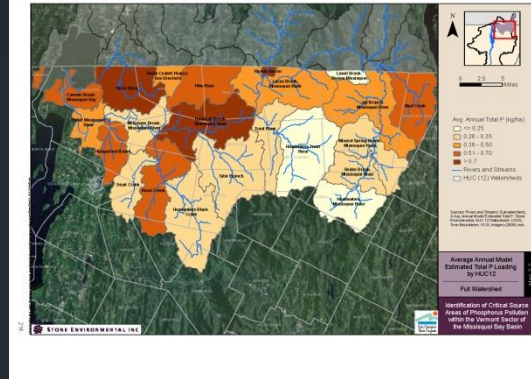


Missisquoi Bay, A Joint Effort

A Juxtaposition of the Province of Quebec and the State of Vermont's Actions Addressing Phosphorus Loading Problems in Missisquoi Bay

By: Hana Aronowitz



Introduction: Missisquoi Bay

- According to 'A phosphorus budget, model and load reduction strategy for Lake Champlain' (1997)
 - Missisquoi river is almost half the mean flow of the Winooski, but is 73% of the mean load total phosphorus found in the Winooski and has a greater mean load of dissolved phosphorus
- According to 'A division of responsibility between Quebec and Vermont for the reduction of phosphorus loads to Missisquoi Bay', a report of the Missisquoi Bay Phosphorus Reduction Task Force (June 2000)
 - Agriculture occupies 21% of watershed in Vermont and 30% of watershed in Quebec
 - 79% of non-point phosphorus going into Missisquoi Bay is from agriculture



Introduction: International Joint Commission

- In 2002, both Vermont and Quebec adopted 'Agreement concerning phosphorus reduction in Missisquoi Bay'
 - In this agreement the responsibility was divided, 60% for Vermont (58.3 mt/yr of P) and 40% for Quebec (38.9 my/yr of P)
- In 2004, the International Missisquoi Bay Task Force was created through IJC to determine the Missisquoi Causeway/Bridge's influence on the Bay
- In 2008, the International Missisquoi Bay Study Board was created through IJC to help create and carry out solutions for phosphorus loading in bay



Methods

- Reports by IJC, and reports connected to IJC
- Town reports on water quality
- Reports by Lake Champlain Basin Program
- EQIP program database



Incentive Programs

Quebec

- Prime-Vert
 - started in 2009, ends March 31, 2013
 - Offers financial assistance for implementation of Best Management Practices over three years

Vermont

- Through Agency of Agriculture, federal agriculture programs and DEC



NGO's

Quebec

- Conservation Baie Missisquoi (1988)
 - Called upon government to do studies on bay
- Citizens Advisory Committees (program through LCMP)
- Corporation Bassin Versant Baie Missisquoi (1999)
 - Government of Quebec promised three years of financial assistance

Vermont

- Lake Champlain Basin Program (1990)
 - Quebec as a partner
 - Put out 'Opportunities for Action' (1996)



Critical Source Areas

Quebec

- Early 2000s, government mandated IRDA research the effectiveness of agri-environmental practices and non-point nutrient pollution

Vermont

- In 2008, Canada and U.S. ask IJC to create an organization to reduce phosphorus in Missisquoi-International Missisquoi Bay Study Board



Quebec- After CSA reports

- the Ministry of Sustainable Development, Environment and Parks and partners put more than \$1.2 million to lower Quebec's impact on to the Missisquoi Bay (2005-2006)
 - To the Agricultural Operations Regulations (REA)
 - The implementation of BMPs to lower non-point source pollution
 - Acquire land to create protected areas
 - Finance research programs
- Survey done by Control Center of Environmental Quebec (CCEQ)
 - All farms in the Quebec section of Missisquoi Bay

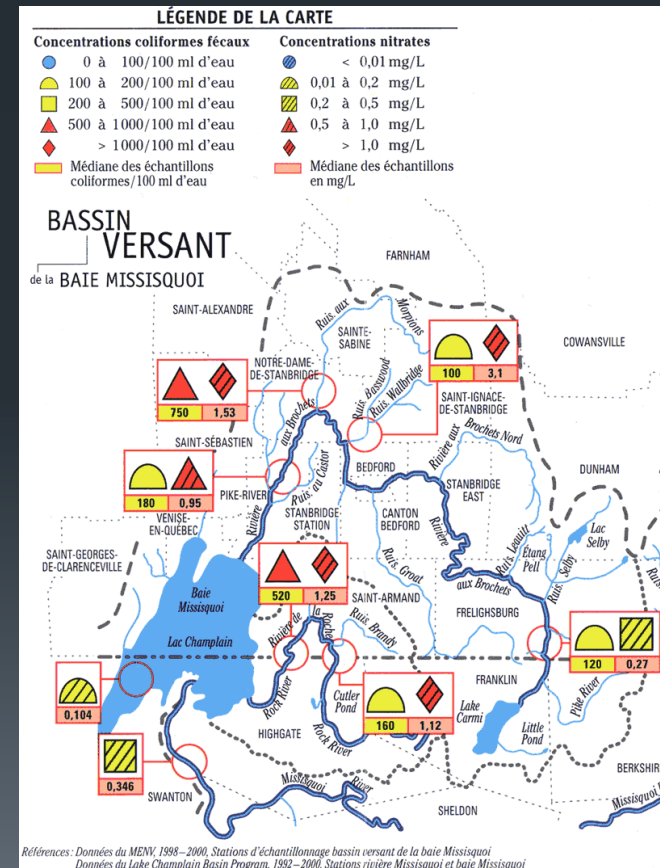


Vermont VT DEC ERP

- Vermont Department of Environmental Conservation-Ecosystem Restoration Program
- Works with other organizations and towns to fund and complete water quality projects

Other Findings/ Trends

- Quebec more willing
 - Did CSA years before U.S.
- Possible Blame on U.S.
 - The Missisquoi Causeway
 - Lake Carmi
 - CSA





Hopes for the Future of this Research

- Amount of projects finished through Prime-Vert
- Other NGOs in/for Missisquoi Basin
- How many grants are given through the Agency of Agriculture for Missisquoi Bay



References:

- NGOs (Info from reflections on the relationships between scientific research and a watershed approach to water management: the case of the missisquoi bay watershed corporation by Chantal d' Auteuil)