

River Advisory Committee Meeting
Thursday, December 21, 2023
3 PM
Town Offices, Nowak Room
Draft Minutes

1. Call Meeting to Order

Members present: Richard Huber (Chair), Dan Jones, Rod Bourdon, Terrie Harman, Niko Papkonstantis, Select Board Rep, and Trevor Mattera, Conservation Commission Rep, were present at this meeting. Town Engineer and Interim Public Works Director Paul Vlasich, Building Inspector Doug Eastman, and Town Manager Russ Dean were also present.

Members Absent: Lionel Ingram, Carl Wikstrom, PEA Rep Warren Biggins

The meeting was called to order by Mr. Huber at 3 PM.

1. Approval of Minutes

a. Draft Minutes: November 29, 2023

Mr. Huber said the grant won't be decided until mid-July, so all options are still out there to be discussed with the feasibility study. On page 3 of the minutes, it says that VHB [Vanasse Hangen Brustlin] is on track to have a draft feasibility study in January. Will we want to have a meeting on the third Thursday in January? Mr. Vlasich said the founding partners [of VHB] will get a draft in January, a draft will be circulated in February. On Feb 27, 2024 at Town Hall at 6:30 PM we'll have a presentation on the findings of the feasibility study.

Mr. Huber asked if the Rockingham Planning Commission [RPC] would organize the presentation. Mr. Vlasich said no, he hasn't had any contact with the RPC and they weren't involved with Great Dam. He [Mr. Vlasich] would organize the meeting.

A member of the public asked how Brentwood residents would be invited. Mr. Vlasich said we could put an announcement in the newspaper. Mr. Dean said we don't have an abutters list for Brentwood residents, but we will try to get the word out as much as we can. Mr. Papakonstantis said we should notify our colleagues in Brentwood and let them spread the word. Mr. Dean said he's been in communication with their Town Administrator.

Mr. Huber asked if there would be a meeting in January, and Mr. Vlasich said he doesn't have an agenda for that.

Mr. Papakonstantis moved to approve the November 29, 2023 meeting minutes as presented. Mr. Bourdon seconded. The motion passed 6-0.

2. Update on River Issues

a. Sewer Siphon Project

Mr. Vlasich said in August, we had a special town vote for an additional \$3.5M in funding for the siphon project. That passed. The contractor and drilling company have been mobilizing at the site. We expect drilling to start in the first week of January. There will be weekly updates on the town website. They'll start with the pilot hole drilling, then ream the hole twice with a larger drill. If all goes well, it will be about a three-month process. The sewer service is still functioning.

b. Septic Systems

Renee Bordeaux of Geosyntec was present to give a presentation related to advanced septic systems. Sally Soule of the NH DES [Department of Environmental Services] Watershed Assistance Grants Department was also present.

Mr. Vlasich said when we upgraded our Wastewater Treatment Plant, one of the requirements of the permit was to develop a nitrogen control plan. We worked with Wright-Pierce to create a plan which included reducing nutrients in the effluent and also to address non-point sources such as runoff. There is quite a bit of loading of groundwater with nutrients from septic systems. There are advanced septic systems that will reduce the loading, which means reducing the amount getting to the surface waters.

When the State came out with the Great Bay total nitrogen general permit, the town developed an "adaptive management plan" with several elements. We are also participating in a group representing several towns called MAAM or Municipal Alliance of Adaptive Management. Any development or redevelopment of a certain size must go through PTAP [Pollutant Tracking and Accounting Program] where they give estimates of their pollutants and determine what type of structures can mitigate those pollutants. We enhanced our street sweeping in the fall to get rid of leaves that get into the drainage system and contribute extra nutrients to the bay. We developed a catchbasin replacement program, but finding a contractor for the program was difficult. Our Planning Department did a land use regulation review of how we can encourage infill development, where developed areas can be further developed rather than spreading out, to avoid adding additional infrastructure and environmental impact. We have inflow and infiltration removal from the sewer system, so there are less nutrients going into the receiving waters. Another component was the study of where in our existing drainage system we can install some structural appurtenances that treat or get rid of stormwater. We have one project designed at Kids Park on Winter Street, and are looking at other properties. We have a couple of grant applications for projects. One is the design and construction of the Kids Park BMP [Best Management Practices], a name for the structure that will clean the water. Another project is to identify other sites for these BMPs and do the designs. Geosyntec is working on a fertilizer program with Kristin Murphy in the Planning Department. The third project is related to advanced septic systems. We are considering an incentive program for folks upgrading their septic systems.

Mr. Huber said the reason we want to control nitrogen for the Great Bay is that it is the breeding ground for the whole North Atlantic. Fish breed in the Great Bay, and with too much nitrogen they can't do it well. Mr. Vlasich said it's about the whole health of Great Bay, not just the fish.

Renee Bordeaux of Geosyntec gave a presentation on their study of advanced septic systems. In 2014, NH DES conducted a study focusing on non-point sources of nitrogen to Great Bay, which identified septic systems as the source of 29% of the total nitrogen loading. Septic systems in closer proximity to a water body, ie under 200 meters, delivered more nitrogen load than those further than 200 meters. 98% of the septic systems in the Exeter River watershed are greater than 200 meters away from a body of water, but there are some within that 200 meter buffer. The most recent nitrogen control permit was in 2021 when the EPA issued the Great Bay Total Nitrogen general permit, which regulated 13 wastewater treatment plants around the Great Bay. In that permit was an optional proposal for communities to develop an adaptive management plan for non-point sources. We developed recommendations such as an incentive program to fund the difference between the cost of a septic system and an advanced septic system for those within 250 feet of a receiving body of water. We also recommended the town conduct outreach as part of the technical review process for development and redevelopment projects to make developers aware that the septic program exists.

In 2022, we applied for a grant to study this further. We developed a map of where septic systems are located in Exeter to identify the most optimal locations for the replacements. We did a literature review of all available advanced septic systems. We looked at the town bylaws and ordinances to see if the town needed to add any language to site plan or subdivision regulations to encourage the use of this program. We also looked at funding mechanisms in other counties and states to see how they're being implemented.

A septic system is an on-site wastewater treatment system that consists of a settlement tank and a leach field. It's typically used for residences in suburban and rural areas where sewer is not available. Conventional septic systems are excellent at removing bacteria, but not effective in removing nitrogen from the wastewater. Nitrogen has become more problematic in water bodies, so advanced septic systems have been developed to reduce nitrogen in the wastewater. We've created a draft map of where septic systems are located in Exeter, with a focus on those located within a 200 meter boundary of a water body, although there are other potential criteria than distance for targeting septic systems for upgrade. There are two advanced treatment technologies the study focused on. One is Amphidrome, which is a biologically active filter. This has the highest nitrogen removal level of any system available and has a low visual impact and small footprint. The other system was the BioMicrobics FAST system, which uses fixed activated sludge technology and is an add-on to a traditional septic tank. The study reviewed septic upgrade incentive programs in Florida and Maryland. In NH, the State is also considering administering a program on their

end similar to what Exeter is considering. The study includes recommendations on starting a pilot program in Exeter and providing education and outreach.

Mr. Bourdon asked if putting in the advanced system is installed in the place of a leech field or in addition to it. Ms. Bordeaux said it depends on which system is used. Some are compact, while some have a component added before a leech field.

Mr. Jones asked where the nitrates go when they are removed. Ms. Bordeaux said they get bound in the media that's within the denitrification systems. They likely need to be flushed out periodically. Mr. Jones asked what would be done with the sludge. Ms. Bordeaux said there's likely some landfilling component.

Doug Eastman asked if cow farms near Great Bay would have a nitrogen impact. Ms. Bordeaux said we did outreach to farmers and they have decent fertilizer management plans in place, but there probably needs to be better education and outreach.

Mr. Huber said we're going to get ocean rise with climate change. What is the prognosis for septic systems in that case? Ms. Bordeaux said high groundwater isn't good for septic systems. There may have to be decisions about relocating septic systems or running sewer out to those locations. One option in sensitive areas is using "tight tanks," which is a concrete tank that fills and is pumped out.

Mr. Eastman said we were seeing recently installed septic fields fail, and we determined that the water treatment system in these homes runs salt through the water and it goes into the drainage system, which kills the field. Pumping the salt water elsewhere, like into the woods, resolves the problem.

Mr. Jones asked if the effluent pumped out of septic tanks contains much nitrogen. Ms. Bordeaux said yes, but it would be treated by septage receiving at a wastewater treatment plant. Mr. Vlasich said Exeter doesn't do septage receiving at the moment as we are in the process of upgrading our facility.

Mr. Vlasich asked if there is a list of advanced septic technologies which are acceptable with the State of New Hampshire. Ms. Bordeaux said NH doesn't have a list of approved technologies. There is a list of proven technologies included in the feasibility study, which is based on lists from other States.

Mr. Mattera asked if there's been a look at creating new sewer hookups. Mr. Vlasich said whenever we have a potential expansion project we see what else can be sewered. Right now there's not a lot of obvious areas where extensions are needed, and you run into a cost-benefit analysis.

Mr. Mattera asked what the current nitrogen output of the Wastewater Treatment Plant is. Mr. Vlasich said it's under 2 milligrams where our permit requirement is 5 mg.

3. Other Business

- a. There was no other business discussed at this meeting.

4. Public Comment

- a. Jay Garnett of Stoney Water Road said abutters were never notified of anything to do with Pickpocket Dam. When this February 27 meeting happens, she hopes that her neighbors and the people in Brentwood are notified. We don't feel like we're being heard. We're starting a petition.

Mr. Huber said the feasibility study was underway, so we were putting off public meetings until we had a list of options. Suddenly there was an opportunity to get a grant that would remove the dam at no cost to Exeter. Exeter would be liable if there were a high hazard incident. We won't know if we get the grant until July, and we don't have to solve the problem until 2027. We have a lot of time to get the best solution. All the stakeholders need to be involved.

Ms. Garnet said that the numbers are inflated for the 100-year flood at 2.5x. We already had the 100 year flood in 2006. We expect to have more of those in the future, but the levels wouldn't be that high.

5. Adjournment

Mr. Ingram moved to adjourn. Mr. Bourdon seconded. All were in favor and the meeting adjourned at 4:06 PM.

Respectfully Submitted,
Joanna Bartell
Recording Secretary