



Degradation of Aesthetics Beneficial Use Impairment Assessment St. Marys River Area of Concern

Michigan Department of Environmental
Quality
Office of the Great Lakes

Statewide Assessment of 10 AOCs

Two cycles of assessments completed.

Staff included:

- AOC Coordinator
- Aquatic Biologist
- Aesthetics Assessment Coordinator

...and followed the DEQ's "2011 Statewide Aesthetics Assessment Workplan and Monitoring Protocol."

Aesthetics BUI Restoration Criteria

According to the *Guidance for Delisting Michigan's Great Lakes Areas of Concern*, this BUI will be considered restored when monitoring data for two successive monitoring cycles indicates that water bodies in the AOC do not exhibit persistent, high levels of the following physical properties in unnatural quantities which interfere with any designated use:

- turbidity
- foams
- color
- settleable solids
- oil films
- suspended solids
- floating solids
- deposits

Restoration Criteria cont'd

For the purposes of the criteria, these eight properties impair aesthetic values if they are unnatural – meaning those that are manmade (e.g., garbage, sewage), or natural properties which are exacerbated by human-induced activities.

Persistent, high levels are those defined as long enough in duration, or elevated to the point of being injurious, to any designated use listed under Rule 323.1100 of the Michigan WQS.

Designated Uses

As Defined by the Michigan Water Quality Standards

Rule 323.1100

- (a) Agriculture.
- (b) Navigation.
- (c) Industrial water supply.
- (d) Warmwater fishery.
- (e) Other indigenous aquatic life and wildlife.
- (f) Partial body contact recreation.
- (g) Fish consumption.
- (h) Total body contact recreation from May 1 to October 31.
- (i) Public water supply.
- (j) Coldwater fishery, depending on location.
- (k) Trout streams, etc.

Site Selection Based on...

- Historic documents

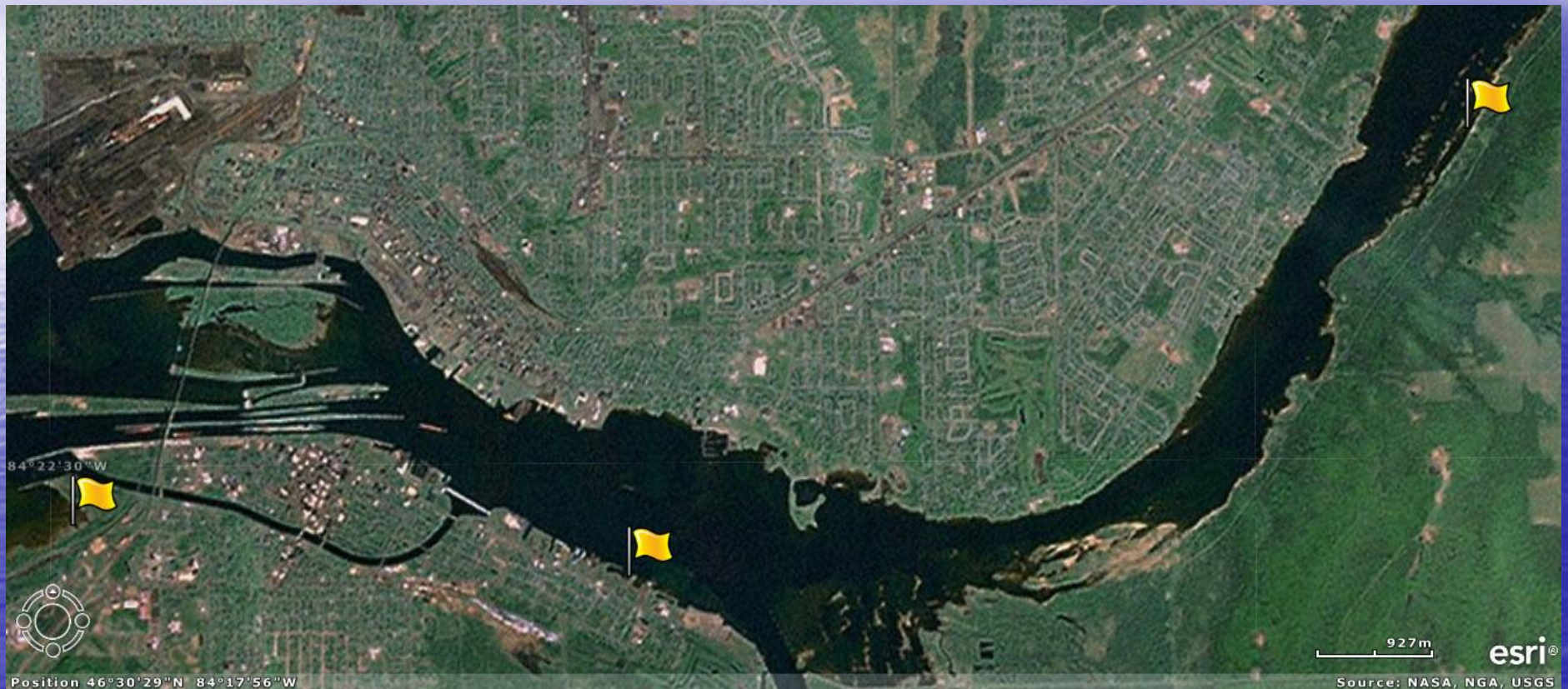
- According to the 1992 RAP document, nuisance levels of floating material have been periodically reported along the north shore of Sugar Island in the Lake George Channel (OMOE and MDNR, 1992). In addition to nuisance floating scum, the East End WWTP and Algoma Steel were identified as the major point sources contributing to oil and grease to the river, followed by St. Marys Paper (EC et al., 2002).

- Consultation with BPAC

- DEQ AOC Coordinator best professional judgment

- Access

St. Marys River Assessment Locations August 3, 2011 & May 23, 2012



Aesthetics Monitoring Data Sheet

Date: _____	Area of Concern & Site Description _____		
Time: _____	G.P.S. Coordinates _____		
Crew: _____	Water Temp: _____		
Weather:	Rain Today <input type="checkbox"/>	Clear <input type="checkbox"/>	Windy <input type="checkbox"/>
	Rain Yesterday <input type="checkbox"/>	Cloudy <input type="checkbox"/>	Approx Air Temp _____
Other Comments: _____			

WATER CLARITY (pick one)

Clear ☐
 Slightly Turbid ☐
 Moderately Turbid ☐
 Highly Turbid ☐
 Opaque ☐

ODOR

None/Natural ☐
 Musty:
 Faint ☐ Strong ☐ None ☐
 Sewage/Fishy:
 Faint ☐ Strong ☐ None ☐
 Anaerobic/Septic:
 Faint ☐ Strong ☐ None ☐

WATER COLOR (pick one color and one qualifier)

Clear ☐ Brown ☐ Green ☐ Yellow ☐
 Grey ☐ Black ☐ Milky/White ☐ Other: _____
 Light ☐ Medium ☐ Dark ☐

VISIBLE DEBRIS/OBVIOUS POLLUTION

None ☐ Natural ☐ (leaves, limbs, weeds)
 Foam ☐ Oil Film ☐ None ☐
 Trash:
 Floating ☐ Fixed ☐ None ☐
 Solids:
 Floating ☐ Fixed ☐ None ☐
 Floating Scum ☐ None ☐
 Deposits:
 Describe _____

ADDITIONAL COMMENTS/OBSERVATIONS: _____

1) Does this AOC have local delisting criteria? _____ If so, how does it differ from the state criteria? _____

2) Are there any designated uses** that may be impaired in your judgment due to aesthetic conditions? _____ If so, which one(s)? _____

3) The impairment(s) may be specifically due to which of the following "physical properties in unnatural quantities?" [circle all that apply: turbidity, color, oil films, floating solids, foams, settleable solids, suspended solids, deposits]

4) Are these conditions "persistent, high levels" or temporary & transient? _____

5) Does this site meet the applicable delisting criteria? _____

6) Please make any other notes that are relevant to the answer in #5: _____

**Designated uses are as follows:

- agriculture - navigation - industrial water supply - public water supply at the point of water intake
 - warmwater fishery - other indigenous aquatic life and wildlife - partial body contact recreation - total body contact recreation between 5/1 and 10/1 - coldwater fishery, depending on location

Photos



Assessment Results

About 38 photos and 18 water samples were taken.

Water samples were consistently clear with low turbidity.

Trash and other floating/washed up debris were minimal.

Concrete blocks used for shoreline stabilization near Elks Club.

Wooden debris observed during low water in Ashmun Bay.

Waterfowl were observed, as were minnows and submerged aquatic plants.

No evidence of any impairment to a designated use was found.

The DEQ recommends removal of the Degradation of Aesthetics BUI and requests a letter of support from the Binational Public Advisory Council to accompany other documentation to EPA.

What the Results Mean

- While there still may be occasional aesthetic issues, the St. Marys River AOC is comparable to other non-AOC areas in the state.
- It does not mean that the St. Marys River AOC has been restored to pristine conditions.

BUI Removal Process

1. Removal Recommendation document to be prepared
2. BPAC concurs with removal
3. Public Notice proposed removal
4. Public Meeting may be held
5. Recommendation forwarded to EPA GLNPO for concurrence and official removal

Questions?
Comments
Concerns?
Discussion?

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