The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

Thomas S. Burack, Commissioner

December 4, 2009

Michelle Nadeau
Wash Pond/Sunset Lake Association
Hampstead, NH

Dear Ms. Nadeau:

Thank you for your interest in Wash Pond (a.k.a. Sunset Lake) in Hampstead, New Hampshire. Following is a summary of both the water quality data that we have on file for Wash Pond, as well as a discussion of the plant community of the lake, based on historical data and on the survey that my intern, Deidra Sargent, performed with one of the shoreline residents on September 4, 2009.

Wash Pond is a shallow pond with a very developed shoreline with homes, a town beach and a campground and associated beach. The pond was classified as mesotrophic during a 1976 lake assessment performed by the Department of Environmental Services (DES). The pond was surveyed again in 1984 and 1997 with no change in the trophic status. Lake assessment data from 1976, 1984 and 1997, as well as information on lake trophic classification and descriptions of the various parameters sampled are attached for your reference.

The pond has an average depth of 12 feet and has a Secchi disk (a tool used to measure clarity) reading of more than 10 feet. The bottom of the pond is comprised of mostly soft sediment and few rocks. The shallow water and good clarity to nearly the entire pond bottom, combined with the soft sediments, offers suitable habitats for aquatic macrophyte growth.

The oldest data available on the pond are from surveys done by DES in 1976 and 1984. According to these studies, the macrophyte community has been sparse throughout the pond. The 1997 survey rated the macrophyte community as scattered throughout the pond (copies attached).

In terms of plant community composition, the attached map from the 9/04/09 survey shows the type and distribution of aquatic plants in Wash Pond. A diverse assemblage of macrophytes is present, including emergent plants (bur-reed, cattail, pickerelweed, spike rush), floating leaved plants (pondweeds, duckweed, white water-lily) and submersed plants (bladderwort, pondweeds, water naiad, waterweed, tape grass). No non-native plants were discovered during this survey.

Overall, water quality and plant abundance in the pond has not changed substantially over the last 32 years according to data we have on file. The macrophyte abundance is the only thing that slightly changed, being ranked sparse up until 1997, when the rating was changed to scattered, indicating only a slight overall increase in plant abundance lakewide.

I understand that you are interested in protecting and enhancing this resource. One of the best ways to do that is to track inputs from the watershed and water quality within the pond. One way to achieve this is to establish a water quality monitoring program on the pond to track changes over time, particularly with the continued urban expansion in the area. The Volunteer Lake Assessment Program (VLAP) through DES is one program that can help you with this monitoring. Sara Steiner is the program coordinator, and can be reached at 603-271-2658 or via e-mail at Sara.Steiner@des.nh.gov if you are interested in finding out more about VLAP for the pond.

In terms of aquatic plant management, DES does not generally recommend removing native aquatic vegetation within a lake or pond. The majority of the higher plant density is around the shoreline of the pond and adjacent to associated wetland areas, which are given to more abundant plant growth, leaving the middle open for navigational and recreational purposes. It is most appropriate to maintain the vegetation within the system and allow the system, to continue to provide beneficial functional values of filtration and nutrient attenuation, to help ameliorate any negative influences of the surrounding urban development on water quality. If you do wish to seek management of the native aquatic vegetation there are two companies that generally work in New Hampshire as contractors in this field. They are:

Aquatic Control Technology, Inc.
11 John Road
Sutton, MA 01590
508-865-1000

Lycott Environmental, Inc.
600 Charlton Street
Southbridge, MA 01550
508-765-0101

Unfortunately the DES does not have funding for management of native aquatic plants, so resources to perform these control activities would need to be found locally. If you wish to seek more input on specific management options please contact one or both of these companies directly.

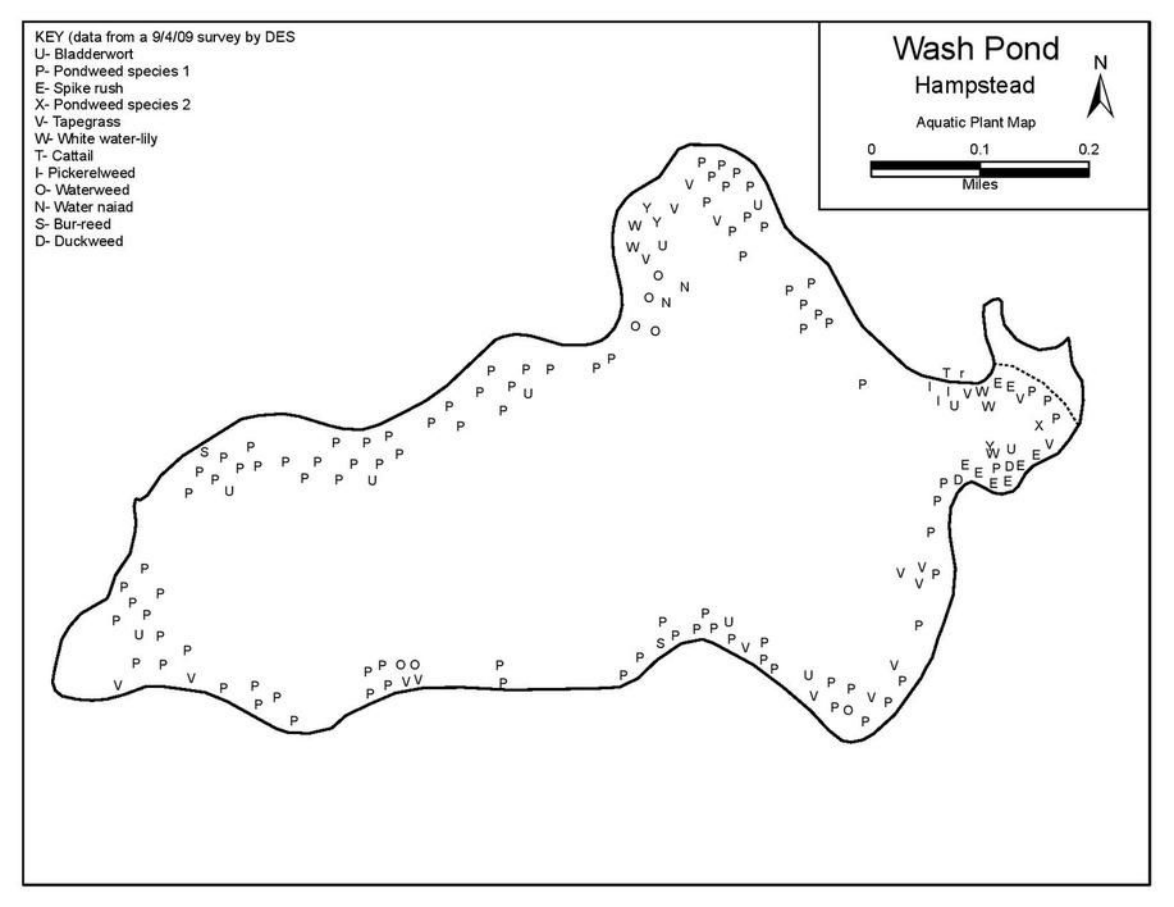
At this time there does not appear to be a problem of aquatic plants in the pond, and certainly no invasive species which could pose a threat to the recreational values and ecological values of the waterbody. Please do note that fanwort and variable milfoil, both exotic aquatic plants, are in waterbodies near yours. It would be a good idea to perform routine monitoring of the pond to find these plants early, if they do happen to be introduced to the system.

If you have any questions about this assessment of Wash Pond please do not hesitate to contact me anytime at Amy.Smagula@des.nh.gov or 603-271-2248,

Sincerely,

Amy P. Smagula
Limnologist/Exotic Species Program Coordinator

Enclosures


KEY (data from a 9/4/09 survey by DES
U- Bladderwort
P- Pondweed species 1
E- Spike rush
X- Pondweed species 2
V- Tapegrass
W- White water-lily
T- Cattail
I- Pickerelweed
O- Waterweed
N- Water naiad
S- Bur-reed
D- Duckweed
Wash Pond
Hampstead
Aquatic Plant Map
N
0
0.1
0.2
Miles