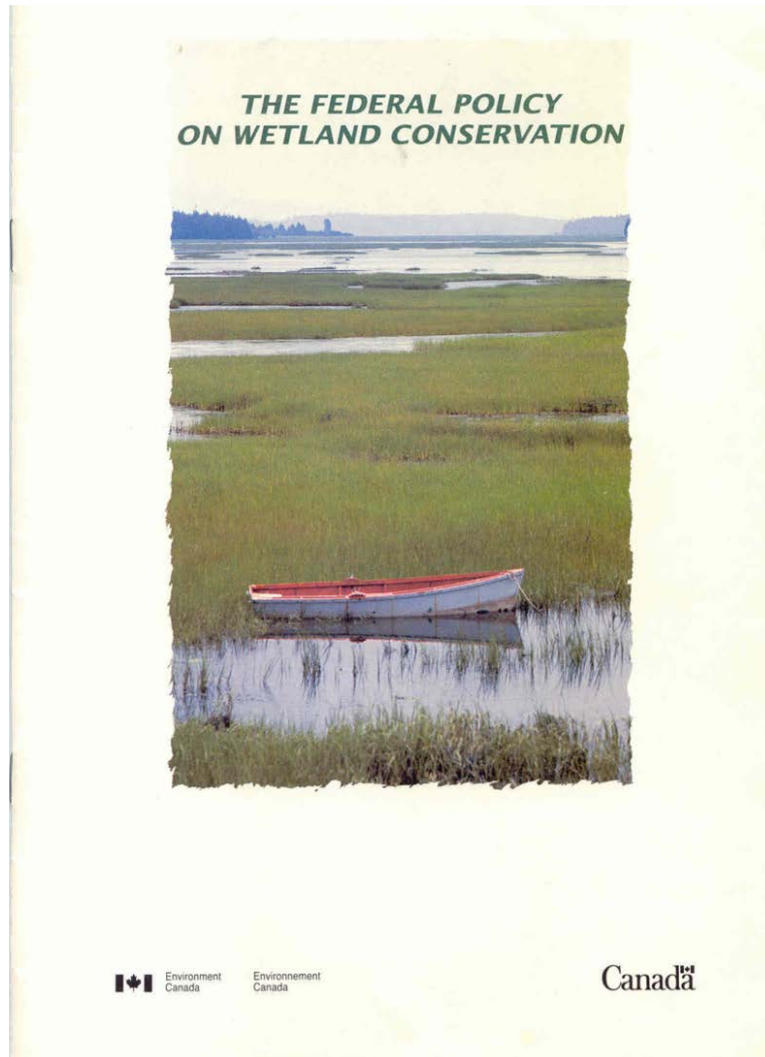
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# Regulating Agencies in Canada

- Federal Government:
  - Environment Canada: Crown lands, Protected Areas
  - Parks Canada: National Parks, National Historic Sites
  - Fisheries and Oceans Canada: Fisheries Act
  - Yukon concluded devolution<sup>1</sup> agreement with Feds in 2003 for education, medical services, social services, and lands and resource management
  - NWT started devolution agreement with Feds in 2013 for 2014
  - Nunavut is working on it
- Aboriginal Affairs and Northern Development Canada
  - Federally recognized First Nations Lands; many have to negotiate between local Councils and the federal government
- First Nations Territories and Lands
  - Land claims and self government (i.e. 11 of 14 land claims in Yukon settled); NWT, Nunavut and Nunavik working on it

<sup>1</sup>Devolution = transfer of province-like responsibilities from the federal government to the territories.

# Federal Wetland Policy - 1991



- **OBJECTIVE:** promote the conservation of Canada's wetlands to sustain their ecological and socio-economic functions
- policy implementation through co-operative approach; not legislated

# Guiding Strategies of Federal Policy

- Developing public awareness
- Managing wetlands on federal lands and waters and in other federal programs
- Promoting wetland conservation in federal protected areas
- Enhancing co-operation
- Conserving wetlands of significance to Canadians
- Ensuring a sound scientific basis for policy
- Promoting international actions

# Wetlands Legislation in Canada

- there is no legislation for wetlands, only indirect protection
- Canadian Wildlife Act
- Canadian Fisheries Act
- Migratory Birds Conservation Act
- Species at Risk Act
- Canadian Environmental Assessment Act

# Fisheries Act – Federal Legislation

- to manage and protect Canada's fisheries resources in all fishing zones, territorial seas and inland waters of Canada; dates from Confederation
  - Section 20: ensure safe passage for fish around obstructions
  - Section 32: prohibits the unauthorized killing of fish by means other than fishing
  - Section 35: prohibition of harmful alteration, disruption or destruction of fish habitat
  - Section 36: prohibits the deposit of deleterious substances harmful to fish and fish habitat, includes making changes to water temperatures

# Regulating Agencies - Provincial

- Provincial Government - Ontario
  - Ministry of Natural Resources
  - Ministry of Northern Development and Mines
    - Mining Act (modernization in Oct 2012)
  - Ministry of Health
  - Ministry of Environment
    - Water quality of surface of ground waters
  - Conservation Authorities (36 in Ontario)
    - Conservation Authority Act
    - Wetlands Policy (i.e. Grand River Cons. Authority)
- Regional Governments
- Local/City Governments

# **Wetlands Legislation in Ontario**

- Planning & Development Act
- Fish & Wildlife Conservation Act
- Municipal Act
- Endangered Species Act
- Conservation Authorities Act
- Environmental Assessment Act
- Ontario Water Resources Act



# Ontario Wetland Regulations

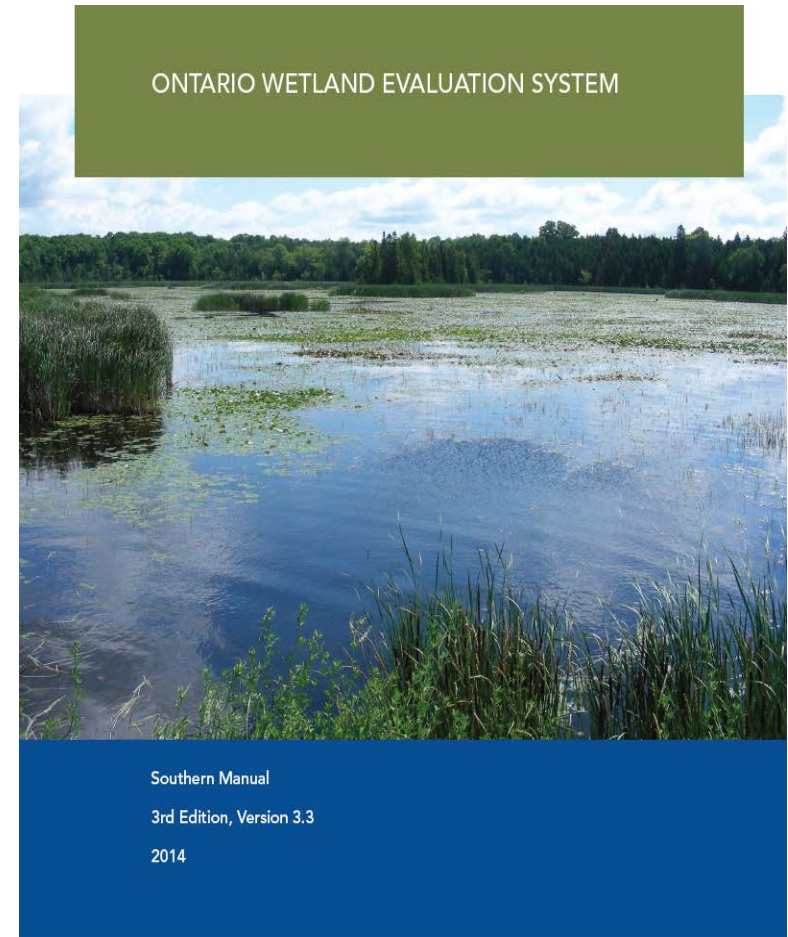
- through 1970s and 1980s – need to protect wetlands in Ontario recognized
- Wetlands Policy Statement – 1992; issued under Section 3 of Planning Act; refers to provincially significant wetlands and adjacent lands
- Provincial Policy Statement (PPS) ensures protection (on private lands) through land use planning process and no loss of provincially significant wetlands
- PPS revised in 2005 and 2014: no loss of wetland functions
  - Section 2: Natural Heritage Features
  - Section 3: Water

# Provincial Policy Statement

## 2014 Provincial Policy Statement

Under the *Planning Act*

Ontario.ca/PPS



# Ontario Wetland Evaluation System (OWES)

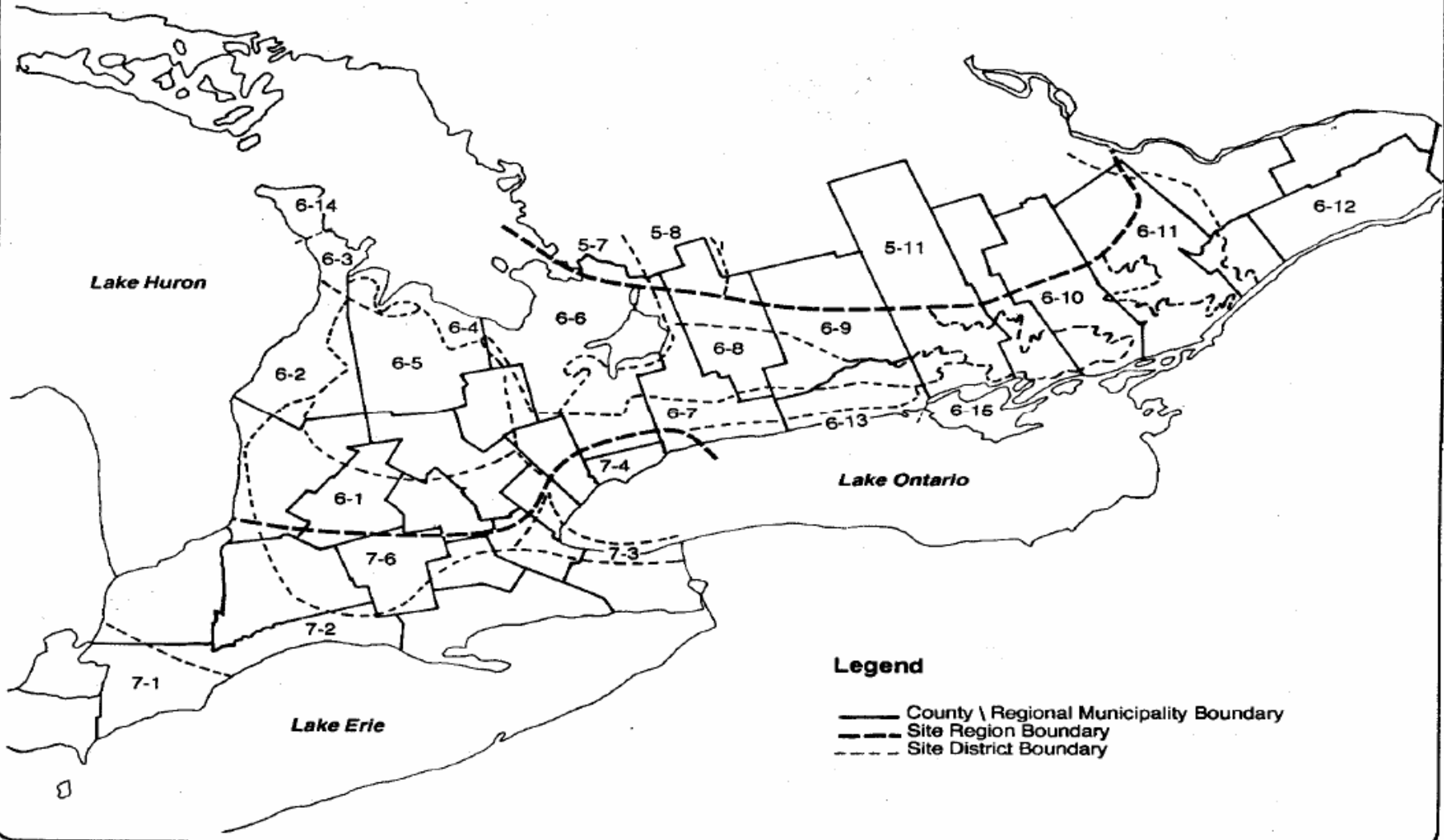
- OWES is procedure for identifying and evaluating provincially significant wetlands
- 3<sup>rd</sup> Edition (s. Ont) published in 1993, version 3.3 in 2014
- must be certified by OMNR
- a standardized method of evaluating values so that wetlands may be ranked relative to one another
  - Evaluation based on perceived values
  - characterizes wetland functions

# OWES Methodology

- Only positive wetland values considered. Ranks wetland significance relative to other wetlands
- An evaluation is a preliminary bio-physical inventory. A “reconnaissance”, not a full inventory
- Does not evaluate wetland vulnerability to development or other pressures
- Two manuals – Northern and Southern Ontario.
- Reflects differences in geomorphology, hydrology; relative rarity of wetlands; different wetland characteristics and values.

# Southern Manual: Site Regions 6 & 7

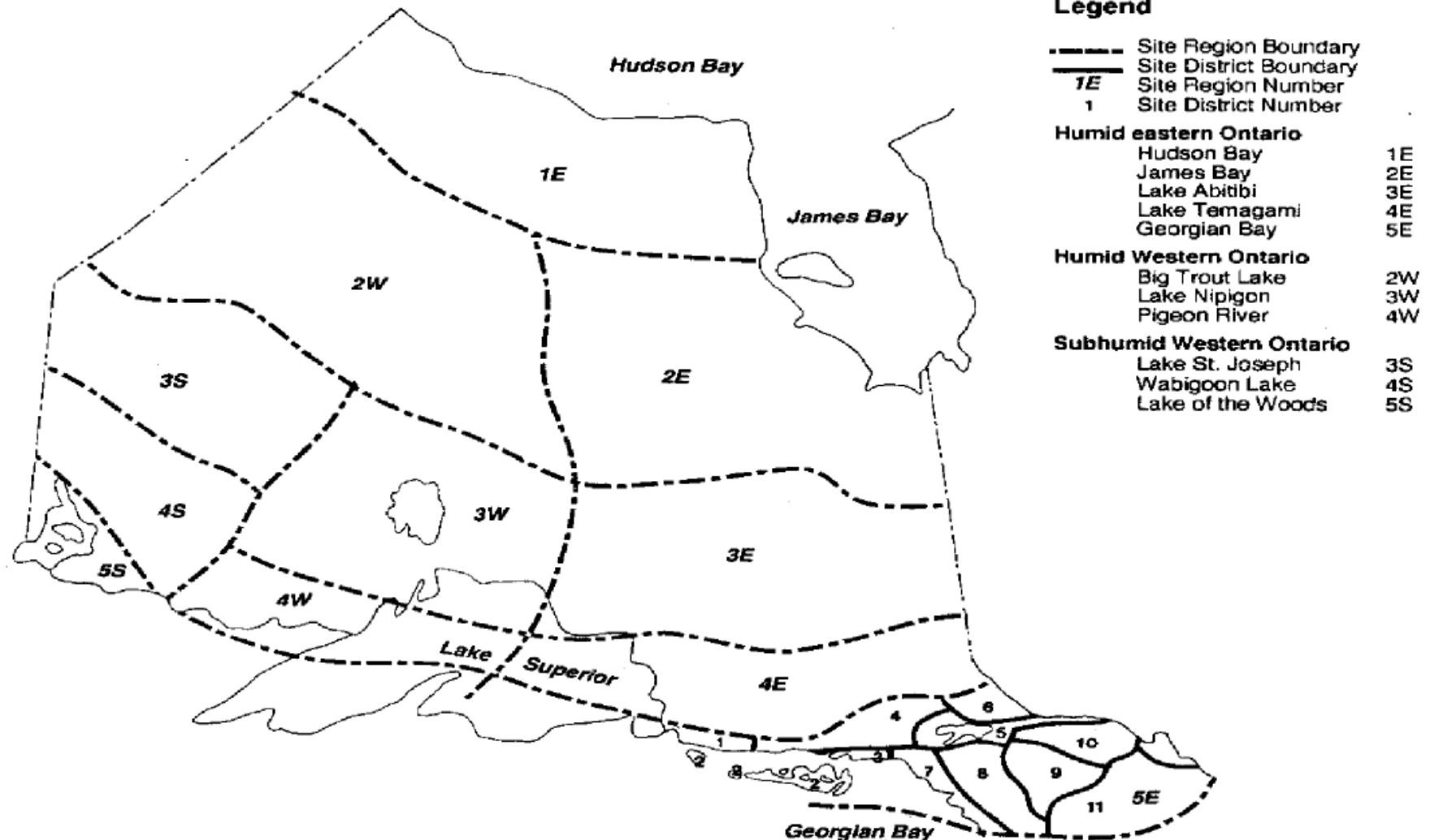
Figure 16 Site Regions and Site Districts in Southern Ontario



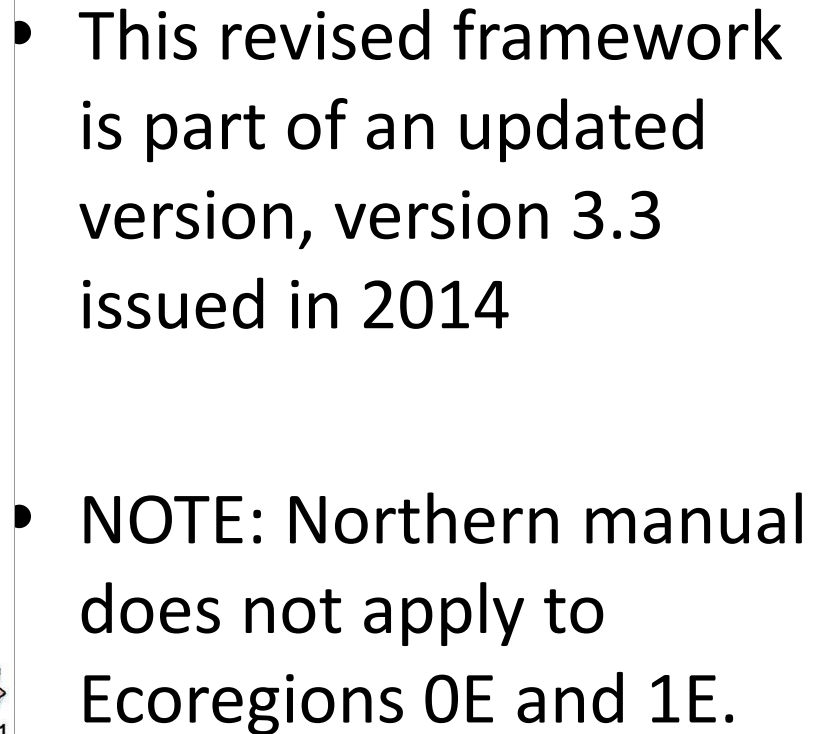
# Northern Manual:

## Site Regions 2,3,4 & 5

Figure 16 Site Regions and Site Districts in Northern Ontario



# Ecozones, Ecoregions and Ecodistricts of Ontario



# OWES Structure

- Components + numerous sub-components
  - Biological
  - Social
  - Hydrological
  - Special Features
- SCORING: Max of 250 points per component  
Total score is capped at 1000 points. Records include all points, but final score is capped.



# Biological Component:

## 3 subcomponents

- Productivity
  - growing degree days; Soils
  - wetland type
  - landscape setting (“site type”)
- Biodiversity
  - number of wetland types (habitat diversity)  
vegetation communities
  - diversity of surrounding habitat, proximity to other wetlands
- Size
  - Recognizes relationship between size and biodiversity

# **Social Component:**

## **8 subcomponents**

- Economically valuable products
- Recreational activities
- Landscape aesthetics
- Education & awareness
- Proximity to human settlement
- Ownership
- Size
- Aboriginal values; cultural heritage

# Hydrological Component:

## 5 subcomponents

- Flood attenuation
  - upstream detention
  - wetland attenuation
- Water quality improvements
  - short-term improvements
  - long-term nutrient trap
  - groundwater discharge
- Carbon Sink
  - Accumulation of carbon-rich organic soils
- Shoreline erosion control
- Groundwater recharge
  - topography & surficial geology

# Special Features Component:

## 4 subcomponents

- Rarity
  - wetlands (within landscape, & by type)
  - species
- Significant features
  - Colonial waterbirds; waterfowl areas; fish habitat
- Ecosystem Age (unique, intrinsic value)
- Great Lakes Coastal Wetlands
  - International resource; significant losses

# OWES Scoring

<b>COMPONENT</b>	<b>MAX SCORE</b>	<b>PROVINCIALY SIGNIFICANT</b>
BIOLOGICAL	250	<b><u>200 POINTS OR MORE</u></b>
SOCIAL	250	
HYDROLOGICAL	250	
SPECIAL FEATURES	250	<b><u>200 POINTS OR MORE</u></b>
TOTAL	1000	<b><u>600</u></b>

# OWES Governance

- Evaluators must use OWES methodology & take OMNR-sanctioned course
- Trained, non-OMNR staff may conduct evaluations; OMNR must approve them

# Minimum Expertise & Required Skills

- experience with & knowledge of wetland ecology, to identify wetland types & characteristic species, features
- Adequate knowledge of plant and animal species; use of taxonomic keys
- Knowledge of aerial photograph interpretation (other imagery) to identify wetland vegetation, boundaries
- General knowledge of natural history and wildlife
- Some understanding of hydrological processes

# Field Work

- Do as much background preparation as possible:
  - confirm wetland presence, maps, air photos,
- May require more than a single visit
  - Can vary depending on: wetland type, site type, its size & complexity, and extent of information already available
  - Permanent open water: summer/early fall to identify floating, submergent vegetation
  - Basin wetlands: has periods of low water levels; must identify surface water inflows and outflows
  - Complexes can require several site visits



# **A complete evaluation consists of:**

- Wetland data & scoring record
- Scoring summary
- Maps: boundary; vegetation Communities; catchment basin
- Documentation – sources of information, photos
- Field notes

# How are OWES Results Used?

- Municipal land use planning process: Official Plans;
- natural heritage system planning
- Conservation authorities: C.A. Act regulations
- Crown Forest Sustainability Act – Forest
- Management Plans; Areas of Concern
- Provincial/Sub-provincial planning efforts
- National, International recognition: Ramsar wetlands

# Environmental Assessment Act

- EAs required for any major public sector project with potential for significant environmental effects (i.e. roads, transit, wastewater and stormwater)
- EAs determine the ecological, cultural, economic and social impact of the project
- key part of the planning process; must be completed before decisions made to proceed
- EAA establishes "Class Environmental Assessment" process
- Only by PEng or PGeo for some (ie. brownfields)

# Class Environmental Assessment

- class EA is a document which sets out a self-assessment streamlined EA process
- Class EA planning processes for:
  - public, government agency and Aboriginal community consultation
  - assessment of potential environmental effects
  - assessment of alternatives
  - documentation requirements
- Part II Order request is a higher level of assessment of an individual environmental assessment (EA) for projects planned following an approved class EA process

## **Code of Practice**

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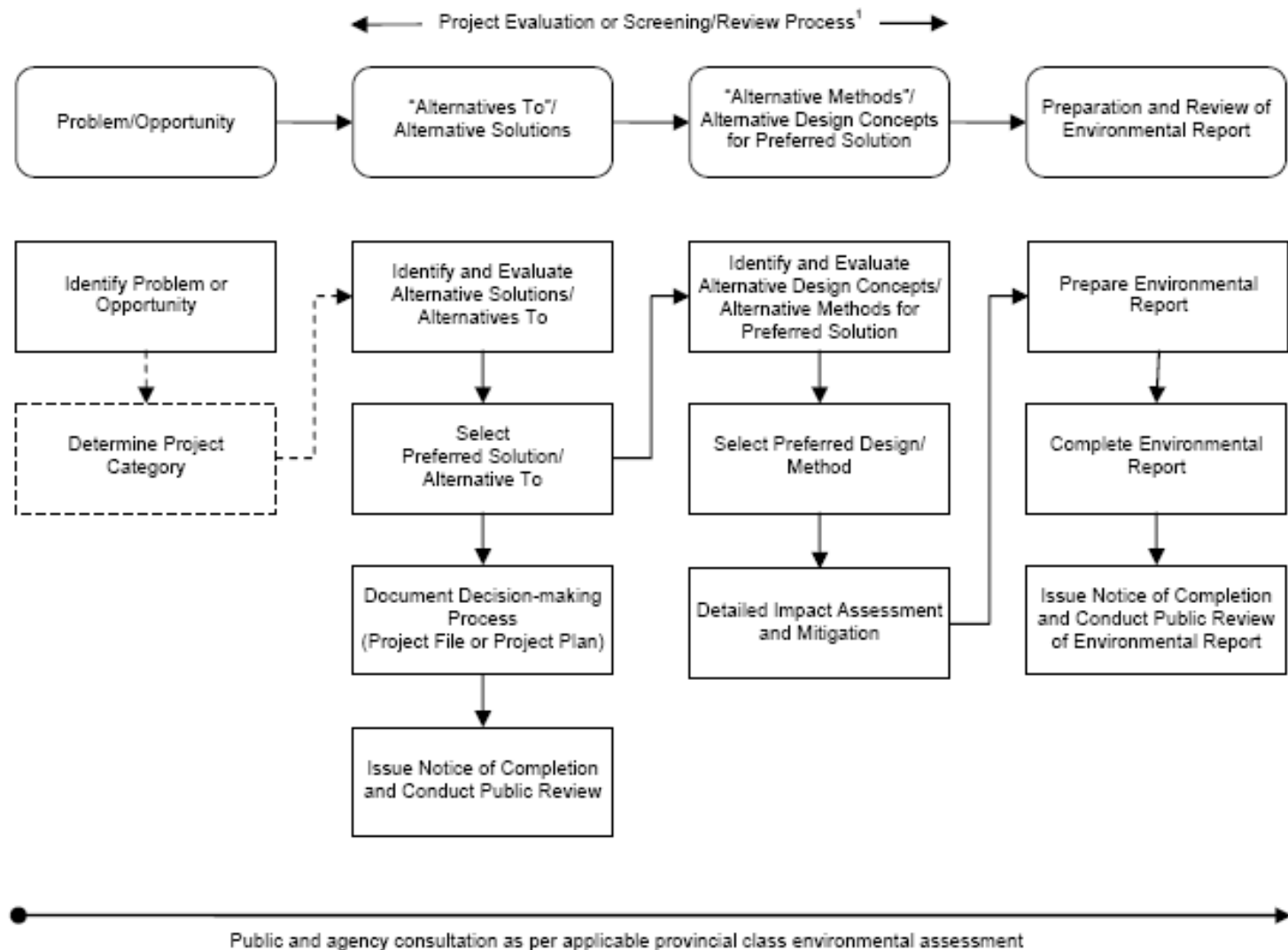
# **Preparing, Reviewing and Using Class Environmental Assessments in Ontario**

Legislative Authority:

Environmental Assessment Act, RSO 1990, Chapter E.18

October 2009





# Conservation Authorities

- Grand River Conservation only CA in Ontario to have wetland policy; 2003
- Responsible for Conservation Authority Act; permission is required for activities:
  - construct any building or structure in or on a pond, swamp or in any area susceptible to flooding during a regional storm;
  - place or dump fill in the areas whether such fill is already located in or upon such area, or brought to or on such area from some other place or places;
  - straighten, change, divert, or interfere in any way with the existing channel or river, creek, stream, or watercourse
- No protection for non-provincially significant wetlands