

## History

Warner's Pond has been an diverse source of resources and pleasure since its origin in the mid 1800's. It was a summer recreational area which had a picnic area, playground, swimming beach, and boat rides. Swimming lessons were offered at Warner's Pond in the 1970s. In the winter, the pond hosted ice skating parties, Christmas tree bonfires, and ice hockey games. Ice houses could be seen standing at the reformatory end of the pond where they stored the ice cut from the pond.

Warner's Pond was earlier called Loring Pond, after David Loring who purchased the water rights in 1817 and established a lead pipe company where the Warner's Pond Dam exists today. The pond, as it is known today, came into being in 1857 after Ralph Warner bought the Pail factory property located at the fork of Laws Brook Road and Commonwealth Avenue. He had a dam raised in the Nashoba Brook to increase the water power for the factory. In 2008, Warner's Pond dam was reconstructed. Warner's Pond is now owned by the Town, except for Scout Island, which is owned by the Boy Scouts of America.

Warner's Pond is a relatively shallow 48-acre pond which is fed by a 47-square-mile watershed in seven communities. 95% of the watershed lies outside Concord. Since at least the 1980s, the pond has undergone eutrophication (a process where waterbodies receiving excess nutrients experience excessive plant growth) and sediment deposition, leading to a decreased use by canoeists and fishermen, as well as diminished ecological value. Exotic, invasive species of plants dominate the pond today.



An excerpt from Henry David Thoreau's Journal...

*December 16: Last Sunday, on the 14th, I walked on Loring's Pond to three or four islands there which I had never visited, not having a boat in the summer. On one containing an acre or two, I found a low, branching shrub frozen into the edge of the ice, with a fine spicy scent somewhat like sweet fern and a handsome imbricate bud. When I rubbed the dry-looking fruit in my hands, it felt greasy and stained them a permanent yellow, which I could not wash out; it lasted several days, and we named the island Myrica Island.*

You can support the Natural Resources Commission with implementing short- and long-term recommendations from the Warner's Pond Watershed Management Plan.

Together we can:

- \* Establish a more balanced native plant community;
- \* Enhance fish and wildlife habitat;
- \* Ensure the continued recreational use of Warner's Pond; and,
- \* Preserve a community asset.

## Warner's Pond



## Help Protect Warner's Pond



## Town of Concord Division of Natural Resources

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## Watershed Management Plan:

In 2012, the Division of Natural Resources had a watershed management plan prepared for Warner's Pond. Various parameters of the pond were evaluated including biological resources, water quality, sediment depth and composition, bathymetry, and sediment and nutrient loading. Warner's Pond was found to have a mean depth of 3.4 feet with an average soft sediment depth of 2.8 feet, leading to the proliferation of plant life. Phosphorus levels were found to be beyond a critical level where active management would make any significant improvement. It was found that an 80% reduction in phosphorus inputs would be needed to see any kind of improvement. Water quality is difficult to control locally as Concord contributes only 5% of the total phosphorus inputs to the system. Below are management recommendations generated from this plan. To read the entire Watershed Management Plan go to: [http://www.concordma.gov/pages/ConcordMA\\_NaturalResources/wpmp/index](http://www.concordma.gov/pages/ConcordMA_NaturalResources/wpmp/index).

### Short-term Recommendations:

1. **Herbicide Treatment:** This is the only viable short-term technique to control fanwort and variable milfoil though its effectiveness is limited due to the high flush rate of Warner's Pond (<1 day).
2. **Harvesting:** Due to the presence of milfoil and fanwort, mechanical harvesting is not recommended but manual harvesting can be effective for water chestnut and purple loosestrife and has been conducted annually since 2004.
3. **Drawdown:** This is effective for fanwort and milfoil but less effective on water chestnut, curly-leaf pondweed, and purple loosestrife. A three foot drawdown is recommended but could impact access to

spawning areas, reduce dissolved oxygen, displace animals, and eliminate winter recreation.

4. **Hydroraking/Rotovation:** This technique is effective on water lilies but will exacerbate milfoil and fanwort infestations.

### Long-term Recommendations:

1. **Education:** Educating pond abutters alone will not solve the problem. A collaborative effect needs to be undertaken with all communities within the watershed: Acton, Boxborough, Carlisle, Littleton, Stow, and Westford.
2. **Low Impact Development (LID) Retrofitting:** Eliminating stormwater inputs in Concord would not vastly improve the water quality in Warner's Pond. To see any kind of improvement, LID techniques would need to be implemented in stormwater outlets within the 47-square-mile watershed.
3. **Dredge Warner's Pond:** A complete dredge of Warner's Pond is not cost effective, however, the 2012 Watershed Management Plan identifies areas of dredging that would be most beneficial to the system. With sediment accumulation rate of about 43-64 cubic yards/year, this could provide over a hundred years benefit but is still very expensive and requires extensive permitting.
4. **Monitoring Program:** Regardless of how Warner's Pond is managed, a monitoring program is necessary to track progress.

### How You Can Help!

1. **Know the enemy:** Warner's Pond has a number of different exotic invasive species that are impacting the pond. These include: variable milfoil, fanwort, water chestnut, curly-leaf pondweed, and Eurasian watermilfoil. Learn how to identify and manage exotic invasive species at [www.concordma.gov/pages/ConcordMA\\_NaturalResources/invasives/invhome](http://www.concordma.gov/pages/ConcordMA_NaturalResources/invasives/invhome).



Curly-leaf Pondweed

Fanwort

2. **Think Regionally:** Warner's Pond is at the bottom of a very large watershed. Work with the surrounding communities to clean up the water entering Warner's Pond.
3. **Act Locally:** Assist with the annual Water Chestnut harvesting.
4. **Go Natural:** Planting native species in your yard minimizes the need to water and fertilize and provides food and shelter for Warner's Pond's resident fauna.
5. **Plant Vegetative Buffers:** Planting vegetated buffers with native plants adjacent to the shoreline slows water runoff, enhances infiltration, and traps sediment, fertilizers, pesticides, pathogens, and heavy metals. This can also discourage geese from using your property.
6. **Do not fertilize your lawn:** Chemicals in fertilizers, especially imidacloprid, may not only be harmful to your children and pets, but may be contributing to the collapse of honey bee populations.
7. **Pick up after your pets and dispose of it properly:** Never leave your dog waste on the ground or dispose of it in a storm drain.
8. **Use Rain Barrels:** a great way to reuse rainwater from your roof for gardening and landscaping.
9. **Do not feed waterfowl!** Feeding discourages winter migration and encourages large flocks that degrade Warner Pond's shoreline and water quality.
10. **Drop off—Swap Off:** Take advantage of the Drop off—Swap off to dispose of used oil, antifreeze, paints, and other household chemicals. Do not dump these down the sink or in storm drains.



Inaction will likely result in a reduction of wildlife habitat and reduced water quality in Warner's Pond. Likewise, recreational opportunities will continue to dwindle.