

## HCT's Six Ponds Resource Management Initiative Progress Report

It's hard to overstate the significance of the recent purchase of the Great Woods property by Harwich Conservation Trust (HCT). The 85-acre Great Woods property is the largest and most ecologically significant assemblage of land and pond shore remaining on Cape Cod. Without protection, the land was destined to become 18 house lots. Instead, it will remain part of hundreds of contiguous acres of forested habitat and walking trails, contributing to the health of public drinking water supplies and pond waters.



By the end of June, with the recording of ownership deeds by HCT and a conservation restriction to be jointly held by the Town of Harwich Conservation Commission and MA Department of Conservation and Recreation, permanent protection of the Six Ponds Great Woods property will be ensured. While the \$3 million investment is important, land acquisition is only the first stage for protection of the long-term health of cherished land and water resources. Below is a summary of the protection plan and initial progress.

HCT launched the [Six Ponds Resource Management Initiative](#) in December 2022 to deepen our understanding of resource conditions in the Six Ponds and surrounding area, and to outline the range of options available to safeguard this fragile area of land and water resources for future generations. The initiative recognizes that monitoring and scientific assessment of ecological conditions are needed to track trends and identify management options. Stakeholder input from neighbors, property owners and others, is also vital.

The multi-phase initiative builds on the extensive work undertaken in the past by the Town and Cape Cod Commission to create the Six Ponds Special District. The phases are:

- Phase 1 – Assess resource conditions through existing data and studies, as well as outreach to neighbors and stakeholders.
- Phase 2 - Identify technical assessments needed to support a science-based management approach.
- Phase 3 – Pursue grants and fundraising to support technical assessments and resource management planning.
- Phase 4 – Prepare a Six Ponds Resource Management Plan.

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Phase 5 – Implement the plan and adapt management measures as needed based on results.

Key findings of a Phase 1 assessment were reported at a March 11, 2023 [presentation](#) and are summarized below.

**Water quality** - Data have been collected in four of the ponds (Aunt Edie's, Cornelius, Hawksnest, Walkers) since 2004, however none of the ponds has an uninterrupted data set for that period, and no data have been collected for Black or Oliver's Ponds. There is also no current, comprehensive assessment of the data to identify water quality trends.



*Data for Cornelius, Walkers and Aunt Edie's Ponds demonstrate stress due to excessive nutrients. Green algal blooms have been observed in Walkers Pond, along with the reported incidence of Eurasian watermilfoil, and aquatic invasive species.*

The latest analysis of water quality data was conducted more than a decade ago and needs updating. These assessment indicates water quality concerns in all ponds to one degree or another, including eutrophic conditions (high nutrient loading), algal blooms and outbreaks of invasive Eurasian milfoil.

This summer, for the first time, water quality data will be collected in all Six Ponds. Walker's, Hawksnest and Cornelius Pond are included in the new Freshwater Initiative launched by APCC and the Cape Cod Commission. The program includes a three-year monitoring commitment followed by an analysis of pond water quality and seasonal mixing. Water quality data for Aunt Edie's, Oliver's and Black Ponds will be collected under the auspices of the Town of Harwich Natural Resources Department. HCT is grateful to the dedication of many stewardship volunteers who will assist with monitoring this season.

**Shoreline habitat** - Much of the 4.5 miles of pond shore is characterized as Coastal Plain Pondshore Community, a globally rare habitat associated with some kettle ponds. Rare Species of plants and wildlife have been identified on the pond shores, and surveys sponsored by HCT have identified a combination of 29 species of dragonflies and damselflies around the ponds. The most recent survey of pond shore conditions is more than a two decades old. Much has

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changed during that time and a comprehensive survey of shoreline vegetation, including potential threats due to erosion and invasive species, is needed.



*A 2022 survey sponsored by HCT found a combined 29 species of dragonflies and damselflies at Walker's, Aunt Edie's and Cornelius Ponds, including the state-listed Threatened Scarlet Bluet damselfly at Walker's Pond.*

**Physical Characteristics** – Five ponds are state-listed Commonwealth Great Ponds; and Aunt Edie's, is large enough to be considered a Great Pond, but is not state-listed. A great pond is defined as any pond or lake of more than 10 acres in its natural state. Any project located in, on, over or under the waters of a great pond is subject to the Massachusetts Public Waterfront Act.

Watershed delineations show direction of groundwater flow in and out of ponds and are important for understanding water quality. Watershed delineations are available for Aunt Edie's, Cornelius, Walker's and Hawksnest ponds, but not for Oliver's or Black Ponds. Detailed bathymetry or water depth is not available for any pond. Maximum and/or average water depth is known for Aunt Edie's, Cornelius, Hawksnest and Walker's Ponds. Data on the characteristics of pond sediments and seasonal stratification, which may help to describe water quality conditions, are also not available for any of the Six Ponds.

*Watershed delineations available for Aunt Edie's, Cornelius, Walkers and Hawksnest ponds, but not for Oliver's or Black Ponds.*



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**Land use** - The 1,200-acres Six Ponds Special District created by the Town of Harwich following the County designation of the area as a District of Critical Planning Concern. The district includes the largest expanse of unfragmented forest in Town, as well as a significant amount of "owners unknown" property. As a result of the designation, zoning regulations were modified to protect pond and drinking water quality, and to foster land uses that are compatible with the resource protection goals of the district. An assessment of the effectiveness of the regulations is needed in light of significant land use changes over the past two decades, including new development as well as land protection measures.



*The Six Ponds Special District was created by the Town of Harwich in 2000. The district consists of 1,200 acres bounded by Routes 6, 137, 124 and Queen Anne Road.*

With the Phase 1 assessment complete, our next steps will be to identify additional technical assessments needed, and secure funding resources to undertake them.

If you would like to stay up to date on this initiative, volunteer, or donate please contact [info@harwichconservationtrust.org](mailto:info@harwichconservationtrust.org).