



Emails related to WPA Emergency Certification filing on the agenda for the Acton Conservation Commission on Wednesday, February 3, 2016 at 7:45 PM at Acton Town Hall, Room 204

From: Armstrong, David [darmstro@usgs.gov]
To: Tom Tidman; Bettina Abe
Cc: Christopher Bruet; Richard Verdi
Subject: Nashoba Brook

Hi Tom, Bettina,

Thanks for meeting with Chris and I today to look at the beaver-backwater issues at the Nashoba Brook gage.

After I got back to the office, I spoke with Rich Verdi, the Chief of our Hydrologic Surveillance Section, about our conversation today. Rich said that he would be willing to try installing a beaver-deceiver pipe at the riffle location where the dam is currently located. The beaver-deceiver pipe would be installed in the riffle where the dam is currently located. This would not be a beaver-deceiver pipe installed through the dam, but would be a long pipe with grates over the entrance and exit at the riffle location where the dam is currently built. We would still need to remove the dam and the two downed trees as we had discussed, and so will still be requesting a permit to remove the beaver and dam this winter in order to address the current backwater at the gage. However, we thought it would be worth the additional expense and effort to try keep the dam-building from being a recurring issue in the future.

Rich also agreed to help identify some educational material that we could put on the kiosk and also eventually on the side of the Nashoba gagehouse to help explain what a USGS streamflow gaging station measures, the value of the stream-gage network, and the value of the Nashoba gage in particular.

Thanks again, and please let use know once you confirm the date/time of the BOH meeting.

best,

Dave

Dave Armstrong

U.S. Geological Survey

New England Water Science Center

10 Bearfoot Rd., Suite 6

Northborough, MA 01532

Phone: (508) 490-5060

Fax: (508) 490-5068

Email: darmstro@usgs.gov

Website: <http://ma.water.usgs.gov>

RE: USGS Nashoba Brook gaging station

Maguire, Thomas (DEP) [Thomas.Maguire@MassMail.State.MA.US]

Sent: Mon 1/25/2016 4:39 PM

To: darmstro@usgs.gov

Cc: Merrill, Pamela (DEP); Smith, Alice (DEP); Friend, Richard (DEP); Hutchins, Linda (DCR); 'Verdi, Richard'; lblake@usgs.gov;
Natural Resources Department

Dave:

Linda forwarded your message to me.

One of my many jobs here that you probably didn't know I do is I'm MassDEP's Wetlands Program Beaver/Muskrat Related Flooding Coordinator.

The Legislation (Massachusetts General Law Chapter 131 Section 80A) governing the Emergency Permit that may be granted by the Board of Health to remove beaver dams includes, but is not limited to, several specific activities that may constitute a threat to human health and safety, including beaver occupancy of a public drinking water and building flooding. The Legislation grants the Board of Health discretion to determine if an activity constitutes a threat to human health and safety beyond the specific examples cited. It seems to me that you can make the case that it is necessary to remove the dam to provide public safety because the gage provides advance warning of flooding. Without the gage operating properly because flow is being blocked by beavers, no advance warning of impending flooding to the public would be possible. If an Emergency Permit is issued by the Board of Health, you'll also need to request an emergency certification from the Conservation Commission. Conservation Commissions are required to defer to the Board of Health on whether the activity constitutes an emergency.

If the Board of Health does not grant the emergency permit, there is an appeal procedure to the Massachusetts Department of Public Health, not to MassDEP. But, you may also apply to Massachusetts Fish and Wildlife for a non-emergency permit to remove the beaver dam. This process is not widely utilized. The Board of Health process is quicker than Mass. Fish and Wildlife, so if the Board of Health denies the Emergency Permit, if USGS does not want to pursue an appeal, I would advise you to apply directly to Massachusetts Fish and Wildlife for a non-emergency permit to remove the dam(s). I think Massachusetts Fish and Wildlife have to prepare a long term management plan for beaver control within the area of concern as part of their review process. You'd also need to file a notice of intent (NOI) request with the Conservation Commission to remove or breach the dam. While this is not as quick as the emergency process, it may be quicker than pursuing resolution of an appeal from a Board of Health decision.

Regardless of the Board of Health, beavers may be trapped by a licensed trapper without an emergency permit, during the open trapping season (November 1 to April 15th). Another possibility is that if the beavers are deemed to constitute a "nuisance," licensed Problem Animal Control agents may be utilized to destroy the beavers.

Thomas Maguire
Massachusetts Department of Environmental Protection
Wetlands Program
Boston, MA

From: Hutchins, Linda (DCR)
Sent: Monday, January 25, 2016 2:16 PM
To: Maguire, Thomas (DEP)
Cc: Friend, Richard (DEP)
Subject: FW: USGS Nashoba Brook gaging station

Can either of you help with this???

Linda M. Hutchins, Hydrologist
Department of Conservation and Recreation
Office of Water Resources
251 Causeway St.
Boston, MA 02114

Phone: 617-626-1384
email: linda.hutchins@state.ma.us

From: Armstrong, David [<mailto:darmstro@usgs.gov>]
Sent: Friday, January 22, 2016 4:58 PM
To: Merrill, Pamela (DEP); Smith, Alice (DEP); Hutchins, Linda (DCR)
Cc: Richard Verdi; Laura Blake
Subject: support for USGS Nashoba Brook gaging station

Hi Pam, Alice, Linda,

Pam, Alice - I spoke to Laura Conlee, the MDFW furbearer biologist, and she suggested that I speak to you about issues we are having with beaver at the USGS Nashoba Brook gaging station because the Circuit Riders frequently interact with town BOH agencies. I'm not sure whose area Acton is in, so I left you both a phone message on this today (friday). Please give me a call next week, if you have a chance.

Since last fall, streamflows at the USGS Nashoba Brook streamflow gaging station in Acton (see http://waterdata.usgs.gov/nwis/uv?site_no=01097300) have been altered by backwater from a downstream beaver dam. This isn't the first time we have had issues with beaver dams on Nashoba Brook, but it is the first time since we moved the gage to its current location. There are numerous beaver in the Nashoba Brook river system, and back in 1997 we moved the gage upstream to get away from a downstream meadow that was frequently dammed by beaver.

We have submitted an application to the Acton Board of Health (BOH) for a 10-Day Emergency Beaver Permit to get permission to remove the beaver dam and beaver to address the backwater issue at the gage. We've had to take similar action at some of our other gages where streamflows are affected by beaver dams, but removal of the beaver dam downstream of the Nashoba Brook gage is a sensitive issue for the Town of Acton because the gage is located on Nashoba Brook Conservation Land near Wheeler Lane in Acton. Walking trails on the property gets considerable use by the public.

We have had several meetings with Tom Tidman, the Acton Conservation Commission Agent, and also Bettina Abe, from the Acton Natural Resources Department, about gaining permission to access the property to trap the the beaver and remove the dam. We are looking to do this work this winter, during the open-season, when trapping can be done discretely beneath the ice. Tom and Bettina understand the importance of good streamflow data and are supportive of the effort. They have, however, spoken to several members on the Acton Board of Health, and have told us that we should expect considerable pushback from the BOH and are at risk for denial of the permit.

We have a meeting with the BOH, tentatively scheduled for Monday evening, February 1st. I plan to attend the BOH meeting and make a short PowerPoint presentation to present the issue. Apparently one of the primary reasons for the BOH reluctance to grant the permit is that they don't see that the beaver impoundment is causing an immediate health concern.

The USGS streamflow gaging network is supported financially by the MDEP through a cooperative agreement with the USGS. The Nashoba Brook gage is a particularly valuable gage in the network because it is one of the few USGS gages in eastern Massachusetts that have a long term period-of-record and that is located on a relatively unaltered stream system.

I put this paragraph in the permit application to the Acton BOH:

"Accurate and reliable streamflow data are essential for public health and safety, Streamflow data from USGS streamflow-gaging stations are used by Federal, State, and local agencies, water resource and emergency managers, weather services, and the public to provide reliable flood warning and flood-related data that can prevent loss of human life and save property damage. Streamflow data are also used to protect drinking water and aquatic life, characterize water-quality conditions, permit water withdrawals, and wastewater discharges, design highway bridges and culverts, and plan for droughts." Since submitting the application I have even found out that in the 2009 MDEP Water Management Act Permit that governs groundwater withdrawals for Acton's

public water supply, sets limits on nonessential outdoor water-use for Acton that are tied directly to streamflows at the USGS Nashoba Brook gaging station. Despite this, Tom and Bettina are unsure that the BOH will grant the permit to remove the dam.

I would like to talk to you about this. Could you give me a call sometime next week to discuss ? I am wondering whether it would be helpful to get a letter of support from the MDEP or to have one of you attend the meeting to help lend support for the gage ?

thanks,

Dave

Dave Armstrong
U.S. Geological Survey
New England Water Science Center
10 Bearfoot Rd., Suite 6
Northborough, MA 01532

Phone: (508) 490-5060

Fax: (508) 490-5068

Email: darmstro@usgs.gov

Website: <http://ma.water.usgs.gov>
