



## **What's happening in your watershed?**

*why it's special, what's the threat, what we're doing about it, and  
how you can get involved*

### **Why it's special**

Quicksand Pond watershed is a place where freshwater meets the sea, and its ebbs and flows at Goosewing Beach support a web of bird and marine life unlike anywhere else in our region. The pond itself is an unusually pristine, 390-acre, naturally breaching coastal pond with a watershed that encompasses parts of Little Compton, Rhode Island, and Westport, Massachusetts. With Goosewing Beach along its southern edge and Cole Brook at its source to the north, this natural area supports several rare species and a rich and unique brackish pond ecosystem, making it one of The Nature Conservancy's most compelling project areas and a top priority in terms of on-the-ground and in-the-water conservation efforts.

Formed 12,000 years ago by the recession of the glaciers, Quicksand Pond is still marked by natural cycles of fresh and salt water flows. A recent assessment by the Conservancy's marine science team found the pond supporting a stunning diversity of healthy populations of fish and shellfish species, including striped bass, alewives, American eels, blue crabs, and one of the last endemic oyster populations along the East Coast. Each spring and summer, its beach and pond shore habitat supports the federally-threatened piping plover – a population that is being brought back from the brink of extinction through coordinated efforts throughout this species' range. The quality of the pond ecosystem is directly linked to work to conserve habitat within the watershed, including recent acquisitions to protect its forested headwaters, and the dune/barrier beach complex along the shore.

The Conservancy began protecting Quicksand Pond in the late 1980s with the support of neighborhood efforts to protect Goosewing Beach. Since then, a number of properties along the pond's shore – some of which were slated for development – have been protected either by outright acquisition or through conservation easements. Currently, 835 acres are under some form of protection in the watershed. These lands have been protected over a period of two decades at a cumulative cost of less than \$8,000/acre.

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## **What's the threat**

Human activities over time impact salt ponds in a variety of ways, but all tend to produce incremental changes to these watershed ecosystems. Some impacts are clearly visible while others are not perceived until it's too late. Natural systems tend to become altered as impacts accumulate over time, until a tipping point is reached, beyond which the system becomes degraded. Quicksand Pond and its watershed have been altered over time and each activity has resulted in changes to its habitat, but its ecosystem remains remarkably intact. Some of these changes have been beneficial, but others threaten the health, or even existence of the pond.

Keeping nutrients, pesticides, and herbicides from surface waters and groundwater supplies is important for people, flora and fauna. Marine and brackish water organisms are particularly vulnerable to excessive nitrogen in surface waters. Moreover, shallow coastal ponds which are not flushed by the tides are highly susceptible to eutrophication from runoff which contains nitrogen from human or livestock waste and fertilizers. For this reason alone, few coastal ponds in our region remain in a healthy, robust state.

Water quality in the freshwater streams which supply these coastal ponds is directly correlated to the integrity of surrounding forest cover. Forest cover and wetland soils absorb rainfall and nutrients, and release it gradually, while impervious road pavements, rooftops, and other features of development repel rainwater, which gathers rapidly into erosive runoff, turning placid streams into silt-laden drainage channels. Recent reports show water quality, stream habitats and aquatic organisms were all irretrievably harmed when coastal watershed areas became built out such that they contain more than 7% impervious surfaces, by land area. (Currently, Little Compton shows impervious cover, town-wide, at 4.5%).

Invasive species, such as phragmites, have been found to proliferate in areas where development has altered natural land cover, fresh water flows, and increased nutrient runoff. Though this plant does provide some beneficial nitrogen trapping, it can also rapidly cover an area, creating a biological 'desert' where few species find food or support.

## **What we're doing about it**

Recognizing the imminent threats to the Quicksand Pond watershed, including subdivision and development of the land which surrounds it, the likelihood of contaminated run-off from lawns and fields, and potential invasion by introduced species, The Nature Conservancy is taking action. It is acquiring conservation interests in land, overseeing the success of threatened species, and restoring areas where invasives have begun to take hold, all to ensure that the pristine and diverse natural communities in the watershed will be protected now and into the future. This is a place where a productive natural ecosystem can be maintained through careful land use planning and focused long-term stewardship; where people can co-exist with rare communities of plants and animals; and, where we can contribute to a biodiversity conservation mission that extends from the local to global scale.

The conservation work going on within the watershed provides a model of success, just as the healthy natural systems supported by the pond provide a yardstick for measuring the condition of habitats elsewhere in the region. The Conservancy continues to work diligently to find solutions to the significant threats impacting this coastal area including:

1. Maintaining good water quality by working with landowners to protect their land with conservation easements in the most critical locations along the shores and stream banks. By keeping land undeveloped and in forest cover, excessive nutrients, especially nitrogen, are not produced. In some cases forests can actually store nitrogen, keeping it out of the water where it does great harm.

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2. Working with neighbors to inventory rare plant life along the shoreline and find an environmentally benign way to restore areas that have become overgrown with common reed, (*Phragmites*).
3. Actively managing breeding populations of the globally-rare Piping Plovers and state threatened Least Terns with a goal of reaching a self-sustaining population of 2,000 breeding pairs of Piping Plovers worldwide.
4. Maintaining healthy fish and shellfish populations, including anadromous fish. This in turn helps support many birds and mammals which depend on the Quicksand pond ecosystem for their survival.
5. Completing an inventory of breeding and migratory birds that rely on the natural communities at Quicksand Pond, to develop a baseline on these populations to prioritize conservation actions.
6. Working in partnership with the Town of Little Compton's Beach Commission, the Conservancy manages Goosewing Beach, Rhode Island's most magnificent coastal strand, as a pristine natural area.
7. Conservancy naturalists offer walks and nature programs throughout the year to share their progress and explain the workings of this globally-rare coastal ecosystem.

In response to this need, The Nature Conservancy launched **“Forest, Field, and Shore – a Campaign for the Sakonnet Landscape”** in the summer of 2007, with the Quicksand Pond watershed identified as one of three key areas to protect. With your help, the Conservancy can continue its work to protect this watershed through land acquisition, conservation easements, research and restoration, species and watershed protection and environmental education. Check out the Sakonnet Campaign on [www.nature.org/rhodeisland](http://www.nature.org/rhodeisland).



Piping Plover at Goosewing Beach Preserve by Geoff Dennis

*On August 18, 2008, 3,477 individual shorebirds  
from 11 different species were counted at Quicksand Pond!*

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## How you can get involved

- **Sign up today** to receive the next Quicksand Pond newsletter by sending an email to [QuicksandPond@tnc.org](mailto:QuicksandPond@tnc.org).
- **Join us** at one of the Quicksand Pond Education Roundtables this summer. Contact Pam Beck at 401-635-4246 for information.
- **Get involved with the Campaign** for the Sakonnet Landscape. Contact Pam Pomfret at the Conservancy at 401-331-7110 ext. 14 and check out <http://www.nature.org/wherewework/northamerica/states/rhodeisland/campaign/>
- **Consider a gift of land** or conservation easement. Contact John Berg at the Conservancy at 401-331-7110 ext. 22; or David Borden at 401-635-4895.
- **Become a Goosewing Beach Volunteer** and help our science and education program – contact Cheryl Wiitala at the Conservancy, at 401-331-7110 ext. 25, or email: [cwiitala@tnc.org](mailto:cwiitala@tnc.org).
- **Join your neighbors** and become involved with one of the excellent neighborhood associations which serve your community.

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### Northern Seahorse (*Hippocampus hudsonius*)



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### Spotted in the summer of 2008 in Quicksand Pond

The northern seahorse occurs along the Atlantic coast of North America mainly from South Carolina to Cape Cod. These fish reside in vegetated habitats, such as sea grass beds, where their morphology is well adapted to feeding and survival. The prehensile tail of the seahorse allows them to grip sea grass blades, while the long mouth acts like a straw and generates a suction that allows them to slurp in small crustaceans and various larvae commonly found in this habitat. Spawning occurs during the summer months. The female deposits eggs into the brood pouch of the male where they are retained until hatching (1-2 weeks). Once hatched, baby seahorses resemble the general appearance of the adults and are independent of parental care within a few days.

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