

Strategy for Delisting Michigan's Great Lakes Areas of Concern



Michigan Department of Natural Resources and Environment

Last Update April 16, 2010

I. Background

In 1987, amendments to the Great Lakes Water Quality Agreement (GLWQA) were adopted by the federal governments of the U.S. and Canada. Annex 2 of the amendments listed fourteen different beneficial use impairments (BUIs) which are caused by a detrimental change in the chemical, physical, or biological integrity of the Great Lakes system. It directed the two countries to identify geographical Areas of Concern (AOCs) that did not meet the objectives of the GLWQA. Remedial Action Plans (RAPs) addressing the BUIs were to be prepared for all AOCs. The BUIs provided a tool for describing effects of the contamination, and a means for focusing remedial actions.

The Michigan Department of Natural Resources and the Environment (DNRE) – [formerly the Michigan Department of Environmental Quality] Water Bureau, in partnership with the Office of the Great Lakes, developed the *Guidance for Delisting Michigan's Great Lakes Areas of Concern*, initially published in 2006 and revised in 2008. The *Guidance* identifies the criteria that are used to determine when a BUI is restored and the process that is used to delist AOCs. This *Strategy for Delisting Michigan's Areas of Concern (Strategy)* is a companion document to the *Guidance*. It identifies the actions that are needed to achieve BUI restoration criteria and ultimately delist AOCs.

Purpose

The purpose of this *Strategy* is to identify actions needed to restore beneficial uses and delist AOCs, establish program priorities, and determine resource allocations in Michigan's AOC program. This *Strategy* addresses all identified BUIs within each AOC. The DNRE uses a three-tiered approach that looks across AOCs, BUIs, and actions to determine priorities regarding where funds and other resources can best be used, are most needed, or are most likely to achieve success. The status of Michigan's AOCs, including the status of BUIs, remedial actions, monitoring, and reporting needs, is reviewed by DNRE staff with input from stakeholders, and is updated in the AOC Action Tracking Table (Appendix A). This *Strategy* can be used by government agencies and local stakeholders in determining priorities for local actions.

How to Use this Document

The narrative section of this document outlines the process the State uses to establish priority actions needed to remove BUIs and ultimately delist AOCs.

The main component of the *Strategy* is the AOC Action Tracking Table (Appendix A). The tracking table identifies the known actions needed to remove a BUI and places them in one of three tiers based on the considerations outlined in Section II. The tracking table is updated by the DNRE as actions are implemented and additional actions are identified.

Stakeholders in the AOC program can use this document to set local priorities for actions and support local projects to complete needed actions.

Disclaimer

The GLWQA is a non-regulatory agreement between the U.S. and Canada, and criteria developed under its auspices are non-regulatory in nature. The actions identified in this document as needed to achieve BUI restoration criteria are not subject to enforcement or regulatory actions by virtue of being listed in this document.

The actions identified in this *Strategy* do not constitute a list of pre-approved projects, nor is it a list of projects simply related to BUIs or generally to improve the environment. Actions identified in this *Strategy* are directly related to removing a BUI and are needed to delist the AOC. However, in many AOCs, further information is needed to determine all actions required to remove a BUI. Thus, the AOC Action Tracking Table is not necessarily comprehensive and will be updated at least annually to reflect additional actions that are needed and actions that are completed.

II. AOC Action Tracking Table

The AOC Action Tracking Table outlines the status of each BUI, the type of actions needed, and the projected timeframe for removal of the BUI. Actions needed are described as belonging to one or more of the following categories: planning/design, remedial action, monitoring, and documentation/assessment. Assessment is considered the formal process of assessing results of remedial actions to determine if BUI restoration criteria have been met. The formal assessment of a BUI will be completed by a Technical Committee convened by the state in consultation with the Public Advisory Council (PAC), per the *Guidance*.

The tracking table also includes three columns that place actions needed for each BUI in one of three tiers. The allocation of actions amongst the tiers is intended to reflect the readiness, priority, and sequencing needs of the actions identified. Resources and staffing support (federal, state and local) that are expected to be available at the time of implementation were also considered. Furthermore, the tier assignment may be used by the State to determine priorities for staff time, funding, and related resource needs. The three tiers are described as follows:

Tier 1: BUI removal and restoration actions to be completed in the short term (0-3 years) are considered:

- Documentation of BUI removal for BUIs that have already been formally assessed and meet the restoration criteria;
- Monitoring and assessment for BUIs that can likely be removed within a three year timeframe;
- Restoration activities that are needed to remove a BUI within a three year timeframe;
- Restoration activities that are needed to delist an entire AOC within a three year timeframe;
- Monitoring needed post remediation to demonstrate that the resource is recovering after remedial actions have been implemented and that restoration criteria have been met;
- Monitoring and formal assessment that could lead to removal of several BUIs at one time (e.g., a statewide assessment);
- Planning and design needed to carry out restoration actions that may be years away but require initial work (e.g., monitoring, feasibility studies)

Tier 2: BUI removal and restoration actions to be completed in the midterm (3-5 years) are considered:

- Restoration activities for BUIs that can be removed within a three to five year timeframe;
- Monitoring and assessment activities that are needed within a three to five year timeframe to demonstrate that the resource is showing consistent improvement after all necessary remedial actions have been completed;
- Restoration activities that are needed within a three to five year timeframe to advance a BUI removal into the Tier 1 category;
- Documentation that is needed within a three to five year timeframe to describe the status of a BUI following remedial actions, monitoring and/or assessment.

Tier 3: BUI removal and restoration actions to be completed in the long term (5+ years) are considered:

- Remedial actions that extend beyond five years;
- Remedial actions that need significant planning/design and/or remedial action implementation;
- BUI removals or restoration activities that lack either agency support and/or PAC resources to support;
- Monitoring and assessment actions that are more long term in nature and need to occur after remedial actions have been completed;
- Documentation that needs to be developed after remedial actions, monitoring and/or assessment have occurred.

The three tiered approach allows decision makers to quickly assess where resources can best be used, are most needed, or are most likely to achieve success. Priority will largely be placed on Tier 1 actions; however, actions

identified in the other tiers will be considered in an effort to advance BUI listings in the AOC Strategy Tracking Table into the Tier 1 category. There may be instances of a BUI being designated as a priority if it is the only remaining BUI in an AOC, and removing it will result in the delisting of the entire AOC. The *Strategy* also allows priority actions to be identified that can be implemented or assessed together to enhance efficiency and make use of limited resources (e.g., Degradation of Aesthetics).

As Tier 1 priorities are identified, additional evaluation criteria may be needed to further prioritize restoration activities. Evaluation criteria may include, but are not limited to, the following: risk to public health and the environment; state and local support; reasonable cost to complete the restoration action; timeframe to remove a BUI; timeframe to delist an AOC; and percent of restoration achieved by implementing a particular restoration action.

III. Tracking Table Updates

The AOC Action Tracking Table is an important component of the *Strategy*, and is updated at least on an annual basis.

IV. Support

Public Advisory Council Involvement

The PACs play an important role in facilitating stakeholder participation in decisions affecting Michigan's AOC Program. DNRE AOC coordinators work closely with the local PACs to populate the AOC Action Tracking Table with actions that are required to advance the restoration of BUIs for each AOC. Individuals or groups wishing to engage in PAC activities may contact the DNRE AOC program for information on how to become involved.

Statewide Public Advisory Council Involvement

The Statewide Public Advisory Council (SPAC) plays an important role in facilitating public participation in decisions affecting Michigan's AOC program. The SPAC works closely with the AOC Program coordinators to implement and further prioritize restoration actions identified in the AOC Action Tracking Table.

Programmatic Needs

In order to successfully implement the *Strategy*, the AOC Program manager (or designee) communicates Tier 1 priorities identified in the AOC Action Tracking Table to other state agency program managers to facilitate coordination of restoration activities in each AOC, where applicable. This occurs on an annual

or as needed basis. Tier 1 restoration actions are incorporated into other agency program work plans where possible and practical.

VI. Reporting

Reporting on BUI removal and AOC delisting progress occurs through RAP Updates, Lakewide Management Plans, and other applicable documents.

Appendix A: AOC Action Tracking Table

Area of Concern Name	Beneficial Use Impairment Name	Assessment in Progress (Y/N)	Category of Action: Planning/Design, Remedial Action, Monitoring, Documentation/ Assessment	Actions Needed	Tier I Actions (0-3 yrs)	Tier II Actions (3-5 yrs)	Tier III Actions (5+ yrs)	Comments
Clinton	Restrictions on Fish and Wildlife Consumption	No	RA	Remediate PCB contamination throughout river			X	
Clinton	Degradation of Fish and Wildlife Populations	No	Mon	Conduct a fish community assessment in the Area of Concern		X		Actions needed to remove the Fish & Wildlife Habitat Beneficial Use Impairment are expected to contribute toward removing this Beneficial Use Impairment.
Clinton	Degradation of Benthos	No	RA	Remediate known contaminated sediment sites			X	
Clinton	Restrictions on Dredging Activities	No	RA	Remediate contaminated sediment in the navigation channel routine Corps of Engineers maintenance dredging and known site-specific contaminated sediment remediation required			X	
Clinton	Eutrophication or Undesirable Algae	No	PD, Mon	Control sources, monitor, and assess related restoration activities related to the Eutrophication Beneficial Use Impairment			X	
Clinton	Beach Closings	No	PD, Mon, RA	Control sources and monitor E. coli levels related to the Beach Closing Beneficial Use Impairment		X		
Clinton	Degradation of Aesthetics	No	Mon, DA	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			State prepared Great Lakes Restoration Initiative proposal for a statewide assessment.
Clinton	Loss of Fish and Wildlife Habitat	No	RA	Restore coastal wetlands in delta region of river at Metropolitan Beach Metro Park, Harrison Twp.	X			
Clinton	Loss of Fish and Wildlife Habitat	No	RA	Remove Paint Creek Dam	X			
Clinton	Loss of Fish and Wildlife Habitat	No	RA	Restore Paint Creek riparian zone	X			
Clinton	Loss of Fish and Wildlife Habitat	No	RA	Implement stormwater management at Van Hoosen Farms Museum on Stony Creek	X			
Clinton	Loss of Fish and Wildlife Habitat	No	RA	Acquire riparian conservation easements on the Main Branch, N. Branch, and Paint Creek, and at the Upland Hills Nature Center	X			
Clinton	Loss of Fish and Wildlife Habitat	No	RA	Remove contaminated sediment in East Subwatershed	X			
Clinton	Loss of Fish and Wildlife Habitat	No	RA	Control contaminated sediment in East Subwatershed	X			
Clinton	Loss of Fish and Wildlife Habitat	No	RA	Create and enhance diadromous fish habitat; restore coastal wetlands and restore natural shoreline conditions; and improve coastal habitat	X			
Clinton	Loss of Fish and Wildlife Habitat	No	Mon	Identify and quantify pollutant sources contributing to dissolved oxygen-related use impairments in E. Br. Coon Creek	X			
Clinton	Loss of Fish and Wildlife Habitat	No	PD	Develop Total Maximum Daily Load implementation plan to address dissolved oxygen-related use impairments in E. Br. Coon Creek	X			
Clinton	Loss of Fish and Wildlife Habitat	No	PD	Restore dissolved oxygen levels in waterbodies within the Clinton River Area of Concern that are identified in the Integrated Report as not attaining Michigan water quality standards due to low dissolved oxygen		X		
Deer Lake	Restrictions on Fish and Wildlife Consumption	Yes	Mon	Monitor fish contaminants for those areas of the Deer Lake Area of Concern not covered under the Consent Judgment for Deer Lake	X			State to use an Environmental Protection Agency grant to conduct monitoring in 2010.
Deer Lake	Restrictions on Fish and Wildlife Consumption	Yes	RA, Mon	Control and monitor mercury sources in Partridge Creek/Carp Creek	X			Complete remedial action needed to minimize the ongoing source of mercury that contaminates the Partridge Creek tributary of Carp Creek as it flows through a series of flooded historic mine workings beneath the City of Ishpeming. City of Ishpeming has prepared a GLRI Proposal.
Deer Lake	Bird and Animal Deformities or Reproductive Problems	Yes	DA	Approve and submit Beneficial Use Impairment removal document	X			State assessment in process.
Deer Lake	Eutrophication or Undesirable Algae	Yes	DA	Approve and submit Beneficial Use Impairment removal document	X			State assessment in process.
Detroit	Restrictions on Fish and Wildlife Consumption	No	RA	Remediate PCB and trace metal contamination throughout river			X	

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Detroit	Tainting of Fish and Wildlife Flavor	No	DA	Assess status of Beneficial Use Impairment		X		
Detroit	Degradation of Fish and Wildlife Populations	No	Mon	Conduct a fish community assessment in the Area of Concern		X		Actions needed to remove the Fish & Wildlife Habitat Beneficial Use Impairment are expected to contribute toward removing this Beneficial Use Impairment.
Detroit	Fish Tumors or Other Deformities	No	DA	Assess status of Beneficial Use Impairment		X		
Detroit	Bird and Animal Deformities or Reproductive Problems	Yes	DA	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			A DNRE statewide assessment of this BUI will determine any monitoring and restoration needs.
Detroit	Degradation of Benthos	No	RA	Remediate known contaminated sediment sites			X	
Detroit	Restrictions on Dredging Activities	Yes	DA	Prepare and submit Beneficial Use Impairment removal document	X			State assessment in process.
Detroit	Restrictions on Drinking Water Consumption or Taste and Odor Problems	Yes	DA	Prepare and submit Beneficial Use Impairment removal document	X			Public Advisory Council is undertaking this work with state grant support.
Detroit	Beach Closings	No	RA, Mon	Remediate SSO impacting Chrysler Beach and monitor E. coli levels related to the Beach Closing Beneficial Use Impairment		X		
Detroit	Degradation of Aesthetics	No	Mon, DA	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			State prepared Great Lakes Restoration Initiative proposal for a statewide assessment.
Detroit	Loss of Fish and Wildlife Habitat	No	RA	Restore wetlands and uplands and enhance fish and wildlife habitat at Blue Heron Lagoon	X			
Detroit	Loss of Fish and Wildlife Habitat	No	RA	Restore emergent vegetation and create fish and migratory bird habitat on Celeron Island	X			
Detroit	Loss of Fish and Wildlife Habitat	No	RA	Restore shoreline and rock shoal; create fish spawning area and an embayment for turtle and fish habitat; and restore upland habitat	X			
Detroit	Loss of Fish and Wildlife Habitat	No	RA	Restore shoreline near South Fishing Pier	X			
Detroit	Loss of Fish and Wildlife Habitat	No	RA	Restore wetlands and enhance/protect fish and waterfowl habitat on Stony Island	X			
Detroit	Loss of Fish and Wildlife Habitat	No	RA	Restore and reconstruct U.S. Steel Shoreline	X			
Detroit	Loss of Fish and Wildlife Habitat	No	PD, RA	Restore native vegetation and migratory bird habitat on Lake Muskoday	X			State has received funding from the Environmental Protection Agency to complete this project.
Kalamazoo	Restrictions on Fish and Wildlife Consumption	No	RA	Remediate PCB contamination throughout river			X	Superfund lead.
Kalamazoo	Degradation of Fish and Wildlife Populations	No	RA	Restore and naturalize urban corridor of Portage Creek	X			State prepared a Great Lakes Restoration Initiative proposal.
Kalamazoo	Degradation of Fish and Wildlife Populations	No	PD	Conduct feasibility studies for the removal of the Otsego City Dam, Otsego Dam, and Trowbridge Dam	X			State prepared a Great Lakes Restoration Initiative proposal.
Kalamazoo	Loss of Fish and Wildlife Habitat	No	RA	Remove Otsego City Dam		X		Dependant on design, feasibility and Superfund progress on remediation.
Kalamazoo	Loss of Fish and Wildlife Habitat	No	RA	Remove Otsego Dam			X	Potential Tier II, depending on design, feasibility and Superfund progress on remediation.
Kalamazoo	Loss of Fish and Wildlife Habitat	No	RA	Remove Trowbridge Dam			X	Potential Tier II, depending on design, feasibility and Superfund progress on remediation.
Kalamazoo	Bird and Animal Deformities or Reproductive Problems	Yes	DA	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			A DNRE statewide assessment of this BUI will determine any monitoring and restoration needs.
Kalamazoo	Degradation of Benthos	No	RA	See Fish and Wildlife Consumption Beneficial Use Impairment				Actions needed to remove the Fish & Wildlife Consumption Beneficial Use Impairment are expected to contribute toward removing this Beneficial Use Impairment.
Kalamazoo	Restrictions on Dredging Activities	No	DA	Prepare and submit Beneficial Use Impairment removal document			X	State to take lead. Consider formal Beneficial Use Impairment removal after Superfund has completed remedial actions needed.
Kalamazoo	Beach Closings	Yes	DA	Prepare and submit Beneficial Use Impairment removal document	X			Assessment complete; state preparing for removal.
Kalamazoo	Degradation of Aesthetics	No	Mon, DA	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			State prepared Great Lakes Restoration Initiative proposal for a statewide assessment.

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Kalamazoo	Degradation of Fish and Wildlife Populations	No		See Fish & Wildlife Habitat Beneficial Use Impairment				Actions needed to remove the Fish & Wildlife Habitat Beneficial Use Impairment are expected to contribute toward removing this Beneficial Use Impairment.
Manistique	Restrictions on Fish and Wildlife Consumption	Yes	Mon	Collect fish contaminant data		X		State to take lead.
Manistique	Restrictions on Fish and Wildlife Consumption	Yes	PD, Mon	Characterize site to develop plan to address potential residual contamination	X			The Environmental Protection Agency's Great Lakes National Program Office approved site characterization - to begin 2010.
Manistique	Degradation of Benthos	N/A		None				Beneficial Use Impairment removed 11/2006.
Manistique	Restrictions on Dredging Activities	No	PD, Mon	Characterize site to develop plan to address potential residual contamination	X			The Environmental Protection Agency's Great Lakes National Program Office approved site characterization - to begin 2010.
Manistique	Beach Closings	Yes	DA	Prepare and submit Beneficial Use Impairment removal document	X			Removal in process; public meeting held in 8/09.
Manistique	Loss of Fish and Wildlife Habitat	N/A		None				Beneficial Use Impairment removed 9/2008.
Menominee	Restrictions on Fish and Wildlife Consumption	No	RA	Remove contaminated sediment			X	Complete remaining sediment cleanups under the Environmental Protection Agency and Wisconsin Dept. of Natural Resources.
Menominee	Restrictions on Fish and Wildlife Consumption	No	Mon	Conduct water quality study using SPMDs	X			The state plans a Semi-permeable Membrane Device study in the Menominee for 2010 to identify the current contaminant loadings to the Area of Concern from the watershed.
Menominee	Degradation of Benthos	No	Mon	Monitor and assess benthos		X		Monitor following completion of sediment cleanups by the Environmental Protection Agency and the Wisconsin Dept. of Natural Resources.
Menominee	Restrictions on Dredging Activities	No	Mon, RA	Complete remaining sediment cleanups under the Environmental Protection Agency and Wisconsin Dept. of Natural Resources.	X			Michigan proposing a statewide assessment.
Menominee	Beach Closings	Yes	DA	Approve, coordinate Beneficial Use Impairment removal submittal with WDNR, and submit removal document	X			State and Wisconsin to take lead.
Menominee	Loss of Fish and Wildlife Habitat	No	Mon	Complete Menominee River Assessment	X			Wisconsin Dept. of Natural Resources - Complete 2010 Area of Concern Habitat Survey.
Menominee	Degradation of Fish and Wildlife Populations	No	PD, RA	Implement plan to provide fish passage around two lower dams	X			Participate on the Federal Energy Regulatory Commission Relicensing Committee (FERC) for fish passage upstream. Under the FERC Relicensing process, the lower two dams on the Menominee which fall within the Area of Concern are being examined to provide fish passage which will open ~ 70 miles of stream to lake sturgeon through lift, sort and transport upstream and downstream baffles to direct fish away from turbines. The FERC process is underway now. Related to both the Fish and Wildlife Population and Habitat Beneficial Use Impairments.
Menominee	Loss of Fish and Wildlife Habitat	No	PD	Develop fish and wildlife management plan per local criteria	X			State and Wisconsin Dept. of Natural Resources to take lead. Complete Fish and Wildlife Population and Habitat needs documentation for the Lower Menominee River. Related to both the Fish and Wildlife Population and Habitat Beneficial Use Impairments. Participate on the Federal Energy Regulatory Commission Relicensing Committee for fish passage upstream.

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Last Update: 4/12/10

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Menominee	Degradation of Fish and Wildlife Populations	No	PD, RA	Design plan to provide fish passage around two lower dams	X			Under the Federal Energy Regulatory Commission (FERC) Relicensing process, the lower two dams on the Menominee which fall within the Area of Concern are being examined to provide fish passage which will open ~ 70 miles of stream to lake sturgeon through lift, sort and transport upstream and downstream baffles to direct fish away from turbines. The FERC process is underway now. Related to both the Fish and Wildlife Population and Habitat Beneficial Use Impairments.
Muskegon Lake	Restrictions on Fish and Wildlife Consumption	No	Mon	Monitor fish contaminants	X			State's routine Surface Water Assessment Section monitoring in 2011.
Muskegon Lake	Restrictions on Fish and Wildlife Consumption	No	RA	Remediate sediments near Division Street outfall	X			State to take lead. Work underway.
Muskegon Lake	Loss of Fish and Wildlife Habitat	No	RA	Restore Ryerson Creek wetland and adjacent lakeshore riparian habitat		X		
Muskegon Lake	Loss of Fish and Wildlife Habitat	No	RA	Remove Lakeshore Trail marine debris (slab wood removal and benthos restoration)	X			
Muskegon Lake	Loss of Fish and Wildlife Habitat	No	RA	Restore wetland and soften shoreline along Hartshorn Peninsula	X			
Muskegon Lake	Loss of Fish and Wildlife Habitat	No	RA	Restore wetland and soften shoreline along SAPPI wetland		X		
Muskegon Lake	Loss of Fish and Wildlife Habitat	No	RA	Restore Michigan Steel Peninsula wetland		X		Proposal submitted for Recovery Act funding - waiting decision.
Muskegon Lake	Degradation of Benthos	No	Mon	Monitor benthos at Ryerson, Little Bear Creek (including unnamed tributary) and the Muskegon River (south Branch near Teledyne and North Branch at the mouth)	X			State to take lead. Routine Surface Water Assessment Section monitoring in 2011.
Muskegon Lake	Degradation of Benthos	No	PD	Conduct feasibility and design of managing storm water in Ruddiman Creek	X			Great Lakes Restoration Initiative proposal for biota Total Maximum Daily Load that addresses this action.
Muskegon Lake	Degradation of Benthos	No	Mon	Monitor benthos in Muskegon Lake post remediation		X		
Muskegon Lake	Degradation of Benthos	No	PD, RA	Re-evaluate and address, if needed, contaminated sediment from the mouth of Ryerson Creek		X		
Muskegon Lake	Degradation of Benthos	No	PD, RA	Implement storm water controls		X		
Muskegon Lake	Restrictions on Dredging Activities	Yes	DA	Evaluate dredge spoils in federal navigational channel, prepare and submit Beneficial Use Impairment removal document.	X			State to take lead.
Muskegon Lake	Eutrophication or Undesirable Algae	No	PD, Mon	Study and control internal phosphorus nutrient loads to Bear Lake	X			Action proposed under 319 funding - waiting funding decision.
Muskegon Lake	Eutrophication or Undesirable Algae	No	PD, Mon	Conduct feasibility study for using constructed wetlands to meet eutrophication targets in Bear Lake		X		
Muskegon Lake	Restrictions on Drinking Water Consumption or Taste and Odor Problems	Yes	DA	Assess status of Beneficial Use Impairment	X			A Public Advisory Council support grant to document status and prepare removal documentation.
Muskegon Lake	Beach Closings	No	PD	Investigate illicit connections in Ruddiman Creek	X			
Muskegon Lake	Beach Closings	No	RA	Address illicit connections in Ruddiman Creek	X			
Muskegon Lake	Degradation of Aesthetics	No	PD, RA	Remove debris in Ryerson Creek	X			
Muskegon Lake	Degradation of Aesthetics	No	Mon	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			State prepared Great Lakes Restoration Initiative proposal for a statewide assessment.
Muskegon Lake	Degradation of Aesthetics	No	PD	Assess oil concerns in Bear Lake - Fenners Ditch	X			(Dolly M. Dam #4 Well)
Muskegon Lake	Degradation of Fish and Wildlife Populations	No		See Fish & Wildlife Habitat Beneficial Use Impairment				Actions needed to remove the Fish & Wildlife Habitat Beneficial Use Impairment are expected to contribute toward removing this Beneficial Use Impairment.
Raisin	Restrictions on Fish and Wildlife Consumption	No	Mon	Monitor fish contaminants	X			State to take lead. Status of this use impairment unknown. Trend monitoring sampling conducted in 2008 and proposed in 2010. Ongoing Great Lakes Legacy Act project addressing source control.

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Raisin	Degradation of Fish and Wildlife Populations	No	Mon	Conduct a fish community assessment in the Area of Concern		X		Actions needed to remove the Fish & Wildlife Habitat Beneficial Use Impairment are expected to contribute toward removing this Beneficial Use Impairment. Fisheries Division survey work planned for 2010.
Raisin	Bird and Animal Deformities or Reproductive Problems	Yes	DA	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			Current Great Lakes Legacy Act project will address remaining known contaminated sediments "hotspots" in the Area of Concern. A DNRE statewide assessment of this BUI will determine any monitoring and restoration needs.
Raisin	Degradation of Benthos	No	RA	Remediate known contaminated sediment sites - River Raisin Great Lakes Legacy Act Project	X			Ongoing Great Lakes Legacy Act project.
Raisin	Restrictions on Dredging Activities	No	RA	Remediate contaminated sediment in navigation channel - routine Corps of Engineers maintenance dredging		X		State proposing a statewide assessment. Ongoing Great Lakes Legacy Act project to address known site-specific contaminated sediments. Per 2/10 project fact sheet, the Corps dredges nav channel ever 2-3 years. Corps received Recover Act funds to dredge the harbor in 2009. State proposing a statewide assessment
Raisin	Eutrophication or Undesirable Algae	Yes	DA	Assess status of Eutrophication Beneficial Use Impairment	X			Review of records dating back to 1992 determined that the Areas of Concern has not been listed on the 303(d) list for nutrients. The Raisin Public Advisory Council approved a motion to support a formal Beneficial Use Impairment assessment (11/18/09).
Raisin	Beach Closings	No	PD, RA, Mon, DA	Control sources and monitor E. coli levels related to the Beach Closing Beneficial Use Impairment		X		Source control may include implementing site-specific source control projects in the watershed impacting the Area of Concern. The Area of Concern waterbody will be listed on the '10 Integrated Report 303(d) for pathogens. State proposing a statewide assessment for this BUI.
Raisin	Degradation of Aesthetics	No	Mon	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			State prepared Great Lakes Restoration Initiative proposal for a statewide assessment.
Raisin	Loss of Fish and Wildlife Habitat	No	RA	Restore shallow water fish and wildlife habitat - William C. Sterling State Park Marsh and Prairie Restoration Project	X			The proposed project is identified in the Fish & Wildlife Restoration Plan as a component of the Northern Wetland Enhancements Project (the restoration will occur on state land).
Raisin	Loss of Fish and Wildlife Habitat	No	RA	Restore shallow water fish and wildlife habitat - River Raisin Wetland Enhancement and Habitat Evaluation Project	X			The proposed project is identified in the Fish & Wildlife Restoration Plan as a component of the Northern Wetland Enhancements Project (the restoration will occur on state land).
Raisin	Loss of Fish and Wildlife Habitat	No	RA	Restore shallow water fish and wildlife habitat - Sterling Island Improvements Project	X			The proposed project is identified in Fish & Wildlife Plan.
Raisin	Loss of Fish and Wildlife Habitat	No	RA	Restore shallow water fish habitat - Restoring Fish Passage River Raisin Area of Concern	X			The proposed project is identified in the Fish & Wildlife Restoration Plan (removal and/or fish passage at 6 low head dams in the city of Monroe).
Rouge	Restrictions on Fish and Wildlife Consumption	No	Mon	Monitor fish contaminants			X	State to take lead. State's routine Surface Water Assessment Section Rouge River Watershed monitoring in 2010.
Rouge	Degradation of Fish and Wildlife Populations	No	Mon	Conduct a fish community assessment in the Area of Concern			X	Actions needed to remove the Fish & Wildlife Habitat Beneficial Use Impairment are expected to contribute toward removing this Beneficial Use Impairment. State's routine Surface Water Assessment Section monitoring Rouge River in 2010.
Rouge	Fish Tumors or Other Deformities	No	DA	Assess status of the Fish Tumor Beneficial Use Impairment		X		Status of this Beneficial Use Impairment is unknown. State's routine Surface Water Assessment Section Rouge River Watershed monitoring in 2010.

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Area of Concern Name	Beneficial Use Impairment Name	Assessment in Progress (Y/N)	Category of Action: Planning/Design, Remedial Action, Monitoring, Documentation/Assessment	Actions Needed	Tier I Actions (0-3 yrs)	Tier II Actions (3-5 yrs)	Tier III Actions (5+ yrs)	Comments
Rouge	Degradation of Benthos	No	Mon	Monitor water quality in the Rouge River watershed using Procedure 51	X			Funding for on-going local and state monitoring is needed. Actions needed to remove the Fish & Wildlife Habitat Beneficial Use Impairment are expected to contribute toward removing this Beneficial Use Impairment. State's routine Surface Water Assessment Section Rouge River monitoring in 2010.
Rouge	Degradation of Benthos	No	RA	Remediate known contaminated sediment sites		X		Contaminated sediment source identification and site specific project scoping required.
Rouge	Restrictions on Dredging Activities	No	RA	Remediate contaminated sediment in the navigation channel routine Corps of Engineers maintenance dredging		X		State proposing a statewide assessment. Source identification and project scoping is required to identify remaining contaminated "hotspots." Per Corps fact sheet dated 2/10, Corps dredges nav channel every 2-3 years; the river was last dredged in 2008. Reconnaissance report completed for Lower Rouge, Fiscal Year '11 funds will be used to negotiate and excite a Feasibility Cost Share Agreement and initiate the feasibility phase.
Rouge	Eutrophication or Undesirable Algae	No	PD, RA, Mon, DA	Control sources, monitor, and assess related restoration activities related to the Eutrophication Beneficial Use Impairment			X	Source control includes implementing site-specific projects in the Rouge River watershed. Specific remedial actions have been identified by state and local stakeholders in watershed management plans and other relevant documents. Review of these plans will be needed to determine which actions specifically address contamination contributing to the Eutrophication or Undesirable Algae Beneficial Use Impairment. Though placed in Tier III, funding for on-going remedial actions and monitoring related to eutrophication-related contamination is needed. State's routine Surface Water Assessment Section Rouge River monitoring in 2010.
Rouge	Beach Closings	No	PD, RA, Mon, DA	Control sources and monitor E. coli levels related to the Beach Closing Beneficial Use Impairment			X	Source control includes implementing site-specific projects in the Rouge River watershed. Specific remedial actions have been identified by state and local stakeholders in watershed management plans and other relevant documents. Review of these plans will be needed to determine which actions specifically address contamination contributing to the Beach Closing Beneficial Use Impairment. Though placed in Tier III, funding for on-going remedial actions and monitoring related to E. coli contamination is needed. State's routine Surface Water Assessment Section monitoring Rouge River Watershed in 2010. State proposing a statewide assessment for this BUI.
Rouge	Beach Closings	No	RA, Mon	Control sources and monitor E. coli levels related to the Beach Closing Beneficial Use Impairment - Elimination of Illicit Discharges to Areas of Concern Project	X			Wayne County proposes to isolate areas of with potential illicit connections of sewage to the Rouge River and pursue corrective action with the property owner.
Rouge	Degradation of Aesthetics	No	Mon	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			State proposing a statewide assessment. State's routine Surface Water Assessment Section monitoring Rouge River Watershed in 2010.
Rouge	Loss of Fish and Wildlife Habitat	No	RA	Restore fish and wildlife habitat - Wayne Rd Dam Removal Project	X			The proposed project is identified in Fish & Wildlife Restoration Plan. Feasibility study completed.
Rouge	Loss of Fish and Wildlife Habitat	No	PD	Restore fish and wildlife habitat - Henry Ford Dam Fish Passage Project	X			The proposed project is identified in the Fish & Wildlife Restoration Plan. Need to determine if fish passage is a feasible project in the Area of Concern.

Appendix A: AOC Action Tracking Table

Area of Concern Name	Beneficial Use Impairment Name	Assessment in Progress (Y/N)	Category of Action: Planning/Design, Remedial Action, Monitoring, Documentation/ Assessment	Actions Needed	Tier I Actions (0-3 yrs)	Tier II Actions (3-5 yrs)	Tier III Actions (5+ yrs)	Comments
Rouge	Loss of Fish and Wildlife Habitat	No	RA	Restore fish and wildlife habitat - Evans Creek Constructed Wetland Project	X			The proposed project is identified in the Fish & Wildlife Restoration Plan.
Rouge	Loss of Fish and Wildlife Habitat	No	RA	Restore fish and wildlife habitat - Rouge River Green Infrastructure Implementation	X			The proposed project is identified in the Fish & Wildlife Restoration Plan. This project is a component of a Green Infrastructure Initiative in the Area of Concern and is considered a priority restoration activity by the Rouge River Advisory Council.
Rouge	Loss of Fish and Wildlife Habitat	No	PD, RA	Restore fish and wildlife habitat - Concrete Channel Modifications/ Enhancements Project	X			The proposed project is identified in the Fish & Wildlife Restoration Plan.
Rouge	Loss of Fish and Wildlife Habitat	No	PD, RA	Restore fish and wildlife habitat - Booth Park Stream bank Stabilization Project		X		The proposed project is identified in the Fish & Wildlife Restoration Plan.
Rouge	Loss of Fish and Wildlife Habitat	No	PD, RA	Restore fish and wildlife habitat - Upper Rouge, Michigan Avenue to Rotunda Drive	X			Corps of Engineers Water Resource Development Act project listing. Per Corps fact sheet dated 2/10, the Corps is completing the feasibility phase. This project is combined with the Corps Rouge Oxbow project (see Concrete Channel Modification line above), with revisions to be made to both scopes so they conform to the funding authority. With optimal funding, project construction could begin in the fall of 2011. The proposed project is identified in the Fish & Wildlife Restoration Plan under the following project titles: Concrete Channel Modifications/Enhancements for Habitat and Fish Populations, Rouge River Channel Restoration, Upper and Lower Sections; Michigan Avenue and Evergreen Road Storm Water Treatment and Habitat Restoration; and, the Oakwood Common Oxbow Restoration.
Rouge	Loss of Fish and Wildlife Habitat	No	RA	Restore fish and wildlife habitat - Danvers Pond Dam Removal & Riparian Corridor Improvements Project	X			The proposed project is identified in the Fish & Wildlife Restoration Plan.
Rouge	Loss of Fish and Wildlife Habitat	No	PD, RA	Restore fish and wildlife habitat - Fordson Island Feasibility & Restoration Project	X			Corps of Engineers Water Resource Development Act project listing. Per Corps fact sheet dated 2/10, the Corps proposes that Fiscal Year '11 funds could be used to initiate a feasibility study (non-federal sponsor needed). The proposed project is identified in the Fish & Wildlife Restoration Plan.
Rouge	Loss of Fish and Wildlife Habitat	No	PD, RA	Restore fish and wildlife habitat - Green Corridors Assessment, Visioning, and Implementation Project	X			The proposed project is identified in the Fish & Wildlife Restoration Plan. This project is a component of a Green Infrastructure Initiative in the Area of Concern and is considered a priority restoration activity by the Rouge River Advisory Council.
Rouge	Loss of Fish and Wildlife Habitat	No	PD	Restore fish and wildlife habitat - Lakes and Impoundment Feasibility & Restoration Project		X		The proposed project is identified in the Fish & Wildlife Restoration Plan.
Rouge	Loss of Fish and Wildlife Habitat	No	PD, RA	Restore fish and wildlife habitat - Oakwood Common Oxbow Restoration Project	X			The proposed project is identified in the Fish & Wildlife Restoration Plan. See the Upper Rouge, Michigan Avenue to Rotunda Drive project line above.
Rouge	Loss of Fish and Wildlife Habitat	No	PD, RA	Restore fish and wildlife habitat - Tournament Players Golf Course Storm water Treatment and Wetland Restoration Project			X	Corps of Engineers Water Resource Development Act project listing. The proposed project is identified in the Fish & Wildlife Restoration Plan. See the Upper Rouge, Michigan Avenue to Rotunda Drive project line above.
Rouge	Loss of Fish and Wildlife Habitat	No	PD	Restore fish and wildlife habitat - Natural Areas Program Management Feasibility Study	X			The proposed project is identified in the Fish & Wildlife Restoration Plan. This project is a component of a Green Infrastructure Initiative in the Area of Concern and is considered a priority restoration activity by the Rouge River Advisory Council.

Appendix A: AOC Action Tracking Table

Last Update: 4/12/10

Area of Concern Name	Beneficial Use Impairment Name	Assessment in Progress (Y/N)	Category of Action: Planning/Design, Remedial Action, Monitoring, Documentation/Assessment	Actions Needed	Tier I Actions (0-3 yrs)	Tier II Actions (3-5 yrs)	Tier III Actions (5+ yrs)	Comments
Saginaw	Restrictions on Fish and Wildlife Consumption	No	Mon	Monitor fish contaminants			X	State to take lead. A Public Advisory Council support grant has been secured by the Partnership for the Saginaw Bay Watershed to complete a Beneficial Use Impairment Delisting Strategy for this Area of Concern.
Saginaw	Tainting of Fish and Wildlife Flavor	N/A		None				Beneficial Use Impairment removed 9/2008.
Saginaw	Degradation of Fish and Wildlife Populations	No	RA	See Fish & Wildlife Habitat Beneficial Use Impairment			X	Actions needed to remove the Fish & Wildlife Habitat Beneficial Use Impairment are expected to contribute toward removing this Beneficial Use Impairment.
Saginaw	Bird and Animal Deformities or Reproductive Problems	Yes	DA	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			A DNRE statewide assessment of this BUI will determine any monitoring and restoration needs. A Public Advisory Council support grant has been secured by the Partnership for the Saginaw Bay Watershed to complete a Beneficial Use Impairment Delisting Strategy for this Area of Concern.
Saginaw	Degradation of Benthos	No	RA	Remediate known contaminated sediment sites in the Saginaw River and Saginaw Bay			X	Source identification and site-specific project scoping is required. A Public Advisory Council support grant has been secured by the Partnership for the Saginaw Bay Watershed to complete a Beneficial Use Impairment Delisting Strategy for this Area of Concern.
Saginaw	Restrictions on Dredging Activities	No	RA	Remediate contaminated sediment in the navigation channel routine Corps of Engineers maintenance dredging and known site-specific contaminated sediment remediation required			X	State proposing a statewide assessment. Source identification and project scoping of contaminated sites is required. Per Corps fact sheet dated 2/10, the mouth of Saginaw River requires annual dredging and the upper Saginaw River requires dredging every 2-3 years. Recovery Act funds will be used to dredge the river in '10. A Public Advisory Council support grant has been secured by the Partnership for the Saginaw Bay Watershed to complete a Beneficial Use Impairment Delisting Strategy for this Area of Concern.
Saginaw	Eutrophication or Undesirable Algae	No	PD, RA, Mon, DA	Control sources, monitor, and assess related restoration activities related to the Eutrophication Beneficial Use Impairment	X			Source control includes implementing site-specific projects in the Saginaw Bay watershed. Specific remedial actions have been identified by state and local stakeholders in 319-approved sub-watershed management plans and other relevant documents. Review of these plans will be needed to determine which actions specifically address contamination contributing to the Eutrophication or Undesirable Algae Beneficial Use Impairment. A Public Advisory Council support grant has been secured by the Partnership for the Saginaw Bay Watershed to complete a Beneficial Use Impairment Delisting Strategy for this Area of Concern.

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Last Update: 4/12/10

Area of Concern Name	Beneficial Use Impairment Name	Assessment in Progress (Y/N)	Category of Action: Planning/Design, Remedial Action, Monitoring, Documentation/Assessment	Actions Needed	Tier I Actions (0-3 yrs)	Tier II Actions (3-5 yrs)	Tier III Actions (5+ yrs)	Comments
Saginaw	Beach Closings	No	PD, RA, Mon, DA	Control sources and monitor E. coli levels related to the Beach Closing Beneficial Use Impairment	X			Source control includes implementing site-specific projects in the Saginaw Bay watershed. Specific remedial actions have been identified by state and local stakeholders in 319-approved sub-watershed management plans and other relevant documents. Review of these plans will be needed to determine which actions specifically address contamination contributing to the Beach Closing Beneficial Use Impairment. A Public Advisory Council support grant has been secured by the Partnership for the Saginaw Bay Watershed to complete a Beneficial Use Impairment Delisting Strategy for this Area of Concern. State proposing a statewide assessment for this BUI.
Saginaw	Beach Closings	No	RA/Mon	Control sources and monitor E. coli levels related to the Beach Closing Beneficial Use Impairment - Saginaw Bay Sanitary Survey Projects	X			Per Shannon Briggs, the state's beach monitoring program coordinator, focus on targeting high priority beaches in Saginaw Bay. The Environmental Protection Agency's Great Lakes National Program Office is currently providing funding for beach sanitary surveys at 5 beaches, including: Singing Bridge Beach in Arenac county (impacted by the Whitney drain), Whites Beach in Arenac County (impacted by a series of canals), Bay City Recreation Area in Bay County (impacted by multiple factors including the Kawkawlin and Saginaw River and possibly the Tobico Marsh), Caseville Beach in Huron County (impacted by the Pigeon River), and Port Crescent State Park beaches in Huron County (impacted by the Pinnebog River).
Saginaw	Beach Closings	No	RA/Mon	Control sources and monitor E. coli levels related to the Beach Closing Beneficial Use Impairment - Bay County Sanitary Survey Project	X			The DNRE and Bay County Health Dept. will conduct sanitary surveys and monitor 5 high priority beaches located on Saginaw Bay. This project will expand the frequency and duration of beach monitoring efforts, and increase the number of beaches regularly monitored with beach sanitary surveys to reduce bacterial contamination.
Saginaw	Beach Closings	No	RA/Mon	Control sources and monitor E. coli levels related to the Beach Closing Beneficial Use Impairment - Restoring Three Arenac County Beaches	X			The DNRE and the Central Michigan Health Dept. will monitor 3 high priority beaches located on Saginaw Bay. This project will expand the frequency and duration of beach monitoring efforts, and increase the number of beaches regularly monitored with beach sanitary surveys to reduce bacterial contamination.
Saginaw	Beach Closings	No	RA/Mon	Saginaw AOC Regional Septic Remediation/Source Elimination	X			This is a regional project on behalf of 4 Saginaw Bay coastal communities and their Health Departments to identify and eliminate illicit discharges from on-site septic systems that have a direct hydrological discharge connection to surface waters of the Saginaw Bay. This is a high priority action identified by the Partnership for the Saginaw Bay Watershed.
Saginaw	Beach Closings	No	RA/Mon	Control sources and monitor E. coli levels related to the Beach Closing Beneficial Use Impairment - Saginaw Bay/River Area of Concern Beach Forecast Modeling Project	X			Project currently being funded by the Environmental Protection Agency's Great Lakes National Program Office.

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Saginaw	Degradation of Aesthetics	No	Mon	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			State prepared Great Lakes Restoration Initiative proposal for a statewide assessment. A Public Advisory Council support grant has been secured by the Partnership for the Saginaw Bay Watershed to complete a Beneficial Use Impairment Delisting Strategy for this Area of Concern.
Saginaw	Degradation of Phyto- or Zooplankton Populations	No	PD, RA, Mon, DA	See Eutrophication or Undesirable Algae Beneficial Use Impairment			X	Actions needed to remove the Eutrophication are expected to contribute toward removing this Beneficial Use Impairment. A Public Advisory Council support grant has been secured by the Partnership for the Saginaw Bay Watershed to complete a Beneficial Use Impairment Delisting Strategy for this Area of Concern.
Saginaw	Loss of Fish and Wildlife Habitat	No	RA	Protect 60% of the coastal wetlands below the 585-foot contour	X			Acquire and/or permanently protect ~700 acres of coastal wetlands to achieve the Fish and Wildlife habitat-related Beneficial Use Impairment restoration target (i.e., protect 60% of coastal wetlands below the 585-foot contour). The state and local stakeholders have identified site-specific projects that will achieve this target.
St. Clair	Restrictions on Fish and Wildlife Consumption	No	RA	Remediate PCB and trace metal contamination throughout river			X	
St. Clair	Tainting of Fish and Wildlife Flavor	NA		None.				Beneficial Use Impairment removed on 9/2009.
St. Clair	Bird and Animal Deformities or Reproductive Problems	Yes	DA	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			A DNRE statewide assessment of this BUI will determine any monitoring and restoration needs.
St. Clair	Degradation of Benthos	No	RA	Remediate known contaminated sediment sites			X	
St. Clair	Restrictions on Dredging Activities	Yes	DA	Prepare and submit Beneficial Use Impairment removal document	X			State assessment in process.
St. Clair	Restrictions on Drinking Water Consumption or Taste and Odor Problems	No	DA	Assess status of Beneficial Use Impairment		X		
St. Clair	Beach Closings	No	PD, Mon, RA	Control sources and monitor E. coli levels related to the Beach Closing Beneficial Use Impairment		X		
St. Clair	Degradation of Aesthetics	No	Mon, DA	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			State prepared Great Lakes Restoration Initiative proposal for a statewide assessment.
St. Clair	Added costs to agriculture or industry	No	DA	Assess status of Beneficial Use Impairment		X		
St. Clair	Loss of Fish and Wildlife Habitat	No	PD	Plan and design restoration of shallow water habitat at Acheson Ventures Waterfront	X			
St. Clair	Loss of Fish and Wildlife Habitat	No	RA	Restore shallow water habitat at Acheson Ventures Waterfront	X			
St. Clair	Loss of Fish and Wildlife Habitat	No	Mon, DA	Monitor, assess and document the restoration of shallow water habitat at Acheson Ventures Waterfront		X		
St. Clair	Loss of Fish and Wildlife Habitat	No	PD	Plan and design restoration of shallow water habitat at Marine City	X			
St. Clair	Loss of Fish and Wildlife Habitat	No	RA	Restore shallow water habitat at Marine City	X			
St. Clair	Loss of Fish and Wildlife Habitat	No	Mon, DA	Monitor, assess and document the restoration of shallow water habitat at Marine City		X		
St. Clair	Loss of Fish and Wildlife Habitat	No	PD	Plan and design the installation of Cuyahoga Habitat Underwater Baskets for use as shoreline restoration alternative	X			
St. Clair	Loss of Fish and Wildlife Habitat	No	PD	Plan and design the restoration of Port Huron North shoreline and fish habitat	X			
St. Clair	Loss of Fish and Wildlife Habitat	No	PD	Plan and design the restoration of Port Huron South shoreline and fish habitat	X			
St. Clair	Loss of Fish and Wildlife Habitat	No	RA	Restore habitat along Cuttle Creek, which drains into the St. Clair River; and restore habitat along St. Clair River shoreline directly north of the mouth of Cuttle Creek.	X			

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Area of Concern Name	Beneficial Use Impairment Name	Assessment in Progress (Y/N)	Category of Action: Planning/Design, Remedial Action, Monitoring, Documentation/Assessment	Actions Needed	Tier I Actions (0-3 yrs)	Tier II Actions (3-5 yrs)	Tier III Actions (5+ yrs)	Comments
St. Clair	Loss of Fish and Wildlife Habitat	No	PD	Plan and design the restoration of valuable shallow water habitat at the mouth of Bunce Creek	X			
St. Clair	Loss of Fish and Wildlife Habitat	No	RA	Restore Port Huron North shoreline and fish habitat	X			
St. Clair	Loss of Fish and Wildlife Habitat	No	Mon, DA	Monitor, assess and document the restoration of Port Huron North shoreline and fish habitat		X		
St. Clair	Loss of Fish and Wildlife Habitat	No	RA	Restore Port Huron South shoreline and fish habitat	X			
St. Clair	Loss of Fish and Wildlife Habitat	No	Mon, DA	Monitor, assess and document the restoration of Port Huron South shoreline and fish habitat		X		
St. Marys	Restrictions on Fish and Wildlife Consumption	No	Mon	Monitor fish contaminants	X			State to take lead. Trend monitoring in 2007 and proposed in 2010 in Munuscong Bay.
St. Marys	Degradation of Fish and Wildlife Populations	No	RA	See Fish & Wildlife Habitat Beneficial Use Impairment				Actions needed to remove the Fish & Wildlife Habitat Beneficial Use Impairment are expected to contribute toward removing this Beneficial Use Impairment.
St. Marys	Fish Tumors or Other Deformities	No	DA	Assess status of the Fish Tumor Beneficial Use Impairment - St. Marys River Water Quality Network Project		X		The St. Marys River Water Quality Network is an information/outreach tool directed toward informing the public about the listed Beneficial Use Impairments and other water quality concerns related to the Area of Concern. The Network will also inform the community about how one reports occurrence's such as fish tumors or other water quality related concerns to the state.
St. Marys	Bird and Animal Deformities or Reproductive Problems	Yes	DA	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			A DNRE statewide assessment of this BUI will determine any monitoring and restoration needs.
St. Marys	Degradation of Benthos	No	RA	Remediate known contaminated sediment sites - St. Marys River Great Lakes Legacy Project			X	Ongoing Great Lakes Legacy Act project. This project addresses the remaining known contaminated sediment site on the US side of the Area of Concern. Local restoration criteria require that known contaminated sediment sites on the Canadian side of the river also be remediated before this Beneficial Use Impairment can be removed on the US side of the Area of Concern.
St. Marys	Restrictions on Dredging Activities	No	RA	Remediate contaminated sediment in the navigation channel routine Corps of Engineers maintenance dredging and known site-specific contaminated sediment remediation required			X	State proposing a statewide assessment. Per Corps fact sheet dated 2/10, Corps dredges nav channel on 4-6 year basis; the river was last dredged in 2008. Ongoing Great Lakes Legacy Act project is addressing the remaining known contaminated sediment site on the US side of the Area of Concern and will likely address the source contributing to chemical contamination in the navigation channel.
St. Marys	Eutrophication or Undesirable Algae	No	RA	Control sources related to the Eutrophication Beneficial Use Impairment - Implementation of the Sault Ste. Marie Area Watershed Management Plan	X			Specific source control and other remedial actions have been identified by state and local stakeholders. Remedial actions have also been identified in the 319 approved watershed management plan. Review of this plan will determine which remedial actions address sources contributing to the Eutrophication Beneficial Use Impairment.
St. Marys	Beach Closings	No	PD, RA, Mon, DA	Control sources and monitor E. coli levels related to the Beach Closing Beneficial Use Impairment	X			State proposed a statewide assessment for this BUI.
St. Marys	Beach Closings	No	RA, Mon	Control sources and monitor E. coli levels related to the Beach Closing Beneficial Use Impairment - Implementation of the Sault Ste. Marie Area Watershed Management Plan to address E. coli contamination	X			This project proposes to target source control remedial actions in the Sault Area Watershed known to be contributing to the listing of the Beach Closing Beneficial Use Impairment.
St. Marys	Beach Closings	No	Mon	Control sources and monitor E. coli levels related to the Beach Closing Beneficial Use Impairment - St. Marys River Total Maximum Daily Loading Monitoring project	X			The DNRE led project will monitor E. coli levels in the St. Marys River and adjacent watershed in 2010 to determine the attainment of the US water quality standard for E. coli.

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Area of Concern Name	Beneficial Use Impairment Name	Assessment in Progress (Y/N)	Category of Action: Planning/Design, Remedial Action, Monitoring, Documentation/Assessment	Actions Needed	Tier I Actions (0-3 yrs)	Tier II Actions (3-5 yrs)	Tier III Actions (5+ yrs)	Comments
St. Marys	Beach Closings	No	RA/Mon	Control sources, monitor, and assess E. coli levels related to the Beach Closing Beneficial Use Impairment - Chippewa County Sanitary Survey Project	X			The DNRE and Chippewa County Health Dept. will conduct sanitary surveys and monitor 4 high priority beaches more frequently and initiate monitoring with sanitary surveys at 6 beaches located on L. Superior and the St. Marys River.
St. Marys	Degradation of Aesthetics	No	Mon	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			State prepared Great Lakes Restoration Initiative proposal for a statewide assessment.
St. Marys	Loss of Fish and Wildlife Habitat	No	RA	Restore rapids habitat in the St. Marys River - Little Rapids Habitat Restoration Project	X			The proposed project will Improve habitat in Little Rapids area west of Sugar Island by restoring altered hydrology to pre-existing rapids, and will accomplish 50% of the Fish and Wildlife Habitat and Populations restoration target.
St. Marys	Loss of Fish and Wildlife Habitat	No	RA	Restore rapids habitat in the St. Marys River - Neebish Rock Cut Habitat Restoration Project		X		Restoration of the rapids at Neebish Island will accomplish 50% of the Fish and Wildlife Habitat and Populations restoration target.
Torch Lake	Restrictions on Fish and Wildlife Consumption	Yes	RA, Mon	Identify and control PCB sources		X		State preparing a Great Lakes Restoration Initiative proposal.
Torch Lake	Fish Tumors or Other Deformities	N/A		None				Beneficial Use Impairment removed 4/2007.
Torch Lake	Degradation of Benthos	Yes	PD	Evaluate mechanism leading to the increasing metals, PCBs, and other contaminants at the sediment water interface	X			State prepared a Great Lakes Restoration Initiative proposal.
Torch Lake	Degradation of Benthos	Yes	Mon	Establish whether Natural Attenuation remedy selected under Superfund is working	X			State prepared a Great Lakes Restoration Initiative proposal.
Torch Lake	Degradation of Benthos	Yes		Identify the plant communities and associated microbes necessary to establish a self-sustaining vegetative cover and identify soil augmentation needed for the stamp sand sites surrounding Torch Lake.				State prepared a Great Lakes Restoration Initiative proposal.
White Lake	Restrictions on Fish and Wildlife Consumption	No	Mon	Monitor fish contaminants in 2011	X			State's routine Surface Water Assessment Section monitoring in 2012.
White Lake	Degradation of Fish and Wildlife Populations	No	RA	Restore impacted sites and purchase conservation easements as identified in Restoration Plan	X			Seven restoration projects have been identified.
White Lake	Degradation of Benthos	No	Mon	Monitor benthos for 3 yrs		X		2 yrs funded with Clean Michigan Initiative in 2009. Need funds for year 3.
White Lake	Restrictions on Dredging Activities	Yes	DA	Evaluate dredge spoils in federal navigational channel, prepare and submit Beneficial Use Impairment removal document.	X			State to take lead.
White Lake	Eutrophication or Undesirable Algae	Yes	DA	Prepare and submit Beneficial Use Impairment removal document	X			White Lake Public Advisory Council has a grant to assess and remove Beneficial Use Impairment.
White Lake	Restrictions on Drinking Water Consumption or Taste and Odor Problems	No	D/A	Prepare and submit Beneficial Use Impairment removal document			X	Meeting states criteria; White Lake Public Advisory Council wants another mechanism to address groundwater contamination.
White Lake	Degradation of Aesthetics	No	Mon	Analyze existing data and conduct assessment of Beneficial Use Impairment	X			State prepared Great Lakes Restoration Initiative proposal for a statewide assessment.
White Lake	Loss of Fish and Wildlife Habitat	No	PD, Mon, RA, DA	see Fish & Wildlife Populations Beneficial Use Impairment	X			
		Shading Indicates Beneficial Use Impairment removal is complete						