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St Clair Detroit River System Initiative  
Governance Model for a  
Common Agenda



# Outline

Background

Challenges

“Collective Impact”

Strategic Vision

Partnership

Subcommittees

Goals and Objectives

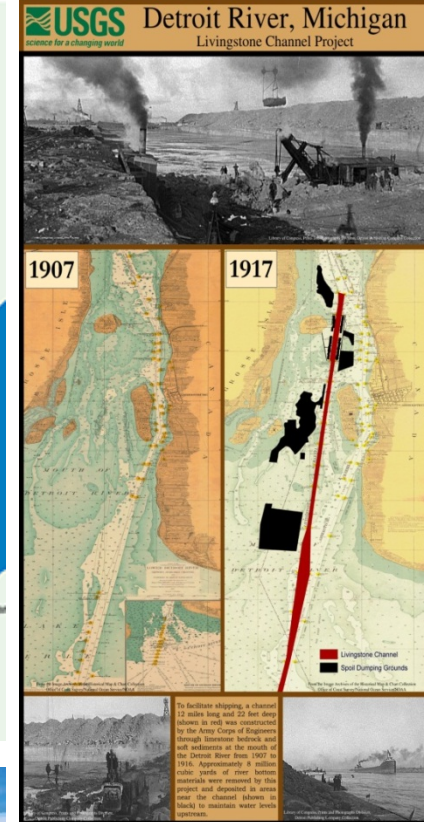
Summary





# Background

- Hundreds of years of misuse and abuse
- 6 Areas of Concern; high concentration of industrial use
- Major urban and rural agriculture setting
- High Fish and Wildlife Values
- Ten years of multi-agency planning, research and implementation
- First bi-national reef restoration project in the Great Lakes





# Challenge of Success

- How to organize the diverse mandates, interest, and field of expertise
- Governance, decision making and roles and responsibilities
- Cost





# Collective Impact

A long-term commitment by a group of actors from different sectors willing to work together under a common agenda to solve a problem

- Agreeing to a set of goals and objectives with agreed upon measures of success (or indicators)
- Create, foster and facilitate knowledge sharing, collaborative efforts and program support

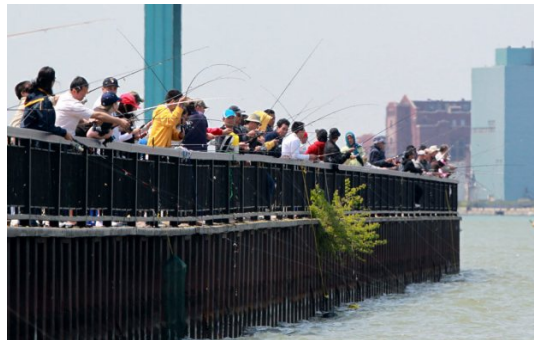






# Strategic Vision

*The St. Clair-Detroit River System is a thriving ecosystem managed with science-based principles and broad social support, providing desired environmental services for the region and the Great Lakes basin.*





# Strategic Vision

## Purpose:

Coordinate research and management needs

## Common Agenda:

Restoration and protection through adaptive, coordinated science decision

## Guiding Principles:

Benefit for society

Science-based

Collaboration

Effective communication





# Strategic Vision

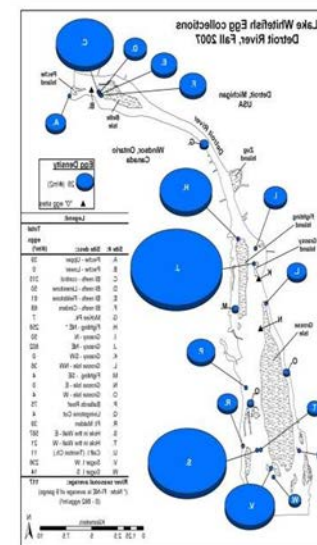
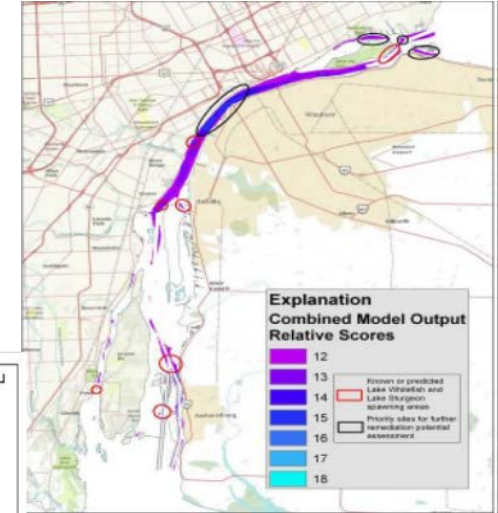
## Outcomes:

Prioritized projects that;

- improve biodiversity
- Benefit people
- Reduce risk of invasive species, pollution and habitat
- Measureable

Decision are based on science and monitoring

Provide a forum to facilitate coordination, transparency and communication







# Partnership Agreement

Member	Date Signed
University of Toledo	4/18/2014
Wayne State University	4/25/2014
Michigan Sea Grant	4/25/2014
Great Lakes Fishery Commission	4/28/2014
The Nature Conservancy	5/21/2014
Michigan Department of Environmental Quality	7/13/2014
U.S. Fish and Wildlife Service	7/17/2014
USGS - Great Lakes Science Center	7/21/2014
U.S. Army Corps of Engineers	7/27/2014
National Oceanic and Atmospheric Administration	7/28/2014
Essex Region Conservation Authority	7/29/2014
Walpole Island Fish Nation	7/30/2014
Ohio DNR Division of Wildlife	7/31/2014
Michigan DNR Fisheries Division	8/1/2014
Ontario Ministry of Natural Resources	9/19/2014

## Purpose:

To coordinate research and management efforts that collectively will achieve measurable progress toward the shared vision, as implemented through a strategic process to link science with integrated management priorities

## Structure:

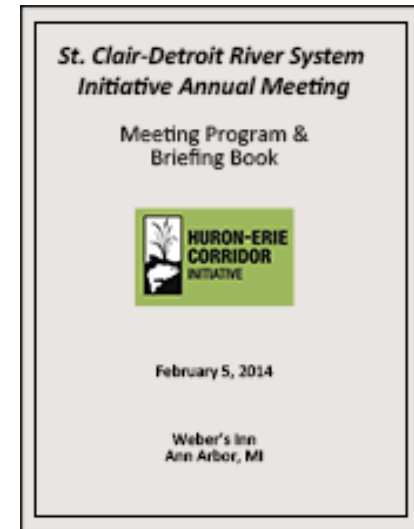
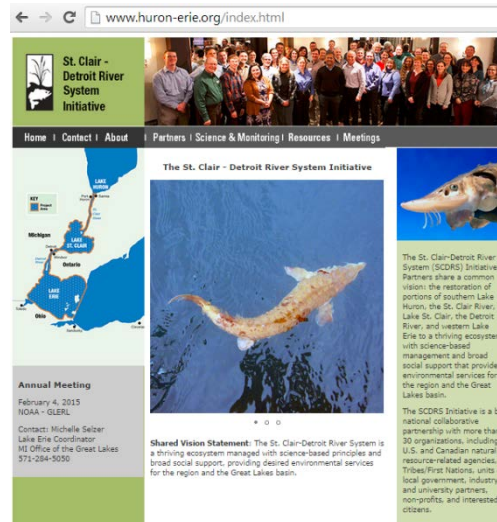
- Steering Committee with Chair and Vice Chair
- Membership
- Roles and Responsibilities
- Subcommittees



# Communication Subcommittee

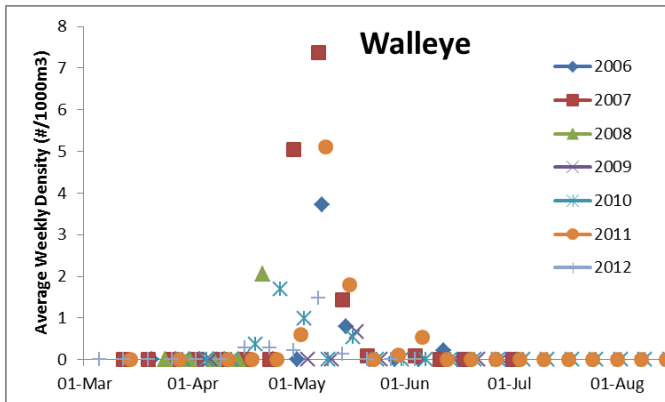
## Charges for 2014-15

1. Implementing backbone facilitation for the Partnership.
2. Revise website to reflect the new Partnership vision and structure.
3. Develop methods and products (such as report cards) to communicate annual outputs from the science and monitoring subcommittees to all partners and interested stakeholders.





# Monitoring Subcommittee



## Charges for 2014-15

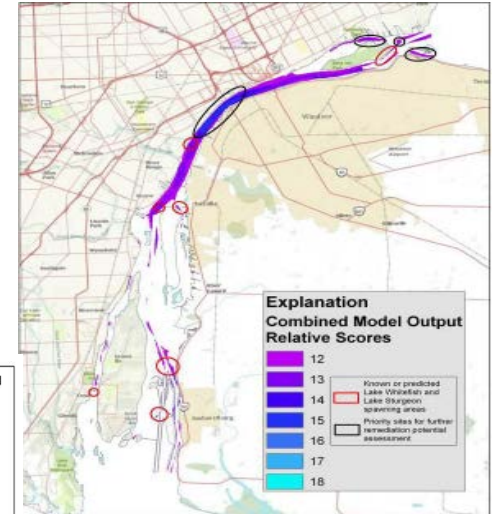
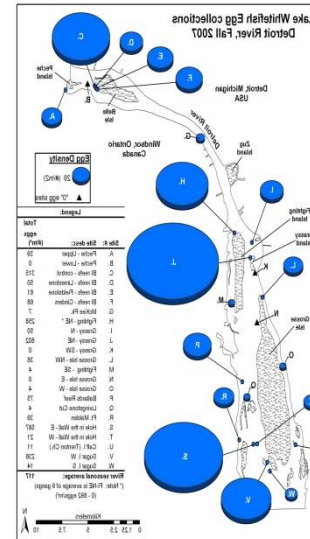
1. Develop a Monitoring Workplan consisting of with specific surveys and indicators...
2. Develop prioritization criteria to identify surveys of the highest utility for advancing the Common Agenda.
3. Review and amend the Monitoring Workplan annually...,
4. Provide the monitoring plan to the Steering Committee, the Science Subcommittee, and the Communications Subcommittee following any amendments.



# Science Subcommittee

## Charges for 2014-15

1. Develop a Science Strategy with relevant working/research hypotheses and evaluation indicators...
2. Develop prioritization criteria to identify hypotheses of the highest utility for advancing the Common Agenda.
3. Review and amend the Science Strategy annually...,
4. Provide the science strategy to the Steering Committee, the Monitoring Subcommittee, and the Communications Subcommittee following any amendments.





# Priority Management Actions

1. Address Beneficial Use Impairments to de-list Areas of Concern
2. Improve water quality through reductions in pollutants from sources
3. Increase overall biodiversity through protection and improvements to habitat
4. Increase production of indigenous fish stocks through protection and improvements to habitats
5. Reduce the impacts on habitat, biodiversity and fisheries from Aquatic Invasive Species threats





# Priority Objectives Setting

Annual Partnership workshop

77 participants representing multiple agencies and organizations

Use clicker technology to prioritize objectives

Breakout groups to recommend ranking system

Steering Committee chose 9 key priority objectives

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Priority	ID	OSM Working Hypotheses (if "Actions Needed" (Outcomes))	Expected Outcomes by 2025	Indicators	Inter-connections among Priorities
1	1	Remove contaminated sediments to reduce degradation of benthos (BI)	Reductions in PCB, mercury and PAHs to cleanup criteria; improved benthic community and reduced contaminant levels (bioactive of fish and wildlife due to sediment clean-up) (AOQ) or cleanup (target fish AOQ)	PCB, Hg, PAH concentration in sediment to cleanup criteria level; Achievement of reference condition criteria (Can AOQ)/benthic community structure; contaminants in benthos	Remediation of contaminated sediments will improve habitats for healthy fauna and their use by people; contaminants are linked directly to the benthos BI and response is expected there initially; less water pollution will address drinking water impairment; increased biodiversity, fisheries, and drinking water quality will improve societal perception of healthier ecosystem.
1	2	Complete remedial actions to reduce fish tumors and other deformities (BI)	Incidence of tumor/bulbar tumors in fish similar to reference conditions	river tumors in brown bullheads	
1	3	Complete remedial actions to reduce mortality on fish and wildlife consumption (BI)	Reduced contaminants in fish tissues; decrease in fish consumption advisories	fish consumption advisories for specific species	
1	4	Complete remedial actions to remove bird or animal deformities or other reproductive problems (BI)	Incidence of bird or animal deformities or other reproductive problems reduced	deformities in frog, hatching success, clutch size, threshold concentrations of contaminants causing reproductive problems in indicator species.	
2,3,4	5	Complete habitat improvement projects to remove loss of fish and wildlife habitat (BI)	Completion of targeted habitat projects as per AOC habitat plans and best stewardship protocol for projects	# of projects completed	
2	6	Reduce loading from regulated and unregulated sources of toxics	Less contaminants in fish, & reduce algae related loading in Lake St. Clair (BI) fish diversity	TP,DP loads from SCDS sources including tributaries	
2	7	Identify contaminants of concern (e.g. pharmaceuticals and personal care products), microplastics of detritive sources, and develop load reduction strategies	Less contaminants of concern (e.g. pharmaceuticals, personal care products, microplastics)	loads of contaminants of concern from SCDS sources, including tributaries	
2	8	Reduce biological contamination (e.g., pathogens, virus, impacts or wildlife)	Reduced beach closures, improved ability to predict beach closures, improved wildlife health	bacterial/pathogen/viruses in water and sediment; Incidences of fish/wildlife disease incidents	
2	9	Reduce loadings from legacy contaminant sources (including groundwater at known locations in DR)	Reduced loadings of legacy contaminants (including groundwater)	Loads of legacy contaminants from SCDS sources, including groundwater	
2	10	Integrated landscape contaminant source assessment	Identification of land-use/land-cover source locations; leading strategies to address multiple contaminant issues to allow focused implementation actions for load reductions in priority areas		
3	11	Increase riparian connectivity/consolidity through increased riparian vegetation and native species use	More trees, shrubs, wetland, RJA species in riparian areas	riparian protected/improved; species richness	An expression of higher biodiversity of indigenous species will be needed to demonstrate that water quality has improved and that BI's for aquatic habitats, deformities, benthos, etc., have been addressed. Habitat improvements through water quality and AOC initiatives should increase indigenous fish production in the system, not just short-term fish attraction, and provide significant economic benefits to fisheries.
3,4	12	Increase continuous cover of functional wetlands and their connectivity to the SCDS	Increased biodiversity and fish production in wetland areas	riparian protected/improved; species richness; larval fish density; fish population dynamics	
3,4	13	Increase river spawning habitat	Improved biodiversity and fish production	riparian protected/improved; species richness; larval fish density; fish population dynamics	
3,4	14	Identify and protect critical habitat areas for rare species including river mouth habitats & connectivity with Lake St. Clair	Increased BSA/SA species abundance, increased production of rare fishes	riparian protected/improved; rare species presence	
4	15	Increase hydrological lateral connectivity between main channel habitats (e.g., Veneo) and shallow water habitat	Increased larval/juvenile fish production	riparian protected/improved; larval fish density; fish population dynamics	
5	16	Develop comprehensive monitoring for AIS based on habitat requirements and availability	Improve detection and assessment programs for identifying effective risk management actions	improved detection probabilities by species and gear type	Sea lamprey control is necessary for production of indigenous fishes at levels for fisheries benefits. AIS plants control is important to promote increases in wetland. Might anticipate increases in AIS as habitats are improved, which may compromise expected increases in non-indigenous biodiversity and potentially ecosystem services.
5	17	Adaptively manage invasive plants (e.g., Phragmites, European Night) at a system landscape scale	Reduce the impact on, and promote restoration of, desired wetland habitats	AIS plant distribution and coverage	
5	18	Apply integrated pest management for sea lamprey in the SCDS	Reduce sea lamprey recruitment to lake fish	adult lamprey abundance; wounding rates	
5	19	Implement preventive strategies through riparian restoration programs and management of potential sources and pathways (e.g., habitat water, the release, etc.)	Prevent introductions of new species	# people/groups contacted; compliance rates with BW plans; # new species by vector over time	
5	20	Develop integrated pest management for established AIS (e.g., zebra mussels, quagga mussels, white sturgeon)	Prevent further dispersal or establishment of populations from SCDS source populations	range expansion	

Yellow Highlights (italics) are the final set of Objectives selected by the Steering Committee on Feb 5, 2015.

Last Updated: 9/21/15

In 2014, the Steering Committee established five management priorities. They include (non-ranked):

1. Address beneficial use impairments to de-list the Detroit River AOC and St. Clair River AOC in both countries
2. Improve water quality through reductions in pollutants from SCDS sources
3. Increase overall biodiversity through protection and improvements to a connected mosaic of habitats in the system
4. Increase production of indigenous fish stocks through protection and improvements to functional habitats in the system
5. Reduce impacts on habitats, biodiversity, and fisheries from AIS threats



# Priority Objectives

1. Complete habitat improvements projects to remove loss of fish and wildlife habitat BUI
2. Reduce loading from regulated and unregulated sources of TP/DRP
3. Identify contaminants of concern, determine sources and develop load reduction strategies
4. Increase riparian complexity/connectivity through increased softened shorelines and native riparian vegetation
5. Increase continuous area of functional wetlands and their connectivity to the SCDRS



# Priority Objectives

6. Increase spawning habitat
7. Increase and protect critical habitat areas for rare species, including river mouth habitats and connectivity with tributaries
8. Develop surveillance monitoring for AIS based on habitat requirements and availability
9. Implement preventive strategies through information / education programs and management of potential sources and pathways (AIS)



# Next Steps

- Analyse science and monitoring database
- Develop a monitoring work plan consisting of specific surveys and indicators
- Develop a science strategy with relevant working/research hypotheses and evaluation indicators...
- Implement habitat improvement projects to remove loss of fish and wildlife habitat beneficial use impairment



# Special Thanks

Environment Canada  
Essex Region Conservation Authority  
Fisheries and Oceans Canada  
Great Lakes Fishery Commission  
Michigan Department of Environmental  
Quality  
Michigan Department of Natural Resources  
Michigan Sea Grant  
National Oceanic and Atmospheric  
Administration  
Ohio Department of Natural Resources  
Ontario Ministry of the Environment  
Ontario Ministry of Natural Resources  
U.S. Army Corps of Engineers  
U.S. Environmental Protection Agency  
U.S. Fish and Wildlife Service  
U.S. Geological Survey  
Walpole Island First Nations

BASF  
Central Michigan University  
CineGroup  
Detroit River Canadian Cleanup  
DTE Energy  
Environmental Consulting and Technology, Inc.  
Friends of the Detroit River  
Great Lakes Commission  
Herpetological Resource and Management  
Michigan State University  
Michigan Wildlife Conservancy  
SmithGroup JJR  
The Nature Conservancy  
University of Michigan  
University of Toledo  
University of Windsor  
Wayne State University  
Wildlife Habitat Council