

## Caspian Lake Protection Committee

Submitted by Stew Arnold, Chair, Aug 2, 2018

First off, our best news is Caspian Lake is still free of any known invasive species - plant or animal. Our prior chair of the Lake Protection committee, Andy Dales, started his report at many annual meetings with this message and I hope to do the same. Since transitioning the tasks from Andy to myself, I have a greater appreciation for the amount of background hours spent in stewardship and want to express the whole community's gratitude to Andy for his service. Andy, please stand and everyone please stand with me in appreciation!

This Lake Protection Committee stewards the following: Water Quality Monitoring, Greeter Program, Lake Level, Shoreline Protection, and Watershed Monitoring. Other areas of care and concern include FOVLAP, Dam Integrity, Goose Poop, and any environmental issues. This committee is looking for VIPs (or Volunteer Invasive Patrollers), Lay Monitors, and others to assist with these tasks.

### **Water Quality**

Caspian Lake remains good to excellent for water clarity, average to historic levels for Chlorophyll-a, and some increase trending in Total Phosphorus. Our Lay Monitors collect samples weekly and the DEC (Dept of Environmental Conservation) of Vermont compiles results. In addition, weekly monitoring is done for Cyanobacteria and we have been getting the best rating of "generally safe".

Because of the increase in Total Phosphorus, the GA has approved our purchasing a Phosphorus Testing kit. David Miltenberger and I will establish a sampling strategy to see if we can determine any sources of higher concentrations such as stream runoff or areas of erosion.

### **Greeter Program**

To reduce the risk of introducing aquatic nuisance species and to educate lake visitors about the threat of degraded water quality by aquatic nuisance species, the Town of Greensboro employs Greeters to monitor the boat access area from Memorial Day to Labor Day. Their objective is to inspect all entering trailers/boats to ensure they are free of all aquatic nuisance species such as Eurasian Water Milfoil, Zebra Mussels, Water Chestnuts, Spiny Water Fleas, etc before entering Caspian Lake. The Greeters were trained by VT DEC personnel. In addition, the Greeters take this opportunity to inform boaters about aquatic nuisance species. Our surveys of these boaters indicates that almost 100% are now knowledgeable about the invasive threat.

The Greeter Program is funded by the Town of Greensboro with an assisted grant from the DEC of Vermont.

Typically, monitoring is done in two shifts each day - weather permitting, from 6am to 11am and from 11am to 5. 1186 boats entered Caspian lake in the 2017 season, compared to 1002 for 2016 season and 561 for 2015 season. 730 boats have been inspected this year as of Aug 1st. Most of our boat traffic is Kayaks and other non-risk watercraft. Nearly all boats are local as Caspian is their last prior use lake.

During last 2017 and this 2018 seasons, **NO** Eurasian Water Milfoil was found by our inspectors on any trailer/boat!

## **Lake Level**

This past winter and spring's extremely high water and ice break-up combined with high winds again caused significant damage to shoreline and property around the lake. We had addressed this issue last summer with the Department of Environmental Conservation and they agreed to opening the dam weir 1 inch (we had suggested 6 inches). The opening occurred in early January. Shoreline damage occurred in February and combined shoreline & property damage occurred during ice out in May.

This experiment was not successful in achieving our objectives to lower the high lake levels by lowering the annual lake level average. We will continue to address this issue with DEC this summer and fall to make further adjustments before the next ice season.

## **Shoreline Protection and Watershed Monitoring**

There are educational opportunities available for our community in both of these areas. The state has developed a "Lake Wise" Program to give shoreline owners guides to best practices on maintaining environmentally friendly approaches to the lake. In addition, there are state resources available for towns and property owners to review best practices in repair or replacement of culverts, drain systems, and road maintenance in our watershed.

## **FOVLAP - Federation Of Vermont Lakes And Ponds**

We have board representation on this statewide association which meets monthly to address common areas of concern for all lakes and ponds. They sponsor educational opportunities with a Spring (and sometimes Fall) Seminar and Summer Annual Meeting. Greatest concern this year was the re-education of Act 67 - to crack down on the transport of aquatic plants and all invasive species.

## **Dam Integrity**

Caspian Lake's outflow is controlled by a dam owned by Hardwick Electric. This dam got a poor rating in its last inspection and is showing major signs of stress. We will assist all powers available to address these concerns before an actual failure occurs.

## **Goose Poop**

Our lake is experiencing an increasing population of Canada Geese and the environmental/aesthetic impact associated. These geese are hatching young goslings then using lawns and the beach for their feeding and subsequent pooping grounds.

## **Other occasional topics**

This spring a living "clam" was found on the southwest shore. Photographs were sent to the state specialist and determined to be an Eastern Elliptio Mussel - common to Vermont and NH. We are unsure if this is new to Caspian or is normal in small numbers.

## **Summary**

More help is needed to address these programs and areas of concern. Please join in the fun!