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Lake Erie Table 1. Multi-Resolution Land Classification (MRLC) land cover classifications and corresponding percent cover in the Lake Erie Basin

Classification	% Cover
Row Crops	27.98
Deciduous Forest	21.35
Mixed Forest	20.69
Pasture/Hay	17.87
Low Intensity Residential	5.49
Parks, Lawns, Golf Courses	1.84
High Intensity Commercial/Industrial	1.51
High Intensity Residential	1.49
Water	0.62
Evergreen Forest	0.50
Woody Wetlands	0.36
Barren; Quarries, Strip Mines, Grave	0.2
Emergent Wetlands	0.1

Lake Erie Table 2. State Parks within the Lake Erie Basin.

Unit Name (DEC Region)	Acres	Primary Natural Habitats
BUCKHORN ISLAND (9)	895	UPLAND/WETLAND
FORT NIAGARA	272	
JOSEPH DAVIS (9)	382	UPLAND
KNOX FARM (9)	633	UPLAND/WETLAND/GRASSLAND
EARL W. BRUDGES ARTPARK (9)	219	X
DEVILS HOLE (9)	37	X
WHIRLPOOL (9)	101	X
NIAGARA RESERVATION (9)	221	X
BIG SIX MILE CREEK MARINA (9)	20.6	X
BEAVER ISLAND (9)	795.7	X
WOODLAWN BEACH (9)	97	X
EVANGOLA (9)	733	X
LAKE ERIE (9)	349	X

Lake Erie Table 3. NYSDEC land units within the Lake Erie Basin.

Unit Name (DEC Region)	Acres	Primary Natural Habitats
STATE FORESTS (9 total))	16,488	MULTIPLE
ZOAR VALLEY MULTIPLE USE AREA	X	X
CANADAWAY CREEK WMA (9)	2,080	UPLAND
GREAT BAEHRE WMA (9)	271	WETLAND
HAMPTON BROOK WOODS WMA (9)	56	UPLAND
TILLMAN ROAD WMA (9)	230	UPLAND/WETLAND
TONAWANDA WMA (9)	5,716	UPLAND/WETLAND

Lake Erie Table 4. Critical Environmental Areas within the Lake Erie Basin

Unit Name (DEC Region)	Location	Approved Criteria
18 MILE CREEK (9)	HAMBURG	EXCEPTIONAL OR UNIQUE CHARACTER
CAYUGA CREEK (9)	CHEEKTOWAGA	²RESERVE WILDLIFE AND GREEN AREAS
JOHN STIGLMEIER PARK (9)	CHEEKTOWAGA	²RESERVE WILDLIFE AND GREEN AREAS
REINSTEIN WOODS (9)	CHEEKTOWAGA	NONE GIVEN
WETLANDS	CHEEKTOWAGA	NONE GIVEN

Lake Erie Table 5. Significant Coastal Areas within the Lake Erie Basin.

Unit Name (DEC Region)	Acres	Location
CATTARAUGUS CREEK (9)	1,328	HANOVER
DUNKIRK HARBOR (9)	478	DUNKIRK
BIG SISTER CREEK (9)	23	EVANS
SMALL BOAT HARBOR - BUFFALO (9)	181	BUFFALO
SMOKE CREEK SHOALS (9)	529	LACKAWANA
STRAWBERRY ISLAND - MOTOR ISLAND SHALLOWS (9)	458	GRAND ISLAND
TIFFT FARM NATURE PRESERVE (9)	278	BUFFALO
TIMES BEACH DIKED DISPOSAL AREA (9)	62	BUFFALO
LOWER NIAGARA RIVER RAPIDS	141	NIAGARA FALLS
CANADAWAY CREEK (9)	85	DUNKIRK
CHAUTAUQUA CREEK (9)	41	WESTFIELD
SILVER CREEK & WALNUT CREEK (9)	8	SILVER CREEK
VAN BUREN POINT (9)	2,827	PORTLAND
BUCKHORN ISLAND - GOAT ISLANDS RAPIDS (9)	902	NIAGARA FALLS
BUCKHORN ISLAND WETLANDS (9)	541	GRAND ISLAND
18 MILE CREEK - LAKE ERIE (9)	80	HAMBURG
GRAND ISLAND TRIBUTARIES (9)	42	GRAND ISLAND

Lake Erie Table 6. Draft Audubon Important Bird Areas within the Lake Erie Basin.

Unit Name (DEC Region)	Acres	Approved Criteria
DUNKIRK HARBOR/POINT GRATIOT (9)	755	% POPULATION; SPECIES AT RISK; WATERBIRDS/FOWL
NIAGARA RIVER CORRIDOR (9)	98,000	% POPULATION; SP AT RISK; SHRUB/SCRUB; WATERBIRDS
RIPLEY HAWK WATCH (9)	16,000	RAPTORS
TIFFT NATURE PRESERVE (9)	275	SPECIES AT RISK
WHEELER'S GULF (9)	210	SPECIES AT RISK

Lake Erie Table 7. Critical **aquatic** habitats found in Lake Erie basin, classified at the system and sub-system level, adapted from Edinger et al. (2002). The number of SGCN that indicate each system/sub-system association as a critical habitat is indicated.

System	Sub-System	# of Species
Lacustrine	cold water deep	13
Lacustrine	cold water shallow	4
Lacustrine	unknown	2
Lacustrine	warm water deep	5
Lacustrine	warm water shallow	7
Palustrine	mineral soil wetland	24
Palustrine	peatlands	2
Palustrine	warmwater stream	1
Riverine	coldwater deep	1
Riverine	coldwater stream	13
Riverine	deepwater river	10
Riverine	unknown	1
Riverine	warmwater deep	1
Riverine	warmwater shallow	1
Riverine	warm water stream	14
Subterranean	natural	1

Lake Erie Table 8. Critical **terrestrial** habitats found in Lake Erie basin, classified at the system and sub-system level, adapted from Edinger et al. (2002). The number of SGCN that indicate each system/sub-system association as a critical habitat is indicated.

System	Sub-System	# of Species
Terrestrial	barrens/woodlands	8
Terrestrial	coastal	3
Terrestrial	forested	34
Terrestrial	open upland	42

Lake Erie Table 9. Lake Erie current species diversity relative to the total number of SGCN statewide

Taxa Group	# Species Groups in the Basin	# Species in the Basin	Total # SGCN Statewide	% of Total SGCN for this Group
BIRDS	14	63	118	53.4
Bald Eagle		1		
Beach and Island Ground-Nesting Birds		1	7	14.3
Breeding Waterfowl		2	4	50.0
Colonial-Nesting Herons		1	8	12.5
Common Loon		1		
Common Nighthawk		2		
Deciduous/Mixed Forest Breeding Birds		3	9	33.3
Early Successional Forest Breeding Birds		4	12	33.3
Forest Breeding Raptors		6	6	100.0
Freshwater Marsh Nesting Birds		6	6	100.0
Grassland Birds		6	11	54.5
Peregrine Falcon		8		
Transient Shorebirds		11	14	78.6
Wintering Waterbirds		11	19	57.9
CRUSTACEA	1	1	7	14.3
Freshwater Crustacea		1	2	50.0
FRESHWATER FISH	9	10	40	25.0
Bigeye chub		1		
Black redbhorse		1		
Brook trout, Heritage strains		1		
Eastern sand darter		1		
Iowa darter		1		
Lake sturgeon		1		
Longear sunfish		1		
Mooneye		1		
Redfin shiner		1		
W. pirate perch		1		
HERPETOFAUNA	7	15	44	34.1
Freshwater Wetland Amphibian		3	5	60.0
Lake/River Reptiles		4	5	80.0
Mudpuppy		1		
Snapping Turtle		1		
Uncommon Turtles of Wetlands		2	5	40.0
Vernal Pool Salamanders		2	4	50.0
Woodland/Grassland Snakes		2	8	25.0
INSECT	3	7	197	3.6
Odonates of Rivers/Streams		2	19	10.5
Other Butterflies		3	18	16.7
Riparian Tiger Beetles		2	2	100.0
MAMMAL	2	3	21	14.3
Furbearers		1	2	50.0
Tree Bats		2	3	66.7
MARINE FISH	1	1	51	2.0
American Eel		1		
MOLLUSK	1	5	59	8.5
Freshwater Bivalves		5	39	12.8
TOTAL	38	104	537	19.4
% of all spp groups statewide	29.7			

Lake Erie Table 10. Species of Greatest Conservation Need currently occurring in the Lake Erie Basin. Species are sorted alphabetically by taxonomic group and species common name. The Species Group designation is included, indicating which Species Group Report in the appendix will contain the full information about the species. The Stability of this basin's population is also indicated for each species.

TaxaGroup	Species	SpeciesGroup	Stability
Bird	American bittern	Freshwater marsh nesting birds	Decreasing
Bird	American black duck	Breeding waterfowl	Unknown
Bird	American golden-plover	Transient shorebirds	Unknown
Bird	American woodcock	Early successional forest/shrubland birds	Decreasing
Bird	Bald eagle	Bald Eagle	Increasing
Bird	Black tern	Freshwater marsh nesting birds	Decreasing
Bird	Black-billed cuckoo	Early successional forest/shrubland birds	Decreasing
Bird	Black-crowned night-heron	Colonial-nesting herons	Decreasing
Bird	Black-throated blue warbler	Deciduous/mixed forest breeding birds	Stable
Bird	Blue-winged teal	Breeding waterfowl	Decreasing
Bird	Blue-winged warbler	Early successional forest/shrubland birds	Decreasing
Bird	Bobolink	Grassland birds	Decreasing
Bird	Bonaparte's gull	Wintering waterbirds	Unknown
Bird	Brown thrasher	Early successional forest/shrubland birds	Decreasing
Bird	Buff-breasted sandpiper	Transient shorebirds	Unknown
Bird	Canada warbler	Early successional forest/shrubland birds	Decreasing
Bird	Cerulean warbler	Deciduous/mixed forest breeding birds	Increasing
Bird	Common loon	Common loon	Unknown
Bird	Common nighthawk	Common nighthawk	Decreasing
Bird	Common tern	Beach and Island ground-nesting birds	Unknown
Bird	Cooper's hawk	Forest breeding raptors	Increasing
Bird	Dickcissel	Grassland birds	Unknown
Bird	Eastern meadowlark	Grassland birds	Decreasing
Bird	Golden eagle	Forest breeding raptors	Unknown
Bird	Golden-winged warbler	Early successional forest/shrubland birds	Decreasing
Bird	Grasshopper sparrow	Grassland birds	Decreasing
Bird	Great egret	Colonial-nesting herons	Increasing
Bird	Greater scaup	Wintering waterbirds	Increasing
Bird	Greater yellowlegs	Transient shorebirds	Unknown
Bird	Henslow's sparrow	Grassland birds	Decreasing
Bird	Horned grebe	Wintering waterbirds	Unknown
Bird	Horned lark	Grassland birds	Decreasing
Bird	King rail	Freshwater marsh nesting birds	Decreasing
Bird	Least bittern	Freshwater marsh nesting birds	Stable

Lake Erie Table 10. (continued)

TaxaGroup	Species	SpeciesGroup	Stability
Bird	Lesser scaup	Wintering waterbirds	Stable
Bird	Little gull	Wintering waterbirds	Unknown
Bird	Long-eared owl	Forest breeding raptors	Unknown
Bird	Long-tailed duck	Wintering waterbirds	Unknown
Bird	Louisiana waterthrush	Deciduous/mixed forest breeding birds	Unknown
Bird	Northern goshawk	Forest breeding raptors	Increasing
Bird	Northern harrier	Grassland birds	Unknown
Bird	Osprey	Osprey	Unknown
Bird	Peregrine falcon	Peregrine falcon	Stable
Bird	Pied-billed grebe	Freshwater marsh nesting birds	Decreasing
Bird	Prairie warbler	Early successional forest/shrubland birds	Increasing
Bird	Prothonotary warbler	Deciduous/mixed forest breeding birds	Unknown
Bird	Red-headed woodpecker	Deciduous/mixed forest breeding birds	Decreasing
Bird	Red-shouldered hawk	Forest breeding raptors	Decreasing
Bird	Red-throated loon	Wintering waterbirds	Unknown
Bird	Ruffed grouse	Early successional forest/shrubland birds	Decreasing
Bird	Scarlet tanager	Deciduous/mixed forest breeding birds	Unknown
Bird	Sedge wren	Grassland birds	Unknown
Bird	Sharp-shinned hawk	Forest breeding raptors	Increasing
Bird	Short-eared owl	Grassland birds	Unknown
Bird	Thayer's gull	Wintering waterbirds	Unknown
Bird	Upland sandpiper	Grassland birds	Decreasing
Bird	Vesper sparrow	Grassland birds	Decreasing
Bird	Whip-poor-will	Early successional forest/shrubland birds	Decreasing
Bird	Willow flycatcher	Early successional forest/shrubland birds	Decreasing
Bird	Wood thrush	Deciduous/mixed forest breeding birds	Decreasing
Bird	Yellow rail	Freshwater marsh nesting birds	Unknown
Bird	Yellow-breasted chat	Early successional forest/shrubland birds	Unknown
Crustacea/Merist	Devil crawfish	Freshwater crustacea	Stable
Freshwater fish	Bigeye chub	Bigeye chub	Stable
Freshwater fish	Black redhorse	Black redhorse	Stable
Freshwater fish	Brook trout, Heritage strains	Brook trout, Heritage strains	Stable
Freshwater fish	Eastern sand darter	Eastern sand darter	Decreasing
Freshwater fish	Iowa darter	Iowa darter	Unknown
Freshwater fish	Lake sturgeon	Lake sturgeon	Unknown
Freshwater fish	Longear sunfish	Longear sunfish	Unknown

Lake Erie Table 10. (continued)

TaxaGroup	Species	SpeciesGroup	Stability
Freshwater fish	Mooneye	Mooneye	Unknown
Freshwater fish	Redfin shiner	Redfin shiner	Decreasing
Freshwater fish	Western pirate perch	Western pirate perch	Unknown
Herpetofauna	Black ratsnake	Woodland/grassland snakes	Decreasing
Herpetofauna	Blanding's turtle	Uncommon turtles of wetlands	Unknown
Herpetofauna	Blue-spotted salamander	Vernal pool salamanders	Unknown
Herpetofauna	Common mudpuppy	Mudpuppy	Decreasing
Herpetofauna	Eastern ribbonsnake	Lake/river reptiles	Unknown
Herpetofauna	Four-toed salamander	Freshwater wetland amphibians	Unknown
Herpetofauna	Fowler's toad	Freshwater wetland amphibians	Unknown
Herpetofauna	Jefferson salamander	Vernal pool salamanders	Unknown
Herpetofauna	Northern map turtle	Lake/river reptiles	Unknown
Herpetofauna	Queen snake	Lake/river reptiles	Decreasing
Herpetofauna	Smooth greensnake	Woodland/grassland snakes	Unknown
Herpetofauna	Snapping turtle	Snapping Turtle	Unknown
Herpetofauna	Spotted turtle	Uncommon turtles of wetlands	Unknown
Herpetofauna	Western chorus frog	Freshwater wetland amphibians	Decreasing
Herpetofauna	Wood turtle	Lake/river reptiles	Unknown
Insect	A tiger beetle	Riparian tiger beetles	Unknown
Insect	American rubyspot	Odonates of rivers/streams	Unknown
Insect	Blue-tipped dancer	Odonates of rivers/streams	Unknown
Insect	Checkered white	Other butterflies	Decreasing
Insect	Cobblestone tiger beetle	Riparian tiger beetles	Unknown
Insect	Mottled duskywing	Other butterflies	Decreasing
Insect	Southern grizzled skipper	Other butterflies	Unknown
Mammal	Eastern red bat	Tree bats	Unknown
Mammal	Hoary bat	Tree bats	Unknown
Mammal	River otter	Furbearers	Unknown
Marine fish	American eel	American eel	Unknown
Mollusk	Elktoe	Freshwater bivalves	Unknown
Mollusk	Kidneyshell	Freshwater bivalves	Unknown
Mollusk	Slippershell mussel	Freshwater bivalves	Unknown
Mollusk	Threeridge	Freshwater bivalves	Unknown
Mollusk	Wabash pigtoe	Freshwater bivalves	Unknown

Lake Erie Table 11. SGCN that historically occurred in Lake Erie Basin, but are now believed to be extirpated from the basin

Taxa Group	Species	Species Group
Bird	Loggerhead shrike	Loggerhead Shrike
Freshwater fish	Atlantic salmon	Extirpated fishes
Freshwater fish	Blackchin shiner	Blackchin shiner
Freshwater fish	Deepwater sculpin	Deepwater sculpin
Freshwater fish	Lake chubsucker	Extirpated Fishes
Freshwater fish	Sauger	Sauger
Freshwater fish	Shortjaw cisco	Extirpated Fishes
Freshwater fish	Silver chub	Extirpated Fishes
Freshwater fish	Spoonhead sculpin	Extirpated Fishes
Herpetofauna	Timber rattlesnake	Woodland/grassland snakes
Insect	A borer moth	Other moths
Insect	A mayfly	Stoneflies/Mayflies of lotic waters
Insect	American burying beetle	American burying beetle
Insect	Culvers root borer	Other moths
Insect	Midland clubtail	Odonates of rivers/streams
Insect	Mocha emerald	Odonates of small forest streams
Mammal	Eastern cougar	Extirpated large mammals
Mammal	Gray wolf	Extirpated large mammals
Mammal	Least shrew	Small mammals of uncertain/questionable residency
Mammal	Least weasel	Small mammals of uncertain/questionable residency
Mammal	Silver-haired bat	Tree bats
Mollusk	Black sandshell	Freshwater bivalves
Mollusk	Buffalo pebblesnail	Freshwater gastropods
Mollusk	Campelema spire snail	Freshwater gastropods
Mollusk	Eastern pondmussel	Freshwater bivalves
Mollusk	Fawnsfoot	Freshwater bivalves
Mollusk	Globe siltsnail	Freshwater gastropods
Mollusk	Gravel pyrg	Freshwater gastropods
Mollusk	Lance aplexa	Freshwater gastropods
Mollusk	Mapleleaf	Freshwater bivalves
Mollusk	Mucket	Freshwater bivalves
Mollusk	Pimpleback	Freshwater bivalves
Mollusk	Pocketbook	Freshwater bivalves
Mollusk	Salamander mussel	Freshwater bivalves
Mollusk	Snuffbox	Freshwater bivalves
Mollusk	Spindle lymnaea	Freshwater gastropods
Mollusk	Watercress snail	Freshwater gastropods
Mollusk	Yellow sandshell	Freshwater bivalves

Lake Erie Table 12. Summary of threats, number of (and percent of all) species groups affected, and percentage of all threats to SGCN in the Lake Erie Basin. For details on threats, see Appendix: *Threats Characterization for Wildlife and their Habitats*

Threats	# of Species Groups Affected	% of All Spp Groups in Basin	% of All Threats in Basin
Multiple ^a	35	92.1	13.2
Habitat loss- conversion to cultural	26	68.4	9.8
Contaminants, pesticides	19	50.0	7.2
Degradation of water quality	15	39.5	5.7
Human disturbance - illegal/unregulated harvest	15	39.5	5.7
Human disturbance - collisions	14	36.8	5.3
Disturbed predator/prey cycles	12	31.6	4.5
Competition for life support	11	28.9	4.2
Disease	10	26.3	3.8
Altered hydrology - loss of aquatic habitat quantity	10	26.3	3.8
Habitat fragmentation	8	21.1	3.0
Human disturbance - direct and indirect	7	18.4	2.6
Unsustainable agricultural/silvicultural practices	7	18.4	2.6
Sedimentation/erosion	7	18.4	2.6
Active alteration of natural processes - fire, etc.	6	15.8	2.3
Habitat loss - natural succession - agricultural reversion; forestry	6	8.0	2.3
Competition from exotics - loosestrife, phragmites	5	8.0	1.9
Human disturbance - entanglement, entrainment	5	8.0	1.9
Loss of streamside buffers	4	8.0	1.5
Altered hydrology - loss of aquatic habitat quality	4	8.0	1.5
Detrimental hybridization	4	8.0	1.5
Unknown threats	4	8.0	1.5
Reduction of patch size, shape, area	3	8.0	1.1
Loss of connectivity	3	8.0	1.1
Susceptibility to stochastic events - weather, storm events	3	8.0	1.1
Susceptibility to stochastic events - isolated populations	3	7.9	1.1
Barriers (roads; development; curbs)	2	5.3	0.8
Terrestrial habitat composition altered by invasives/non-natives	2	5.3	0.8
Terrestrial habitat composition altered by overuse (deer browse, etc.)	2	5.3	0.8
Aquatic habitat altered by invasives or non-natives	2	5.3	0.8
Susceptibility to stochastic events - rare species	2	5.3	0.8
Climate change (sea level rise; temperature changes)	2	5.3	0.8
Pollution (acid rain; soil contamination)	1	2.6	0.4
Aquatic habitat altered by overuse (beaver, geese, swans, muskrats)	1	2.6	0.4
Human created abrupt edges	1	2.6	0.4
Loss of host species	1	2.6	0.4
Active alteration of natural processes - beaver activity, spring flooding	1	2.6	0.4
Climate change (range restriction; changes in distribution)	1	2.6	0.4
Erosion - silviculture; agriculture; stormwater	1	2.6	0.4

^a Multiple = recommended action addresses multiple threats rather than one specific threat

Lake Erie Table 13. Existing management plans and agreements within the Lake Erie Basin.

Plan/Agreement Name	Involved Parties	Information
Lake Erie Gorges Biodiversity Inventory and Landscape Integrity Analysis October 2002	NYNHP	Integrity analyses; natural communities; conservation planning priorities
Lake Erie Lakewide Management Plan (LaMP) - April 2002	USEPA	State of the lake; guiding principles; goals and objectives - improve connectivity, restore ecosystems, prevent invasives, implement monitoring strategy
Fish Community Goals and Objectives for Lake Erie- Special Publication 30-02	Great Lakes Fishery Commission	Fish communities in Lake Erie
Effect of Water Levels and Flow Fluctuation on Aquatic and Terrestrial Habitat	New York Power Authority	Impacts of water on habitats