Environment

Étude internationale sur le lac Ontario et le fleuve Saint-Laurent
International Lake Ontario - St. Lawrence River Study

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1 What is our main objective?

Our main objective is to ensure that wetland habitats are maintained under a new water-level regulation plan.

Over a period of several years, we studied wetland habitats extensively. The wetlands experienced varying degrees of flooding, different water depths and different rates of water-level fluctuations.

2 Why did we study wetlands?

Water level changes may affect certain wetland species that are considered rare, threatened, or endangered, and benefit from Federal, State and Provincial laws that protect them and their nesting habitats.

Wetland species are strong indicators of wetland quality and are used as measures of restoration success and regional biodiversity.

3 What are the links between wetlands and water levels?

When we analyzed our research, we discovered that there was a strong link between wetland plant and animal reproduction on the one hand and diversity and water levels on the other hand.

Natural water level patterns can determine the diversity and condition of wetland plant communities and the habitats they provide for a variety of invertebrates, amphibians, reptiles, fish, birds, and mammals.

4 How does water-level regulation affect wetlands?

Water level regulation has altered the natural processes on Lake Ontario and in the St. Lawrence River.

Wetland plants and animals can sometimes adapt daily, seasonally and yearly to water level fluctuations on a short-term basis. However, certain species do not always adapt and may disappear from the community over time.

5 How will the Study Board use our research?

This discovery has helped us develop more sensitive computer models showing habitat quality and sustainability year-to-year and on a long-term basis.

These models will help the Study Board predict how changes to the regulation plan may affect wetlands. This will help the Study Board make more informed decisions.

Photo: Dana L. Darrow