

# **Amphibian and Bird Indicators for Great Lakes Wetlands: the Marsh Monitoring Program**

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# Great Lakes Wetlands

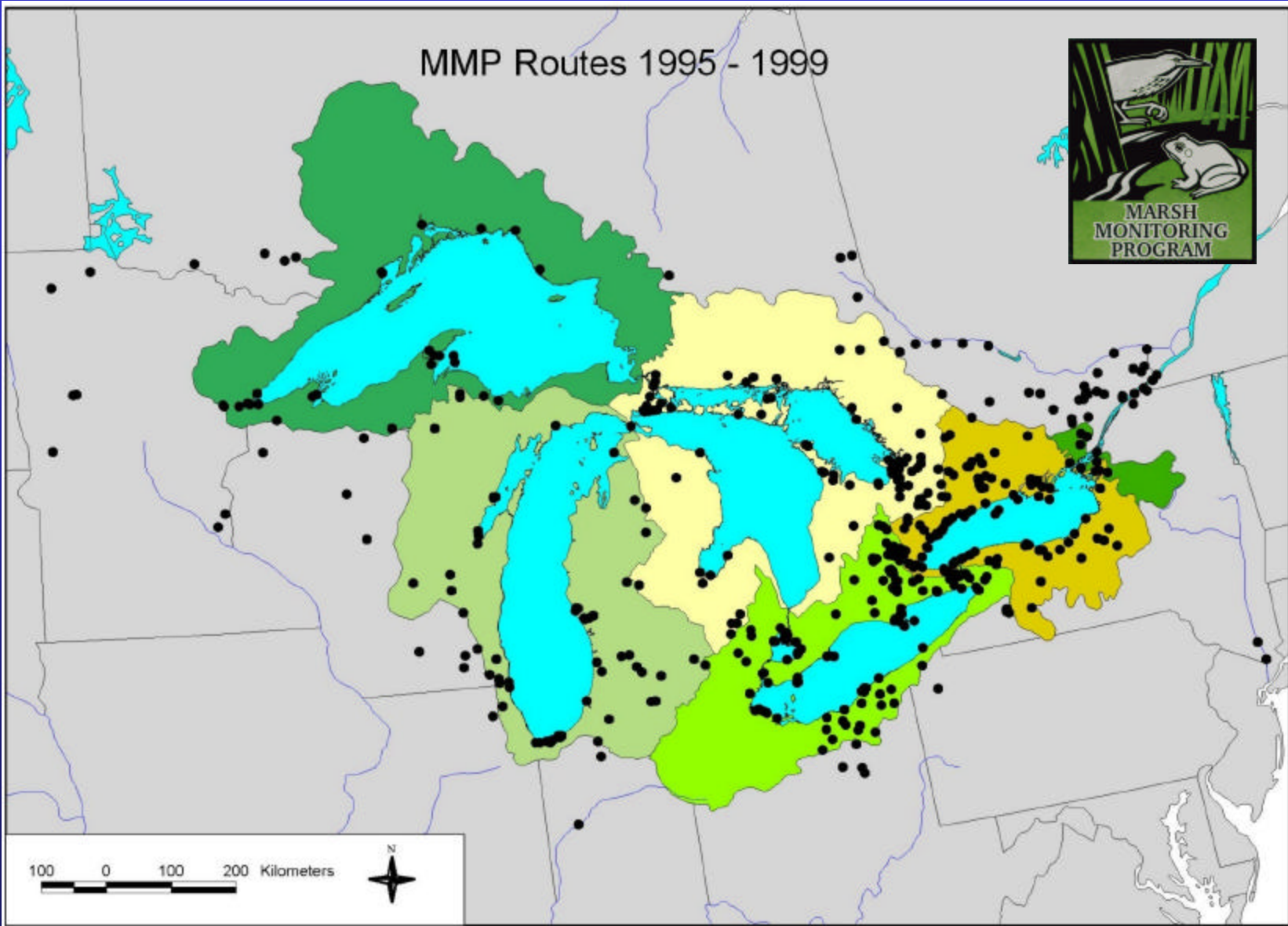
Conservation & Restoration  
Publications & Outreach



# Vision

Great Lakes marshes of sufficient quality and quantity to support diverse breeding populations of amphibians and birds.

# MMP Routes 1995 - 1999



# Partnerships





# Objectives

1) Monitor breeding amphibians and birds



2) Assess habitat relationships



### 3) Help assess management & restoration



## 4) Engage and motivate stakeholders





# Amphibian Indicator



- Wetland-dependent
- Sensitive eggs & skin
- Sedentary
- Wide distribution
- Public interest

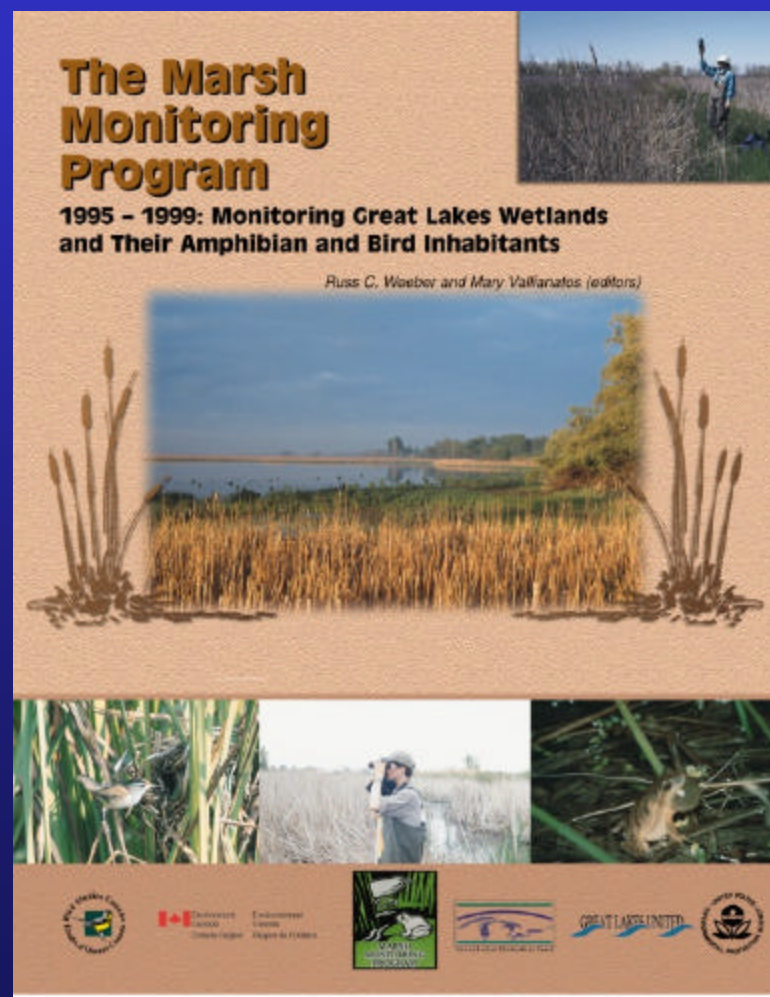
# Bird Indicator



- Wetland-dependent
- Wide distribution
- Easy to count
- Public interest

# Reporting

- Basin-wide
- Lake level
- Biodiversity Investment Areas
- Areas of Concern
- Wildlife Management Areas
- Program participants



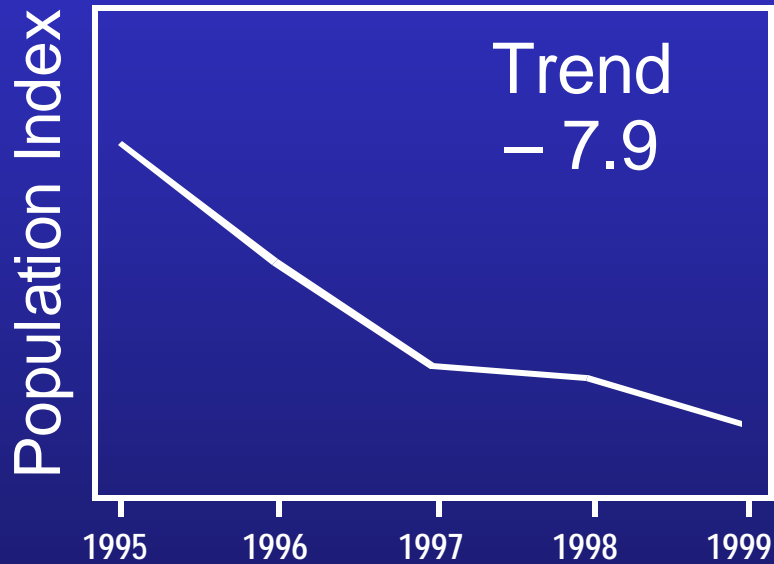
# MMP Routes

- Permanent wetlands
- Large wetlands
- Cattail and grasses/sedges
- Route coverage
  - strongest in Erie and Ontario
  - weakest in Superior

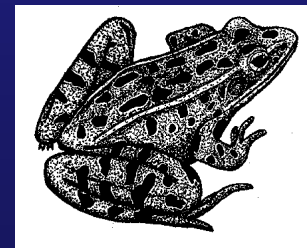
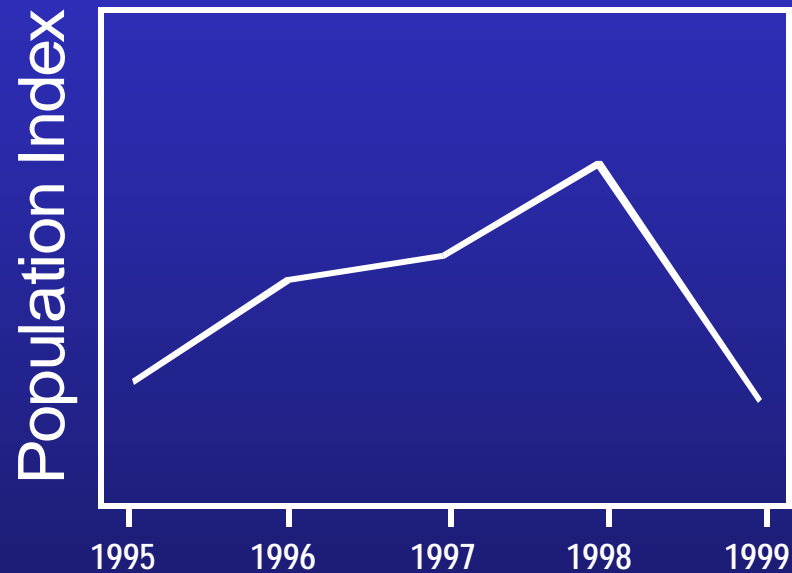


# Is the presence of each species changing through time?

Chorus Frog



Northern Leopard Frog



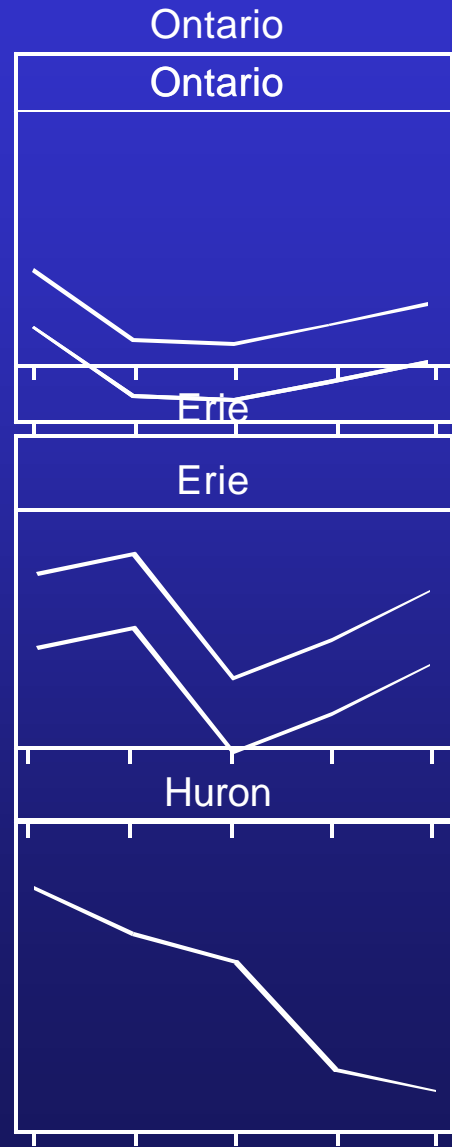
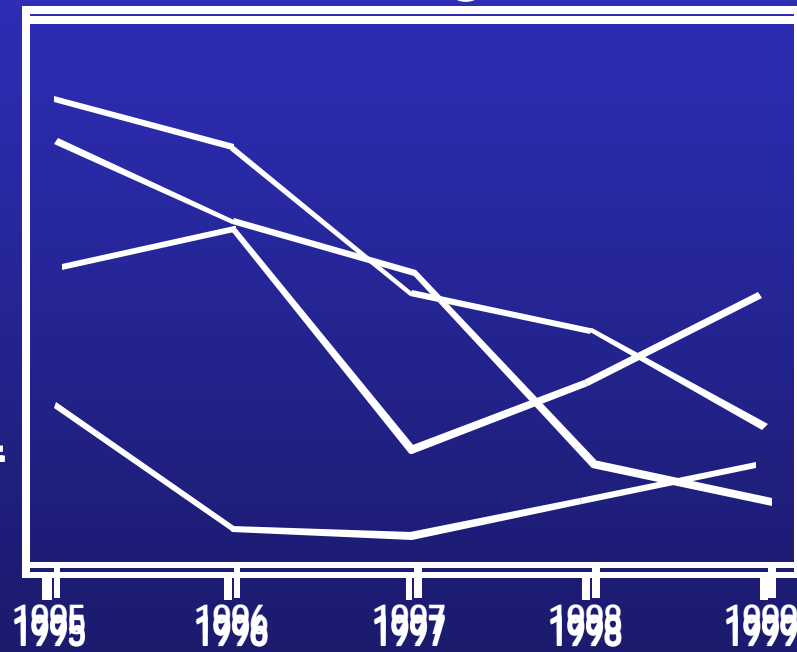


# Do trends vary among lake basins?



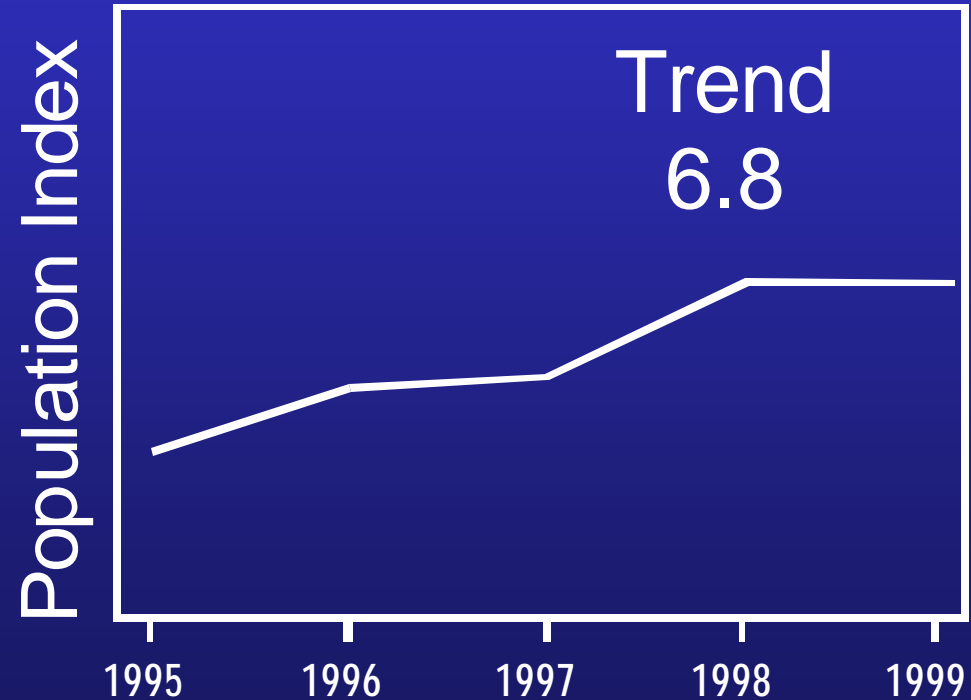
Chorus  
Frog

Population Index

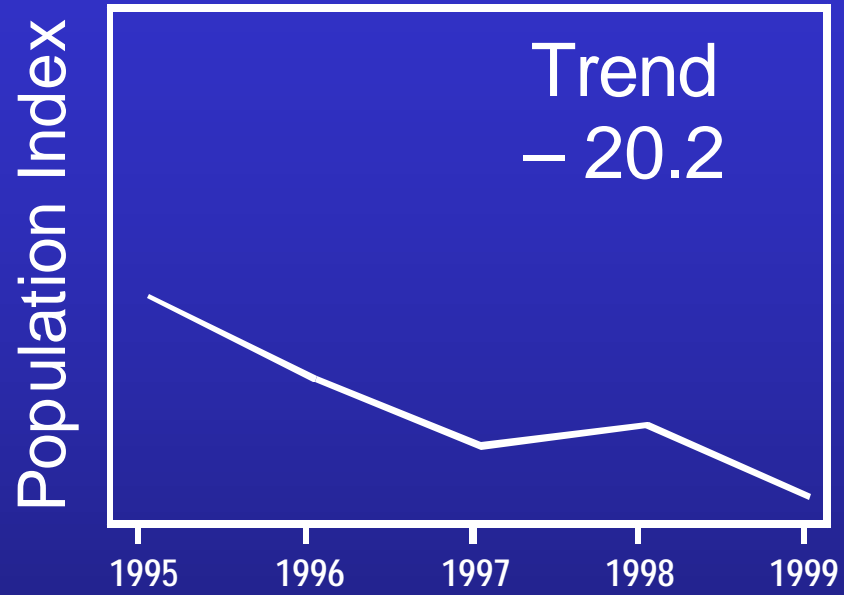


# Are the numbers of individuals changing through time?

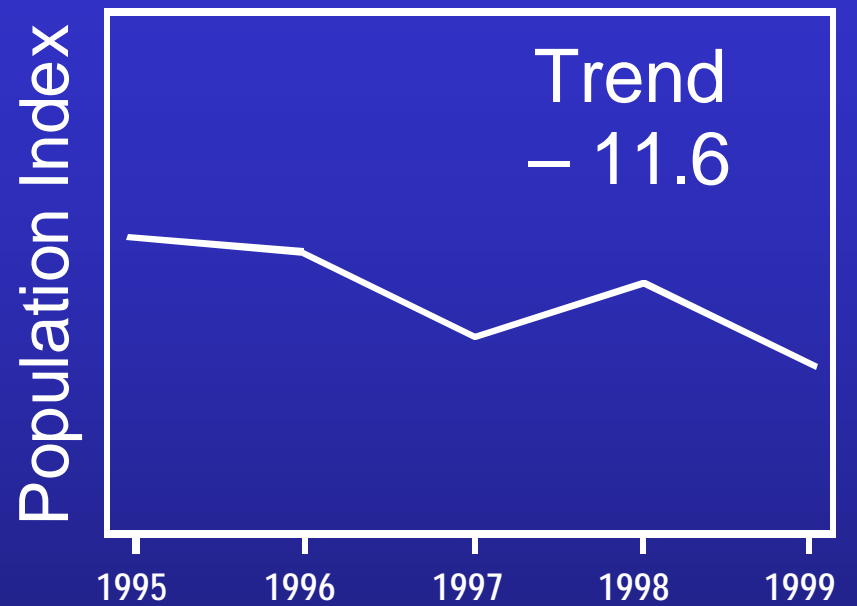
## Common Yellowthroat



## Black Tern



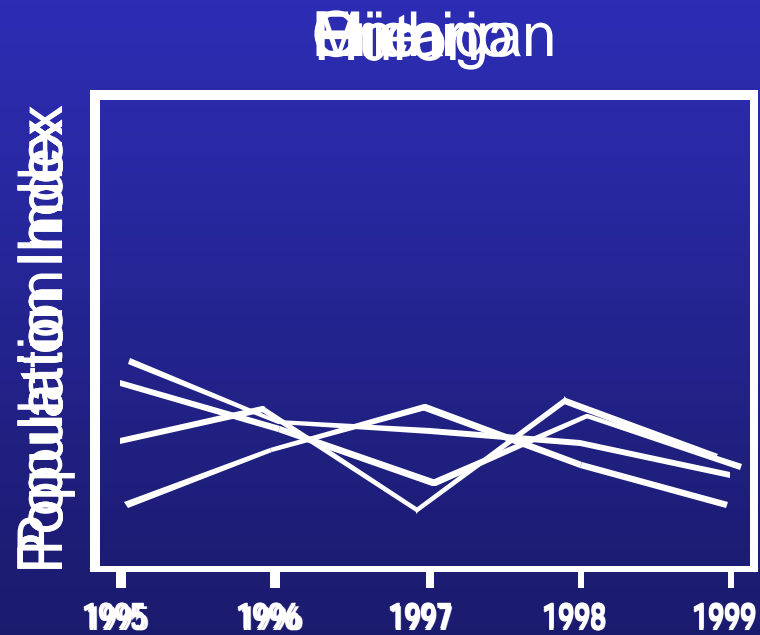
## Pied-billed Grebe



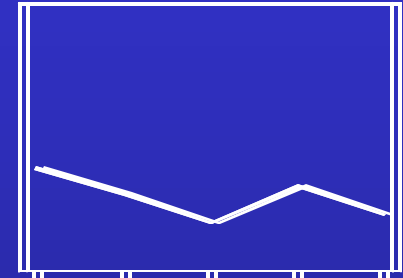
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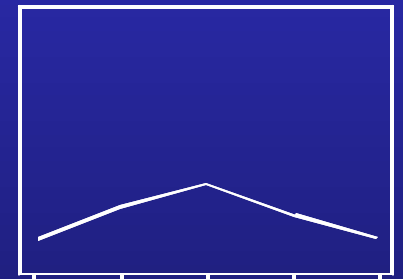
Pied-billed Grebe



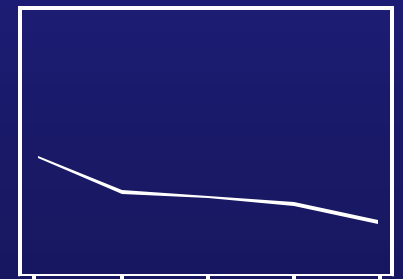
Ontario



Erie



Huron



# Habitat Relationships

What habitats are at risk?

How do we best manage wetlands?

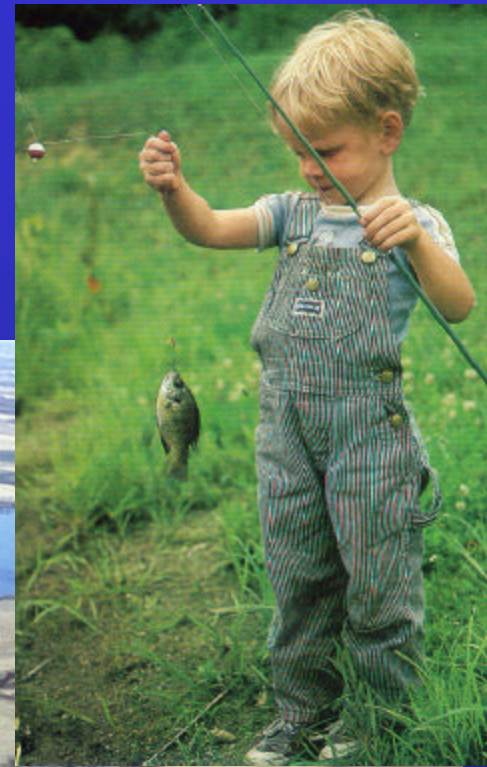




# Enhancement

- Endpoints for Success
- Indices >> Populations
- Participant Recruitment & Retention
- Data Sharing & Reporting





Marsh Monitoring Program  
Bird Studies Canada  
[www.bsc-eoc.org](http://www.bsc-eoc.org)