

St. Clair – Detroit River System Initiative Report Card 2016

Indicator Status for Priority Objectives updated 2/23/2017

Non-Habitat Related Indicators

Priority Objective	Indicator	Reporting Frame	Status
Reduce loading from regulated and unregulated sources of total phosphorus and dissolved reactive phosphorus entering western Lake Erie	Spring (March-July) total phosphorus load (< 860 MT) and dissolved reactive phosphorus (< 186 MT) entering western Lake Erie from the Maumee River	Annually	Poor
	40% reductions in spring (March – July) loading of total phosphorus and dissolved reactive phosphorus relative to 2008 levels (Detroit River, Thames River, Maumee River, River Raisin, Portage River, Toussaint Creek, and Leamington tributaries)	Annually	Not determined
	Western basin-specific spring (May – September) total phosphorus concentration between (10-20 µg/L)	Annually	Poor
Identify contaminants of emerging concern (e.g., pharmaceuticals and personal care products, microplastics) determine sources, and develop load reduction strategies	Intersex prevalence and severity in fish compared to healthy “reference” locations	Opportunistically	Not determined
	Prevalence of plasma vitellogenin in male fish compared to healthy “reference” locations	Opportunistically	Not determined
	Prevalence of abnormal concentrations of reproductive hormones in fish	Opportunistically	Not determined
	Level of estrogenicity being discharged in wastewater effluent	Opportunistically	Research and monitoring need
Improve detection and assessment by developing surveillance monitoring for non-native species	Number of programs implemented for and their distribution within the SCDRS targeting non-native species (mollusks, fish, amphibians, reptiles, plants)	Annually	Not determined
	Percent coverage of <i>Phragmites</i> in wetlands in the SCDRS	Opportunistically	Fair
Implement preventive strategies for non-native species through information/education programs and management of potential sources and pathways (e.g., ballast water, live release, etc.)	Vector risk analysis scores of pathways for invasive species introduction for the St. Clair River, Lake St. Clair, Detroit River, and Maumee Bay (USFWS 2016)	Every three years	Not determined

Many of the status ratings were taken from the SCDRS Viability Analysis (DeBruyne et al. in review) and Lake Erie Biodiversity Conservation Strategy (Pearsall et al. 2012)

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Habitat Related Indicators

Priority Objective	Indicator	Reporting Frame	Status
Complete habitat improvement projects to remove loss of fish and wildlife habitat Beneficial Use Impairment (BUI)	Number of projects left to complete leading to the removal of this BUI in the Detroit River	Annually	9
	Number of projects left to complete leading to the removal of this BUI in the St. Clair River	Annually	Completed
	Canadian response indicators	Annually	Research and monitoring need
Increase riparian complexity/connectivity through increased softened shorelines and native riparian vegetation	Artificial shoreline index: increase percentage of softened shoreline by removing artificial structures (e.g., sea walls and rip rap)	Opportunistically	Poor
	Amphibian Index of Biotic Integrity (AmphIBI) for Wetlands (Ohio EPA)	Opportunistically	Research and monitoring need
Increase the continuous area of ecologically functional wetlands and their connectivity to the SCDRS	Percent of accessible tributary habitat	Opportunistically	Good
	Wetland area	Opportunistically	Fair
	Marsh bird IBI	Opportunistically	Fair
	Invertebrate IBI	Opportunistically	Research and monitoring need
	Amphibian Index of Biotic Integrity (AmphIBI) for Wetlands (Ohio EPA)	Opportunistically	Research and monitoring need
	Wetland fish index (WFI) of wetland quality	Opportunistically	Poor
Increase functional river spawning habitat for native lithophilic species in main channel and tributaries	Area of main channel (St. Clair and Detroit rivers) habitat suitable for lithophilic spawners (hectares)	Annually	Not determined
	Percent of accessible tributary habitat	Opportunistically	Good
	Mean 5-year annual peak density of pelagic larval whitefish and walleye (#/1000 m ³)	Annually	Fair
	Mean 5-year catch per unit effort of adult walleye, shorthead redhorse, lake whitefish, and burbot	Annually	Not determined
	Mean 5-year catch per unit effort of juvenile lake sturgeon (< 1000 mm)	Annually	Not determined
Identify and protect critical habitat areas for rare native species in main channel and tributaries	Mean 5-year catch per unit effort of juvenile lake sturgeon (< 1000 mm)		Not determined
	Additional indicators		Research and monitoring need

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