



BOARD OF DIRECTORS

February 24, 2017

Laura Rome
*President
Maynard*

Board of Selectmen
Town of Acton
472 Main Street
Acton, MA 01720
bos@acton-ma.gov

Ingeborg Hegemann
*Vice President
Stow*

Re: Proposed Nagog Pond Water Treatment Plant

Richard Tardiff
*Treasurer
Natick*

Dear Board of Selectmen,

Dick Lawrence
*Clerk
Hudson*

Thank you for the opportunity to comment on the proposed construction of a water treatment plant at Nagog Pond by the Town of Concord. We hope that the Board will consider our letter despite the late stage in the Hearing process. OARS is the watershed organization for the Sudbury-Assabet-Concord watershed, with over 700 members throughout the area. A non-profit organization founded in 1986, OARS works primarily through science-based advocacy and education to develop a scientific understanding of the causes of river degradation and works with communities to seek effective solutions. OARS monitors the water quality of our surface waters, including two sites on Nashoba Brook (Acton and Concord); reports are available on our website and are provided to the towns.

Don Burn
Westborough

Robert Donelan
Concord

Lisa Eggleston
Sudbury

Allan Fierce
Stow

Paul Goldman
Marlborough

Dave Griffin
Maynard

The Nagog Pond Water Treatment Plant project documents that have been submitted focus almost exclusively on the treatment plant construction and site disturbance. They contain very little information on the downstream impacts of Concord's plan to withdraw significantly more water from Nagog Pond which will be made possible by the construction of the treatment plant. Our main concern is the impact on the streamflow in Nagog Brook, a state-designated Coldwater Fishery Resource (see first figure, below, from DEP's SWMI Viewer). Nagog Pond is the sole source headwater of Nagog Brook. Nagog Brook is wholly within the Town of Acton and is a valuable natural resource that deserves protection.

Brian Kilcoyne
Concord

Martin Moran
Hudson

Pam Rockwell
Concord

Peter Shanahan
Acton

Based on available information, there is one outlet from the dam that is well below the top, and a small spillway to handle overflows. We have no information about the flows released through the outlet, its elevation, or the rate and frequency of flow over the spillway, hence we are not able to judge to what degree withdrawals from Nagog Pond affect streamflow in Nagog Brook. This streamflow will also affect flow in Nashoba Brook, and ultimately the Assabet River, a federally-designated Wild and Scenic River. We do note, however, that the proposed volume of the withdrawal—stated at 0.8-1.0 million gallons per day (1.24-2.32 cfs), far exceed the streamflow measured in Nashoba Brook in the summer/fall months (see second figure, below, from USGS for 2015 (2016 was more extreme drought)). DEP states that the Firm Yield of Nagog Pond is 0.86 mgd.

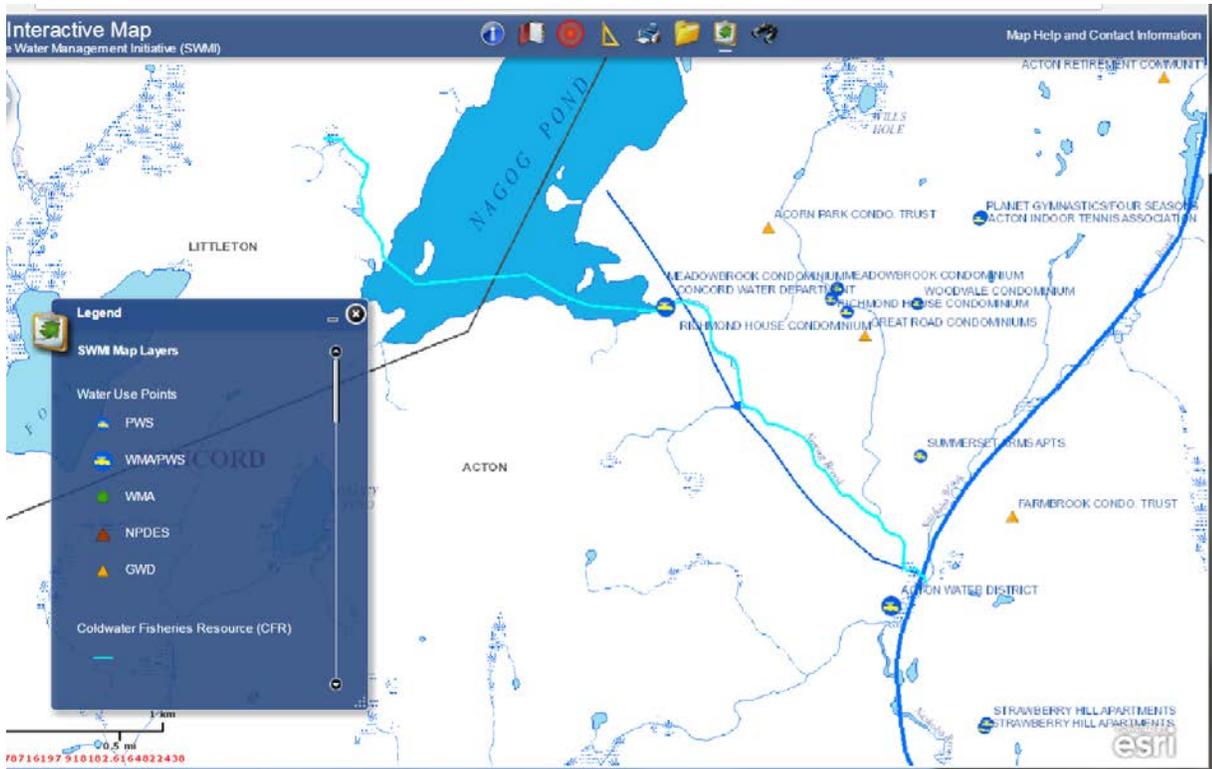
Lisa Vernegaard
Maynard

Before this project goes ahead, we believe it is important to know:

1. What is the elevation of the dam's outlet?
2. What is the minimum flow released to Nagog Brook at the dam?

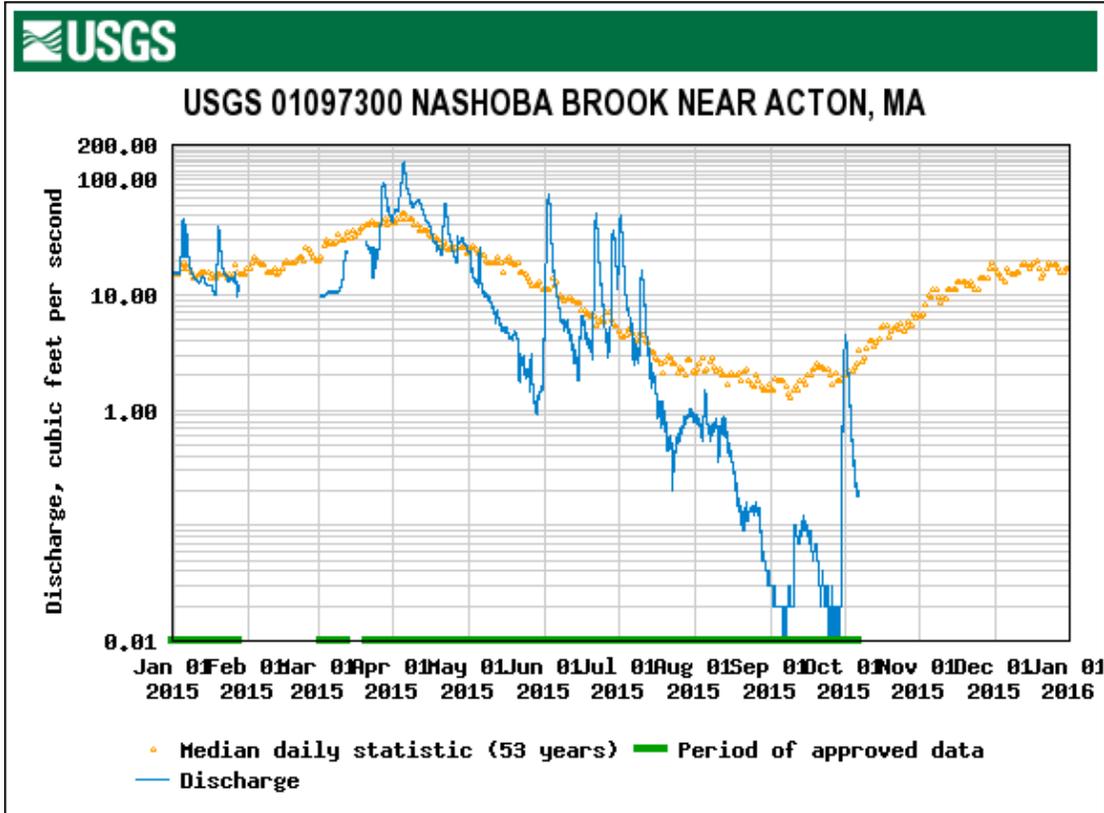
3. How are the releases to Nagog Brook determined?
4. Will a minimum release necessary for the survival of coldwater fish species be maintained even when pond levels drop?

It is particularly important that your Board ask these questions and secure a commitment to establish minimum streamflows and streamflow monitoring, in the May-October period at a minimum. We share the concerns voiced by Board member Franny Osman at the Board of Selectmen meeting of Jan. 23, 2017, and support her request for monitoring of the waterlevel downstream. Due to the fact that this is a Registered (grandfathered) water source, the State’s ability to regulate water withdrawals to protect the environment is hampered. As a result, it is up to the towns of Acton and Concord to protect the coldwater fishery, recreation, wildlife habitat or any other use of this stream and the streams and rivers into which it flows.



We request that Concord be required to:

1. Determine a minimum streamflow regime for Nagog Brook, in consultation with the Division of Fisheries and Wildlife
2. Maintain the above streamflow regime, including establishing a streamflow level that would trigger increased release from the dam into Nagog Brook.
3. Conduct streamflow monitoring and reporting for Nagog Brook for the months of May-October.
4. Use the Nashoba Brook USGS gage as the trigger to determine town-wide water conservation restrictions, unless stricture measures are voluntarily used (as they were in 2016).



The volume of water to be withdrawn should be looked at closely. By their own account, Concord’s new treatment plant will result in more than tripling the amount of water withdrawn from Nagog Pond. This is water that will be unavailable to the already highly stressed Nagog/Nashoba Brook system (see photo below at the Warner’s Pond dam, Nashoba Brook in Concord (8/17/16)). According to their *Public Water Supply Annual Statistical Report*, Concord only withdrew water from Nagog Pond during three months in 2014, June, July and Aug., with an avg. of 0.32 mgd; in 2011 they withdrew even less and only in Jan, Feb, May, July. A new treatment plant would vastly increase their use of this source—they expect to withdraw at least 0.8 mgd, presumably every month of the year, with peak periods up to 1.5 mgd.



Of particular concern is the expected withdrawals during peak need—the summertime. We could not find a description of the seasonality of these future withdrawals. The DPW website states: “Depending on the season, all available production facilities may be called upon to satisfy system demands which fluctuate between 2 million gallons per day (MGD) during the winter months to over 5 MGD in the summer.” In contrast, the Water Needs Forecast prepared for Concord in 2015 by the Dept. of Conservation and Recreation, in preparation for their withdrawal permit application, showed a far smaller water need: 2.09 mgd by 2021; 2.10 mgd by 2026, and 2.11 mgd by 2031.

Concord’s summer water use is very high compared with other communities, despite conservation efforts by the town. In 2014 it was literally double their winter use. Presumably much of the added increment is non-essential water use. Given the predicted increase in frequency and duration of drought due to climate disruption--coupled with a growing population--finding effective ways to reduce water use during the summer must become a high priority for every community.

In summary, there are important questions to be asked and protections to be put in place to see that the coldwater fishery resources of Acton’s Nagog Brook are protected while Concord’s water needs are met. The approval process for this project is one of the few places this can be done.

Thank you for the opportunity to comment on this project. Please don’t hesitate to contact me if you have any questions.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'A. Juma', with a long, sweeping underline that extends to the left and then loops back under the name.

Alison Field-Juma
Executive Director

cc: Alan Cathcart, Concord Water and Sewer
Tom Tidman, Acton Natural Resources