OBSERVATIONS & RECOMMENDATIONS

After reviewing data collected from **MCQUESTEN POND** the program coordinators recommend the following actions.

We are pleased to welcome the Manchester Urban Ponds Restoration Project to the New Hampshire Volunteer Lake Assessment Program. Manchester's volunteers collected a lot of samples this summer and we applaud them for their efforts. Although it takes a few years to establish lake quality trends, we hope that this project will encourage the citizens of the city to continue their active participation in sampling and help to reverse the degraded conditions of the ponds. We encourage the Project Coordinator to establish a wet weather sampling program in the future. Samples collected during rain events allow us to determine non-point sources of pollution to the lake. Since the project's goals include restoring the quality of the urban ponds and reducing pollutant loads data collected from wet weather sampling allows biologists to better evaluate phosphorus loading to the lake.

FIGURE INTERPRETATION

- No data are available for chlorophyll-a or transparency, as the pond is too shallow for these tests. The monitors can collect a sample for chlorophyll-a by taking a grab sample, so we can establish a baseline for future monitoring. Also, Amy Smagula, the Exotic Species Coordinator, suggests collecting a horizontal plankton haul. She is available for training of this manner.

- The average of total phosphorus was just above the median for New Hampshire lakes and ponds this summer. The values are in the moderate range for New Hampshire lakes. The increase in October is possibly due to sediment in the sample, as the turbidity reading was also elevated. Use caution when sampling in shallow areas. If sediment is noticed in the bottle try again for a cleaner sample.

OTHER COMMENTS

- The tributaries of McQuesten Pond all had high phosphorus and turbidity readings this summer. We have yet to determine the natural trends for this watershed. If, in the future, the data suggest that elevated turbidity is a result of anthropogenic sources then we will establish more sampling stations to determine the causes. If, however, this is due to sampling conditions (i.e. sampling when there

is little flow or when too shallow) find an area of the inlet where a good sample can be obtained. Also, make note of the conditions of the inlet on your field data sheet, so we can better understand the values.

- Conductivity values were high this summer around the pond (Table 6). Discovering the source of this pollution would be beneficial for the sake of the pond.

- The total phosphorus concentration (Table 8) and turbidity (Table 11) of the outlet is much higher than in the epilimnion and the inlets. This is an unusual result, as often the outlet has similar water quality to the in-lake samples. We will observe this station more thoroughly in the future.

NOTES

- Monitor's Note (6/7/00): Large storm last night; mallards, muskrat.

- Monitor's Note (9/13/00): Tributary and outlet samples, only.

- Monitor's Note (10/3/00): Debris at end of first pond (caused by Japanese Knotweed debris). Inlet and outlet only. 16.5°C.

USEFUL RESOURCES

Stormwater Management and Erosion and Sediment Control Handbook. NHDES, Rockingham County Conservation District, USDA Natural Resource Conservation Service, 1992. (603) 772-4385.

Save Our Streams Handbook for Wetlands Conservation and Sustainability. (800) BUG-IWLA, or visit www.iwla.org

A Brief History of Lakes, NH Lakes Association pamphlet, (603) 226-0299 or www.nhlakes.org