



# **Nova Scotia Wetland Conservation Policy**

**September 2011**

  
**NOVA SCOTIA**

  
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# Policy Scope



- Policy applies to all freshwater and certain tidal wetlands (those commonly referred to as salt marshes and coastal saline ponds, including barachois ponds and tidal lagoons) in Nova Scotia.
  - does not include eel grass beds or mud flats

# Policy Objectives

- **No loss** in *Wetlands of Special Significance* and **no net loss** in *other wetlands*.
- Promote wetland **protection** and **stewardship** and increase **awareness** of the importance of wetlands
- **Restore** wetland types with high historic losses (e.g., salt marshes, large floodplain swamps)
- Encourage the use of **buffers** to better ensure integrity



# Key Exceptions

- **No Approval is needed to alter:**
  - **Wetlands less than 100 m<sup>2</sup>**
  - **Designated “Marshlands” (AMCA)**
  - Wetlands that develop in road or agricultural drainage ditches
- **An approval is not required:**
  - For secondary/forestry roads or driveways, less than 10 m wide and 600 m<sup>2</sup> in total area through swamps
  - For harvesting trees or mowing agricultural fields in a wetland (use BMPs to minimize damage)

# Wetlands of Special Significance ("no loss" wetlands)

- Salt marshes
- Wetlands w/i designated Ramsar sites, Wildlife Mgt. Areas (Crown lands only) Provincial Parks, Nature Reserves, Wilderness Areas, or lands protected by land trusts
- EHJV project sites
- Wetlands known to support at-risk species
- Wetlands in designated protected water areas

http://www.gov.ns.ca/nse/wetland/conservation.policy.asp

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Wetlands

## Wetland Conservation Policy

### Wetlands

[Vernal Pool Mapping and Monitoring Project](#)

[Wetland Alteration](#)

[Wetland Assessment Resources](#)

[Wetland Conservation Policy](#)

[Wetland Indicator Plant List](#)

[Wetland Links](#)

[Wetland Professional Resources](#)

### New Wetland Conservation Policy for Nova Scotia!

The province released the [Nova Scotia Wetland Conservation Policy](#) (PDF: 4.2mb) on October 14, 2011. It is a comprehensive new policy that provides direction and a framework for the conservation and management of wetlands in Nova Scotia. The policy highlights the important roles wetlands play in Nova Scotia's landscapes and their value to society. It represents a commitment to managing Nova Scotia's wetlands in a consistent manner and to maintaining a high level of wetland integrity for future generations, while allowing for sustainable economic development in our communities.



### Nova Scotia Wetland Conservation Policy

The Nova Scotia Wetland Conservation Policy identifies what legislation, regulations, and policies are currently relevant to wetland conservation; clarifies the roles and responsibilities of government and the public in relation to wetlands; and makes this information more accessible to Nova Scotians. Ultimately, the policy establishes specific objectives intended to prevent the net loss of Nova Scotia's wetlands.

Government realizes that effective wetland conservation and preventing the net loss of wetlands is unlikely to be achieved through policy alone and acknowledges the

# Why all the fuss?

- Critical for watershed health
- Filter pollutants (fertilizer, sediment, pesticides)
- Moderate effects of climate change
- Recharge groundwater
- Control flooding and erosion
- Important habitat for wildlife/biodiversity
- Salt marshes nourish coastal fisheries
- Hunting, fishing, berry picking, medicinal plants



# Nova Scotia Wetland Inventory

- Peatland 159,000 ha
- Swamp 128,000
- Fresh marsh 74,000
- Salt marsh 17,000\*
- Shallow water 6,000

Peatland

Swamp

Salt marsh

Fresh marsh

\* historic conversions >50% province-wide, 80% Bay of Fundy;

> 50% loss in New England states; 360,000 acres lost between 1998-2004 along Atlantic and Gulf Coasts (NOAA/USFWS)

*A PLAN of the PENINSULA,  
upon which  
the TOWN of HALIFAX is situated,  
shewing;*

*the HARBOUR, the NAVAL-YARD, and the several WORKS constructed for their DEFENCE.*

*Surveyed in the Year 1704 by Captain Charles Blaskowitz,  
under the direction of J. Col. Mose, Chief Engineer to America.  
(See Blaskowitz and Henry's Collection 2002)*

*N.B. The Lines drawn Yellow, within the Lands, are granted hold, for  
the Crown; and the Figures marked upon several of the Hills, show  
their height from the level of the Sea.*

B.O.



Blaskowitz  
1784

**REFERENCES**

- a, a, a, a Batteries and Fortifications thrown up at different times for the defence of the Harbour.
- b Machine, or the principal Battery.
- c The remains of the South Battery, the Land of which is granted away.
- d The remains of the Middle Battery, on the rear of which was a large Square reserved for public use, the part of which, enclosed within the town lately given up by the Town, and is now enclosed for Government use.
- e The remains of the Lower Battery, in the rear of this are the Ordnance Storehouses, the enclosing of which was lately ordered, to be the magazine of the Town.
- f Fort Castle, being a Bockhoof with an Intrenchment thrown up round it.
- g Naval Hospital.
- h Remains of detached Positions thrown up for the defence of the Naval Yard.
- i Small Black house.
- k Grenadier Barracks.
- l Red Barracks.
- m Barracks commonly called Fort Lottrel.
- n Powder Magazine.
- o Cornwallis Barracks.
- p Artillery Barracks.
- q Arsenal Hospital.
- r Main Guard and Barracks.
- s Engineer's or Lumber Yard.
- t New Barracks built near the Eastern Battery, since the Powder was lodged within the Work.
- N<sup>o</sup> 1 Church.
- N<sup>o</sup> 2 Roman Catholic Chapel.
- N<sup>o</sup> 3 Dutch Church.
- N<sup>o</sup> 4 Market House.



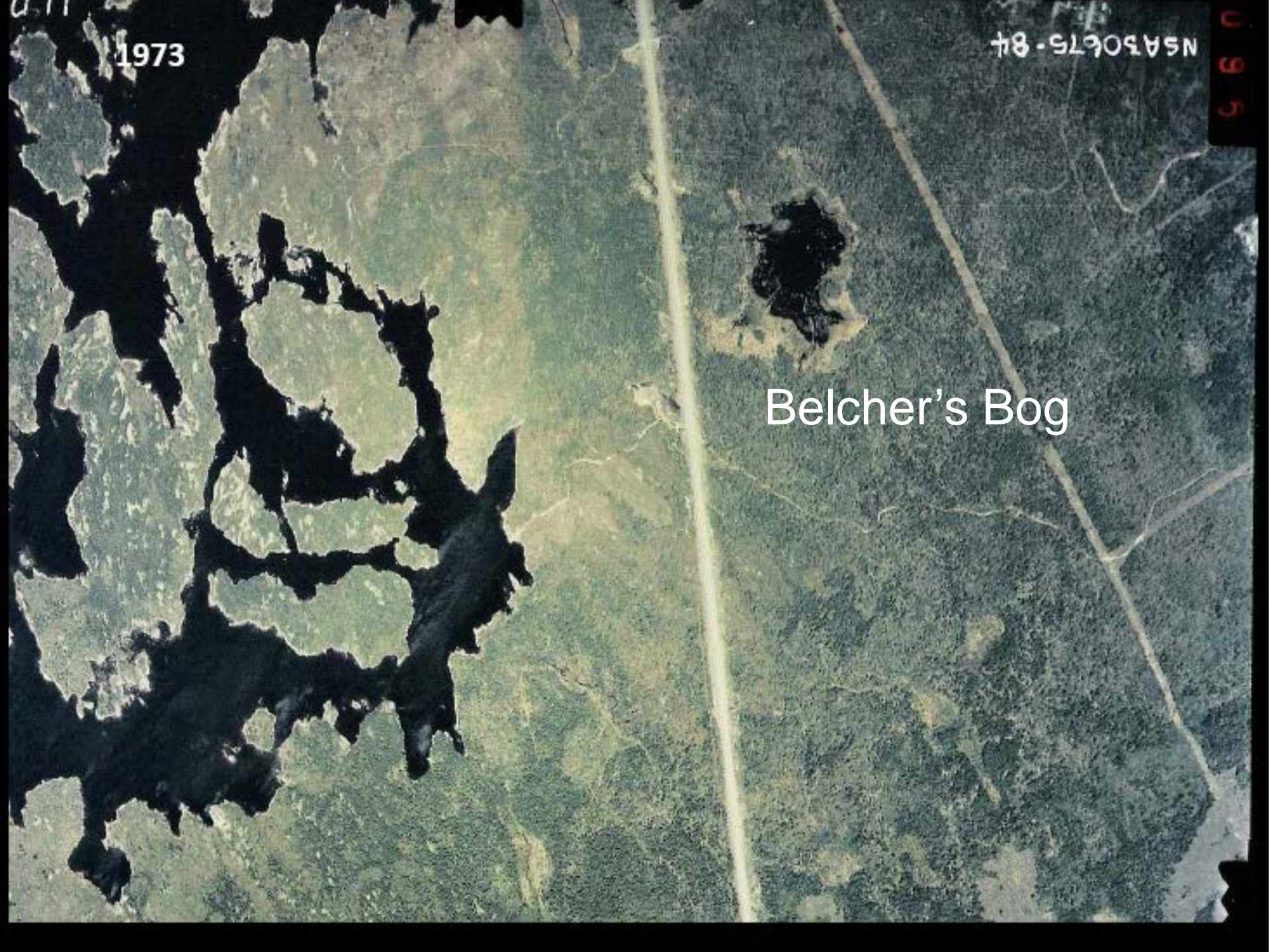


1973

NSAS0675-84

095

Belcher's Bog



1981

8/15/1981

204

11



1992



2011



Sherwood Heights

Farnham Gate Rd

102

Lagbrae Dr

Turman Dr

Flamingo Dr

Dunbrack St

Parkland Dr

Lancaster Dr

Radcliffe Dr

Wilfrax Dr

Lacewood Dr

Willett St

©2012 Google

Image © 2012 GeoEye

Google earth

542 m

Imagery Date: 7/9/2011



2003

20 T 446850.16 m E 4946290.49 m N elev 85 m

Eye alt 2.42 km



9/30/2004

2004

Dartmouth Crossing

© 2012 Google  
Image © 2012 DigitalGlobe

Click to see historical imagery from 2003.

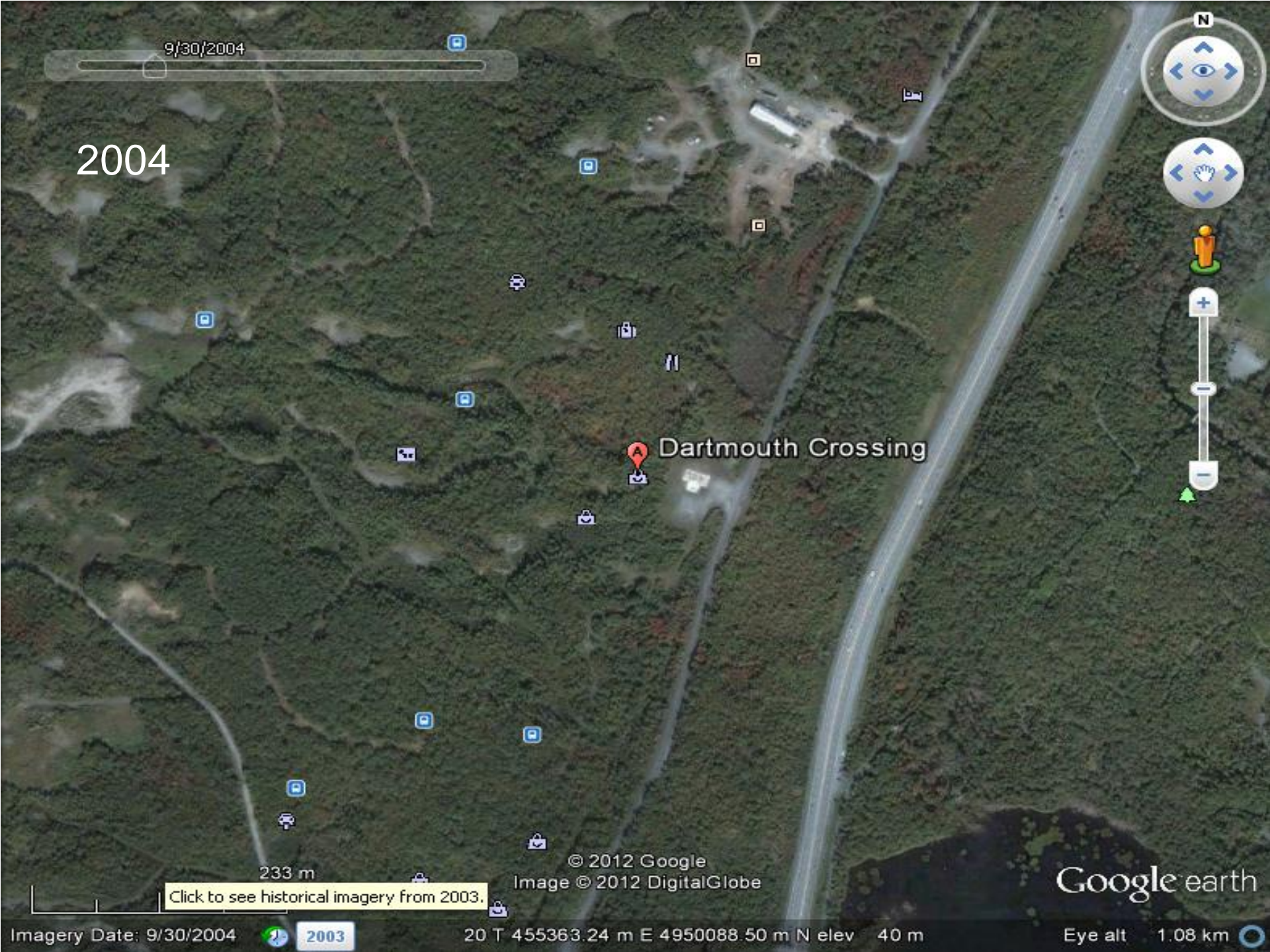
Imagery Date: 9/30/2004

2003

20 T 455363.24 m E 4950088.50 m N elev 40 m

Google earth

Eye alt 1.08 km



7/26/2007  
2003 2011

2007

Navigation controls including a compass, a hand cursor, a person icon, and a zoom slider.

Dartmouth Crossing

© 2012 Google  
Image © 2012 DigitalGlobe

Google earth

Imagery Date: 7/26/2007

2003

20 T 455363.24 m E 4950088.50 m N elev 40 m

Eye alt 1.08 km

2011

7/9/2011

Dartmouth Crossing

Image © 2012 GeoEye  
© 2012 Google

Google earth

Imagery Date: 7/9/2011

2003

20 T 455363.24 m E 4950088.50 m N elev 40 m

Eye alt 1.08 km





Patch 458 – Walton River



Wetland Drainage for Agriculture – Shubenacadie River





Patch 166 – Goose Bay



Salt Marsh Dyking - Cornwallis River



Salt Marsh Dyking – Grand Pre



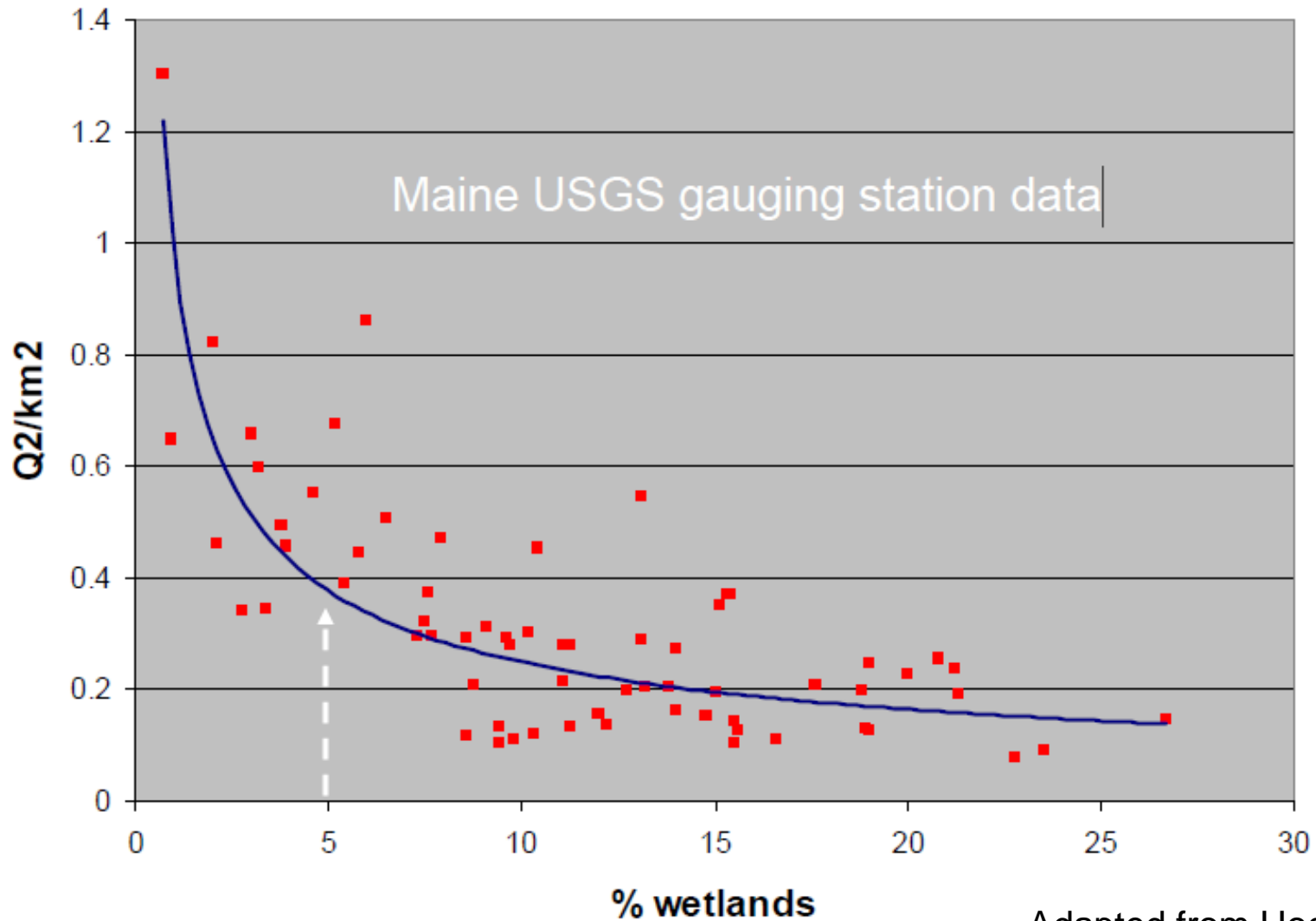
Patch 156 - French River-Southwest



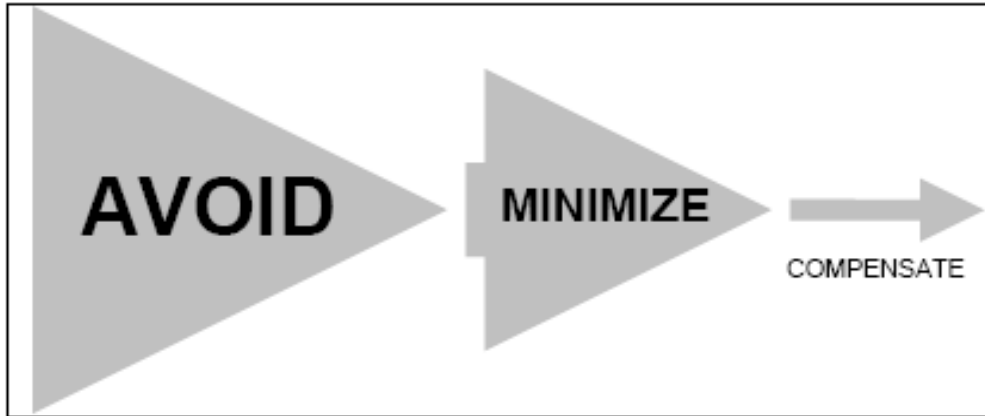
Suburban Lake Development – Hammonds Plains



# Managing Wetlands for Watershed Health - Thresholds



# What does it all mean?



- Protect/restore most significant wetlands
- *Compensation is required for all approved alterations*

# What is Compensation?

*Compensation is action taken to offset losses of wetland altered by a development*

- Typically in the form of restoration, enhancement or creation
- Preference is for *restoration*

# What is Compensation?

- *Restoration* is the re-establishment of wetland that previously occurred at a site
  - e.g. blocking farm drains to restore hydrology
- *Enhancement* is increasing one or more functions at an existing wetland
  - e.g. modifying land contours to allow fish passage or re-establishing native plant species
- *Creation* is the construction of wetland where none existed previously
  - e.g., expanding an existing wetland or constructing a naturalized stormwater treatment wetland

# How Much Compensation is Required?

- *Restoration* – 2:1 (2 ha restored for every hectare altered)
- *Enhancement* – case specific but at least 3:1
- *Creation* – 2:1 if expanding an existing wetland; 4:1 if constructing a wetland where none existed previously

# Other forms of Compensation

- May also include *partial* credit for;
  - Studies to identify potential restoration sites
  - Naturalized stormwater or wastewater wetlands
  - Preserving existing wetlands of special significance
  - Building access facilities or interpretative centres
  - Developing public education materials
  - Conducting or supporting wetland research
- **Only considered in addition to projects that provide at least 1:1 restoration on the ground**

# Salt Marsh Restoration

## *Walton River*



- ~ 100 ha salt marsh restored between 2005-present
- ~1500 ha inland wetlands restored (mostly EHJV)
- unknown number ha lost to development

# Minudie Dykelands, Cumberland County



NB

NS

British Settlement  
Evans

Westcock

Aulac

Point de Bute

10,000 m dyke  
1,300 ha protected

Wood Point

East Amherst

Amherst

Amherst Point

Upper Nap

Cumberland Basin

Mill Creek  
Minudie  
Minudie, NS BOM, Canada

Nappan

Fenwic

River  
Hébert

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Google earth



# St. Marys Bay Dykelands, Digby County

Bay of Fundy

Annapolis Basin

Digby

Victoria St

101

Evangeline Trail

St. Marys Bay

3.15 mi

Image © 2009 TerraMetrics

© 2009 Tele Atlas

Image © 2009 DigitalGlobe

Data SIO, NOAA, U.S. Navy, NGA, GEBCO

elev 162 ft

Google

Eye alt 10.92 mi

44°35'55.22" N 65°46'56.42" W



# St. Marys Bay Dykelands



# GOM-Relevant Projects

- Comprehensive Watershed Studies
  - Sackville River(draft complete), Cornwallis River?

- Sea Level Rise – Salt Marsh Study



- Elephant Grass Biomass Proposal

or not)

# Sackville River Comprehensive Watershed Study

Geo-spatial analysis to identify potential wetland habitats, including largest intact headwater wetlands

Identification of potentially degraded wetland habitat:

- Road impacts
- Development
- Flooding
- Infill
- Culvert placement/improper sizing

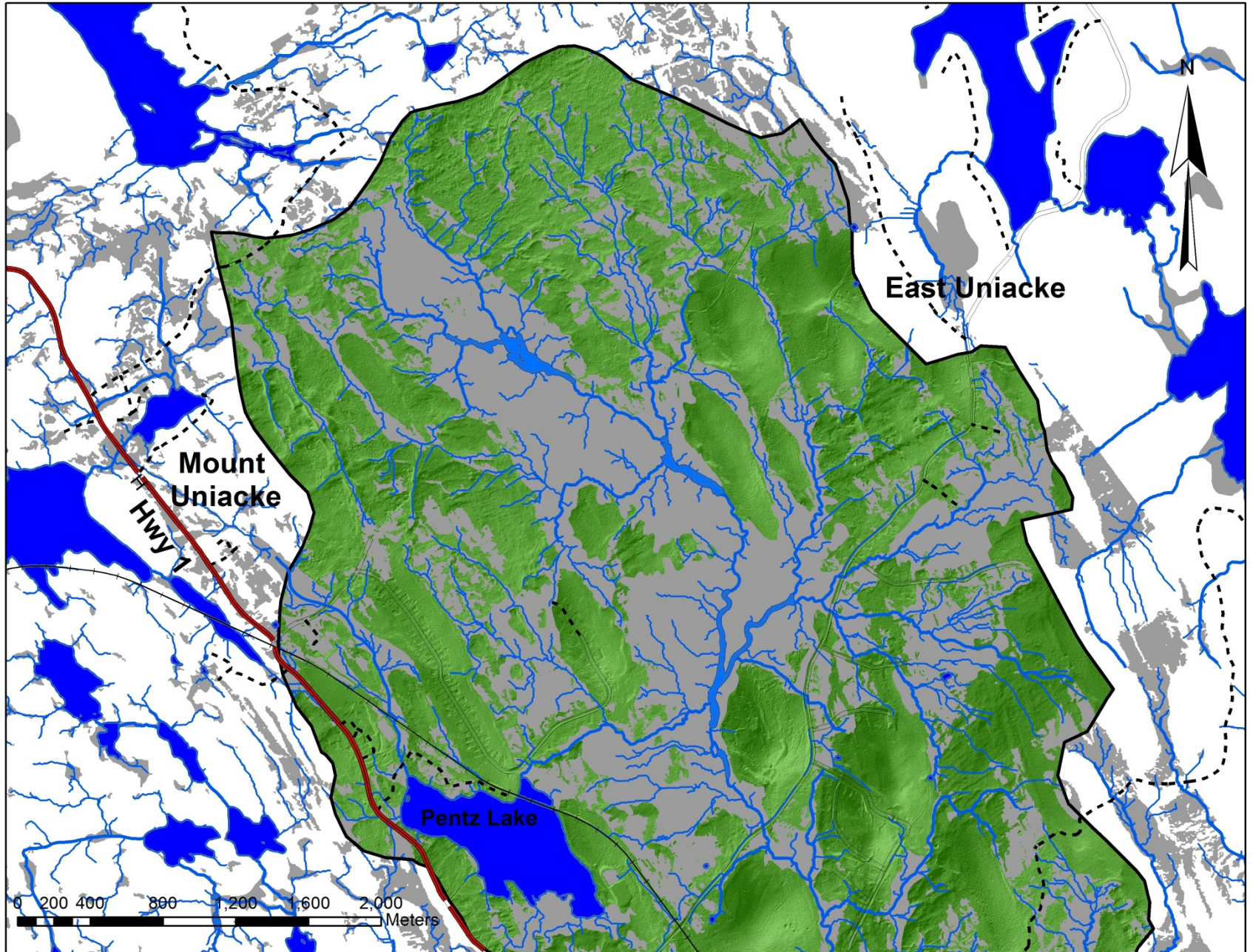
# Sackville River Comprehensive Watershed Study

**Field Verification:** field assessment by team of ecologists, biologists and wetland assessors.

- Verification of predicted wetland layer.
- Confirmation of potential wetland restoration/creation sites
- Verification of ecologically significant areas

**Reporting:** compilation of results and restoration list

# Headwaters Hants: Potential Wetland Layer





# Research Needs

- Key sites for protection
- Priority sites for restoration
- Historic loss analyses
- Baseline condition characterization
- Indicators of wetland integrity
- Restoration techniques
- Status and Trends assessment
- Improved Wetland Inventory
- Watershed condition assessment
- Land-use change threshold analysis

<http://www.gov.ns.ca/nse/wetland/>



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*Halifax Commons, N.S. 1933*

*Photo by Mr. Adell*

