

# A Cooperative Bi-National Approach to Monitoring the St. Marys River Great Lakes Connecting Channel

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Sault Ste. Marie, ON

Sugar Island, MI

Sault Ste. Marie, MI



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Pointer 46°30'02.32" N 84°13'01.10" W

Streaming 100%

Eye alt 13.11 km



# Presentation Overview

- Background/Issues
- Resolution Process/Approach
- Results
- Lessons Learned

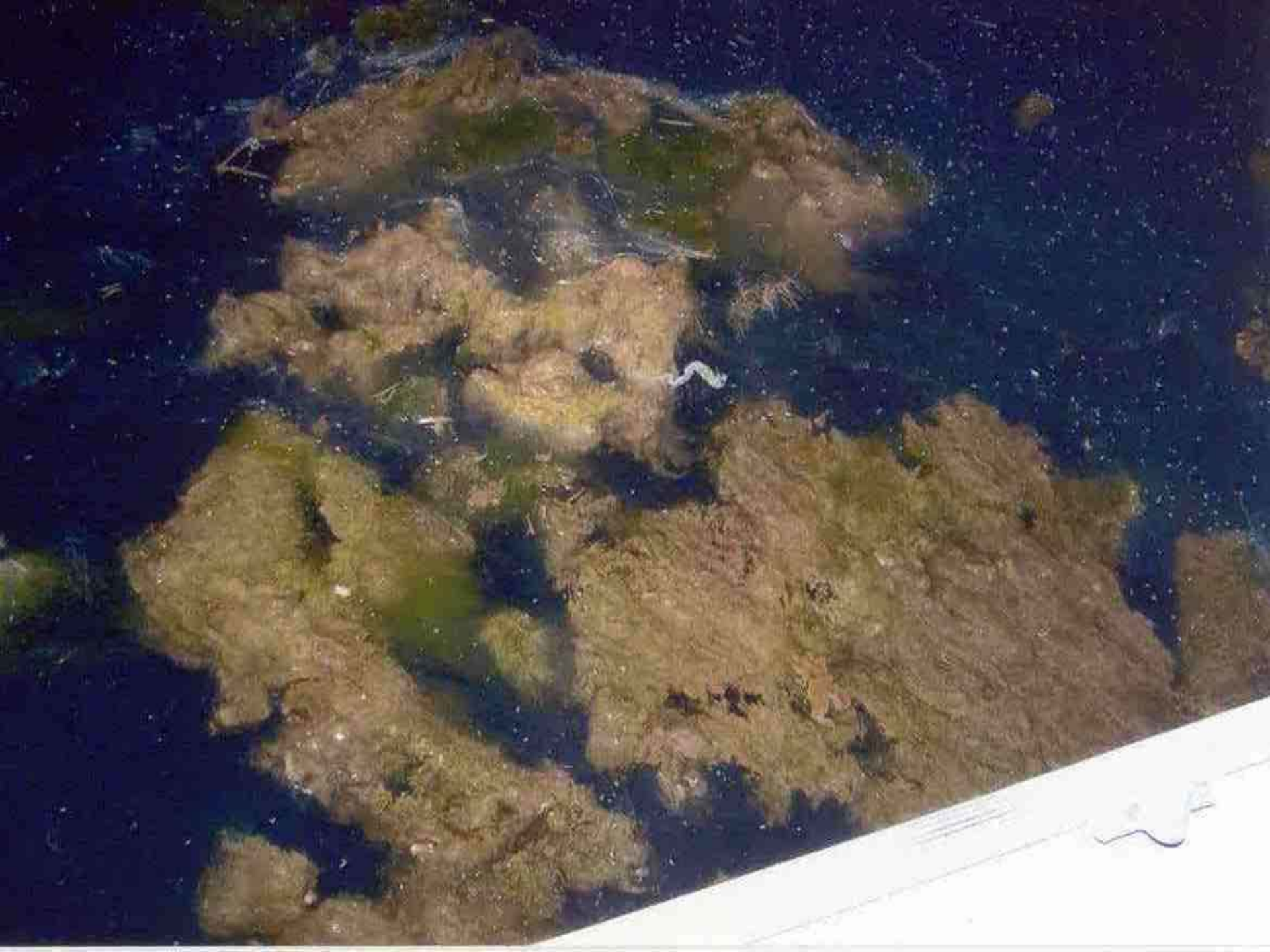
# Background

- Complaints about floating material in the water and deposited on shore, came to a head in 2006
- Elevated *E. coli* levels found in 2002, 2003, 2006
- Reactionary sampling
- Political firestorm



Photo courtesy Chippewa  
County Health Department











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# Sugar Island Monitoring Work Group

## (Formed in February 2007)

U.S. Environmental Protection Agency

Environment Canada

Health Canada

Michigan Department of Environmental Quality

Ontario Ministry of Environment

Chippewa County Health Department

Algoma Public Health

Inter-Tribal Fisheries and Assessment Program

Sault Ste. Marie Tribe of Chippewa Indians

Bay Mills Indian Community

Garden River First Nation



# Purpose

- Review existing data and monitoring activities
- Identify data gaps and monitoring needs
- Develop proactive interagency monitoring plan
  - coordinated sampling design/implementation
  - data comparability
  - common reporting
- Ensure timely communication among agencies and the public

# Workgroup Activities

- Floating material response
- Weekly *E. coli* sampling
- Sediment sampling
- Source identification
- Treatment plan inspections
- Public meetings



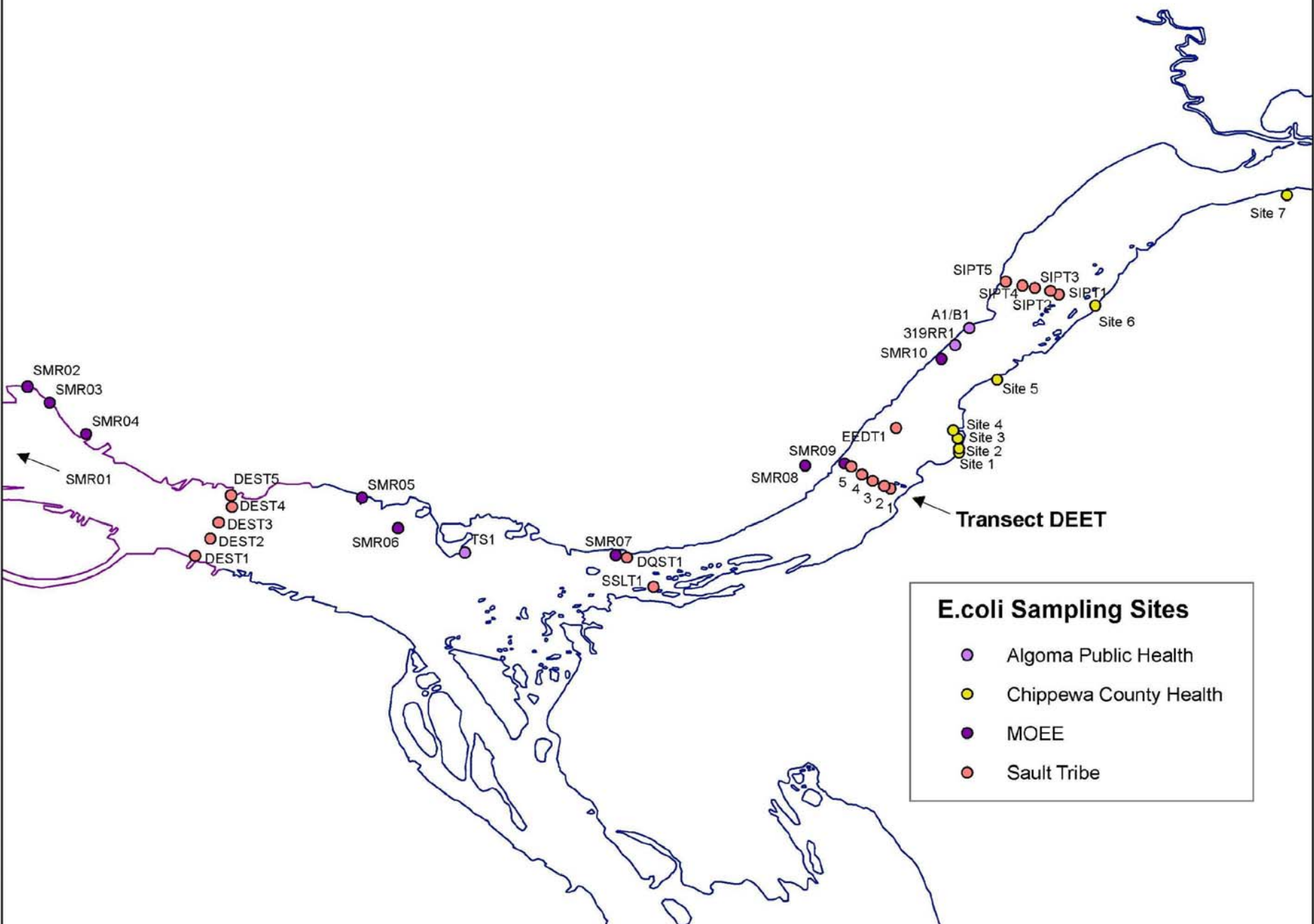
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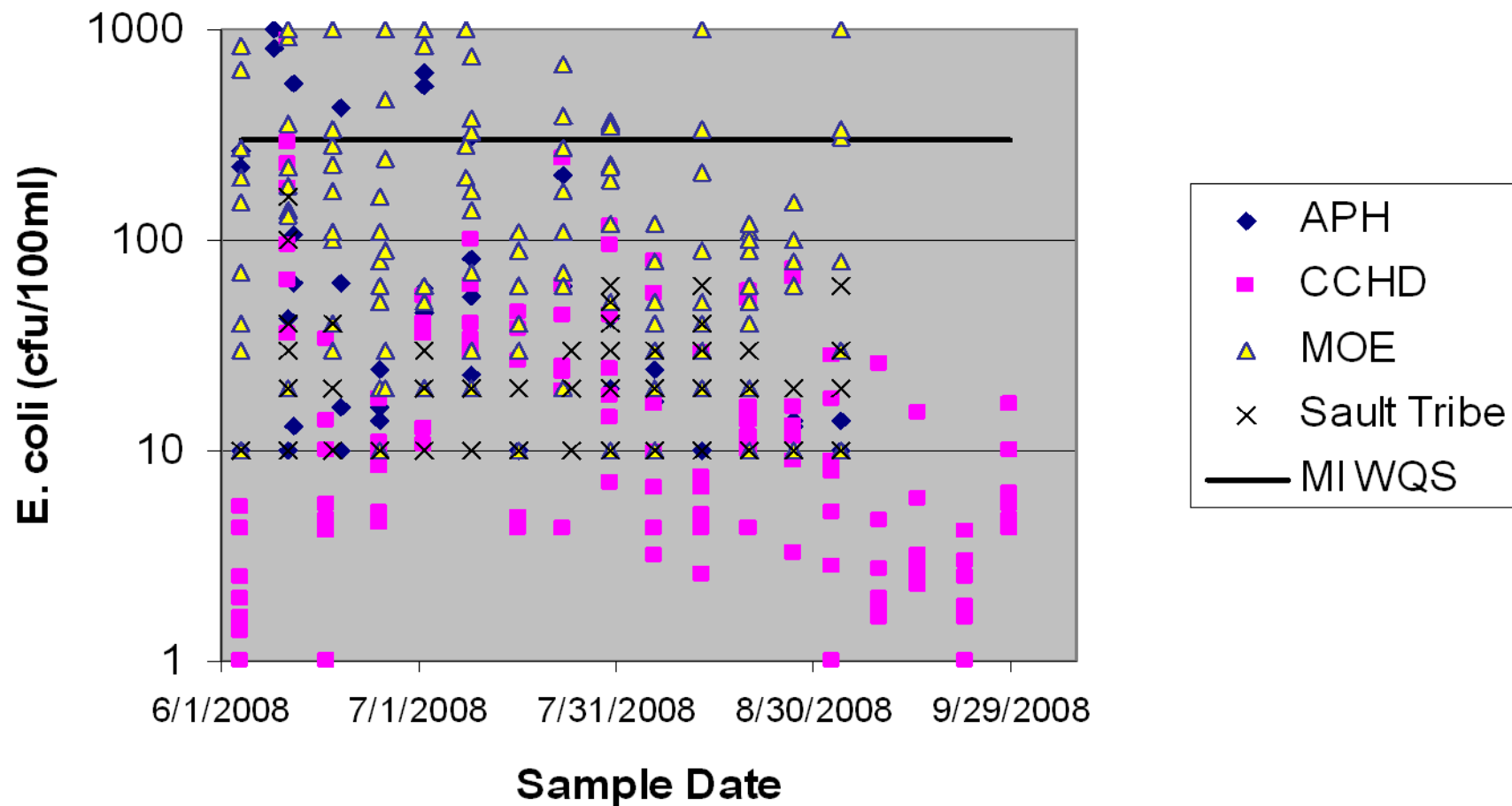
# Floating Material Response

- Incidents reported in 2007 (5), 2008 (4), 2009 (4)
- All 2007 samples natural (algae, pollen, insect exuviae)
- Three 2008 incidents natural material (one was a dark gray substance with sewage-smell)
- 2 incidents in 2009 were personal care products
- Blue-green algae common

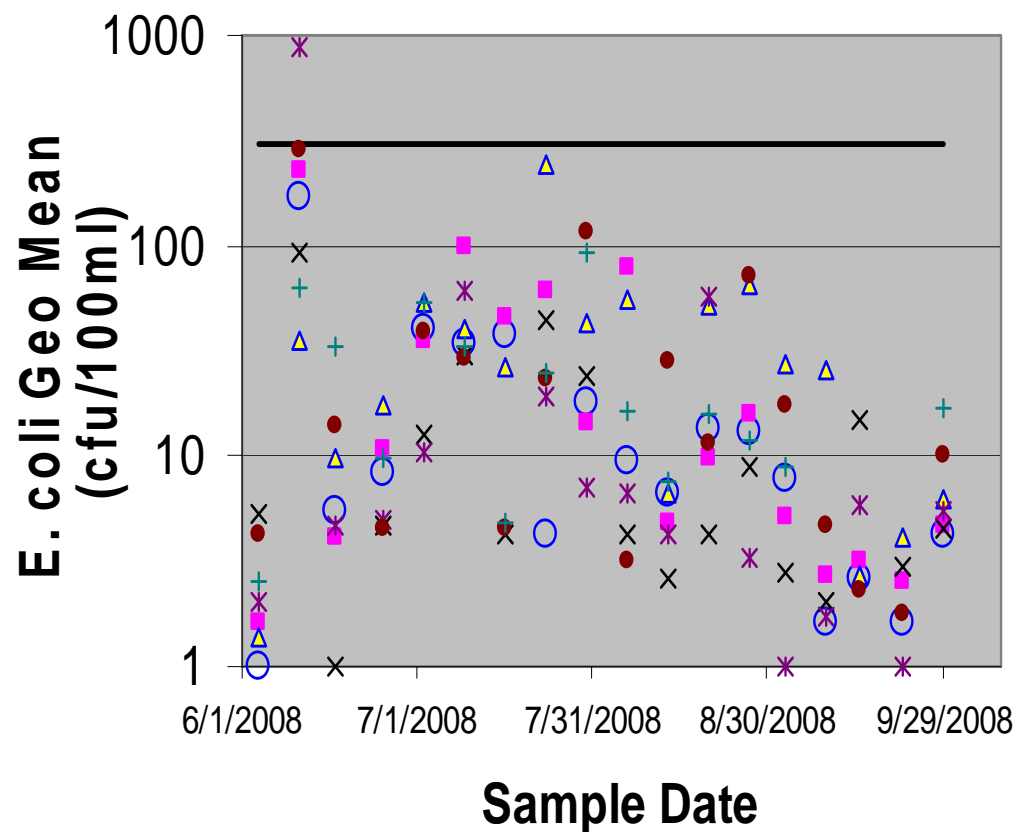




**Figure 4.1. 2008 Results For All Agencies**



# CCHD 2008 Results



- Bumstead
- Harrington
- △ Eitrem Cove
- × Eitrem East
- × Smith
- SI Township Park
- + Welch
- MI WQS



# Source Tracking Study

- Monitoring for the human *Bacteriodes* DNA marker
- Human specific strain an indicator of human sewage
- Water collected weekly at 18 sites

# Bacteriodes Results

- 7 of 180 (4%) positive
- Positives on 3 occasions
- First week had multiple hits
- September hits unexplained
- 4 of 7 positives at one stormwater outfall

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# Lessons Learned

- Co-chairs not involved prior to 2007
- Broad participation - knowledgeable staff
- Cooperative monitoring with comparable methods
- Extensive QA/QC

# Lessons Learned (continued)

- High-level management support
- Frequent communication
  - among agencies
  - with the media and public
- Transparency - annual reports, data availability

# Acknowledgements

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Amanda Bosak (Bay Mills Indian Community)  
St. Marys R. Bi-National Public Advisory Committee