AN INTRODUCTION TO THE BEACH CLOSINGS BENEFICIAL USE IMPAIRMENT

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WHAT WILL BE COVERED

- Beach closings BUI basics
- Listing Rationales
- Sources of contamination
- BUI removal criteria
- Remedial actions

BEACH CLOSINGS BUI BASICS

- 20 AOCs with the BUI designated
- 9 removed
- II remaining

- Kalamazoo River
- Lower Menominee River
- Manistique River

- Muskegon Lake
- River Raisin
- St. Clair River
- St. Marys River
- Waukegan Harbor
- Rochester Embayment

AOC	•	Restriction on fish	Tainting of fish & v flavor ◆	Degraded fish & w ¤¤¤ulations ◆	Fish tumor or othe	Bird & animal defo	Degradation of ber	Restrictions on dre	Eutrophication or undesirable algae	Restrictions – drini consumption, tast	Beach Closings
Kalamazoo River	MI	2025+	ar.	2025+		2025+	2025+	2025+			2011
Lower Menominee River	MI/WI	2018		2019			2017	2017			2011
Manistique River	MI	2024					2007	2021			2010
Muskegon Lake	MI	2013		2020			2021	2011	2020	2013	2015
River Raisin	MI	2023	2	2015		2025	2025+	2025+	2013		2013
Rochester Embayment	NY	2021	2018	2021	2015	2021	2017	2019	2019	2011	2019
St. Clair River	MI/ON	2025+	2010	65:		2017	2015	2011		2020	2016
St. Marys River	MI/ON	2021	8	2019	2021	2014		2018	2017		2016
Waukegan Harbor	IL	2021		9)			2018	2014			2011

IJC CRITERIA

- Listing Guideline: "When waters, which are commonly used for total-body contact or partial-body contact recreation, exceed standards, objectives, or guidelines for such use."
- Removal Guideline: "When waters, which are commonly used for total-body contact or partial-body contact recreation, do not exceed standards, objectives, or guidelines for such use."
- Rationale: "Accounts for use of waters; sensitive to jurisdictional standards; addresses water contact recreational consistent with the Agreement."

LISTING RATIONAL

- E. coli
- Chemical body contact restrictions
- Nuisance algae
- Sedimentation
- Eutrophication



SOURCES OF CONTAMINATION

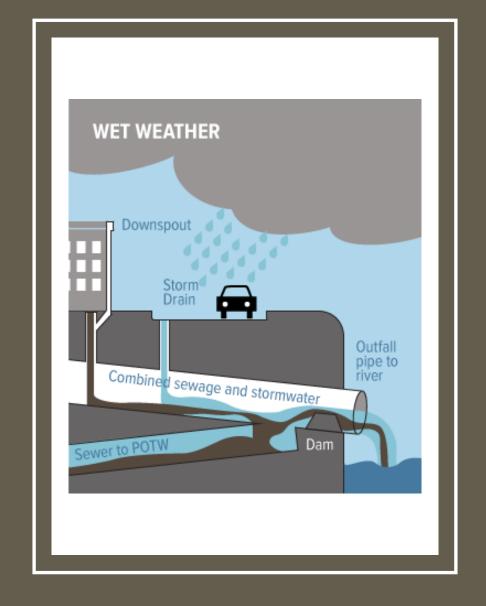
CSOs

Unknown—source tracking being conducted or needed

Birds/wildlife

Chemical contamination

Direct stormwater



BUI REMOVAL CRITERIA ANALYSIS

- List of Impaired Waters —80%
 - CSO "off ramp"—81%
- % of beach season—30%
 - CSO "off ramp"—50%
- TMDL approved for non-point source—15%
- No chemical contact advisories –25%
- Divided by water type—15%

BUI REMOVAL CRITERIA ANALYSIS

- Blue-green algae target
- TMDL study complete
- No sewage infrastructure failures
- Storm water reduction program implemented
- Manmade sources of bacteria contamination controlled where feasible

REMEDIAL ACTIONS



REMEDIAL ACTIONS

- CSO control
- Source tracking
- Green infrastructure
- Waterfowl harassment or deterrence
- Updates to wastewater treatment
 Algae control system plant

- Beach grooming
- Public education
- NowCast Model for beach closures
- Algae removal
- Outfall relocation

CHALLENGES





Sustainable long-term bird control plan

Public perception

CONCLUSIONS

- A large amount of work done for this BUI is conducted outside the AOC program
- E. coli
- CSOs are the main sources of contamination
- Birds play a difficult role

