

# **North Sandy Pond Resiliency Project**

## *Restoring lost shoreline with natural materials*

### A project of the Town of Sandy Creek

#### ***The Issue***

The beaches and dunes of the magnificent eastern Lake Ontario shoreline are constantly changing, thanks to winds from the west that drive storms and waves across the 180-mile length of Lake Ontario. North and South Sandy Ponds form the geographic center of this shoreline, with a common connection to Lake Ontario through a narrow channel in North Pond. Eastern Lake Ontario's beaches, including the three-mile barrier that shelters



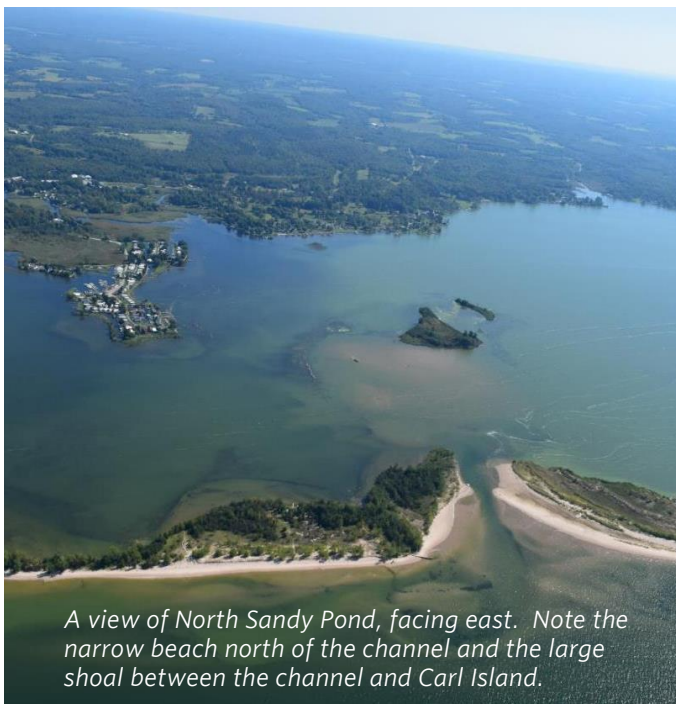
*An eroded low dune north of the Sandy Pond channel.*

North Pond from the lake, experienced heavy erosion in April – June 2017 due to record high water levels and wind-driven waves. In addition, in recent years a substantial shoal with over 700,000 cubic yards of sand has collected just inshore of North Pond's channel, which now must be dredged for navigability. The sand in this shoal has come from the depleted beach north of the channel, and no longer is available to the natural process of dune and beach rebuilding. Further depletion of the sandy barrier will expose the pond and its shoreline to the full force of the lake and increase the flood danger to residences and businesses.

Can we use naturally-occurring materials – sand – to rebuild the eroded shoreline, create potential new habitat for rare species like the piping plover, shelter homes from flooding, while at the same time maintaining an open channel? This is the array of benefits we hope to achieve with the North Sandy Pond Resiliency Project, as an example of nature-based shoreline restoration.

#### ***Consulting with the community***

The Sandy Pond community places great value on the sandy beach and dunes of North Pond's shoreline. Walking and recreating on the beach is the key ingredient in the Sandy Pond experience most cited by participants in two public meetings. A working group of stakeholders, representatives of Sandy Island Beach State Park, and Town Board members – the North Pond Resiliency Committee (NPRC) -- has evaluated alternatives for management of the channel with the aid



*A view of North Sandy Pond, facing east. Note the narrow beach north of the channel and the large shoal between the channel and Carl Island.*

of coastal engineers and experts. The NPRC recommends capturing sand from the shoal for replenishment of vulnerable areas of the beach as the most feasible management alternative, with the greatest benefits for the natural values of North Pond.

## ***The approach***

The proposed alternative, which was presented on August 16, 2018 at a community meeting in the Sandy Pond Sportman's Club, includes five elements:

1. continued dredging of the channel for sand placement in eroded areas south of the channel;
2. capture of sand from the shoal with a hydraulic dredge, and transfer of this sand to replenish vulnerable areas north of the channel;
3. use of porous fabric geo-tubes to hold sand in place while the water from the hydraulic process drains off;
4. grading of the sand deposited north of the channel for beach profiles and preferred plover habitat;
5. planting beachgrass and other native plants to help hold sand in place.



## ***Anticipated results***

This project is expected to increase the resilience to storms and wave action of the beach north of the channel. Replenishment of the beach south of the channel with dredged sand is already achieving this result. By moving sand from the western edge of the shoal, we will reduce the frequency of dredging necessary to maintain the channel. Sand from the shoal will rebuild the beach and rejoin natural shoreline processes that have maintained this beach for thousands of years. Restoring sand to the beach also may create new habitats for threatened species.

## ***Project partners***

The Town of Sandy Creek; NYS Office of Parks, Recreation and Historic Preservation; The Nature Conservancy; Sandy Pond Channel Maintenance Association; NY Sea Grant. This project is supported by a Great Lakes Nature-Based Shoreline grant through the NYSDEC's Water Quality Improvement Program, with funding from the NYS Environmental Protection Fund, under the Ocean and Great Lakes Conservation Act.

