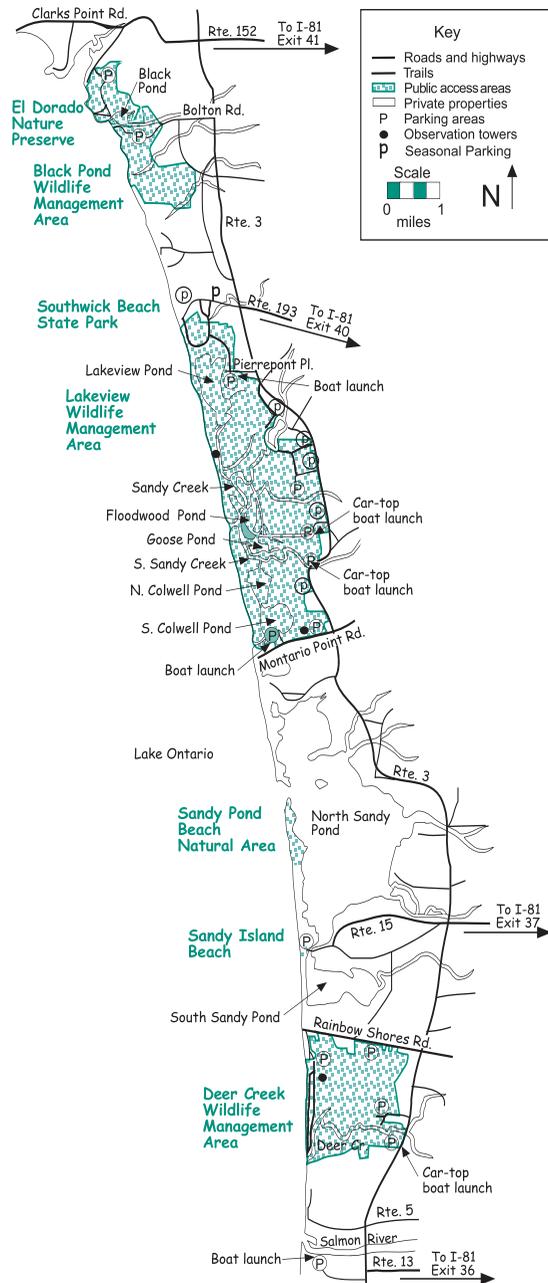


Eastern Lake Ontario Dunes and Wetlands Area



Our Eastern Lake Ontario Dunes & Wetlands



You Can Help Protect These Unique & Fragile Natural Resources

Eastern Lake Ontario Dunes and Wetlands

Welcome to the Eastern Lake Ontario Dunes and Wetlands Area (ELOWDA). Located in Oswego and Jefferson Counties, ELOWDA is a fragile ecosystem with many recreational opportunities. When visiting the area please be sure to follow all regulations for your safety and the security of the fragile ecosystem.

Help Protect the Dunes!

- * Stay off the dunes.
- * Encourage appropriate behavior by others.
- * Help inform other visitors, whenever possible, about the reasons behind regulations and appropriate suggestions for the area's use.
- * Leave everything you find (except litter).
- * Participate in volunteer projects involving dune cleanup or restoration.

DUNE BLOWOUT

Beachgrass anchors sand and protects dunes from wind erosion. Foot and vehicle traffic tear out these plants. Exposed sand is blown inland and gradually a dune is lowered and lost.

PLEASE STAY OFF DUNES!!!!

Dune Blowouts

Examples of dune blowouts are evident throughout the 17-mile stretch of shoreline. A blowout is a steep-sided valley formed when wind blows through a low or empty spot in the dunes, carving out a channel or depression. Loss of vegetation or other disturbances, such as unnecessary traffic, in one area starts the process.

Stewardship Vision

The long-range stewardship vision for guiding future use and conservation of the dunes and wetlands area is highlighted in "New York's Eastern Lake Ontario Dune and Wetland System: Guidelines for Resource Management in the 21st Century" funded by the New York State Department of State. The Eastern Lake Ontario Dunes and Wetlands Area stewardship vision is based on the following principles:

- * Public awareness of the resources and their importance
- * Awareness of local ecosystems
- * Management coordination and partnership efforts
- * Public interest, support, and local awareness
- * Sustainable economic benefits
- * Effective shoreline management
- * Educational and scientific use
- * Cultural enrichment
- * Personal actions for effective stewardship
- * Adequate funds for resource management
- * Effective response to changing environmental conditions

The stewardship vision is ultimately about achieving a balance between sound recreational usage and natural resource conservation.



Black Tern
(Illustration courtesy of Bob McNamara.)

Common Plant Life

Sand dunes can be a challenging habitat for plants. Few plants can tolerate the low fertility, unstable conditions, and extreme fluctuations in temperature and moisture found in the dunes. Take a walk along the Eastern Lake Ontario dunes and you are sure to notice the following characteristic plants of the dune area.

Beachgrass

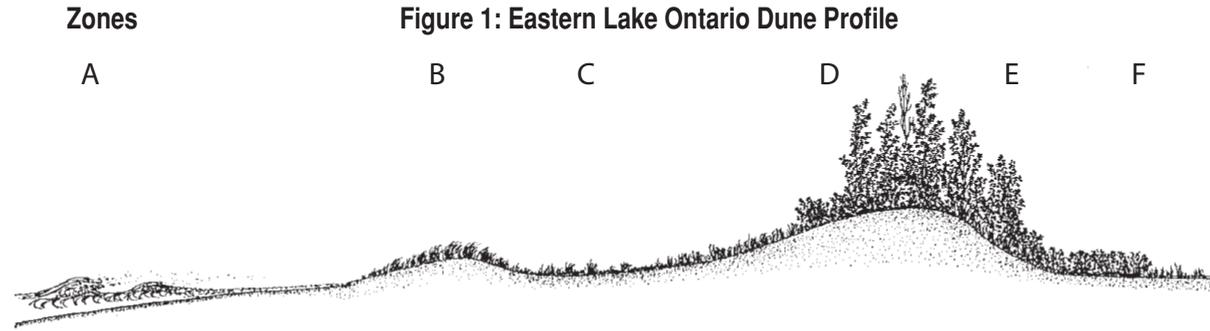
Immediately adjacent to the beach (Figure 1: Zone A) you will see beachgrass (NYS Endangered Species): a tough, coarse grass that may grow 2-3 feet in height and spreads by underground rhizomes. The rhizomes travel in a line parallel to the surface sending up new shoots about every 12 inches. The network of rhizomes, and their roots, stabilizes sand and encourages dune growth. Please be sure not to walk on beachgrass; it will not tolerate being trampled.

Sand Dune Willow

Sand Dune Willow (NYS Endangered Species) can be seen along ELODWA. This shrub typically grows 6-10 feet in height. The lance-shaped leaves of Sand Dune Willow are 3-10 cm long, are pointed at the tip, and heart-shaped at the base. The leaves are covered with small white hairs when young, but become more green with age. This plant grows along the tops of foredunes into low interior areas called swales, and even into stabilized secondary and backdune areas. (Figure 1: Zones B-E).

Eastern Cottonwood

Eastern Cottonwood is the primary dune-colonizing tree species of ELODWA (Figure 1: Zone D). Eastern Cottonwood can be distinguished from other plants by its leaves (triangular-shaped, 3-6 inches long, serrated margin), fruit (cottony seeds), and bark (smooth, gray to yellow-green when young, turning gray with deep ridges with age).



The Eastern Lake Ontario Dunes and Wetlands Area is comprised of six main zones: A - beach; B - foredune; C - trough or swale; D - inland or secondary dune; E - backdune; and F - wetland, pond, or creek. Woodlands and meadows are found inland of the wetland zone. (Illustration courtesy of Bob McNamara.)

The Dune Barrier

The Eastern Lake Ontario sand dunes form a ridge on the landward side of the beach, creating a barrier between the lake and inland areas. This barrier extends nearly 17 miles from the mouth of the Salmon River in the south to the outlet of Black Pond in the north. These unique dunes are the highest and most extensive in the state, and the second highest (the highest are on Cape Cod) in the Northeastern United States.

Why the Dune Barrier is Important

Dunes protect the shore from erosion caused by wind and waves. The dunes protect the many ponds, creeks, and marshes that formed behind them, and are required for the survival of these fragile inland environments. These valuable inland habitats provide important breeding areas for many species of plants, fish, birds, and other wildlife.

Sand Dune Creation

The coastal dunes of Eastern Lake Ontario were created over thousands of years by the interaction of currents, waves, wind, and vegetation. Some of these dunes crest at more than 70 feet above the surface of the lake. If disturbed by manmade or natural activities, it is unlikely these dunes would be able to rebuild to their present state.

Threats to the Dune System

The fragile plants that anchor the dunes stabilize the sand through networks of underground runners (root system). Any traffic, whether human, pet, or vehicle, tramples and tears the runners buried in the loose sand. As a result the sand loses its anchor and is easily eroded by wind and water. Due to disturbance and lost vegetation, wind velocity increases at the surface of the sand, easily eroding it. The areas where this has occurred are referred to as "blowouts" (eroded valleys or gaps in the dunes). As the blowouts become larger, blown sand is deposited in inland areas, including to in fragile wetland, pond and creek environments. This unique ecosystem is dealt a double blow--the dune barrier is destroyed and the displaced sand clogs the inland habitats it once served to protect.

Common Wildlife

The wide variety of distinct habitats found along ELODWA support a diverse population of wildlife (birds, turtles, frogs, snakes, fish, squirrels, etc.) as well as several rare specials that depend on the area for survival.

Other Wildlife

Upon close observation, many signs of abundant wildlife inhabiting the dune system can be found. Tracks of Whitetail Deer, Red & Gray Fox, Painted & Snapping Turtles, and Black Tern, just to name a few, are often imprinted in the sand. Rodents and larger animals as well as insects and fish also depend on the dunes and associated wetlands for survival.

Birds

Numerous species of raptors, neotropical songbirds, transient shorebirds, and marsh birds are found along the Eastern shore of the lake. During fall migration between the Arctic breeding grounds and wintering areas in South America, these species stop to feed in the dune system. Our dune system provides one of the best fall feeding grounds for these migrants.

This brochure has been produced with assistance from **The Ontario Dune Coalition**, an organization comprised of state and county agency and community group representatives dedicated to educating the public about Eastern Lake Ontario's dunes and wetlands.

This brochure was prepared for the New York State Department of State Division of Coastal Resources with funds provided under Title 11 of the Environmental Protection Fund.

For more information please contact:

New York Sea Grant
SUNY Oswego
Oswego, NY 13126
(315) 312-3042
<http://www.nysgdunes.org>