

**MEETING NOTES OF
BARNES AQUIFER PROTECTION ADVISORY COMMITTEE**

DATE: 2/6/18 **LOCATION:** Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

<input checked="" type="checkbox"/> M. Czerwec, Easthampton	C. Seklecki, Easthampton	<input checked="" type="checkbox"/> Marla Hanc, Southampton
D. Conti, Holyoke	J. Burkott, Holyoke	Paul Diemand, Southampton
<input checked="" type="checkbox"/> T. Gaughan, Southampton	A. Smith, Holyoke	Jay Vinskey, Westfield
<input checked="" type="checkbox"/> Heather Miller, Westfield	K. Leigh, Westfield	<input checked="" type="checkbox"/> L. Sullivan, PVPC
<input checked="" type="checkbox"/> R. Newton, Smith College	<input checked="" type="checkbox"/> P. Gambarini, PVPC	

Others present: Mary Ann Babinski, Westfield City Council; Kristin Mello, WRAFT; Louise Sullivan, PVPC

TIME OF CALL TO ORDER: 3:38 p.m. **TIME OF ADJOURNMENT:** 4:55 p.m.

Action Items from Meeting:

PVPC

- Prepare 2/6 meeting minutes and distribute for review
- Prepare agenda for 3/6/18 meeting and distribute
- Talk with Community Foundation of Western Massachusetts re: grant request
- Follow up with MassDEP and ANG on Phase 1 Study availability
- Prepare new map showing USGS boundaries
- Provide support for roundtable event to be hosted by Mayor LaChapelle (suggested invite language, one page briefing for those attending, draft agenda, maps, etc.)
- Post geothermal info for developers on website
- Review information on solar and begin revising BAPAC guidance

BAPAC members

1. Adoption of January 2nd meeting notes

Patty asked for a clarification and a discussion of the third bulleted paragraph on page 2 of the minutes:

Bob stated that if a buffer is proposed around the medium yield aquifer in order to extend the water resource protection area, there needs to be justification. It is a good idea because Zone IIs are simply modeled derivations. Bob said that the way to justify including this would be to define them topographically and state that these are secondary recharge areas where water runs off the slopes and then infiltrates into the aquifer. He explained that in many places, the protected zones are actually drawing from outside the aquifer directly and encompass those secondary recharge areas.

Patty explained that she wanted to make sure that the language is clear when speaking of these areas, protected zones, the Aquifer, and the Zone II. Bob responded that although the last sentence is ambiguous, the paragraph is correct. To further explain what he meant, Bob said that water runs off the slopes located outside the aquifer and then infiltrates the aquifer. Patty asked if the protected zones are Zone IIs. Bob replied that they are. He said that all the protected zones are now Zone IIs. Bob explained that we're looking at all of the aquifer and

then the slopes that feed the aquifer. He said that it's just like Easthampton's sole source designation which does exactly the same thing. Patty asked if those other areas outside of Zone II are considered the aquifer. Since the Zone II is a subdivision of the aquifer, he said, it's those areas of the aquifer that are contributing water to those particular wells but there are other areas of the aquifer that don't lie within Zone II where there are no wells. Bob underscored that the aquifer includes all of the Zone IIs plus more.

Mary Ann asked if a new map could be added to the BAPAC website. Patty said that they could add to the existing Zone II/Sole Source designated map, a layer that shows the high and medium yield aquifer as defined by USGS.

It was agreed that in the third bullet on the January 2 notes, "protected zones" in the last paragraph would be changed to "Zone II" for clarification. And in the fourth bullet, the "protection zone" would be changed to "sole source designated area."

Mike then called for a motion to approve the January 2, 2018 minutes.

Bob Newton made a motion to approve the January 2nd meeting notes as amended, seconded by Tom Gaughan, and the motion was unanimously approved.

2. Status of Work with Air National Guard following Phase 1 Report - MassDEP

Patty invited MassDEP to attend the BAPAC meeting, albeit at a somewhat late date given that she was out with the flu, but MassDEP was not able to attend. Eva Tor, Deputy Regional Director at the Massachusetts Department of Environmental Protection, provided Patty with a one-page document entitled *MassDEP Barnes Update for 2/6/18 BAPAC Meeting*, which was distributed at the meeting. Ms. Tor reported that there has been no change in plans since MassDEP responded to the the Air National Guard's Phase I report.

Patty suggested that if the committee members have specific questions, she could include them in a letter to MassDEP. Bob interjected that he'd first like to see the Phase 1 report and know what response the Air National Guard had to MassDEP's letter. Bob noted that the report has not been released to the committee members but that MassDEP has seen it. He strongly recommended that BAPAC committee members ask for that Phase I report. Patty replied that the report needs to be requested from the Air National Guard. Bob recommended asking both MassDEP and the Air National Guard independently for the report. Bob stated that he would want to see the report before he would ask specific questions.

Mike called for a motion to ask the Air National Guard and MassDEP for a copy of the report.

Moved by Tom Gaughan, seconded by Marla Hanc, to approve that the Air National Guard and MassDEP be asked for a copy of the "FY 10-Phase 1 Regional Site Inspections of Perfluorinated Compounds Report" and the motion was unanimously approved.

Bob asked if the location of the private well that had a high detection of a different PFC compound is known. Kristen replied that she wasn't surprised to see that compound show up but she didn't know the location of the private well. Bob underscored that we need to obtain the location of this well from MassDEP.

3. Citizen Speak

Mary Ann Babinski reported that she presented BAPAC's suggestions to the Natural Resources Committee in Westfield on January 29th and she will send a copy of the meeting minutes reflecting the comments and concerns voiced at the meeting to Patty. Mary Ann then mentioned some of the suggested **changes** that were implemented:

- *Section 3-170.11 – Performance Standards*
Infiltration basins and trenches shall be constructed with a 3 foot minimum separation between the bottom of the structure and maximum groundwater elevation.
3 foot minimum separation increased to 5 foot minimum separation
- *Section 3-170.10 – Special Permit Additional Procedures*
Each entity, or their representative, shall review the application and submit written comments to the Special Permit Granting Authority, who shall defer its final action until such comments are received or 35 days have elapsed.
Allow **6 weeks** for submittal of written comments to the Special Permit Granting Authority
- *Section 3-170.1 – Intent and Purposes*
...to bring attention to the smaller brooks and streams and their importance to groundwater protection.
Because the names of specific brooks and streams were no longer to be mentioned, a sentence has been added to this Section to emphasize that **there is a dynamic relationship between groundwater and surface water**

Mary Ann reported that she spoke with Jake Dolinger at PVPC and he said he would need four days to do the work. Patty noted that Local Technical Assistance program funding could possibly cover two days of Jake's work. Mary Ann believes that the City of Westfield has just hired an engineer versed in GIS and Heather agreed.

Patty suggested that Westfield's ordinance might want to provide clarity on process for review and approval, perhaps especially on special permits. She noted that Easthampton's *Water Resource Protection District Ordinance* outlines the special permitting process and that this could serve as a starting place. Mary Ann agreed that the language needs to be clear.

Kristin asked if BAPAC's check list for developers addresses limits to the size of septic systems in a Zone II. Kristin stated that for example, 581 students and 100 teachers would total an estimated 14,000 gallons per day and there's a nitrogen loading limit of 440 gallons per day per acre in a Zone II.¹

Kristin reported that there is a site plan for a school with a septic system presented to the Westfield Planning Board. They now need to make a ruling about whether or not the facilities are adequate and whether or not there will be protection from pollution. Kristin further reported that the issue hasn't been brought before the Board of Health because none of the permits have

¹ Not part of meeting, but provided here as footnote for guidance:
Title 5 of the State Environmental Code, 310 CMR 15.000, imposes a nitrogen loading limitation of 440 gallons per day per acre design flow for systems serving new construction in nitrogen sensitive areas and for new residential construction where the use of both on-site systems and on-site drinking water supply wells are proposed. Department of Environmental Protection, Revised 2/22/16, Guidelines for Title 5

(Design flow – the quantity of sanitary sewage, expressed in gallons per day in accordance with 310 CMT 15.203)
(Nitrogen sensitive area – an area so designated by 310 CMR 15.215)

been filed yet. Kristin said that she believes there is danger of something being approved when it can't be approved, and she asked if there could be included in BAPAC's developers' check list mention of the need for Title 5 compliance and specifically nitrogen loading considerations in a Zone II area.

Bob asked Kristin for more details and Kristin replied she was speaking of the Roots Academy school. She reported that at the Planning Board it was mentioned that there would be industrial waste comprised of chemicals being used in science labs. She added that septic for something that large is not allowed in the Zone II but because it's for educational use, the Board has been advised that no one in Massachusetts has ever denied a site plan for an educational use because it is protected by Massachusetts General Laws. Kristen continued saying that since the Board is not in charge of Title 5 or its administration, they are in danger of approving this site plan.² Bob commented that he was shocked and in disbelief.

Mary Ann said the zone where the property is located is industrial and permitted use allows educational and religious purposes. She underscored that the Westfield *Water Resource Protection District Ordinance* allows permitted uses for educational or religious purposes. Kristin added that the developer doesn't have to do a special permit, only a site plan. Bob asked why the project doesn't come before BAPAC. Patty replied that it did come to BAPAC. She said she remembers that in the meeting they had with the developer, someone asked about septic and they said they were still working things out and talking about a possible sewer connection. Mary Ann stated that she doesn't understand how the Westfield Planning Board can approve this site plan if part of the plan is putting in a septic system. Patty noted that this project is over Southampton's Zone II area.

Kristin replied that the Board of Health does have the Title 5 regulations³ but the site plan hasn't been approved yet. Mary Ann asked if a reference to Title 5 can be made in the *Westfield Water Resource Protection District Ordinance*. Kristin said it would be great if it could be a prerequisite. Heather commented that this issue hasn't reached the Westfield Board of Health yet so its position is not known.

² Not part of meeting, but provided here as footnote for guidance:

Guidebook for Massachusetts Boards of Health 2006, Chapter 7: Sanitary Sewage Disposal – *Inspect septic system installations, repairs and upgrades to determine their compliance with Title 5 of the State Environmental Code. Order corrective measures and take necessary enforcement actions when Title 5 violations are found.*

Massachusetts General Laws, c. 111, §31 authorizes local boards of health to adopt septic system regulations equal to or more stringent than the State Environmental Code. This authority is recognized in the DEP regulations, 310 CMR 11.02 and 15.000(3)

Because large systems have a history of operational problems and high failure rates, the 1995 Code classifies as "significant threats" those that are located within 400 feet of water supply reservoirs, within 200 feet of reservoir tributaries, or within a nitrogen sensitive area. These systems must be replaced by treatment plants within five years of discovery, unless the owner demonstrates that the Massachusetts water quality standards are being met at the property boundary and in the receiving water. DEP may extend the deadline, under an enforceable agreement, if more time is needed to achieve a level of environmental protection that is at least equivalent to that provided by the DEP groundwater protection regulations, 314 CMR 5.00 and 6.00. (310 CMR 15.304(2)&(3))

³ Not part of meeting, but provided here as footnote for guidance:

Guidebook for Massachusetts Boards of Health 2006, Chapter 7: Sanitary Sewage Disposal, page 7-10:

Except where variances are specifically prohibited (310 CMR 15.415) and for schools, the health authority may vary the provisions of the Code when enforcement would be manifestly unjust and the applicant can prove that the proposed system design achieves the same degree of environmental protection as the Code

Only DEP may grant a variance for publicly or privately-owned elementary, middle or secondary schools, and the criteria differ from other variance applications. (310 CMR 15.416)

Patty asked if Kristin could repeat the triggers. Kristin stated that for new construction and rehabbed construction in Zone II, there is a limit, namely, the nitrogen loading rule of 440 gallons per day per acre. But for a school plus a gymnasium and cafeteria, the requirement is 20 gallons per day per person. Kristin further stated that at 581 students plus 100 staff multiplied by 20 gallons per person, the total comes to about 13,000 gallons. She said this calculation can be found in 310 CMR 15.203 and the nitrogen rule can be found in 310 CMR 15.2144

4. Developments of Regional Impact

Patty announced that initially, the Barnes Aviation Museum wanted to come talk about their project, but then Rob Levesque sent a note saying that he already knew what BAPAC's concerns would be so there is no need to attend a BAPAC meeting at this point in the planning.

5. Naming of New Treatment Plant in Westfield

Patty said she had received a call from Woody Darling requesting that BAPAC committee members consider sending a letter to the Water Commissioners to recommend that the new wastewater treatment plant at wells 7 and 8 be named after Barbara Swords. According to Woody, Patty reported that Ms. Swords was a founding member of BAPAC and that she had demonstrated great foresight in protecting the aquifer by being so active in BAPAC.

Bob underscored that it seems very appropriate to name the plant after Barbara and voiced support for a letter to the Water Commissioners. Others agreed and Patty asked if members had any comments that they would like to have included in the letter. Bob suggested saying that she was very vocal and active and Mary Ann said she was instrumental in getting defined the Zone II recharge protection area along the City's northwest border with Southampton, which includes Root Road. Patty said she would draft a letter and circulate for corrections before she finalizes. Mike called for a motion to draft a letter recommending that the new wastewater treatment plant be named after Barbara Swords.

Moved by Bob Newton, seconded by Tom Gaughan, to approve that a letter be sent to the Water Commissioners recommending that the new wastewater treatment plant be named after Barbara Swords and the motion was unanimously approved.

⁴ Not part of meeting, but provided here as footnote for guidance:

TITLE 5 PROGRAM'S GUIDANCE ON SYSTEM UPGRADES IN AREAS SUBJECT TO NITROGEN LOADING LIMITATIONS, Effective date: December 23, 1999, BRP/DWM/Watershed Permitting/Title 5 (Boston and Regional Offices)

Purpose: This policy provides guidance to Department staff and Boards of Health who act on applications for Title 5 system upgrades in areas subject to the nitrogen loading limitations of Title 5, 310 CMR 15.214. This policy addresses the issue of whether an innovative/alternative treatment technology approved by DEP to reduce nitrogen should be required for system upgrades in such areas.

Text: In 1995, the Department revised the Title 5 regulations. The resulting set of regulations provides for increased environmental protection in certain sensitive resource areas, such as areas that contribute to drinking water supplies.

Under the 1995 Code, the areas that are afforded increased environmental protection and subject to a 440 gpd per acre design flow limitation for new construction include the following: residential lots with on-site wells, interim wellhead protection areas, DEP approved Zone IIs of public water supply wells, and nitrogen sensitive embayments.

6. Aquifer Roundtable Planning

Patty reported that she and Bob were able to meet with the new Mayor of Easthampton, Nicole LaChapelle, that morning. Bob briefed the Mayor about the aquifer formation and its extension into Westfield, Southwick and West Springfield. Patty further reported that they spoke to the Mayor about hosting a roundtable of chief elected officials this spring to talk about several matters, including:

- updating the 1989 MOA to be more relevant and effective going forward, including attending to surface water supply concerns and well as groundwater supply objectives
- the need for additional funding to enable these endeavors

Mayor LaChapelle agreed to host the roundtable. The idea is that Bob would deliver a presentation about the aquifer followed by a discussion of the topics noted above that have been discussed in recent BAPAC meetings.

Patty suggested that the committee members devote a BAPAC meeting, maybe the March meeting, to plan what they will discuss at the Aquifer Roundtable meeting. Patty indicated that she will put some ideas together and then present a draft agenda to committee members.

Patty drafted an invitation for Mayor LaChappelle and shared with committee members for their feedback. Bob remarked that it is a good invitation but he suggested expanding our purview by saying that BAPAC is interested in all sources of water for cities and towns and not just ground water. Patty said she feels uneasy about such a broad scope with BAPAC's budgetary constraints but she replied that she would include that suggestion in the invitation. In addition to chief elected officials from current BAPAC communities, the roundtable may include the selectboard chair from Southwick and the Mayor of West Springfield, which are essentially drawing drinking water supply from the southern end of the same geological formation. It would be good to see if BAPAC's work going forward can attend to some of the issues in these other communities as well and possibly bring them into the membership fold.

7. Other Business

Geothermal Guidance - Patty noted that due to a lack of time at the last meeting, discussion of the geothermal information for the BAPAC website was tabled. She provided a document entitled *Draft Guidance for Geothermal Projects Proposed for the Barnes Aquifer Area*. Patty stated that the document contains some hyperlinks for resources and provides guidance at the top of the document in bulleted items. She asked the committee members if they wanted to recommend no open loop systems in the Zone II and the response was "yes." Patty indicated that another bullet would then be added saying that BAPAC does not recommend open loop systems in the Zone II.

Then Patty asked what their recommendation would be for the separation distances from private wells. Bob replied that he's neutral and the only thing to worry about is what's being circulated for antifreeze. Patty replied by reading the third bulleted item:

As an anti-freeze agent, propylene glycol provides the least health and environmental risk. Note that the use of methanol as an anti-freeze chemical is not allowed in Massachusetts. Patty noted that MassDEP reported that Connecticut well drillers might not know this. Patty asked if the systems could be constructed to not use antifreeze. Bob responded that he didn't know the cost for doing that and there are trade-offs. Patty asked if Bob would be using antifreeze at Smith College and he

replied that he will be using only water. Patty asked if the BAPAC members approved of the *Draft Guidance for Geothermal Projects Proposed for the Barnes Aquifer Area* document and the response was that they did and it could be distributed.

Solar projects guidance - Bob related that since Mayor Nicole Chappelle mentioned solar panels in today's meeting, BAPAC should update its material on solar panels. We may need more research before we make a recommendation, he noted. Patty replied that she will put solar panels on next month's agenda. Bob noted that Mayor Chappelle also mentioned runoff from the panels. Marla, who belongs to the Massachusetts Association of Conservation Commissions, reported that the MACC had a workshop on solar panels at one of their conferences. Bob said that there must be some scientific literature concerning solar panels and he volunteered to do some research so BAPAC members can be more knowledgeable about solar panels.

Grants - Patty announced that there's an opportunity to apply for a Western Massachusetts Community Foundation Grant for \$25,000 and the deadline is February 16th. Patty added that she has a call scheduled to discuss some of the ideas that have been discussed at recent BAPAC meetings. If a proposal moves forward for the deadline, Patty will need letters of support from the respective water departments. She indicated that she would send the committee members the letter and she asked them to return the signed letters to her.

Signs - Kristin reported that we have been discussing the idea of asking Westfield students for their ideas for signs because there is an event coming up next month. Kristin stated that she has put some requests into Artworks Westfield to hold a contest and maybe Six Flags might be willing to be a sponsor during National Groundwater Awareness Week, March 11-17. Kristin indicated that the National Groundwater Association has a curriculum that includes aquifers, groundwater and source protection written to common core and federal standards and available for various grade levels. Kristin asked Bob if he would attend The Massachusetts National Groundwater Foundation's Groundwater Awareness Week and give a presentation and he replied that he would.

Patty reminded the committee members about replacing BAPAC's current logo. The committee members had a short discussion about liking the drop of water sign on Route 141 and Patty suggested having a contest asking for submissions of a logo. Heather suggested having a contest during National Drinking Water Week in May. Patty asked Kristin if she was willing to be in charge of running the contest. Kristin said she would if no one else will. National aquifer association has its groundwater week in December

8. Next Scheduled Meeting Date: March 6th, 3:30 p.m.

Patty announced that the next BAPAC meeting is scheduled for March 6th, but for the BAPAC April 3rd Meeting, Patty said she will be out of the country traveling with other environmental colleagues to Uruguay and Peru. Patty added that she will arrange for a colleague to chair the April meeting.

Bob Newton made a motion to adjourn the Barnes Aquifer Protection Advisory Committee (BAPAC) at 4:55, seconded by Heather, and unanimously approved.