

Barnes Aquifer Protection Advisory Committee

**Report on Fiscal Years 2014 and 2015
(July 2013 to June 2015)**



Prepared by the
Pioneer Valley Planning Commission
in cooperation with
The Barnes Aquifer Protection Advisory Committee
December 2015

**BARNES AQUIFER PROTECTION ADVISORY COMMITTEE
(BAPAC)**

Fiscal Years 2014 and 2015 (July 2013 to June 2015) Annual Report
Prepared by the Pioneer Valley Planning Commission

Acknowledgements

The Pioneer Valley Planning Commission would like to acknowledge the contributions of Barnes Aquifer Protection Advisory Committee members:

Charles Darling, Westfield, Chair, FY2014 and 2015
Karen Leigh, Westfield, FY2014 and 2015
Jay Vinskey, Westfield, FY2014 and 2015
Michael Czerwiec, Easthampton, Vice Chair, FY2014 and 2015
Darleen Buttrick, Easthampton, FY2014
Robert Newton, Easthampton, FY2014 and 2015
Chester Seklecki, Easthampton, FY2014 and 2015
Jeff Burkott, Holyoke, FY2014
Dave Conti, Holyoke, FY2014
Andrew Smith, Holyoke, FY2014
Edward Cauley, Southamptn, FY2014
James Labrie, Southamptn, FY2014 and 2015
Joseph Slattery, Southamptn, FY2014
Tom Gaughan, Southamptn, FY2015
Randall Kemp, Southamptn, FY2015

PVPC Staff Credits

Writing and Research: Patty Gambarini, Senior Environmental Planner

This report and the work of BAPAC is funded through a contribution from the four member communities and the Pioneer Valley Planning Commission.

TABLE OF CONTENTS

Executive Summary	1
1. Introduction.....	2
2. BAPAC Accomplishments July 2013 to June 2015	6
3. Recommendations for Fiscal Year 2016.....	32
4. Proposed Budget for Fiscal Year 2016	35
Appendix A Ongoing Issues Affecting the Barnes Aquifer	
Appendix B Agendas and Meeting Notes	
Appendix C Developments of Regional Impact (DRI) Comment Letters	

Page intentionally left blank

Executive Summary

Summary of Accomplishments for Fiscal Years 2014 and 2015

BAPAC met monthly from September to June during Fiscal Years 2014 and 2015, commenting on 12 Developments of Regional Impact (DRIs) to support the implementation of best management practices for developments occurring within the recharge area. DRIs were from Easthampton (1), Southampton (2), and Westfield (9).

Other accomplishments include the following:

- Promoted improved aquifer protections by providing comments on City of Westfield's Water Resources Zoning Ordinance update
- Facilitated understanding of proposed new Water Management Act Regulations under the Sustainable Water Management Initiative and provided comments on draft regulations to MassDEP
- Worked with City of Easthampton to inform and support best practices on irrigation wells
- Promoted understanding about geothermal wells and potential recommendations to boards of health for such wells that will help protect drinking water supply
- Produced and distributed to boards of health and local media brochure on best practices for property owners
- Updated maps for the BAPAC website
- Continued to advance efforts to protect a high priority parcel for drinking water supply protection in Southampton that is of significant interest to the Easthampton Water Department

Recommendations for Fiscal Year 2016

BAPAC should continue to promote regional action for protecting inter-municipal water resources. For FY2016, the three key overarching areas of work are: reducing threats to the aquifer, public outreach and education, and extending work and developing additional funding sources. Following are tasks in priority order for FY2016

1. Continue to conduct reviews of Developments of Regional Impact (DRIs)
2. Facilitate sharing of information as communities prepare for Water Management Act permit renewals with the new Sustainable Water Management Initiative (SWMI)
3. Support current work by Winding River Land Conservancy to protect 30 acres on Cook Road in Southampton
4. Provide guidance on geothermal regulations to local boards of health
5. Seek funding for 3 projects:
 - video on Aquifer and best practices for drinking water supply protection

- storm drain labels
 - printing brochure for distribution within schools
6. For website, post brochure of best practices for property owner, agendas and meeting notes, and links to consumer confidence reports

1. Introduction

Importance of the Barnes Aquifer

The Barnes Aquifer has been widely recognized as one of the Commonwealth's most important regional groundwater supplies. Portions of the aquifer in Easthampton have been designated a "sole source aquifer" by the U.S. Environmental Protection Agency.

- The Aquifer extends from the Westfield River northward over 12 miles to Northampton
- It provides water to more than 60,000 residents and many businesses, industries and institutions in the communities of Easthampton, Southampton and Westfield (Holyoke no longer draws water from the Aquifer due to TCE contamination at its wells).¹
- There are 11 active municipal wells, and the 108 unit Hendrick Street Well Field in Easthampton that tap the regional aquifer
- Together these wells draw a total of 1.2 billion gallons per year

Regional Approach to the Barnes Aquifer

The size, importance, and inter-municipal geography of the Barnes Aquifer demands regional cooperation and regional solutions to fully protect this critical water supply. Recognizing this, the PVPC and municipal officials from Easthampton, Holyoke, Southampton, and Westfield convened an initial meeting in March of 1988 to discuss cooperative strategies for protecting the Barnes Aquifer. Out of this meeting grew the idea for creating a regional aquifer protection advisory committee.

On September 26, 1988, the Barnes Regional Aquifer Protection Advisory Committee held its first meeting. This ad hoc committee began work on a regional water supply protection strategy, and on an inter-municipal compact to formalize municipal commitments to implement the strategy.

¹ The City of Holyoke closed the Pequot and Coronet Homes Wells in 1988.

Table 1.1: Barnes Aquifer Service

	Number of registered/permited wells*	Listed with DEP as active?	Safe Yield (MGD)	Max Single Day Volume	Annual Withdrawal	Number days well active	Number of People Served	Number of private wells
Easthampton	5 registered; 1 permitted						16,053	5 est.
	1087000-04G Hendrick Well Field	yes	1.195	1,335,800	190,523,400	364		
	1087000-05G Pines Well	yes	1.008	238,800	16,363,800	364		
	1087000-06G Nonotuck Road Well	yes		0	0	0		
	1087000-08G Nonotuck Park Well	yes	1.138	1,526,400	230,330,800	348		
	1087000-09G Brook Street Well (permitted)	yes	1.6992	377,400	94,704,200	363		
	1087000-07G** Maloney Well	yes	1.454	42,000	138,000	4		
Holyoke	2 registered wells							15 est.
	01G	no						
	02G	no						
			Approved Daily Pumping Volume (MGD)					
Southampton	2 permitted						3,688	800 est.
	1276000-01G	yes	.792	0	0	0		
	1276000-02G Glendale Well 2	yes	.792	660,000	119,984,646	365		
Westfield	4 registered wells						42,000	750 to 1,000
	1329000-01G	yes	2.002	2,060,000	18,320,000	50		
	1329000-02G	yes	2.002	1,740,000	47,990,000	97		
	1329000-07G	yes	2.002	2,590,000	297,329,000	224		
	1329000-08G	yes	2.002	1,920,000	164,920,000	145		

* Registered wells operate under a 100,000 gallon per day (gpd) threshold.

** This well is not in compliance with MA Wellhead Protection Regulations 310 CMR 22.21(2) because the Zone II of this well is not included in the City's Aquifer Protection District Map

Sources: Public Water Supply Statistical Report (Southampton, Easthampton, and Westfield 2014)

Creation of the Barnes Aquifer Protection Advisory Committee

In December 1989, the chief elected officials in the Cities of Westfield and Holyoke, the Towns of Easthampton and Southampton, and the Pioneer Valley Planning Commission signed the “Memorandum of Agreement for Barnes Aquifer Protection” at a public ceremony. This agreement to act cooperatively to protect a natural resource of regional significance was the culmination of a yearlong planning effort by PVPC and a voluntary advisory task force of local officials and residents. The intergovernmental compact created a standing Barnes Aquifer Protection Advisory Committee (BAPAC) with the authority to review and comment on “developments of regional impact” in the aquifer recharge area, and to develop a regional aquifer protection strategy.

Barnes Aquifer Protection Advisory Committee Membership

The inter-municipal contract that created BAPAC specifies how many members are selected to the committee. The chief elected officials of each member community is to appoint three representatives and PVPC is to appoint one representative. In FY2015, Holyoke temporarily suspended its membership due to a \$4.5 million budget shortfall. BAPAC members for Fiscal Year 2014 and 2015 were:

Easthampton	Darleen Buttrick, Resident (FY2014) Michael Czerwiec, Water Department (FY2014 and 2015) Chester Seklecki, Board of Health (FY2014 and 2015)
Holyoke	Jeff Burkott, Planning Department (FY2014) Dave Conti, Water Department (FY2014) Andrew Smith, Conservation Commission (FY2014)
Southampton	Edward Cauley, Department of Public Works (FY2014) James Labrie, Planning Department (FY2014 and 2015) Joseph Slattery, Water Department (FY2014) Tom Gaughan, Southampton (FY2015) Randall Kemp, Southampton (FY2015)
Westfield	Charles Darling, Water Department (FY2014 and 2015) Karen Leigh, Conservation Commission (FY2014 and 2015)
Advisor	Robert Newton, Professor of Geomorphology, Smith College
Pioneer Valley Planning Commission	Patty Gambarini, Senior Environmental Planner, BAPAC Facilitator

Meetings

BAPAC met monthly from September 2013 to June 2015. Following is a brief summary of BAPAC meeting dates and key agenda items. Notes from BAPAC meetings are contained in Appendix B.

Table 1.2: Monthly Meeting Summary, Fiscal Years 2014 and 2015

Date	Key Agenda Items
August 21, 2013	FY2014 Work Plan and permitting new agricultural wells in Easthampton
September 10, 2013	DRIs and FY2014 Work Plan
October 1, 2013	DRI (revisited from June 2013), geothermal considerations in the Zone II, and FY2014 Work Plan
November 5, 2013	DRI (revisited from September 2013), Barnes Air National Guard activities, and FY2014 Work Plan
December 3, 2013	Presentation by MassDEP's Duane LaVangie on Sustainable Water Management Initiative changes to Water Management Act (SWMI)
January 7, 2014	DRI, storm drain labeling, SWMI
February 4, 2014	SWMI, maps, land protection
March 4, 2014	Revisions to water resource protection district bylaw in Westfield, SWMI, maps, joint letters with boards of health, land protection
April 1, 2014	DRI, SWMI, land protection, outreach
May 6, 2014	SWMI, land protection, brochure
May 21, 2014	Review SWMI draft regulations for comment
June 3, 2014	Not held due to lack of attendance.
August 5, 2014	DRIs, FY2015 Work Plan
September 16, 2014	DRI, SWMI grant, FY2015 Work Plan, video project
October 7, 2014	DRIs, Revisions to water resource protection district bylaw in Westfield, waiver application for irrigation well in Easthampton, and West Springfield consideration of joining BAPAC
November 4, 2014	Revisions to water resource protection district bylaw in Westfield, land protection, SWMI regulations, waiver application for irrigation well in Easthampton
December 2, 2014	DRIs, land protection
January 6, 2015	DRIs, land protection
February 10, 2015	Land protection, video, geothermal information, website
March 3, 2015	DRI, land protection, video, geothermal information
April 7, 2015	Hampton Ponds projects in Westfield, land protection, video, geothermal information
April 14, 2015	Geothermal with MassDEP's Joseph Cerruti
May 5, 2015	Meeting cancelled
June 2, 2015	DRIs, salt study, land protection, video, geothermal information

2. BAPAC Accomplishments July 2013 to June 2015

The following section summarizes the key issues BAPAC addressed and the accomplishments during Fiscal Years 2014 and 2015. Work in these fiscal years has been focused under two specific categories:

- Reducing Threats to the Aquifer
- Public Education and Outreach, and

Reducing Threats to the Aquifer

Developments of Regional Impact (DRI)

DRIs are defined as any development project that requires:

- a) state approval under the Massachusetts Environmental Policy Act (MEPA) process, or
- b) local approval for a Special Permit, Site Plan Approval, Subdivision Approval, zoning amendment, or withdrawal of property from M.G.L. Chapters 61, 61A, or 61B

In its reviews, BAPAC assesses the potential for water pollution or other adverse impacts to the aquifer from the proposed project and recommends mitigating measures to prevent such impacts.

Municipal representatives in member communities are obligated to submit DRIs to BAPAC for review. This obligation is defined in the Memorandum of Agreement for Barnes Aquifer Protection signed by the chief elected official in each member community. BAPAC sent a letter to planning directors and planning boards in 2012 to reinforce an understanding of BAPAC's role with respect to DRIs.

During Fiscal Years 2014 and 2015, BAPAC reviewed and commented on 12 DRIs, including 1 from Easthampton, 2 from Southamptton, and 9 from Westfield.. See Table 2.1 below for a list of these DRIs, a summary of the major issues, and BAPAC's recommendations. Appendix C contains copies of the DRI comment letters from BAPAC submitted for these projects.

Given the new standards within the Water Management Act that impact water use, BAPAC members are increasingly interested in reviewing development proposals that involve entities with higher water uses. Though these projects may be physically located outside of the Zone II (and therefore not currently subject to BAPAC review), these developments have significant bearing on the health and future of the Aquifer. Such recent projects have included several breweries and explorations by large corporations, including Niagara Bottling.

Table 2.1: Fiscal Years 2014 and 2015 DRI Reviews

DRI / Date	Name of Project and Location	Owner/ Developer	Project Representative	Issues / Requested Info / Actions
Easthampton				
October 10, 2013 and October 7, 2014	Hampton East Condominiums Development			Condominium Association submitted request for variance to well regulations to allow for irrigation well. Mike Czerwiec reported that the Board of Health is leaning toward allowing an irrigation well as they seem to feel some obligation to allow this type of well. Mike noted that Section 6-4c of the Board of Health regulations, however, is clear that there is no obligation. He will attend next Board of Health meeting. It is critical for them to realize that 16,000 people in the City rely on the aquifer for drinking water. Furthermore, this request for a variance does not represent a "hardship" as there are other approaches to establishing an aesthetically pleasing landscape. Patty noted that BAPAC has been clear about its opposition to irrigation wells with the October 2013 letter sent to Health Director Jackie Duda. No additional letter issued.
Southampton				
September 10, 2013	Pleasant Meadow Estates, Pleasant Street	Chester and Susan Kellogg	Mark Reed, Heritage Survey	Project involves 10-lot subdivision with each home on minimum lot size of 40,000 square feet. Project area involves total of 30 acres. Not yet decided whether Town or homeowners association will take ownership of open space set aside. Project will be on town water, but all properties will have septic systems. For stormwater drainage, plan calls for two stormwater leaching basins, one basin to the north of Lot 1, and another to the west of Lot 5. Storm runoff from front roofs, driveways, and roadways will drain to series of 9 catch basins. Five catch basins drain to the basin to the north of Lot 1, and four drain to the basin to the west of Lot 5. Design of two leaching basins is similar: stormwater will flow into a forebay and then flow over a rip rap berm into basin itself where there will be a series of 5 leaching galleys with 3 catch basin grates. Basin will be loamed and seeded with grasses. Homeowner's association will be responsible for maintenance.

DRI / Date	Name of Project and Location	Owner/ Developer	Project Representative	Issues / Requested Info / Actions
				<p>Based on questions from BAPAC members, additional information included:</p> <ul style="list-style-type: none"> ▪ Stormwater will reach inlet of leaching galley at 100-year design storm ▪ Borings to 12 feet encountered no groundwater ▪ Planning Board recommending leaching galleys because concerned about lack of infiltration during frozen conditions ▪ Will have covenant for lawn care that prohibits the use of chemical fertilizers and pesticides ▪ Also will have covenant to prohibit installation of garbage disposals <p>Seven recommendations from BAPAC:</p> <ul style="list-style-type: none"> ▪ Eliminate direct infiltration by removing the leaching galleys in the infiltration basins. Members are concerned that direct infiltration provides greater risk of groundwater contamination. ▪ Between the catch basins and the leaching basin forebays, add a swirl separator that can achieve 80% TSS removal. Ensure that the unit receives regular maintenance as there are often high failure rates due to lack of maintenance. ▪ Add an emergency shut off valve on the pipe draining to each of the leaching basins to isolate the basins from drainage in the event of a spill ▪ Label catch basins to remind residents, “No Dumping – Drains to Aquifer” ▪ Controls should include minimizing compaction of soils, especially in infiltration basin areas during construction so as to ensure that basins function properly once they are on line ▪ Ensure that there is a covenant that prohibits the use of chemical fertilizers and pesticides on lawns ▪ Ensure good operations and maintenance plan for proper care of storm system by homeowner’s association

DRI / Date	Name of Project and Location	Owner/ Developer	Project Representative	Issues / Requested Info / Actions
	Western View Estates	Triple Seven LLC	Mark Reed, Heritage Survey	<p>Project does not entail cluster arrangement, but will leave 2.9 acres as open space along the Town’s proposed Labrie Field property. Will return with definitive subdivision plan, but seeking BAPAC input at preliminary plan stage. Project involves 3 ANR lots and a 13-lot subdivision, all lots for which are greater than 40,000 square feet. Stormwater from roofs, drives, and roadway will drain to 8 catch basins along street edge and be piped to a stormwater basin using a design similar to that proposed for the Pleasant Meadow Estates project.</p> <p>Seven recommendations from BAPAC (same as Pleasant Meadow Estates project):</p> <ul style="list-style-type: none"> ▪ Eliminate direct infiltration by removing leaching galleys in infiltration basins. Direct infiltration provides greater risk of groundwater contamination. ▪ Between catch basins and leaching basin forebays, add a swirl separator that can achieve 80% TSS removal. Ensure that the unit receives regular maintenance as there are often high failure rates due to lack of maintenance. ▪ Add an emergency shut off valve on the pipe draining to each of the leaching basins to isolate the basins from drainage in the event of a spill ▪ Label catch basins to remind residents, “No Dumping – Drains to Aquifer” ▪ Controls should include minimizing compaction of soils, especially in infiltration basin areas during construction so as to ensure that basins function properly once they are on line ▪ Ensure that there is a covenant that prohibits the use of chemical fertilizers and pesticides on lawns ▪ A good operations and maintenance plan will be critical to the proper care of the storm water system by the homeowner’s association

DRI / Date	Name of Project and Location	Owner/ Developer	Project Representative	Issues / Requested Info / Actions
November 5, 2013	Western View Estates	Triple Seven LLC	Mark Reed, Heritage Survey	<p>Plan now calls for 12 lots, down from 13, and a shorter road. Drainage will move from deep sump catch basins with hoods to a C900 Stormceptor unit to a forebay and then into the infiltration basin. Per BAPAC's earlier comments on the project, there are now no leaching galleys in the infiltration basin. C900 unit is larger and easier to clean out than the C400 unit. From the infiltration basin, there could be overflow to a down gradient field. Question as to whether the location of the inlet directly across from the opposite berm of the basin might produce a washout of the berm during high flows. Project proponent indicated that with just a 1/2% slope and lots of space from inlet to berm that a washout is not likely.</p> <p>Homeowners Association will be responsible for maintaining the storm system, though Town will likely clean Stormceptor and catch basins, and charge cost to Homeowners Association. Question from BAPAC about success in Homeowners Association management of stormwater systems.</p> <p>No plans for emergency shut off valve before infiltration basin. Heating in subdivision will be by natural gas and not oil. Also, concern is that in the event of emergency no one aware of valve location. BAPAC recommended catch basins be labeled so residents know not to dump.</p>
Westfield				
October 1, 2013	Indian Motorcycle Sales, 962 Southampton Road	Denis Bolduc		<p>It was noted that when this project came before BAPAC during June 2013 meeting, the project proponent Denis Bolduc had indicated there would be no motor vehicle servicing or fueling. Now it appears, based on notes from the Westfield City Council meeting that this may not be the case. BAPAC stated in its July 26 letter to Council President Brian Sullivan, "As part of the plan, it will be critical to ensure that all motorcycles are stored inside the building and no vehicle maintenance or fueling occurs on site." Notes from the City Council meeting indicate that there may be indoor servicing of vehicles. This is not an allowable use under Westfield's Water Resource Protection Area zoning overlay. Members agreed that as an advisory group, BAPAC does not have much recourse at this point.</p>

DRI / Date	Name of Project and Location	Owner/ Developer	Project Representative	Issues / Requested Info / Actions
January 7, 2014	Whip City Aviation, 110 Airport Road	Whip City Aviation	Rob Levesque of R. Levesque Associates	<p>Proposal entails developing a 7,350 square foot hangar building. The hangar will house 6 “T” hangars to accommodate small general aviation aircraft. New facility will be part of a 30-year lease with the City for airport property that includes 5 existing buildings and several existing hangars that will be rehabilitated. The new hangar will be slab on grade and made of prefabricated steel and aluminum. Site improvements will include bituminous driveways and taxiway that will disturb 29,947 square feet of land.</p> <p>Applicant showed <i>preliminary plan</i> for the project and said stormwater from site will flow to stormceptor unit for pretreatment and then outlet to a basin for infiltration. Inlet will be equipped with an emergency shut off valve. The basin, to be designed for the 100-year storm, will overflow to a flat grassy area on the property, according to Mr. Levesque.</p> <p>Four recommendations from BAPAC:</p> <ul style="list-style-type: none"> ▪ Curb all bituminous surfaces so that in the event of a spill, contaminated material can be contained on impervious area and not move into stormwater system ▪ Ensure that there are clear provisions for proper disposal of fuel sump drainage generated during pre flight preparations – typically this is less than 1 cup of fuel, but there is a cumulative impact to improper disposal ▪ If floor drains are required, ensure that they are tied into the City sewer system (and not routed to holding tanks) ▪ Ensure that there is a clearly articulated Emergency Spill Response Plan that addresses how plan itself will be maintained and updated over time and who will have that responsibility. Spill response practices should include regular testing of valve shut off procedures as well as containment of spills so that fuel remains on the bituminous surfaces and does not reach the stormwater system.
April 1, 2014	Barnes Regional Airport - Repave Taxi Lanes around	Brian Barnes	Alex Bernier, Stantec	Proposal involves taxi way reconstruction funded in part by MassDOT and the City of Westfield. Project will add almost 1 acre of increased impervious area to current taxi way area. The project is exempt from

DRI / Date	Name of Project and Location	Owner/ Developer	Project Representative	Issues / Requested Info / Actions
	T-Hangars			<p>stormwater permit or site plan review requirements. Increased paved area is due to FAA requirements for offset distances from buildings to ensure wing tip clearance.</p> <p>Taxi lanes currently service approximately 20 single engine aircraft and stormwater drainage sheet flows to adjacent grassy areas. With proposed reconstruction, drainage along eastern edge of project site would continue to sheet flow. Drainage from central taxi area of project site would be routed to a catch basin that is connected to a 10 x 200 foot long infiltration trench along northwest boundary of project site. At north east corner of project site, drainage would flow directly to a 6 by 85-foot infiltration trench. At southern end of the project site, drainage would flow directly to a 4 by 100-foot long infiltration trench.</p> <p>BAPAC concern about direct connection between catch basin and drywell since no means of disconnections or shut off should spill occur. BAPAC cited Massachusetts Stormwater Handbook guidance in using stormceptor in such situations within Zone II. Applicant said that currently all stormwater is sheet flowing from paved area and that a challenge to gather flow at a central point due to flatness of site. BAPAC reiterated need for some pretreatment before infiltration.</p> <p>Also discussion about 16-inch water main that passes under construction area. BAPAC recommended precaution be taken to keep line from breaking.</p> <p>Five recommendations from BAPAC:</p> <ul style="list-style-type: none"> ▪ Pretreat all stormwater before it moves into infiltration trenches to ensure the continued ability of the trenches to infiltrate over the long term. ▪ Curb bituminous surfaces so that in the event of a spill, contaminated material can be contained on the impervious area and not move into the stormwater system. ▪ The treatment system should include a gate valve before all of the infiltration facilities so that in the event of a spill these valves

DRI / Date	Name of Project and Location	Owner/ Developer	Project Representative	Issues / Requested Info / Actions
				<p>can be turned off to prevent the spill from reaching the trenches.</p> <ul style="list-style-type: none"> ▪ Ensure that there is a clearly articulated Emergency Spill Response Plan that addresses how the plan itself will be maintained and updated over time and who will have that responsibility. Spill response practices should include regular testing of valve shut off procedures as well as containment of spills so that fuel remains on the bituminous surfaces and does not reach the infiltration trenches. ▪ Operation and maintenance should include use of winter deicing materials that will not harm groundwater sources.
August 5, 2014	Golden Acres Estates, Old Long Pond Road		Mark Reed, Heritage Survey	<p>11-lot preliminary subdivision plan involves lots at least 2 acres in size. All drinking water will come from private wells and all wastewater will be treated by septic systems. Several elements of project arise out of a Land Court litigation settlement memorandum of agreement. As part of MOA, City Planner and Engineer will recommend to Planning Board among other things the following:</p> <ul style="list-style-type: none"> • Proposed roadway with a 50-foot right of way and a paved width of 20 feet • Waiver for underground utilities • Passive stormwater management in compliance with MassDEP standards <p>Passive stormwater management to include grass swales along roadway. Because this is a preliminary subdivision application details are not yet defined. July 10 letter to Planning Board from applicant requests waiver on Stormwater Management Permit.</p> <p>BAPAC major recommendation to Planning Board: do not waive Stormwater Management Permit. Permit process provides important controls that help to safeguard drinking water supply during and post construction. These include reviewing stormwater management methods and appropriateness to the site and the Zone II area, promoting good construction practices, and ensuring there is good</p>

DRI / Date	Name of Project and Location	Owner/ Developer	Project Representative	Issues / Requested Info / Actions
				<p>operations and maintenance plan in place for the homeowner's association.</p> <p><i>October 7, 2014 - e-mail communication from Mark Reed</i> Indicated that the only change from BAPAC's review in August is that all lots are now 2 acres or more. BAPAC's comments were already sent in August 18th letter to planning board. Stormwater system detail will come with definitive plan for BAPAC to review at later date.</p>
	1056 North Road (Old 49er Site)	Emanuel Sardinha	Rob Levesque of R. Levesque Associates	<p>Project applicant came to describe proposal to BAPAC to get preliminary sense of concerns. Parcel is zoned commercial, but has been vacant for about 20 years. Development is constrained because lot is less than 2 acres and located within the Zone 2. Applicant had talked with ZBA about variance, but may instead wait until City updates zoning regulations for the Water Supply Protection District.</p> <p>BAPAC concern at this point is that exception for commercial development on lots that do not meet 2-acre lot size requirement will create a "slippery slope" whereby larger properties start trying to make the case for subdividing to lot sizes that are less than 2 acres.</p>
September 16, October 7, November 4 2014;	Westfield Water Resources Zoning Update	City of Westfield		<p><i>Proposed changes to Westfield Water Resource Protection District Zoning was discussed at several BAPAC meetings. See separate narrative for this below under section, entitled: Westfield Water Resources Zoning Update on page 19</i></p>
December 2, 2014	Roots Athletic Center, Roots Road	Sage Engineering	Frank DeMarinis, Ben Hildebrand	<p>Roots Gymnastics Center recently sold, but Sage Engineering still owns aquatics center. Now seeking to develop 13-acre parcel to south of gymnastics center on Roots Road. Last piece of developable land based on negotiation with Natural Heritage, which is seeking to protect turtle habitat. Soils are medium to coarse sand and are fast draining (percolating in 3 minutes). There is bordering vegetated wetlands to East and river to north. Work will reportedly occur outside of resource areas.</p>

DRI / Date	Name of Project and Location	Owner/ Developer	Project Representative	Issues / Requested Info / Actions
				<p>Proposal involves constructing: 87,000 square foot metal building to house 3 indoor 100x200 soccer fields; 2 outdoor artificial turf playing fields; and 193 parking spaces (includes 35 overflow parking spaces). Drainage will be directed to infiltration basin at northeastern corner of site. This area will receive drainage from roof, all parking areas, sidewalks, and yard drains within fields. Front parking area, which will be paved and curbed, has 2 deep sump, hooded catch basins that direct flow to Stormceptor unit. Just beyond Stormceptor unit, there is emergency shut off valve for use in case of a spill in front parking lot to keep contaminated flow from the infiltration basin.</p> <p>Additional information based on BAPAC member concerns:</p> <ul style="list-style-type: none"> ▪ No fill brought in from off site ▪ Outdoor fields will involve synthetic turf with an 8-inch gravel base, 2-inches of 1/8" stone ▪ Turf layer will include black rubber beads ▪ Fields will be crowned in center and flow to yard drains ▪ There are no recommendations for fertilization of landscaped areas, only mowing <p>BAPAC concerned with use of artificial turf, and particularly crumb rubber that is typically used. Connecticut DEP completed study in 2010 that indicates potential risk to surface waters and aquatic organisms associated with stormwater runoff from artificial turf fields. From study, also appears that artificial turf fields hosed down to provide cooling on hottest days of summer. This runoff could also be of concern.</p> <p>BAPAC's 5 recommendations:</p> <ul style="list-style-type: none"> ▪ Conduct annual groundwater monitoring in location of

DRI / Date	Name of Project and Location	Owner/ Developer	Project Representative	Issues / Requested Info / Actions
				<p>infiltration basin and provide reports to Westfield and Southampton Water Departments. Monitoring well should be sited and sampled in consultation with Westfield Water Department. Establishing parameters for monitoring should also be done in consultation with Westfield Water Department.</p> <ul style="list-style-type: none"> ▪ Ensure that pipes carrying drainage from artificial turf fields have solid walls and <u>are not</u> perforated. ▪ Pave and curb <u>all</u> parking areas and provide system of drainage that includes directing flow to catch basin(s) to stormceptor and to emergency shut off valve before storm pipe system that leads to infiltration basin. ▪ Stipulate that no synthetic chemical fertilizers or pesticides be used in near term or long term for any landscaping work on site. Also for winter de-icing use ecologically friendly alternatives to sodium chloride. ▪ Ensure that there is good operations and maintenance plan to provide proper care for stormwater management system, including regular cleaning of catch basins, Stormceptor, and sediment forebay, and regular testing of emergency shutoff valve(s). BAPAC members have witnessed a high failure rate of Stormceptor units in particular due to lack of maintenance. <p>Letter of response from applicant notes that the developer will coordinate with the Westfield Water Department and/or BAPAC after a synthetic turf field product is selected. Committee members had no additional comments on the project.</p>

DRI / Date	Name of Project and Location	Owner/ Developer	Project Representative	Issues / Requested Info / Actions
	0 Dox Road	Gerald E. Tracy	None	<p>Based on request from Westfield’s Water Department, BAPAC reviewed petition from Gerald E. Tracy to the Zoning Board of Appeals. Mr. Tracy was not present at the meeting, but BAPAC members had public hearing notice and zoning application in hand. Applicant is seeking variance from 2- acre lot area requirement to create up to 8 building lots at 0 Dox Road. Proposal involves subdividing a 7.32 acre parcel into either: 8 lots with an average .9 acres each; or 4 lots with an average of 1.8 acres each.</p> <p>BAPAC recommendation:</p> <ul style="list-style-type: none"> ▪ Deny waiver as there is no reason to increase housing density in the Zone II under this request ▪ 2-acre minimum lot size requirement set to specifically reduce density over the Zone II and protect drinking water supplies for the long term ▪ Based on M.G.L. Chapter 40A, Section 10 this request does not meet the requirements of a variance. (Three conditions that must be met for a variance: 1. soil conditions, shape or topography are unique to particular property and don’t affect the rest of the properties in that district; 2. substantial hardship (court cases have ruled that the “substantial hardship” cannot be self-created nor involve problems of increased cost or lost money); 3. not a detriment to the public good and will not nullify or derogate from the intent and purpose of the subject ordinance <p><u>Outcome:</u> Zoning Board of Appeals granted variance from the City's 2-acre lot minimum in the Zone II, enabling the developer to subdivide a 7.32 acre parcel into 4 lots with an average of 1.8 acres each. Patty noted that BAPAC's letter recommending denial of the waiver, included the three conditions from state law that must be met for a variance to be granted. ZBA members reportedly did not take note of these conditions in its granting of the variance. Patty suggested that</p>

DRI / Date	Name of Project and Location	Owner/ Developer	Project Representative	Issues / Requested Info / Actions
				BAPAC think about outreach and education on drinking water supply protection for ZBA members in Barnes Aquifer communities for next year's work plan...perhaps roundtables with other town boards as well.
June 2, 2015	219 Russellville Road	Con Edison Development, Mark Chrisos	Michael Gagnon, Milone & MacBroom	Conceptual solar project in early stages of planning. Came to BAPAC for guidance. No letter submitted at this early stage of project.

Reducing Threats to the Aquifer (continued)

Aquifer Land Conservation Program

The protection of important aquifer recharge land has been a longstanding goal of the committee. Through a process that began in FY2011, BAPAC began identifying priority lands for conservation.

Among these priority lands is a 30-acre parcel on Cook Road in Southampton near Broad Brook that is of key interest to the Easthampton Water Department. BAPAC has been working since March of 2014, starting with conversation with land owners, exploring interests with Mass DCR, Mass Fish and Wildlife, and preparing materials for various potential funding sources, including the Massachusetts Drinking Water Supply Protection program and Community Preservation Committees in Southampton and Easthampton. Winding River Land Conservancy has also been involved in this process, providing funding for appraisals, negotiating with the landowner on timetable. More recently Winding River has stepped up to more actively help in negotiating and resolving the relative values and interests to be held by each of the municipalities. This piece of work has proved beyond the capacity of BAPAC to complete so more active involvement from Winding River is very welcome.

The time invested and difficulty of the Cook Road land protection effort has made clear that BAPAC ought to find ways to work more effectively with the local and regional land trusts. It makes sense going forward to be clear that BAPAC can play a supporting role, but a land trust must take the lead.

Westfield Water Resources Zoning Ordinance Update

In 2007 BAPAC provided recommendations for the City of Westfield to update the ordinance for the Water Resource Protection District. This was part of an effort to help all BAPAC communities improve water supply protection. At the request of the City, BAPAC updated these recommendations in December 2013 so that any changes would be current with MassDEP requirements and provide improved protection.

Proposed City changes to the ordinance in early 2014, however, were not entirely in keeping with BAPAC recommendations. BAPAC devoted portions of several meetings (September 16, October 7, and November 4, 2014), and staff time to reviewing proposed ordinance language through several iterations based on a request from the City Council Natural Resources Committee. BAPAC issued final recommendations in a December 2014 letter urging the City Council to revise several points:

- 1. Promote clear understanding of the Zone I and Zone II with definitions at the top of the ordinance in Section 3-170.4 with the other definitions*

2. Clarify language about what triggers a special permit based on impervious surface under 3-170.7 (1a) to read:

site modification resulting in an increase in impervious surfaces, provided it adds more than 2,500 square feet to the lot or causes more than 15% of the entire lot area to be impervious surface...(underlines are additions)
3. Be more specific about impervious trigger for special permit for single and two-family residential use in 3-170.7 (1b). For a typical 2-acre residential lot to be 15% impervious, an applicant would need to create 13,068 square feet of impervious area, while 2,500 square feet is only 3% of impervious. Perhaps make this trigger consistent with language suggested in consideration #2 above.
4. Examine whether it is possible to have a maximum 65% of impervious cover on a site as indicated in 3-170.8 (2) and also meet forthcoming MS4 permit requirements, particularly 2.3.6, a,ii (a) 1 and 2 as described in the 2014 draft permit. This analysis should also take note of the new Water Management Act regulations that will require mitigation, including impervious cover reductions, should the City of Westfield seek to expand current withdrawals at existing wells or create a new well.
5. Fix language in Performance Standard (3-170.11) about impervious and recharge to read:

Any land use resulting in ~~the greater of~~ 2,500 square feet per lot or 15% of the entire lot area ~~as~~ to be impervious shall provide a system of artificial recharge ~~of~~ that will not result in the degradation of groundwater quality.

BAPAC also noted in this letter that there is still great concern among members,

... by eliminating the 2-acre minimum lot size for non residential uses (as shown in 3-170.8(1), Westfield could be opening the door for future subdivisions of land that include substandard lot size. The 2 acre minimum was specifically put into place to reduce development density over the Zone II in order to protect drinking water supply for the long term. Why make this exception now? Members are somewhat heartened by the inclusion of the November 17, 2014 cutoff date for such properties within the proposed ordinance language and from indications from the City Planner that this exception as written applies only to 6 lots within Westfield.

As the ordinance provisions moved through City Council, BAPAC members were further concerned with additional changes. A note to City Councilor Mary O'Connell read as follows:

At the BAPAC meeting this past Tuesday, it was brought to our attention by Mary Ann Babinski that there are more recent additional changes to Westfield's Water Resource Zoning ordinance. Committee members asked me to write you on behalf of BAPAC about several specific concerns that they noted in advance of the City Council's deliberations tonight:

1. Exceptions for "aircraft related activities" and "aviation fuels" in Section 3-170.5 Prohibited Uses numbers 4 and 5 are very concerning, particularly since the City's Well #7 located down gradient of the airport is now showing a contaminant that comes from airport activities. Please note that there are also some private wells used for drinking water supply in this same area. It seems that given the great potential for contamination from these activities already showing up in the well, there should be no exemption.

2. BAPAC members are also concerned that the maximum impervious cover on a lot has now been pushed up to 70% under 3-170.8 (2). You likely know the importance of recharge to the Aquifer and impervious cover seriously limits recharge. The higher the impervious, the less recharge for drinking water supply. Also we had previously noted that this allowance for such high impervious cover also is working counter to 2 important regulations:

- New Water Management Act regulations require mitigation, including impervious cover reductions, should the City of Westfield seek to expand current withdrawals for drinking water at existing wells or create a new well.*
- The forthcoming federal stormwater management permit requires that stormwater management systems on new and re-developed sites be designed to, "retain the first one-inch of runoff from all impervious surfaces on site." Is it possible to have 70% impervious and retain the first inch of rainfall?*

Finally, we want to be sure that the ability to require appropriate groundwater management, including the installation of groundwater monitoring wells and regular testing is not weakened. We noted that this provision has been removed from 3-170.9 Special Permit Additional Requirements. There is still language under 3-170.10 Special Permit Additional Procedures, but language in the 2-18-15 version seems to be a bit confused. Here it is as it was written in the 9-12-2014 version:

All projects shall be reviewed by the Permit Granting authority as to the potential for groundwater contamination. If the Permit Granting Authority after consultation with the Board of Health, Water Commission or any other entity that deems appropriate determines that the project use has potential to pollute groundwater, it shall prescribe and appropriate groundwater management program. This program may include the installation of groundwater monitoring wells and a regular testing procedure. The Permit Granting Authority reserves the right to withhold any and all permits until such groundwater management programs have been approved.

Permitting Irrigation Wells

BAPAC members talked on two occasions (June and August of 2013) with Easthampton's new Health Agent Jackie Duda about permitting irrigation wells. She said that up until now, there have essentially been no irrigation wells allowed, but she has now had several requests in the past year. She planned to develop well regulations that provide good guidance for development of irrigation wells. She will pass draft well regulations by BAPAC for feedback.

Ms. Duda requested that BAPAC members put recommendations from the two meetings in writing. The following are major points from the letter:

BAPAC members continue to believe that in the interest of avoiding contamination of the drinking water supply and preserving municipal supply, irrigation wells should continue to be prohibited. There are three major reasons:

- 1. An irrigation well is a direct connection from the surface to the aquifer and as such it represents a potential pathway for contamination. Backflow from the irrigation system could contaminate the aquifer with chemical fertilizers, pesticides, and other contaminants.*
- 2. Withdrawals from irrigation wells will create cones of depression that could alter the groundwater flow system in such a way as to change the path of existing contaminant plumes. Such changes could lead to contamination of municipal wells. For example, the plume of TCE moving from Southampton into the Hendrick Street Well Field (where it is removed by treatment) could be induced to flow toward the Brook Street or Nonotuck Park Wells (where there is no treatment).*
- 3. New safe yield definitions under the State's new Sustainable Water Management Initiative indicate that groundwater withdrawals from Easthampton's portion of the Barnes Aquifer may already be near the maximum allowable limit. Allowing more water to be withdrawn for irrigation could affect the amount of water available for municipal use.*

As you may know, U.S. EPA designated the Aquifer in Easthampton as a sole source aquifer in 1995. EPA has noted, "The designated area is a stratified drift aquifer consisting of shallow sand and gravel deposits. The shallow nature of the aquifer allows contaminants to be rapidly introduced into the ground water with minimal assimilation." Easthampton (as well as Southampton) rely entirely on the Aquifer for drinking water. If contamination were to occur, it would pose a significant public hazard and a serious financial burden to the communities within the aquifer service area."

In the fall of 2014, Easthampton's Board of Health considered a proposal from Hampton East Condominium Association for a variance to allow an irrigation well for lawn watering. BAPAC members attended the public hearing. The City's DPW and Water

Department spoke at the hearing to oppose the variance and the Board of Health voted against issuing a variance.

Norman Roy who had spoken on behalf of the Condominium Association followed up with BAPAC at its next meeting. He noted that BAPAC communities are inconsistent in the standards for regulations from one community to the next. Woody noted that like Easthampton, Westfield does not allow for irrigation wells.

Salt Study Update

Smith College Professor Robert Newton collaborated with other BAPAC members to update the 2008 salt study. For the update, homeowners received a letter inviting them to participate in the well water analysis and then received a bag, including bottles and instructions for sampling of their private well. In total, there were 43 homeowners, including 31 from Westfield, 7 from Southamptton, and 5 from Holyoke. Sampling occurred in early spring 2015, likely a good time of year for capturing potential impacts following snow melt. Results are expected Fall of 2015

Understanding Geothermal Energy

In conversation with BAPAC, Easthampton's new Board of Health Agent Jackie Duda noted that there is no clear guidance in Massachusetts for geothermal wells in an aquifer. BAPAC members expressed interest in knowing more about geothermal energy, particularly what threats geothermal wells might pose to groundwater sources. Learning more about this topic began with a conversation with Williston Northampton School Physical Plant Director Jeff Tannatt who had experience with several geothermal installations in the project to create new dormitories at the school. He attended the October 2013 BAPAC meeting and shared with members several key highlights:

- Geothermal system at the new dormitories has been in place for 5 years. It is called a ground source heat pump system.
- It involves 2 water to water heat pumps and 17 wells that are 350 feet deep on a 20-foot grid. Jeff provided a plan showing well locations.
- Piping for the system involves 5" diameter heat fuse sealed high density polyethylene tubing encased in Bentonite with a U-shaped tube at the bottom.
- Fluid in the subsurface piping is recirculated to the heat pumps and no fluid is injected into the ground. This is known as a closed loop system. No groundwater is added to the system or discharged from the system.
- The system carries a fluid that includes antifreeze specified by DEP – propylene glycol and dipotassium phosphate. (Jeff provided Patty with a copy of the MSDS Sheet for this fluid.)
- The pumps used in the system are designed for the gravity of the fluid used.
- Construction for the wells cost \$100k

- The system runs at 25lbs of pressure (City water comes in at 100 lbs of pressure)
- A leak detection system shuts the system down automatically. This is something Jeff can monitor from his computer as well and so far, there have been no problems.
- He is impressed with the efficiency of the system. During summer months, 1 watt of electricity used for the pumps produces 13 watts of cooling.
- The system services about 30,000 square feet of space, including dorms for 32 students and 3 faculty residences.
- Jeff will advocate for geothermal systems as the school goes ahead with planning for additional dormitories and a new science building.

Over the summer of 2014, Lucy Salwen, a Wesleyan University student intern did some research for BAPAC on geothermal systems. Patty received Ms. Salwen's final report in early 2015 and shared this with BAPAC members.

In April 2015, BAPAC hosted a meeting with Joe Cerrutti who permits geothermal systems for MassDEP. Mr. Cerrutti shared the following highlights with members:

Types of Geothermal Systems

Open loop systems - These systems have a dedicated supply well and return/discharge well. They have been used frequently in Plymouth and Carver, and the Cape, where there is a "high yielding" formation. Sometimes there is iron and manganese entrainment that clogs the discharge point at the return well. So use often deeper and wider diameter to help avert. Salt and brackish waters can be corrosive so need to replace pumps repeatedly.

Dual use well- provides domestic H2O supply and geothermal. Important to have backflow preventer to avoid release of refrigerant.

Closed loop system - Typically 500' deep and mostly HDP tubing. Heat exchange happens with circulation of contained fluid (water with an antifreeze compound) in an underground vertical loop. MassDEP has specified which agents can be used.

Methanol is not allowed. Ethanol is allowed. Propylene glycol is allowed and provides the least environmental risk. If well is functioning as it should, there is no exchange with the aquifer.

Horizontal closed loop system (like at Williston) - makes good sense if already doing lots of disturbance, excavation. Underground horizontal pipes are installed in narrow trenches.

Direct exchange wells - Not very common. These tend to involve 60 foot boreholes and have copper tubes in the ground with a liquid agent running through them.

Mass DEP Role

Mass regulations have primacy over federal regulations.

Mass registers both open and closed loop systems. May be dropping review of closed loop systems in the future. If all according to guidelines, closed loop system involves 1-page submission to MassDEP. Open loop system involves completing 16-page registration form. Dual use must apply as open loop and include additional information. (There has been 10+ year discussion between MassDEP and State Plumbing Board about prohibition of non contact cooling H2O discharge.)

Joe processes all Underground Injection Control Registrations for these wells.

Had GC who wanted to change the antifreeze agent in closed loop system and pour methanol on the ground.

Lots of learning stories about tubing installations without keeping head of water so tubes collapsed.

To Think about in Zone 2 Communities

- Generally there are not significant concerns in Zone 2 for geothermal applications
- State has no special requirements for any of these wells in a Zone 2
- Contractors working from out of state may not know Mass regulations.

- Health agents get copied on all UIC registrations
- Plumbing inspectors should be copied on all registrations of dual use wells
- Make sure all geothermal wells are getting registered by MassDEP
- Do not provide well drilling permit from Board of Health until UIC registration in hand
- Note that horizontal systems do not need well drilling permit (require registration by MassDEP)
- Require review of both closed and open loop systems.
- With closed loop there are concerns about antifreeze agents being handled responsibly and/or leaking
- Need to make sure in closed loop that water chemistry is not going to cause problems with antifreeze solution. H2O with high manganese, iron can cause problems with clogging.
- Include some good information about set back distances between drinking well and geothermal wells. Some communities prohibit open loop systems near municipal distribution system.
- Talk with local plumbing inspectors about how they are checking dual use systems (system bleed drywell back siphoning device, backflow preventer to keep refrigerant from moving into drinking water.

Sustainable Water Management Initiative

BAPAC devoted considerable time to understanding proposed changes to the Water Management Act through the Sustainable Water Management Initiative (SWMI). Members reviewed the initial proposed changes and invited MassDEP Water Management Program Chief Duane LaVangie in December 2013 to help better understand specific impacts to BAPAC communities. Major points coming out of the conversation with Mr. LaVangie are as follows:

- Though the Broad Brook system is shown to be highly impacted for August median flow and biological indicators, Easthampton's actual 2012 groundwater use of 1.62 MGD is far below the authorized (registered) rate of 3.31 MGD.
- Pond Brook in Westfield is also shown to be highly impacted for August median flow and biological indicators, but Westfield's actual groundwater use of 5.21 MGD is below the baseline and authorized (registered) rate of 6.11 MGD.
- While surface waters associated with Southamptton's wells are in better condition, the town's actual use of .32 MGD is pushing up against its authorized (permitted) rate of .36 MGD. It is not clear what will be required of the Town should it need additional supply under the new SWMI regulations.
- Mapping done to show condition and categories for stream systems under SWMI are based on a model and not actual data from a given stream where there are no stream gauges.
- Draft regulations will be issued for public comment sometime soon.

Once draft regulations were issued for public comment, BAPAC members attended MassDEP's public hearing in Springfield on May 8, 2014. Later in the month, BAPAC held a special meeting to discuss the ramifications of the regulations and potential comments to be issued by members. Assistant Superintendent of Operations in Amherst's DPW Amy Rusieckia joined BAPAC for this meeting as she had done a close analysis of the regulations and could share her insights (Amherst served a pilot project community for SWMI in 2013).

BAPAC commented on the proposed regulations in July 2014. Major points from the letter are as follows:

Unfortunately, we see one major flaw: the model does not take into account the dynamics of aquifers that have a confining clay layer. In these circumstances, the underlying construct of the regulations - "1 gallon in equals 1 gallon out" – does not apply. Further testing and refinements to the model to better understand the dynamics of groundwater and surface water relationships in confined aquifers is essential for these regulations to make sense. We understand that site specific refinements are permitted under the regulations as currently proposed, but the cost for this must be assumed by water suppliers who must use monies from an already stressed budget. Furthermore, there is no indication of what scope of work and method would be acceptable to MassDEP.

We strongly urge the Massachusetts Department of Environmental Protection to take the matter in hand by providing a clear method, scope of work, and funding for refinements. Funding could target the generation of real data where the model is showing the most stressed basins, and particularly where the underlying 1:1 construct of the regulations does not apply. Otherwise, how will we know whether minimization and mitigation are meeting SWMI objectives in improving flow and fish communities?

Through the regulations as currently proposed, MassDEP is asking water suppliers to invest heavily in something that will not provide a true understanding of whether our dollars are producing the desired results of sustainable water management.

SWMI requirements went into effect on November 7, 2014. BAPAC member communities have been asked to think about how they might share in procurement of services required to comply with SWMI requirements. The schedule for new permits is as follows:

River basin	Window for filing permit application renewals
Westfield River	September 30, 2015, and November 30, 2015
Connecticut River	Not yet announced, expected September 2016 to November 2016

Public Education and Outreach

Brochure

Based on a request from Southampton, BAPAC prepared a brochure to promote best practices within the Barnes Aquifer. The brochure follows up on work with boards of health on tips for well owners. The brochure however has broader appeal to all property owners in the Aquifer. Southampton planned to distribute the brochure in the bill from the Water Department and the Board of Health planned to distribute the brochure to private well owners. BAPAC distributed the brochure during Drinking Water Week with a media release to local outlets. It did not appear that any of the outlets picked up the story. BAPAC will explore distribution of the brochure through schools during the next Drinking Water Week. Funding to print the brochure, however, must be identified to do this.

Figure 2.1: Best Practices Brochure



Tips for Protecting Your Drinking Water Supply through the Seasons

The journey of water to your tap involves drawing from the Barnes Aquifer, a precious groundwater source that literally runs beneath your feet. This groundwater source is fed by nearby rivers and streams, as well as rain and snowmelt that soak deep into soils.

You can think of your property, and the larger surrounding area of Easthampton, Southampton, areas of Westfield, and west Holyoke, as a giant sponge that soaks up not only rainfall but whatever may get washed into storm flows.

So our activities aboveground can have important consequences for our drinking water sources below.

Following are a selection of important tips for how you can help ensure that our drinking water supply remains healthy and safe.

Spring



As you do your Spring cleaning, be sure to dispose of hazardous and toxic chemicals properly. Check with your local Health Department about upcoming Hazardous Waste Collection events to dispose of such materials as lawn fertilizers and pesticides, paints, varnishes, photographic solutions, paint thinners, waste oils, antifreeze, wood preservatives, and household cleaners.

Do not drain your car's used oil onto the ground or into storm drains. Bring your used oil with your sales receipt to service stations that have proper disposal facilities.



Summer



Avoid using chemical pesticides or fertilizers on your lawn and garden. Some of these chemicals dissolve in rain or irrigation water and percolate through the soil into groundwater. These products can also present problems for groundwater supply if not properly stored or disposed. Good information on taking a chemical-free approach is available on the following websites:

Greenscapes: www.greenscapes.org
Safe Lawns: www.safelawns.org

Eliminate or reduce outdoor watering whenever possible. A rain gauge will help. If you note that there has been an inch of rainfall during the week, you don't need to water at all. Supplemental watering should be done in the early morning to avoid evaporation. Water conservation is critical to reducing demand on groundwater resources.

Video

BAPAC developed a concept for a video that has the following outline:

- Begin with a scene of turning on the tap maybe with kids hands – “Did you ever wonder...”
- If you live in Easthampton, Southampton, and parts of Holyoke and Westfield, your water flows from beneath the ground, from the Barnes Aquifer
- Move into very brief history of Barnes Aquifer formation with some good graphics – how lucky we are that these ancient historic events resulted in such a great source of drinking water (Bob Newton, Geology Professor, Smith College)
- Follow rainfall and how moves to replenish the Aquifer (maybe side message: that's why it is so important to take care of what we do on the surface) then follow to
- Behind the scenes at current waterworks where machinery and Water Department people working to pull water from the Aquifer for delivery of water to your tap
- The quality of the water delivered (mention Easthampton and Southampton award – best tasting water in the nation)

- What you can do around your home, business, and community to continue helping to keep our drinking water safe
- End back with scene of tap water and kid filling glass and then drinking

Outreach to Easthampton CATV staff and E-Town videos provided thought for moving forward. Funding to produce the video is estimated to be about \$24,000 with the bulk of funding to be devoted to a consultant to produce the video and a small portion to the Pioneer Valley Planning Commission (PVPC) to guide and oversee the project

Florence Bank has generously provided \$1,000 to help kick off fundraising in BAPAC communities for the video. This work will continue into FY2016.

Ideas for video use include:

- Local cable access
- Training local officials about the importance of the Aquifer and best practices
- Working with school children who are learning about water, perhaps a shorter version that is among several tools to be used in visiting classrooms

Website

BAPAC produced updated maps for the website to show surficial geology. Maps also identify the sole source boundary, and distinguish between public and private wells. These have been added to the website for easy access by municipal officials, developers, and property owners.

Storm drain labeling

Based on discussions from the recent subdivision review projects in Southampton, BAPAC researched labeling of storm drains where drains deliver storm flow to infiltration areas. Several possible images were reviewed and members agreed that adapting the Puget Sound label for the aquifer would likely be most effective. BAPAC storm drain label will read: “Only rain down the drain! Barnes Aquifer starts here.” A large arrow could be incorporated, but will be essential to look at drains to get idea of where label would go (so have correct direction for arrow). See figure 2.2 below.

Figure 2.2: Draft Storm Drain Label



Members talked about how labels would be purchased and installed. The question being: Should BAPAC require developers to purchase and install these labels, should BAPAC buy a quantity and then give to developers, or should BAPAC get agreement from developers and others (where developments are already in place) for installation and then perhaps identify a group willing to label drains? Members agreed that to ensure labels get installed, it is best that BAPAC purchase labels and adhesive and then find a group to help with installation. BAPAC conferred with Michael Young from the Westfield River Watershed Association who offered to loan a dozen or so wire brushes for prepping the label surface should BAPAC do a labeling event.

One idea to possibly fund label production is to submit a Supplemental Environmental Project proposal to DEP for labels.

Extend Work and Develop Additional Funding Sources

Sustainable Water Management Initiative Grant

BAPAC members talked about the SWMI grant each year to identify possible projects. Only communities permitted under the Water Management Act are eligible. For BAPAC, this is Easthampton and Southampton currently. One of the major challenges of the program is that the work of the grant must occur within a 5-month period. Mass DEP has indicated that projects can be done in two parts, but each segment of the project would have to be able to stand on its own as a complete project to get selected (since there is no assurance that the second proposal would be funded in a consecutive year). Grant ideas discussed by BAPAC members have included:

- For Easthampton - Develop a stream flow/groundwater evaluation method better suited to the confined area of the Barnes Aquifer, where the state's modeling, which involves 1 gallon withdrawn equals 1 gallon removed from flow, does not necessarily apply. Year 1 might fund purchase and installation of equipment. Calibration (capturing high and low flows to establish stage/discharge relationship) and recording data would occur outside of the grant period. A Year 2 award, could fund data download and analysis. Patty will ask if this two part type grant is possible. *MassDEP has indicated that this idea is not eligible. They noted too that the regulations now have provisions that outline the standards for a site specific evaluation such as this.*
- For Southampton – Examine dam release relationship to groundwater pumping.

3. Recommendations for Fiscal Year 2016

In addition to the administration and reporting required for the 10 annual advisory committee meetings, BAPAC will continue to work during FY2016 on tasks under three specific categories:

- Reducing Threats to the Aquifer
- Public Education and Outreach, and
- Extend Work and Develop Additional Funding Sources

Because the scope of work is extensive and there is a desire to not lose site of existing tasks (though they may not be completed), tasks are listed here in priority order. Those strategies in *bold italics* will be the focus for this year's work.

Task	Strategy	Category
1. Continue to conduct reviews of Developments of Regional Impact (DRIs)	<p><i>Seek timely DRI submittals from local communities for BAPAC review and comment</i></p> <p>Visit with Westfield Zoning Board to talk about BAPAC concerns with trend of waivers for undersized lots.</p>	Reducing Threats to the Aquifer
2. Facilitate sharing of information as communities prepare for Water Management Act permit renewals with the new SWMI regulations. Permit renewals are as follows: Westfield River - November 2016 Connecticut River - November 2017	<p><i>As a first step, check with Southwick and West Springfield to see what they are doing. Talk with MassDEP about outreach workshop schedule.</i></p>	Reducing Threats to the Aquifer
3. Advance protection of priority aquifer recharge lands	<p>Work with local land trusts, including Winding River, Pascommuck Conservation Trust, and Kestrel Land Trust to facilitate land protection efforts. <i>Support current work by Winding River to protect 30 acres on Cook Road in Southampton.</i></p>	Reducing Threats to the Aquifer

Task	Strategy	Category
<p>4. Continue work to improve the BAPAC website</p> <p>M. Czerwiec has offered to launch and maintain BAPAC Face Book page.</p>	<ul style="list-style-type: none"> ▪ <i>Post agendas and meeting notes</i> ▪ <i>Post brochure of best practices</i> ▪ <i>Post links to consumer confidence reports</i> ▪ <i>Post geothermal information</i> ▪ Develop section on K-12 resources ▪ New graphic on Aquifer formation ▪ Links to important studies about the Aquifer ▪ Additional photos (including photo of BAPAC meeting) 	Public Education and Outreach
<p>5. Offer BAPAC review of any new well regulations in development by local boards of health. <i>Easthampton, Westfield, and Southampton are still in the process of revising regulations.</i></p>	<i>Provide guidance on geothermal regulations</i>	Reducing Threats to the Aquifer
<p>6. Work toward producing video on Aquifer and importance of best practices</p>	<i>Continue to seek funding from local sources</i> If reach funding goal, begin process of producing video.	
<p>7. Capitalize on Drinking Water Week to advance awareness of the Barnes Aquifer</p>	<p>This could include one or two of the following provided there is funding:</p> <ul style="list-style-type: none"> ▪ <i>Produce, distribute, and install storm drain labels</i> ▪ Print best practices brochure for distribution in schools ▪ A tour of the aquifer with a local cable channel ▪ Guest column to run in local newspapers 	Public Education and Outreach
<p>8. Help BAPAC communities understand best practices for winter road maintenance</p>	<ul style="list-style-type: none"> • Publicize results of latest salt study and provide links to resources for best practices 	Reducing Threats to the Aquifer
<p>9. Conduct follow up testing to understand whether TCE is still present in the aquifer.</p>	<p>With DEP data on TCE as a baseline (B. Newton has), collect new samples to understand what is happening with TCE in the Aquifer. One important first step is to understand why results from Smith College lab have been</p>	Reducing Threats to the Aquifer

Task	Strategy	Category
	different from Easthampton. M. Czerwiec has suggested that a 3 rd lab be used to help understand where issue may be.	
10. Continue to explore interest with Southwick and West Springfield in joining BAPAC.	Invite representatives from these communities to a BAPAC meeting.	Extend Work and Develop Additional Funding Sources
11. Seek summer intern help from either Smith or Mt. Holyoke College	Apply to internship programs to solicit help on BAPAC projects	Extend Work and Develop Additional Funding Sources
12. Seek funding to advance BAPAC's work	<p>Investigate possible grants, including Massachusetts Environmental Trust, SWMI, and Drinking Water Protection Program grants where BAPAC has projects that match grant-making interests</p> <ul style="list-style-type: none"> ▪ <i>Submit SEP request to MassDEP for storm drain labeling and printing best practices brochure for distribution in schools</i> 	Extend Work and Develop Additional Funding Sources

4. Proposed Budget for Fiscal Year 2016

	Hours	Cost*	% Total
Administration/Reporting			
▪ Advisory Committee Facilitation (10 meetings and including meeting agendas and notes)	40	\$2,960	
▪ Annual Report	8	\$592	
▪ Postage, copies, travel, computer fee		\$232	
<i>Subtotal</i>	50	\$3,784	
Reduction of Threats to the Aquifer	40	\$2,960	
Public Education and Outreach	44	\$3,256	
TOTAL	134	\$10,000	100%

*Cost estimates based on PVPC rate of \$74/hour (includes fringe and overhead at 120.2%)

Page intentionally left blank

Appendixes

- Appendix A** **Ongoing Issues Affecting the Barnes Aquifer**
- Appendix B** **Agendas and Meeting Notes**
- Appendix C** **Developments of Regional Impact (DRI) Comment Letters**

Page intentionally left blank

Appendix A: Ongoing Issues Affecting the Barnes Aquifer

Trichloroethylene (TCE) Contamination
Development and Abandoned Monitoring Wells
Road Salt Contamination of Domestic Wells
Closure of the Northampton Landfill
Local Water Supply Ordinances

Trichloroethylene (TCE) Contamination

In the early 1990s, the aquifer extending from Easthampton to Westfield was rendered largely unsuitable as a drinking water supply when it was found to be contaminated with trichloroethylene (TCE). At the onset of the investigation, the Hendrick Street Well Field and the adjacent Pines Well supplied drinking water to the City of Easthampton. This public water supply provided more than fifty percent of the City's drinking water needs.

The Massachusetts Department of Environmental Protection (DEP) sampled and inventoried nearly 400 private wells in Easthampton, Southampton, Holyoke and Westfield. Numerous public and private wells in Easthampton, Holyoke and Southampton had to be treated or shut down. In addition, DEP installed hundreds of microwells, enabling the sampling and analysis of groundwater, sampled surface water, and performed soil gas surveys and obtained soil samples to define the extent and pathway, as well as determine the source(s) of the TCE contamination that extended 4.5 miles within the aquifer. Hampton Ponds was also sampled and found not to be contaminated. The TCE contamination within groundwater is found at depth.

DEP's investigation identified Southampton Sanitary Engineering (SSE) and General Electric (GE) as potential responsible parties. GE has denied responsibility for dumping TCE and contaminating the aquifer, but has performed voluntary cleanup activities at the release site on Dupuis Road. SSE claimed they did not have the financial resources to perform further investigation and remediation. Much site assessment and some cleanup activities have been performed at this site by MA DEP.

The City of Holyoke closed two municipal wells in West Holyoke due to the TCE contamination. The City of Easthampton had to construct a water treatment plant for the same reason, costing approximately \$800,000. MA DEP estimates it has expended in excess of \$2 million in private well sampling, assisting in costs for the Easthampton water treatment plant, and risk reduction measures such as supplying bottled water and treatment filters. Approximately 30 homes in Southampton and West Holyoke had TCE at levels of concern. DEP assisted Southampton with more than twenty of the thirty affected residences within their community by applying funding intended for filters to

purchasing a pipeline for delivery of municipal water at a cost of approximately \$200,000. Because of the unavailability of public water in most areas of West Holyoke (Rock Valley Road, Labrie Lane, Keyes Road and Mueller Road), DEP arranged for bottled water for the short term and installed and maintained (for two years) whole house granular activated carbon filters in the eight remaining affected residences. Residents were provided with written sampling and maintenance recommendations and are sent annual reminders from DEP. DEP and the City of Holyoke estimate that it will cost approximately \$800,000 to \$1 million to install public water lines on Labrie Lane, Rock Valley Road, Keyes Road and Mueller Road. The City of Holyoke has stated it is unable to finance such a project at this time.

The activated carbon filters cost approximately \$2,000 per year to maintain and it is unclear how many homeowners are in fact maintaining their filters. It remains unclear whether homes built or purchased after filters were offered by DEP have measures in place to reduce their risk of exposure to harmful levels of TCE. Although public water is available in Southamptton and Westfield, some property owners have chosen not to hook up and are still using TCE contaminated wells. At a public meeting in 2006 held by the Clean Water Coalition at the Hampton Ponds Association's building on Apremont Way numerous residents of the Hampton Ponds area of Westfield, Southamptton and Holyoke stated that they were unaware that there was a contamination issue and that they were utilizing private wells. It is unknown how many people are in this situation. It is likely that these people took ownership of their homes after DEP had performed their outreach and were never contacted directly.

At BAPAC's invitation Catherine Skiba, Service Center Manager for Mass DEP attended a January 2012 meeting to answer questions and review information from DEP's latest work on the TCE contamination. Following are the main points that arose during the discussion:

- DEP's work was aimed at identifying the sources of TCE contamination. As such the agency's mapping is illustrative in nature (a "cartoon") depicting conservatively the maximum areal extent in which groundwater contamination had been detected and not a delineation of a plume per se. Contamination generally has been detected in some wells in an extensive area from the Pequot Pond area in Southamptton to the Hendrick Street wells in Easthamptton. As part of this investigation, DEP sampled more than 400 private wells and also installed 278 micro-wells to identify the approximate area and the source of the TCE contaminant plume. DEP's work was intended to identify the source(s) of the contamination and to assist in identify impacted private drinking water wells. DEP's work does not show how concentrations of TCE are trending and it also does not show how the contaminant plume is moving. There is so much variability in the aquifer and it is such a complex hydrogeological environment that it is difficult to do this.

- DEP did a comprehensive investigation and identified 2 Potentially Responsible Parties (PRP), including Southampton Sanitary Engineering for their site at 80/82 Pequot Road, Southampton, and GE for two sites in West Holyoke (Dupuis Road and Apremont Highway), which may have been a 1950s dumping area for their Jackson Street facility (PCBs were also detected at these sites and cleaned by GE). The Pequot Road site has been split in two with one part of the site still requiring clean up and the other having had an RAO statement submitted. (An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.) The Dupuis Road site in Holyoke remains in the Bureau of Waste Site Cleanup system; an RAO has not yet been filed. The Apremont Highway site has had an RAO filed.

- Although two locations have received RAO's, residual contamination remains in the groundwater. A discussion regarding persistence of the contaminants in the groundwater ensued and Bob Newton noted that modeling done by Smith College indicates the contaminants would decrease and eventually be flushed out of the aquifer in a 50 to 60 year time period (this is somewhat speculative based on the assumptions of the model and is not definitive).

- With the discovery of this contamination, major work went into getting affected homes off of private wells and onto public water. Southampton extended water mains to many of the affected areas. There were 9 affected homes that were provided filters for their private wells. DEP has worked with these homeowners to remind them about the importance of maintaining the filters at their homes. Homes that received the last reminder letter from MassDEP on January 13, 2010 were located on Keyes Road, Mueller Road, Rock Valley Road, and Southampton Road.¹

- Holyoke representatives noted there may be additional homes that have since been built in these areas.

- DEP's last letter to homeowners on private wells about filters went out in 2010. It is important for Boards of Health to pick up on this work with those still on private wells. There are no requirements for homeowners to test their wells for TCE. In fact, it was noted that they may be reluctant for fear of impacts on property values.

¹ Southampton's 2012 annual report for the Water Department notes the following: "It is also important to remind the residents of Southampton that over a decade ago the Water Department extended its public water service into the eastern section of town....This was done at great expense to benefit the health and safety of Southampton residents living in that area....Even after all that time, however, roughly one hundred homes in the area have still not connected to the safe public water supply. This means that about three hundred men, women, and children who live in Southampton are still drinking the raw groundwater from the Barnes Aquifer without water treatment and possibly putting their family's health at risk."

As a follow up to the update from DEP, BAPAC members agreed that TCE Contamination Study follow up should be added as a work plan item this. PVPC contacted Boards of Health in each municipality about well regulations, and reviewed DEP's October 2011 revised well recommendations for Boards of Health. Based on this review, PVPC then drafted recommendations to add provisions that:

- A. require testing of existing private wells for TCE (or possibly all Volatile Organic Compounds/VOCs) during property transfers; and
- B. ensure that any new private wells are tested prior to issuance of a building permit. All test results should be submitted to the Board of Health which may at its discretion forward results to BAPAC. Holyoke's Health Director requires testing for all VOCs on all new wells.

Possible next steps might include:

- Ask Boards of Health how BAPAC might help with outreach to homeowners in TCE affected areas
- Building on DEP's list of private homes with which they have been in contact regarding TCE and filters, work with Boards of Health to add to this list any homes that have been built in the affected areas and determine whether they are on private or public water supply. (Board of Health should have records on this.)

Development and Abandoned Monitoring Wells

Development pressures within the Barnes Aquifer Zone II are significant. Although each of the four communities enacted aquifer protection district zoning and participate in a regional aquifer oversight committee called the Barnes Aquifer Protection Advisory Committee (BAPAC), commercial, industrial and residential development continues to consume important recharge land, bringing with it new threats and opportunities for aquifer contamination.

One of the greatest threats to the aquifer associated with past contamination and on-going development is the installation of hundreds of monitoring wells within the Zone II. Sites where monitoring wells have been installed include commercial and industrial facilities, and 21E sites. In recent years, BAPAC has become increasingly aware of abandoned monitoring wells that are either not known to the current property owner or long since forgotten by them, yet not decommissioned. Abandoned wells that have not been decommissioned are a direct conduit to the aquifer and serve as a potential avenue for contamination.

In each of the four Barnes Aquifer communities, as well as many statewide, there are no local regulations requiring the decommissioning of monitoring wells once they are no longer of use. Likewise, M.G.L. c. 21E also does not require monitoring wells to be decommissioned once a site is beyond the five year audit period. According to the Office

of Water Resources at MA Department of Conservation and Recreation, statewide 10,000 wells (both productive and monitoring) were installed in 2005 and only 750 wells decommissioned.

Examples of this threat to the aquifer are as follows. Beavers dammed Pond Brook near Westfield municipal Well #8. The dammed water came within feet of covering a monitoring well installed during construction of Well #8. It is unknown if monitoring wells exist on other properties inundated by beaver activity. Also, at Westfield municipal Well #3 in 2008, bacteria counts at the well prompted an investigation of monitoring wells in the area which found one monitoring well where the lock had been broken off by vandals and the cap left off. Well #3 and the monitoring well were both disinfected and the monitoring well re-secured. Last, MEPA Environmental Impact Reports from the early 1990s for Summit Lock Industrial Park in Westfield, the site of C&S Wholesale, identify the installation of 17 monitoring wells on a 139 acre parcel and an additional 12 on an adjacent parcel. Under MEPA, these wells were to be monitored annually and data submitted to DEP and the Westfield Water Department. Records indicate that the last round of sampling occurred in 1999. After several recent attempts to communicate with C&S about the status of their wells, the operations manager acknowledged that their monitoring program had been discontinued and he wasn't even sure where the wells are located.

Road Salt Contamination of Domestic Wells

BAPAC and Smith College conducted an on-going investigation of the impacts of road salt on domestic wells in an area of Southampton and Westfield along Routes 10 and 202. Route 10 is maintained by MassHighway; Route 202 is maintained by the City of Westfield. The investigations have been as follows:

- In three sampling rounds between December 2004, September 2005, and March 2006, approximately 35 private wells were sampled. More than 25 of these wells were determined to be salt impacted with sodium concentrations above the 20 mg/l limit set by the Massachusetts Office of Research Standards and Guidelines (ORSG) and chloride levels above the 250 mg/l Secondary Maximum Contaminant Level (SMCL).
- In April 2008, 90 wells in Southampton, Westfield and Holyoke were sampled for sodium, chloride, nitrate nitrogen, calcium, magnesium, potassium, lithium, sulfate, nitrate, dissolved silica, arsenic, lead, barium, and hardness. Of those samples, 38 were salt impacted from road salt and 17 other wells had naturally high sodium levels. Ten (10) wells, all in the Round Hill area had arsenic levels above 5 ppb which is considered high but not above the MCL. Also noteworthy, road salt is causing the groundwater to become hard by exchanging sodium for calcium and moving calcium into solution.

- In 2009, Mass DOT initiated a road salt impact study on two private wells at 407 College Highway (Route 10) in Southampton. The study was the result of a complaint filed by the property owner stating their well had been contaminated by road salt applied by MassDOT. According to MassDOT, the study was discontinued after one round of sampling found both wells to test positive for bacteria. The property owner was provided instruction on how to sterilize the well. Once completed and free of bacteria, MassDOT would resume the study. According to MassDOT, the property owner was non-responsive and thus the study discontinued. MassDOT is willing to resume the study and work with the property owner if the well is disinfected.
- A fifth round of private well sampling was performed on June 3, 2009 at 16 residences and 1 business on Jaeger Drive, North Road, Southampton Road, and Old Stage Road in Westfield. The sites were selected to gather further information about long term trending of sodium chloride levels in the aquifer.

There are approximately 12 homes on private wells on Route 10 within the vicinity of Swanson Corners in Southampton to the intersection of Route 202 in Westfield. Several of these well owners participated in the road salt study conducted by BAPAC and several of the participating wells were found to be highly impacted by road salt contamination. Along Route 10, there are 4 homes in Southampton and 4 in Westfield that participated in the salt study and were identified as salt impacted. There may be more wells affected, but they did not participate in the study and have not been identified. For people on medically prescribed sodium restricted diets, the high sodium levels in these wells could pose a significant health risk. Therefore, BAPAC continued to investigate options for providing municipal water to this area.

The City of Westfield is currently extending municipal water service along Route 202 to a proposed Assisted Living facility and up to the Purple Onion Restaurant/bar at the intersection of Route 10. One salt impacted well in this area will be provided municipal service via this extension. Due to elevation and head pressure, however, it is not feasible for the City of Westfield to extend its water line to the Southampton border. As an alternative, the Westfield Board of Water Commission voted to support extension of Southampton's municipal water service into Westfield to service private wells impacted by road salt that the City of Westfield is unable to reach. The Southampton Water Department is willing to service the homes in Southampton and Westfield that are affected, but would need funding assistance to implement such a public works project.

The Southampton Water Department provided a cost estimate totaling \$128,700 to install 3,900' of pipeline (\$33/foot installed) with all hydrants services and valves (utilizing Highway/Water Department labor rates).

Community Development Block Grant (CDBG) has been identified as a possible source of funding. The issues that remain outstanding relative to CDBG are:

- Which CDBG National Objective is addressed?
- What were the demographics of the homes being serviced (are they CDBG eligible)? An income survey would be needed.
- Could you use Westfield CDBG funds in Southampton and servicing Southampton homes? Westfield is an entitlement community and Southampton is not.
- Possibility of Southampton applying for MA CDBG Small City's funds for their portion
- Unlikelihood of meeting Westfield's FY11-12 CDBG Program deadline (proposals are due in January)
- Westfield only receives around \$440,000/yr in CDBG funds, of which about half goes to paying back a bunch of bad Section 108 Loans. The Mayor and City Council would need to decide if this was a priority.
- PVPC is administering a FY2010 CDBG program for Southampton. The Town may be eligible to apply for FY2012 in December but there are a number of milestones relative to progress on their current project that need to be accomplished before determining if they would be eligible to apply.

Other possible next steps include: Contacting MassDOT about resuming the road salt study; contacting affected well owners to determine if they would connect to municipal service if available; and, exploring alternative funding sources to extend water service.

Closure of the Northampton Landfill

The City of Northampton currently operates a regional landfill on Glendale Road in Northampton. The landfill is located within the Zone II of Easthampton's Maloney Well. The City of Northampton was planning to expand the operation to increase the lifetime of the facility and allow for the disposal of more municipal waste. Due to strong local opposition to the landfill expansion, The Board of Public Works voted in January 2010 not to seek a Special Permit for the landfill expansion without further guidance from the Mayor and City Council citing costs to prepare such a permit application without really knowing if the Council will approve it. The Northampton City Council also voted in the Spring of 2010 not to support the expansion. The City is preparing for closure of the landfill in March of 2013 and has issued a Request for Proposals for hauling and/or disposal of waste from its two residential drop-off centers.

Local Water Supply Ordinances

In 2007, PVPC reviewed municipal water supply protection bylaws and ordinances and provided recommendations using DEP's 2005 model ordinance as its reference. Implementation of recommendations could qualify communities for waivers on frequency of testing, and also possibly affect ranking in grant applications. In 2012,

BAPAC's workplan included a task to understand what of the recommendations have and have not been adopted and what strategies or next steps might be helpful.

Easthampton — BAPAC learned that recommendations were not adopted and got bogged down in the discussion about the designation for the northern aquifer area in town. Easthampton sought to propose a standard based on thickness of the clay layer, but DEP at that time did not want to have different standards for the northern part of the aquifer than the southern part of the aquifer in Easthampton. PVPC revisited the question with a DEP official about allowing for a standard based on clay thickness. DEP noted that there are many holes in the clay layer and so many unknowns that it puts a great burden on property owners to prove thickness of the clay layer. DEP does not have a mechanism to allow for such a standard, but the City could formally petition DEP for an allowance, seeking relief from regulation. The DEP official noted that the City ought to not be hopeful about the outcome of such a petition.

BAPAC Advisor Bob Newton observed that the holes in the clay layer are limited to areas where Eskers are present. In addition, the pressure from the underlying aquifer is so high, he noted, that groundwater flows up and out of these holes, which would presumably keep contaminants up and out of the aquifer. Clay ranges in thickness from zero to more than 100 feet in some places and that thickness could be determined based on a method called seismic refraction.

Given DEP's position, PVPC briefly discussed with Easthampton's new Planning Director Jessica Allan how to begin exploring the implications for the City. Extending current aquifer standards to the northern part of the City would result in pre-existing non conforming uses. Any change of use in a particular location would need to conform with the new zoning. Getting answers to several questions may be important: What studies have been done to date of this aquifer area? To what extent does the northern aquifer area have land uses that are prohibited by current aquifer zoning? Has there been a delineation of the clay layer? Are there ways to manage uses outside of zoning?

Next steps in Easthampton could include exploring implications of not being able to use a clay thickness standard for the northern Zone II in Easthampton. Once a proposal can be made to establish an aquifer protection zone in the north, former City Planner Stuart Beckley has suggested that BAPAC hold one meeting with the planning board to inform them about the ordinance changes and then go to the City Council to present on the issue to them. It would be good to get 10 voters interested in the issue to help support the changes.

Holyoke — BAPAC's Holyoke representatives have noted that the area of Holyoke in the Zone II already has protection through 2-acre lot size and 200-foot frontage requirements and that additional restrictions to the ordinance may not be necessary.

Southampton— Southampton representatives were unable to confer with municipal colleagues to determine whether it may be possible to move forward. Through follow up work in 2013, PVPC learned that revising regulations is a priority for the Board of Health.

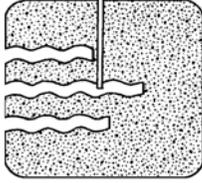
Westfield — There has been no action on BAPAC's 2006 recommendations. Updates to the ordinance may occur as part of the permitting process for a new well. Through follow up work in 2013, BAPAC learned that the Board of Health is in the process of revising regulations.

DEP has new a new model regulation issued in 2011. Possible next steps for the future include reviewing where there have been changes from the 2005 model to update BAPAC's recommendations to municipalities.

Page intentionally left blank

Appendix B: Agendas and Meeting Notes

Left blank intentionally.



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Wednesday, August 21, 2013

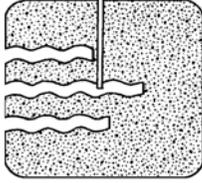
TIME: Noon

PLACE: Easthampton Municipal Office Building
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Review Meeting Minutes from:**
June 4, 2013 (adoption will occur at regularly scheduled meeting in September)
- 2. Developments of Regional Impact**
- 3. Jackie Duda, Easthampton Board of Health**
re: permitting new wells (agriculture and geothermal)
- 4. Work Plan for Next Year**
- 5. Other Business**
- 6. Next Meeting**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

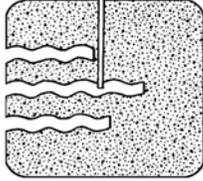
BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, September 10, 2013
TIME: 3:30
PLACE: Easthampton Municipal Office Building
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of Meeting Minutes from:**
June 4, 2013
August 21, 2013
- 2. Developments of Regional Impact**
Pleasant Meadow Estates, Pleasant Street, Southamptn, 10-lot cluster development
Western View Estates, Strong Road, Southamptn, 13 building-lot subdivision
- 3. Abigail Fopiano, Project Hydrogeologist, Geosphere Environmental Management**
Re: Source security for wells and aquifers
- 4. Annual Report and Work Plan for 2014**
- 5. Other Business**
- 6. Next Meeting**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

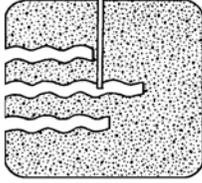
BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, October 1, 2013
TIME: 3:30
PLACE: Easthampton Municipal Office Building
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of Meeting Minutes from:**
September 10, 2013
- 2. Developments of Regional Impact**
 - Follow-up discussion re: Indian Motorcycle Sales, 962 Southampton Rd., Westfield
 - Review letter to Southampton Planning Board re: Western View Estates, Strong Rd., Southampton
- 3. Jeff Tannatt, Physical Plant Director, Williston-Northampton School**
Re: Geothermal wells in the Zone II
- 4. Finalize Annual Report and Work Plan for 2014**
- 5. Other Business**
- 6. Next Meeting**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

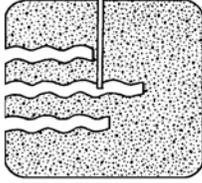
BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, November 5, 2013
TIME: 3:30 p.m.
PLACE: Easthampton Municipal Office Building
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of Meeting Minutes from:**
October 1, 2013
- 2. Adoption of Annual Report and Work Plan for 2014**
- 3. Developments of Regional Impact**
 - Western View Estates, Strong Road, Southampton – Definitive Subdivision Plan
- 4. John Richardson, Environmental Coordinator, Barnes Air National Guard**
Re: Base activities relative to the Barnes Aquifer
- 5. Maps for BAPAC website**
- 6. Other Business**
- 7. Next Meeting: December 3, 2013**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

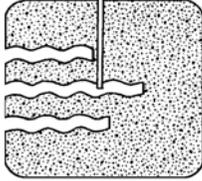
BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, December 3, 2013
TIME: 3:30 p.m.
PLACE: Easthampton Public Safety Complex
32 Payson Avenue, Easthampton, MA

Agenda

- 1. Presentation by Duane LaVangie, MassDEP Water Management Program Chief**
Sustainable Water Management Initiative

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

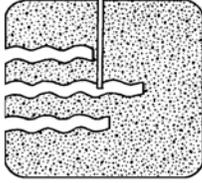
BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, January 7, 2014
TIME: 3:30 p.m.
PLACE: Easthampton Public Safety Complex
32 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of Meeting Minutes from:**
November 5, 2013
- 2. Developments of Regional Impact**
 - Whip City Aviation LLC, Barnes Airport
- 3. Work Plan**
- 4. Other Business**
- 5. Next Meeting: February 4, 2014**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

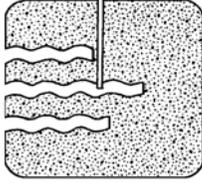
BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, February 4, 2014
TIME: 3:30 p.m.
PLACE: Easthampton City Hall
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of Meeting Minutes from:**
January 7, 2014
- 2. Developments of Regional Impact**
- 3. Work Plan**
 - SWMI
 - Maps
 - Land protection
- 4. Other Business**
- 5. Next Meeting: March 4, 2014**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

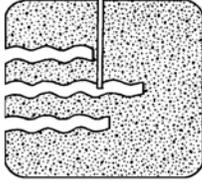
BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, March 4, 2014
TIME: 3:30 p.m.
PLACE: Easthampton City Hall
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of Meeting Minutes**
February 4, 2014
- 2. Developments of Regional Impact**
- 3. Work Plan**
 - Water resource protection district bylaws- proposed changes in Westfield
 - SWMI- method and grants timeframe
 - Joint letters with boards of health/Drinking Water Week
 - Land protection
- 4. Other Business**
- 5. Next Meeting: April 1, 2014**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

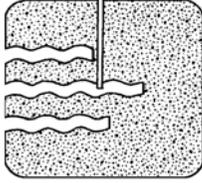
DATE: Tuesday, April 1, 2014
TIME: 3:30 p.m.
PLACE: Easthampton City Hall
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of Meeting Minutes**
March 4, 2014
- 2. Developments of Regional Impact**

Barnes Regional Airport, Alex Bernier, Stantec
- 3. Work Plan**
 - SWMI
 - Land protection
 - Outreach
- 4. Other Business**
- 5. Next Meeting: May 6, 2014**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

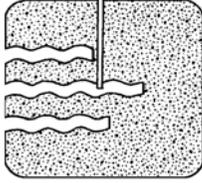
BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, May 6, 2014
TIME: 3:30 p.m.
PLACE: Easthampton City Hall
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of Meeting Minutes**
April 1, 2014
- 2. Developments of Regional Impact**
- 3. Work Plan**
 - SWMI draft regulations comments
 - Land protection - update
 - Outreach – brochure and Drinking Water Week
- 4. Other Business**
- 5. Next Meeting: June 3, 2014**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Wednesday, May 21, 2014
TIME: 9 a.m.
PLACE: Easthampton City Hall
50 Payson Avenue, Easthampton, MA
Conference Room B, Basement

Agenda

Only order of business

**Review Sustainable Water Management Initiative (SWMI)
Draft Regulations for Comment**

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

DATE: 8/21/13

LOCATION: Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

D. Conti, Holyoke	J. Burkott, Holyoke	A. Smith, Holyoke
D. Buttrick, Easthampton	<input checked="" type="checkbox"/> M. Czerwec, Easthampton	<input checked="" type="checkbox"/> C. Seklecki, Easthampton
<input checked="" type="checkbox"/> W. Darling, Westfield	Karen Leigh, Westfield	
James Labrie, Southampton	J. Slattery, Southampton	
R. Newton	<input checked="" type="checkbox"/> P. Gambarini, PVPC	

Others present: Jackie Duda, Easthampton Health Agent

TIME OF CALL TO ORDER: 12:20 p.m.

TIME OF ADJOURNMENT: 2 p.m.

Action Items from Meeting:

PVPC

- Write up 8-21-13 meeting notes
- Prepare and distribute agenda for next meeting
- Draft annual report and FY14 work plan
- Call Cook Road landowners to follow up on meeting
- Contact BANGB Environmental Officer John Richardson and invite to attend a BAPAC meeting in October to provide an update on base activities
- Contact Jeff Tannatt at Williston Northampton School to see if he would be willing to attend November meeting to talk to BAPAC about the geothermal wells at the school

BAPAC members

- Chester to check with Easthampton City Planner about any projects that may be coming up for review in Easthampton
- Mike to talk with the City Planning about approaching the CPC committee for monies to do an appraisal on the Cook Road property

1. Review of June 4, 2013 Meeting Notes

There were no corrections to minutes at this time. Adoption will occur at regular September meeting.

2. Developments of Regional Impact

Patty reported that the Westfield's City Planner indicated that the proposal for Indian Motorcycles in Westfield involves a change of use with no changes to the site. There will be no storage of contract equipment at the back of the property as explored by the project proponent at the last BAPAC meeting.

There are two development proposals for Southampton that will be coming before BAPAC in September.

Patty asked if BAPAC should be expecting any projects for review in Easthampton. Chester Seklecki will confer with the City Planner.

3. Jackie Duda, Easthampton Board of Health

Easthampton's new Health Agent Jackie Duda continued her conversation with BAPAC members about permitting wells. She said that up until now, there have essentially been no wells allowed. She said she sensitive to Water Department concern about revenue, but based on several requests she has had in the past year, she is planning to develop well regulations that provide good guidance for development of

agricultural wells. She will also develop regulations for geothermal wells as this is a growing area of work without clear guidance for such work in an aquifer. Jackie agreed that the guidance passed by Patty from DEP's Catherine Skiba should be incorporated. The conversation with BAPAC members yielded three additional points for consideration:

- Agricultural wells should only be allowed in agricultural zones
- Around agricultural wells, there should be a radius or zone within which no mixing of chemicals could occur
- Research must be done to understand best practices for geothermal wells in an aquifer

Jackie said she will pass draft well regulations by BAPAC for feedback. Patty reminded the good guidance provided by Catherine Skiba

4. Work Plan

Members reviewed the list of ideas provided by Patty and recommended the following be included on the FY2014 work plan:

Land Conservation Planning

Raise monies to protect Cook Road property, including: prepare grant request, approach CPC in both Easthampton and Southampton. As a next step, Patty will follow up with the landowner and Mike will talk with the City Planning about approaching the CPC committee for monies to do an appraisal of the property.

Education/Outreach

Website - continue work to overhaul. Specifically:

- Overlay Zone II and well locations over surficial geology maps
- Revise aquifer formation graphics
- Develop section on K through 12 resources
- Photos (including photo of BAPAC meeting)

Develop tri-fold brochure to promote the website and BMP toolkit – among residents, local developers, and DRI proponents

Identify what information may be available for guidance on geothermal wells in the Zone II in MA and for other aquifers. If there is not sufficient information, this might serve as the basis for a foundation funded project.

Meet with Southwick and West Springfield representatives to explore interest in joining BAPAC.

Continue series of joint letters with Boards of Health

Drinking Water Week – See if local cable will work with us to film tour of the aquifer. If not, prepare guest column to run in local newspapers.

Members also revisited the idea of doing some strategic planning. Patty noted that this work might begin with a review of BAPAC work to date. Perhaps an intern could review all of BAPAC's annual reports to define what the group has done in the past, an exercise that would help to inform the group in defining a path for the future.

5. Next Meeting

September 10, 2013 @ 3:30 PM

Easthampton Municipal Office Building, 50 Payson Avenue, Easthampton

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

DATE: 9/10/13

LOCATION: Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

D. Conti, Holyoke	J. Burkott, Holyoke	A. Smith, Holyoke
D. Buttrick, Easthampton	<input checked="" type="checkbox"/> M. Czerwiec, Easthampton	<input checked="" type="checkbox"/> C. Seklecki, Easthampton
<input checked="" type="checkbox"/> W. Darling, Westfield	Karen Leigh, Westfield	
James Labrie, Southampton	J. Slattery, Southampton	
<input checked="" type="checkbox"/> R. Newton	<input checked="" type="checkbox"/> P. Gambarini, PVPC	

Others present: Mark Reed, Heritage Surveys, Inc.

TIME OF CALL TO ORDER: 3:40 p.m.

TIME OF ADJOURNMENT: 5:15 p.m.

Action Items from Meeting:

PVPC

- Write up 9-10-13 meeting notes
- Prepare and distribute agenda for next meeting
- Update FY14 work plan
- Work with Mike Czerwiec on funding for appraisal at Cook Road
- Contact Easthampton Health Agent to clarify BAPAC regard for irrigation wells
- Contact DEP to invite to meeting to talk about SWMI

BAPAC members

- Bob and Mike will work together to figure out how to reconcile Easthampton and Smith College testing results on TCE, perhaps through use of third lab.
- Mike to serve as lead on request to CPA for appraisal funding for Cook Road property

For the Annual Report:

- Everyone will review draft annual report
- Mike will verify as to whether the Brook Street Well is permitted or not.
- Woody will get number of private wells for Westfield to include in Table 1.1

1. Adoption of June 4, 2013 and August 21, 2013 Meeting Notes

Adoption of the June 4 meeting notes was recommended by Bob Newton, seconded by Chester Seklecki, and unanimously approved. Adoption of the August 21 meeting notes was recommended by Chester Seklecki, seconded by Bob Newton, and unanimously approved.

2. Developments of Regional Impact

Pleasant Meadow Estates, Pleasant Street, Southampton, 10-lot cluster development

Representing the project for owner Chester and Susan Kellogg, Mark Reed of Heritage Survey explained that the Southampton Planning Board public hearing for the definitive subdivision plan continues on September 18th. The project is not within the jurisdiction of the Conservation Commission, so that committee has already signed off.

The project involves a 10-lot subdivision with each home on a minimum lot size of 40,000 square feet. The project area involves a total of 30 acres. Mr. Reed said it is not yet decided whether the Town or homeowners association will take ownership of the open space set aside, but most likely it will be the homeowner's association that takes ownership. The project will be on town water, but all properties will have septic systems. For stormwater drainage, Mr. Reed said the plan calls for two stormwater leaching basins, one

basin to the north of Lot 1, and another to the west of Lot 5. Storm runoff from front roofs, driveways, and roadways will drain to a series of 9 catch basins. Five of these catch basins drain to the basin to the north of Lot 1, and four drain to the basin to the west of Lot 5. The design of the two leaching basins is similar: stormwater will flow into a forebay and then flow over a rip rap berm into the basin itself where there will be a series of 5 leaching galleys with 3 catch basin grates. The basin will be loamed and seeded with grasses. The homeowner's association will be responsible for maintenance.

Based on questions from BAPAC members, Mr. Reed provided additional information, including:

- Stormwater will reach the inlet of the leaching galley at the 100-year design storm
- Borings were made to 12 feet and no groundwater was encountered. Mr. Reed said that given the location groundwater is likely 30 to 40 feet below the surface
- The planning board sought use of the leaching galleys because they are concerned about lack of infiltration during frozen conditions
- There will be a covenant for lawn care that prohibits the use of chemical fertilizers and pesticides
- There will also be a covenant to prohibit the installation of garbage disposals

BAPAC members had seven recommendations for the project:

- Eliminate direct infiltration by removing the leaching galleys in the infiltration basins. Members are concerned that direct infiltration provides greater risk of groundwater contamination.
- Between the catch basins and the leaching basin forebays, add a swirl separator that can achieve 80% TSS removal. Ensure that the unit receives regular maintenance as there are often high failure rates due to lack of maintenance.
- Add an emergency shut off valve on the pipe draining to each of the leaching basins to isolate the basins from drainage in the event of a spill
- Label catch basins to remind residents, "No Dumping – Drains to Aquifer"
- Controls should include minimizing compaction of soils, especially in infiltration basin areas during construction so as to ensure that basins function properly once they are on line
- Ensure that there is a covenant that prohibits the use of chemical fertilizers and pesticides on lawns
- A good operations and maintenance plan will be critical to the proper care of the storm water system by the homeowner's association

Western View Estates, Strong Road, Southampton, Subdivision

Representing the project for owner Triple Seven LLC, Mark Reed of Heritage Survey explained that the project has preliminary subdivision approval from the Southampton Planning Board. He will be filing a definitive subdivision plan for the property within the next month. While this project does not entail a cluster arrangement, there is 2.9 acres that will be left as open space along the Town's proposed Labrie Field property.

The project involves 3 ANR lots and a 13-lot subdivision, all lots for which are greater than 40,000 square feet. Mr. Reed said that stormwater from roofs, drives, and the roadway will drain to 8 catch basins along the street edge and be piped to a stormwater basin using a design similar to that proposed for the Pleasant Meadow Estates project.

BAPAC members had the same recommendations for this project as noted in the Pleasant Meadow Estates project:

- Eliminate direct infiltration by removing the leaching galleys in the infiltration basins. Members are concerned that direct infiltration provides greater risk of groundwater contamination.
- Between the catch basins and the leaching basin forebays, add a swirl separator that can achieve 80% TSS removal. Ensure that the unit receives regular maintenance as there are often high failure rates due to lack of maintenance.
- Add an emergency shut off valve on the pipe draining to each of the leaching basins to isolate the basins from drainage in the event of a spill

- Label catch basins to remind residents, “No Dumping – Drains to Aquifer”
- Controls should include minimizing compaction of soils, especially in infiltration basin areas during construction so as to ensure that basins function properly once they are on line
- Ensure that there is a covenant that prohibits the use of chemical fertilizers and pesticides on lawns
- A good operations and maintenance plan will be critical to the proper care of the storm water system by the homeowner’s association

3. Abigail Fopiano, Project Hydrogeologist, Geosphere Environmental Management

Ms. Fopiano did not attend the meeting as planned.

4. Annual Report and Work Plan for 2014

Patty explained that in preparing the Annual Report, she moved the section entitled “Ongoing Issues Affecting the Barnes Aquifer” in the appendices. This is a section that gets expanded a bit every year based on developments that may occur relative to any of the specific issues.

Committee members began a conversation about work plan items, but will need to continue the discussion at the next meeting. Following were major points from the conversation:

Land protection – Continue to focus on the Cook Road property protection. Patty read aloud the September 2 letter from Barbara LaFlam expressing the property owners’ continued interest in working with BAPAC, but requesting some consideration for a possible compromise. Patty and Mike will work together to take the next step: making a request to Easthampton CPC for funding to do an appraisal.

Work with boards of health on series of letters to private well owners – Continue this series of letters.

Offer BAPAC review of any new well regulations in development by local boards of health – Patty noted that Easthampton, Westfield, and Southampton are in the process of revising regulations. Easthampton has already asked for BAPAC guidance on agricultural irrigation wells and geothermal wells. So that members can begin exploring some of the important considerations of geothermal wells in the Zone II, Patty has invited to BAPAC’s next meeting Jeff Tannatt of the Williston Northampton School, which has geothermal wells. Bob Newton was surprised to hear that Easthampton’s health agent had been talking to BAPAC about agricultural irrigation wells. He said they are a bad idea and represent a giant step backward for aquifer protection. BAPAC has in the past completely discouraged their use. Most members present agreed with Bob. Patty noted that she did not think BAPAC members conveyed this strongly enough to Easthampton’s health agent during the August meeting. Patty will follow up with her.

Following up with boards of health on TCE (including FY2012 letter regarding testing of wells as well as follow up with residents in affected areas) – Bob noted that he has DEP data on TCE and perhaps it is a good time to collect new data to understand what is happening. One important first step would be to understand why results from Smith College’s lab have been so different from Easthampton’s. Mike suggested that they use a 3rd lab to help in understanding where the issue may be.

SWMI – Bob agreed with an 8-23 e-mail from Mike suggesting that BAPAC devote some attention to understanding what the implications will be of the new Sustainable Water Management Initiative. Bob questioned the maps that SWMI is using that shows so much extreme alterations in August median flows and biologic categories within the aquifer. He asked: Given that there are no gauges on these stream systems, on what basis were these maps made? What are the rules and how will all of this go forward? Patty will contact Catherine Skiba at MassDEP to see who might be able to come talk to BAPAC about SWMI.

5. Next Meeting

October 1, 2013 @ 3:30 PM

Easthampton Municipal Office Building, 50 Payson Avenue, Easthampton

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

DATE: 10/1/13

LOCATION: Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

D. Conti, Holyoke	J. Burkott, Holyoke	<input checked="" type="checkbox"/> A. Smith, Holyoke
D. Buttrick, Easthampton	<input checked="" type="checkbox"/> M. Czerwiec, Easthampton	C. Seklecki, Easthampton
<input checked="" type="checkbox"/> W. Darling, Westfield	Karen Leigh, Westfield	
James Labrie, Southampton	J. Slattery, Southampton	
<input checked="" type="checkbox"/> R. Newton	<input checked="" type="checkbox"/> P. Gambarini, PVPC	

Others present: Peter Francis, The Westfield News

TIME OF CALL TO ORDER: 3:35 p.m.

TIME OF ADJOURNMENT: 4:45 p.m.

Action Items from Meeting:

PVPC

- Write up 10-1-13 meeting notes
- Prepare and distribute agenda for next meeting
- Update and finalize FY14 work plan
- Work with Mike Czerwiec on funding for appraisal at Cook Road
- Write letter to Easthampton Health Agent to clarify BAPAC regard for irrigation wells
- Contact DEP to invite to meeting to talk about SWMI

BAPAC members

- Bob and Mike will work together to figure out how to reconcile Easthampton and Smith College testing results on TCE, perhaps through use of third lab.

1. Adoption of September 10, 2013 Meeting Notes

Adoption of the September 10 meeting notes was recommended by Bob Newton, seconded by Andrew Smith, and unanimously approved.

2. Developments of Regional Impact

Indian Motor Cycle Sales, 962 Southampton Road, Westfield

Patty and Woody noted that when this project came before BAPAC during its June meeting, the project proponent Denis Bolduc had indicated there would be no motor vehicle servicing or fueling. Now it appears, based on notes from the Westfield City Council meeting that this may not be the case. BAPAC stated in its July 26 letter to Council President Brian Sullivan, "As part of the plan, it will be critical to ensure that all motorcycles are stored inside the building and no vehicle maintenance or fueling occurs on site." Notes from the City Council meeting indicate that there may be indoor servicing of vehicles. Woody noted that this is not an allowable use under Westfield's Water Resource Protection Area zoning overlay. Members agreed that as an advisory group, BAPAC does not have much recourse at this point.

Western View Estates, Strong Road, Southampton, Subdivision

Members agreed that the letter to the Southampton Planning Board on this preliminary subdivision plan looks fine. Patty will send.

3. Jeff Tannatt, Physical Plant Director, Williston-Northampton School

As BAPAC members are working to come up to speed on the issues associated with geothermal power, Jeff graciously agreed to talk about the geothermal system that the school installed with its new dormitories. Following are highlights from the conversation:

- Geothermal system at the new dormitories has been in place for 5 years. It is called a ground source heat pump system.
- It involves 2 water to water heat pumps and 17 wells that are 350 feet deep on a 20-foot grid. Jeff provided a plan showing well locations.
- Piping for the system involves 5” diameter heat fuse sealed high density polyethylene tubing encased in Bentonite with a U-shaped tube at the bottom.
- Fluid in the subsurface piping is recirculated to the heat pumps and no fluid is injected into the ground. This is known as a closed loop system. No groundwater is added to the system or discharged from the system.
- The system carries a fluid that includes antifreeze specified by DEP – propylene glycol and dipotassium phosphate. (Jeff provided Patty with a copy of the MSDS Sheet for this fluid.)
- The pumps used in the system are designed for the gravity of the fluid used.
- Construction for the wells cost \$100k
- The system runs at 25lbs of pressure (City water comes in at 100 lbs of pressure)
- A leak detection system shuts the system down automatically. This is something Jeff can monitor from his computer as well and so far, there have been no problems.
- He is impressed with the efficiency of the system. During summer months, 1 watt of electricity used for the pumps produces 13 watts of cooling.
- The system services about 30,000 square feet of space, including dorms for 32 students and 3 faculty residences.
- Jeff will advocate for geothermal systems as the school goes ahead with planning for additional dormitories and a new science building.

4. Annual Report and Work Plan for 2014

Given the scope of the Work Plan, members recommended that tasks be prioritized for implementation.

Bob suggested the following prioritization and others agreed:

- Determining how the Sustainable Water Management Initiative will impact BAPAC communities
- Following up on the land protection effort on Cook Road
- Finishing work to overhaul the BAPAC website
- Reviewing draft new well regulations developed by local Boards of Health

Andrew suggested that Holyoke might be interested in outreach on road salt, including alternatives, and retrofitting equipment. Outreach would be to DPW officials and to enterprises maintaining private roads.

5. Next Meeting

November 5, 2013 @ 3:30 PM

Easthampton Municipal Office Building, 50 Payson Avenue, Easthampton

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

DATE: 11/5/13

LOCATION: Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

D. Conti, Holyoke	J. Burkott, Holyoke	A. Smith, Holyoke
<input checked="" type="checkbox"/> D. Buttrick, Easthampton	<input checked="" type="checkbox"/> M. Czerwiec, Easthampton	<input checked="" type="checkbox"/> C. Seklecki, Easthampton
<input checked="" type="checkbox"/> W. Darling, Westfield	Karen Leigh, Westfield	
James Labrie, Southampton	J. Slattery, Southampton	
<input checked="" type="checkbox"/> R. Newton	<input checked="" type="checkbox"/> P. Gambarini, PVPC	

Others present: Mark Reed, Heritage Surveys, Inc.

TIME OF CALL TO ORDER: 3:35 p.m.

TIME OF ADJOURNMENT: 5:25 p.m.

Action Items from Meeting:

PVPC

- Write up 11-5-13 meeting notes
- Prepare and distribute agenda for next meeting
- Issue invitations to meeting with DEP on SWMI
- Revise maps for website
- Circulate land protection priorities list to members to see if there is another project that might be worth pursuing at this time
- Find source for catch basin labels

BAPAC members

- Bob Newton and Mike Czerwiec will work together to figure out how to reconcile Easthampton and Smith College testing results on TCE, perhaps through use of third lab.

1. Adoption of October 1, 2013 Meeting Notes

Adoption of the October 1 meeting notes was recommended by Chester Seklecki, seconded by Bob Newton, and unanimously approved.

2. Adoption of Annual Report and Work Plan for 2014

Patty Gambarini explained that she had prioritized the work plan according to the discussion at the last meeting. She also added a task requested by Andrew Smith regarding getting the word out about best practices for managing ice and snow on roads. Darleen Buttrick indicated she thinks the Western Mass Water Works recently did a workshop along these lines.

Bob noted that the follow up testing to understand whether TCE is still present in the aquifer could include an expanded salt study, as well as testing at the Westfield wells near the Barnes Air National Guard facility. He is planning to pursue this work with an intern in January and will confer with Woody Darling.

On the land protection task, Patty reminded members that the effort on Cook Road failed. The landowners felt that BAPAC was moving too slowly on the appraisal and they wanted to accept an offer they had had for 2 lots on the Easthampton end of the property. Based on a question from Bob, Patty indicated that she had left it with one of the landowners that they should call back if the deal on the 2 lots falls through. Patty will circulate the land protection list to members to see if there is another project that might be worth pursuing at this time.

Approval of the Annual Report and Work Plan for 2014 was recommended by Bob Newton, seconded by Mike Czerwiec, and unanimously approved.

3. Developments of Regional Impact

Western View Estates, Strong Road, Southampton, Subdivision

Representing the project for owner Triple Seven LLC, Mark Reed of Heritage Surveys, Inc. explained that a definitive subdivision plan public hearing is scheduled for the following day. The plan now calls for 12 lots, down from 13, and a shorter road. Drainage will move from deep sump catch basins with hoods to a C900 Stormceptor unit to a forebay and then into the infiltration basin. Per BAPAC's earlier comments on the project, there are now no leaching galleys in the infiltration basin. Mark noted that the C900 unit is larger and easier to clean out than the C400 unit. From the infiltration basin, there could be overflow to a down gradient field. Woody questioned whether the location of the inlet directly across from the opposite berm of the basin might produce a washout of the berm during high flows. Mark said that with just a 1/2% slope and lots of space from inlet to berm that a washout is not likely.

The Homeowners Association will be responsible for maintaining the stormwater system, though the Town will likely clean the Stormceptor and the catch basins, and charge the Homeowners Association. Darleen asked how successful it is for the Homeowners Association to manage stormwater. Chester said that typically the first 5 or 10 years go smoothly until new homeowners come who don't want that role. Resale can sometimes be tough. Patty suggested that characterizing the success of stormwater management systems under the care of homeowners associations could be a good student project.

Mark noted there are no plans for an emergency shut off valve before the infiltration basin. Heating in the subdivision will be by natural gas and not oil. Also, the concern is that in the event of an emergency no one knows where the valve is in any case.

Woody asked that the catch basins be labeled so residents know not to dump. Patty will explore sources and let Mark know.

It was agreed that there was no need for another comment letter on this project.

4. John Richardson, Barnes Air National Guard Base

John Richardson attended the meeting to provide an update and talk with members about ANG activities at the base. Following are highlights from the conversation:

- The ANG Base operates under a multi sector general stormwater permit, but it does not have a new permit yet. Currently, there are no discharges into any local waters. All stormwater sheet flows, draining into surrounding soils.
- ANG has been working with MassDEP to address several problems around the Base. This includes deicing of aircraft and resulting glycol and propylene contamination of storm flows. The Base is working to get all aircraft under cover to contain this problem. In addition all floor drains in buildings where aircraft are washed have oil separators and wash water then goes into the city sewer system.
- There are three sites on which the ANG is working actively with MassDEP's Bureau of Waste Site Cleanup. John Richardson talked about two of these sites:
 - RTN 1-17089 is South of Morley Bridge Road, approximately 1,500 to 2,000 feet upgradient of Westfield's wells 7 and 8. This is a drum disposal waste site along a slope where there is PAH, cadmium, and asbestos contamination. Clean up process is just beginning at this site. ANG may put in monitoring wells and results would be submitted to the city and MassDEP.
 - RTN 1-288 is located west of Falcon Drive at the ANG Petroleum Oil Lubricants facility. Four 25,000 gallon underground storage tanks were removed in 1998 along with tons of petroleum contaminated soil (tank sludge was historically disposed of in a disposal trench on site). Because groundwater was shown to be contaminated in this area, ANG has been using injection wells to pump persulfate into the ground and superoxidate groundwater. The area has numerous monitoring wells and ANG is reporting to DEP every 6 months.

- Upcoming projects at the Base include: rebuilding the 9,000 foot runway (to be completed by end of November); expanding the flight line (area where park planes) and using more concrete so that can hold bigger and heavier jets; expanding building 015 and in the process demolishing building 016.
- ANG has filled in approximately 100 monitoring wells using state manual for well abandonment.
- For road salting, ANG uses urea. Sand is a problem with the jets.
- All oil tanks will eventually be eliminated as ANG is switching to 100 percent natural gas.
- Westfield will explore the possibility of some sampling at existing monitoring wells near the ANG Base.

5. Aquifer Maps for Website and Municipalities

Members had several comments on the maps:

- Show sole source boundary
- Distinguish between private and public wells
- Cut off Northampton
- Verify well locations
- Show scale on maps

6. Next Meeting

December 3, 2013 @ 3:30 PM

Easthampton Public Safety Complex, 32 Payson Avenue, Easthampton

Members agreed that the next meeting should be devoted to Duane LaVangie's presentation and the follow up discussion on the Sustainable Water Management Initiative. Any DRI's should be reviewed at another time. Members agreed that invitees to the December 3rd meeting should include planning boards, conservation commissions, and water commissions from each of the BAPAC communities.

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

DATE: 1/7/14

LOCATION: Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

D. Conti, Holyoke	J. Burkott, Holyoke	<u>X</u>	A. Smith, Holyoke
D. Buttrick, Easthampton	<u>X</u> M. Czerwiec, Easthampton	<u>X</u>	C. Seklecki, Easthampton
<u>X</u> W. Darling, Westfield	Karen Leigh, Westfield		
James Labrie, Southampton	J. Slattery, Southampton		
<u>X</u> R. Newton	<u>X</u> P. Gambarini, PVPC		

Others present: R. Levesque, R. Levesque Associates; and J. Carpenter, G. Bean, and M. Babinski, all of Westfield Concerned Citizens.

TIME OF CALL TO ORDER: 3:32 p.m.

TIME OF ADJOURNMENT: 4:55 p.m.

Action Items from Meeting:

PVPC

- Write up 12-7-13 meeting notes
- Prepare and distribute agenda for next meeting
- Get timetable from DEP on SWMI draft regulations
- Get additional information on catch basin labels
- Contact Mark Noonan re: status of Country Club property in Westfield
- Contact Mark Kassis re: status of parcel between Whiting and Tighe Carmody reservoirs
- Find out if state plane coordinates from MassDEP were used for well locations

BAPAC members

- Mike and Woody to review aquifer maps to verify well locations
- Chet will talk with Mr. Cykowski re: family interest in working with BAPAC on Pomeroy Street parcel
- Bob Newton and Mike Czerwiec will work together to figure out how to reconcile Easthampton and Smith College testing results on TCE, perhaps through use of third lab.

1. Adoption of November 5, 2013 Meeting Notes

Adoption of the November 5 meeting notes was recommended by Chester Seklecki, seconded by Bob Newton, and unanimously approved. It was noted that the agenda for the current meeting did not have correct location indicated. It reads 32 Payson Avenue, instead of 50. Fortunately, personnel at 32 Payson Avenue were able to provide direction to correct location.

2. Developments of Regional Impact

Whip City Aviation, 110 Airport Road, Westfield

Rob Levesque of R. Levesque Associates presented for Whip City Aviation on the new T Hangar at the Barnes Municipal Airport. Whip City Aviation is proposing to develop a 7,350 square foot hangar building. The hangar will house 6 "T" hangars to accommodate small general aviation aircraft. This new facility will be part of a 30-year lease with the City for airport property that includes 5 existing buildings and several existing hangars that will be rehabilitated. The new hangar will be slab on grade and made of prefabricated steel and aluminum. Site improvements will include bituminous driveways and taxiway that will disturb 29,947 square feet of land.

Mr. Levesque showed the *preliminary plan* for the project at the meeting and said that stormwater from the site will flow to a stormceptor unit for pretreatment and then outlet to a basin for infiltration. He said the inlet

will be equipped with an emergency shut off valve. The basin, to be designed for the 100-year storm, will overflow to a flat grassy area on the property, according to Mr. Levesque.

Out of the concerns expressed by members, there were the following four recommendations for the project:

- ☞ Curb all bituminous surfaces so that in the event of a spill, contaminated material can be contained on the impervious area and not move into the stormwater system
- ☞ Ensure that there are clear provisions for proper disposal of the fuel sump drainage generated during pre flight preparations – typically this is less than 1 cup of fuel, but there is a cumulative impact to improper disposal
- ☞ If floor drains are required, ensure that they are tied into the City sewer system (and not routed to holding tanks)
- ☞ Ensure that there is a clearly articulated Emergency Spill Response Plan that addresses how the plan itself will be maintained and updated over time and who will have that responsibility. Spill response practices should include regular testing of valve shut off procedures as well as containment of spills so that fuel remains on the bituminous surfaces and does not reach the stormwater system.

Patty will draft letter with recommendations to Westfield Planning Board.

3. Work Plan for 2014

Storm drain labeling

Based on discussions from the recent subdivision review projects in Southampton, Patty began to research labeling of storm drains. Storm drains would be labeled where drains deliver storm flow to infiltration areas. Patty provided images from a couple label vendors to give members an idea of what these might look like and what wording might be on labels. Members agreed that adapting the Puget Sound label for the aquifer would likely be most effective. So label could read: “Only rain down the drain. Barnes Aquifer starts here.” A large arrow could be incorporated, but essential to look at drains to get idea of where label would go (so have correct direction for arrow).

Members talked about how labels would be purchased and installed. The question being: Should BAPAC require developers to purchase and install these labels, should BAPAC buy a quantity and then give to developers, or should BAPAC get agreement from developers and others (where developments are already in place) for installation and then perhaps identify a group willing to label drains. Members seemed to agree that to ensure the labels get installed, it would probably be best that BAPAC purchase labels and adhesive and then find a group to help with installation. Patty noted that Michael Young from the Westfield River Watershed Association had offered to loan the dozen or so wire brushes for prepping the label surface if BAPAC does a labeling event.

SWMI

Patty distributed copies of Duane LaVangie’s powerpoint presentation for the benefit of members who could not attend his talk at the December BAPAC meeting. The major points coming out of that presentation were:

- Though the Broad Brook system is shown to be highly impacted for August median flow and biological indicators, Easthampton’s actual 2012 groundwater use of 1.62 MGD is far below the authorized (registered) rate of 3.31 MGD.
- Pond Brook in Westfield is also shown to be highly impacted for August median flow and biological indicators, but Westfield’s actual groundwater use of 5.21 MGD is below the baseline and authorized (registered) rate of 6.11 MGD.
- While surface waters associated with Southampton’s wells are in better condition, the town’s actual use of .32 MGD is pushing up against its authorized (permitted) rate of .36 MGD. It is not clear what will be required of the Town should it need additional supply under the new SWMI regulations.
- Mapping done to show condition and categories for stream systems under SWMI are based on a model and not actual data from a given stream where there are no stream gauges.

- Draft regulations will be issued for public comment sometime soon.

Bob noted that we should find out when regulations will be issued so that BAPAC can make comments. Also, he reported that his students did do a complete analysis of flow in Broad Brook, but the results were mixed with no consensus. For the long term, there are plans at Hendrick Street to add 3 production wells. Recommendation is to locate them as far west from Broad Brook as possible so as to minimize impacts. Bob noted, however, that the geology there is tough as it borders on clay.

Patty will get timetable for comments on SWMI draft regulations.

Land protection

Members reviewed the list of land protection priorities identified by BAPAC in 2011. Andrew noted that for Holyoke he is working with Fish and Wildlife to protect the Edna Williams parcels located in Broad Brook's headwaters. For Easthampton, Chet said he will talk with Mr. Cykowski to see if there may be family interest in working with BAPAC on their Pomeroy Street parcel. In Westfield, Woody reported that he is working on a Conservation Restriction for the Potoniac parcel near well #5. He also noted that the owner of the country club recently passed away and that status of the property is not known. Patty will contact Mark Noonan to see if he knows what status may be. For Southamton, Patty will check in with Mark Kassis to see if he has any update on parcel between Whiting and Tighe Carmody reservoirs.

4. Aquifer Maps for Website and Municipalities

Patty distributed maps to Woody and Mike for Westfield and Easthampton respectively. These maps have been updated to show sole source boundary; distinguish between private and public wells; and to show scale. Members suggested that wells could be located by using state plane coordinates from MassDEP. Patty will check to see if that is what has been used on the map. In the meantime, Woody and Mike will look to verify locations on maps provided.

5. Next Meeting

March 4, 2014 @ 3:30 PM
50 Payson Avenue, Easthampton

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

DATE: 2/4/14

LOCATION: Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

D. Conti, Holyoke	J. Burkott, Holyoke	<input checked="" type="checkbox"/> A. Smith, Holyoke
D. Buttrick, Easthampton	<input checked="" type="checkbox"/> M. Czerwiec, Easthampton	C. Seklecki, Easthampton
<input checked="" type="checkbox"/> W. Darling, Westfield	Karen Leigh, Westfield	
James Labrie, Southampton	J. Slattery, Southampton	
<input checked="" type="checkbox"/> R. Newton	<input checked="" type="checkbox"/> P. Gambarini, PVPC	

Others present: Mary Ann Babinski, Gail S. Bean, and Jean Carpenter all of Westfield Concerned Citizens, and Barbara Rokosz

TIME OF CALL TO ORDER: 3:40 p.m.

TIME OF ADJOURNMENT: 5:00 p.m.

Action Items from Meeting:

PVPC

- Write up 2-4-14 meeting notes
- Prepare and distribute agenda for next meeting
- SWMI
 - Look for method on determining August median flow and biological indicators
 - Time frame for grants program and find out how can do good study within the given time frame
 - Timetable on draft regulations
- Look at status of lands around Kuzeja family property/Pomeroy Street
- Update aquifer map to show proper well locations in Easthampton and to show Great Brook Aquifer in Westfield
- Add to work plan: SEP proposal to DEP for Barnes Aquifer storm drain labeling

BAPAC members

- Chet will talk with Mr. Cykowski re: family interest in working with BAPAC on Pomeroy Street parcel
- Bob Newton and Mike Czerwiec will work together to figure out how to reconcile Easthampton and Smith College testing results on TCE, perhaps through use of third lab.

1. Adoption of January 7, 2014 Meeting Notes

Adoption of the January 7 meeting notes was recommended by Bob Newton, seconded by Andrew Smith, and unanimously approved.

2. Developments of Regional Impact

There were no DRIs for review at the meeting. Woody Darling noted that BAPAC's recommendations for the Whip City Aviation project were integrated into the Westfield Planning Board decision except for the recommendation about floor drains, which ended up not being required for the project.

3. Work Plan for 2014

Sustainable Water Management Act (SWMI)

Members talked about what would happen if a community sought to exceed its authorized withdrawal rate under SWMI. Woody noted that it would likely require mitigation in the form of additional recharge to the basin as well as a host of water conservation practices. Bob Newton noted that under SWMI the issues in Easthampton and Southampton are a bit contradicting. In Easthampton, SWMI modeling is showing high impacts of withdrawals to Broad Brook, but the authorized withdrawal rate is such that the City still has

ample ability to increase its withdrawals. In contrast, in Southampton, modeling shows far less impacts to the Manhan River as a result of well withdrawals, yet the authorized rate is such that the town is reaching the limits of what it can withdraw. Members noted it is very important that Southampton be made aware of this. Patty will contact Southampton to request that a representative attend BAPAC meetings.

Members also questioned how SWMI might be affecting West Springfield and Southwick and suggested that SWMI might be an impetus for them to join BAPAC.

There was also discussion about what BAPAC might do for the next round of SWMI grants, likely next fall. Patty noted that only communities with permitted wells are eligible to apply. Mike Czerwicz noted that if a municipality has one permitted well, then the entire system falls under that permit. As a result Easthampton and Southampton are eligible. **IS WESTFIELD?** Woody suggested collecting some data to help prepare for the SWMI grant application.

The grant concept discussed was to determine actual stream flow and the relationship of groundwater to this flow. Bob noted that the SWMI modeling is based on only a few systems and does not really capture what occurs in the Barnes Aquifer. 1 gallon withdrawn is not necessarily 1 gallon removed from flow. It will be important to understand what specifically was the SWMI method used, and characteristics of the reference watersheds. Maybe BAPAC develops a method that makes better sense for the Barnes. Bob has already put a gauge station on Broad Brook, but might be good to put one on Pond Brook as well. A gauge for the Manhan requires a \$60,000 instrument that Bob does not have, plus QAPP development. Also need to establish a well monitoring network. Bob noted that it is important to establish the stage discharge relationship during high flows and low flows. Patty recalled that project implementation for SWMI grants is supposed to occur within a very short time frame, from February to June. Patty will check with DEP to confirm this time frame and ask whether it's possible to accommodate projects with longer time frames--for monitoring in particular.

Maps

Mike provided Patty with a diagram of how the Hendrick Street well field and Pines Street well should be better indicated on the map.

Members also asked that map in Westfield show the Great Brook Aquifer, where the stratified drift extends across the Westfield River.

Land Protection

Patty reported that she talked with Mark Noonan about the status of the Country Club property in Westfield. He said he believes the City of Westfield is in the process of buying a CR with CPC monies, but could not confirm. He said he was more concerned about the status of the Cook Road property in Southampton. He will follow up with Barbara La Flam to see if they are following through with selling parcels to a developer.

Andrew Smith noted that he monitors the CR on the Kuzeja family property, which straddles Holyoke, Easthampton and Southampton. He said that expanding land protection in that area and along Pomeroy Street would be beneficial to the aquifer. Patty will look at Easthampton's Open Space Plan and at notes from previous meetings about this area to begin exploring whether there might be an opportunity in this area.

Storm drain labeling

Patty showed the storm drain label options to members and the group agreed on the label that reads, "Only rain down the drain! Barnes Aquifer starts here."

Committee members also want to find a way for BAPAC to fund label production rather than charge developers for labels. Patty will add to the work plan submitting a Supplemental Environmental Project proposal to DEP for labels.

4. Other Business

Patty reported that she had learned that morning that the Westfield City Planner was putting forth recommendations on their water resource protection district. The concern is that the recommendations from the planner indicate that these are based on the December 12th memo from PVPC. Woody said that the planner indicated he made changes because they would not pass the way they were worded.

Patty noted there are at least two important changes of substance from what PVPC/BAPAC had put forth:

Requires that a lot be 50% or more within the water resource protection district to comply with district standards. This is a change from previous practice and PVPC/BAPAC recommendation that standards apply to the entire lot or parcel where the district line (Zone II) divides a lot or parcel.

Also the definitions section does not now include definitions for Water Resources Protection District, Zone 1, and Zone II.

Bob noted that the Zone II is just a line and development beyond this boundary often has water quality impacts. He suggested responding to indicate that it is important that wherever the boundary line divides a property, standards apply to the entire lot or parcel.

5. Next Meeting

March 4, 2014 @ 3:30 PM
50 Payson Avenue, Easthampton

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

DATE: 3/4/14

LOCATION: Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

	D. Conti, Holyoke		J. Burkott, Holyoke		A. Smith, Holyoke
	D. Buttrick, Easthampton	X	M. Czerwiec, Easthampton		C. Seklecki, Easthampton
X	W. Darling, Westfield		Karen Leigh, Westfield		
	James Labrie, Southampton	X	J. Slattery, Southampton		
X	R. Newton	X	P. Gambarini, PVPC		

Others present: None

TIME OF CALL TO ORDER: 3:40 p.m.

TIME OF ADJOURNMENT: 4:54 p.m.

Action Items from Meeting:

PVPC

- Write up 3-4-14 meeting notes
- Prepare and distribute agenda for next meeting
- SWMI – check on when regulations issued; ask about whether there will be change in baseline for communities well below that in actual use; ask about whether SWMI grants can be done in two parts (Year 1 and Year 2)
- Draft brochure for distribution in Southampton and other communities
- Continue trying to contact CATV for piece on tour of the Aquifer

1. Adoption of February 4, 2014 Meeting Notes

Adoption of the February 4 meeting notes was recommended by Bob Newton, seconded by Mike Czerwiec, and unanimously approved.

2. Developments of Regional Impact

There were no DRIs for review at the meeting. Woody Darling noted that the Westfield roundtable heard about a likely forthcoming project near Old Long Pond Road on the Westfield-Southampton border.

3. Work Plan for 2014

Water resource protection district bylaws – proposed changes in Westfield

Woody noted that there is a change proposed to allow Open Space cluster developments in the Zone II with a special permit. Members did not see a problem with this given that there should be open space protection associated with a development of this type.

What members are more concerned with is the Westfield planning board recommendation that the Water Resources Protection Overlay District zoning require that a lot be 50% or more within the district to comply with district standards for the entire lot. This weakens BAPAC's recommendation that stipulates, where the boundary line of the Water Resource Protection District divides a lot or parcel, the requirements shall apply to the entire lot or parcel. Bob Newton noted that the Zone II boundary is just for a given well and that the aquifer itself extends beyond this boundary. It is best to be as protective as possible and include the entire lot.

Sustainable Water Management Act (SWMI) - Regulations

Patty reported that in corresponding with SWMI coordinator Duane LeVangie she learned that draft regulations should be out by March 28th. She will notify BAPAC members as soon as she hears about draft regulations.

Members talked with Joe Slattery about Southampton's situation: Southampton's actual use/baseline is near the ceiling presented by their authorized withdrawal rate. If the Town seeks permission for an increase in the withdrawal rate, it will need to meet SWMI regulations. Joe noted that recharge in Southampton is fairly good because everyone is on septic.

Bob noted that as for Easthampton, where the authorized rate is nearly double what the actual use/baseline is, there is some word that the state is going to lower the authorized rate/baseline. He questions when communities might find out about this. Patty said she can check in with Duane LeVangie on this question.

Where Westfield is looking to develop a new well, they will need to meet regulation under SWMI. This will likely require mitigation in the form of additional recharge to the basin as well as other water conservation practices.

Sustainable Water Management Act (SWMI) - Grant

Patty reported that the time frame for implementing a SWMI grant involves only a 5-month time frame, February 1 through June 30.

One project grant idea the group had been discussing was to possibly develop a stream flow/groundwater evaluation method better suited to the confined area of the Barnes Aquifer, where the state's modeling, which involves 1 gallon withdrawn equals 1 gallon removed from flow, does not necessarily apply. The short grant time frame, however, limits what is possible. Bob noted that perhaps in a Year 1 award, the grant could fund purchase and installation of equipment. Calibration (capturing high and low flows to establish stage/discharge relationship) and recoding data would occur outside of the grant period. A Year 2 award, could fund data download and analysis. Patty will ask if this two part type grant is possible.

For Southampton, one idea for a SWMI grant is to look at the dam release relationship to groundwater pumping.

Outreach

Patty recalled for members that last year she had conferred with boards of health and prepared a seasonally appropriate letter of best practices for private well owners to be issued jointly by BAPAC and Boards of Health. While Easthampton's Board of Health did issue the letter to the few private well owners in the city, there were no letters issued in Westfield (due to staff change) or Southampton (due to cost).

Southampton is eager to have a brochure based on these letters. Joe said that the brochure could go out in the bill from the Water Department and that maybe the Board of Health could send the brochure to private well owners. Patty said that she can draft a brochure that describes best practices for all Aquifer residents, but that also includes specific mention of private well owners.

Mike noted too that for Drinking Water week, the brochure could go home with school kids in other communities. Problem is BAPAC does not have a budget to print the brochure.

For drinking water week, Patty said she had also been trying to contact Easthampton CATV to see if there might be interest in producing a piece that tours the aquifer. She will continue with this idea.

It was also mentioned that a theater project some years ago on the aquifer had been extremely effective.

Patty will work on the brochure for now and see what she can learn about the theater idea, possibly for next year.

Land Protection

Members talked about the 2 lots that are part of the 30-acre Cook Road property where BAPAC had explored possible protection. Southampton's Conservation Commission has asked the Board of Selectmen to consider exercising their right of first refusal on these lots. Patty was looking for direction from the committee as to whether BAPAC wanted to have a presence at the meeting to talk with Select board members about these two lots. Members agreed that since discussion involves only the 2 lots, BAPAC need not have a presence at the meeting, but that it is worth pursuing an appraisal on the remaining 27 acres. Patty will work with Mark Noonan of Winding River Land Trust toward an appraisal.

Patty recommended postponing discussion on a land protection idea raised by Andrew Smith at the last meeting until Andrew can join the group.

4. Next Meeting

April 1, 2014 @ 3:30 PM
50 Payson Avenue, Easthampton

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

DATE: 4/1/14

LOCATION: Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

	D. Conti, Holyoke		J. Burkott, Holyoke	<u>X</u>	A. Smith, Holyoke
	D. Buttrick, Easthampton	<u>X</u>	M. Czerwiec, Easthampton		C. Seklecki, Easthampton
<u>X</u>	W. Darling, Westfield		Karen Leigh, Westfield		
	James Labrie, Southampton	<u>X</u>	J. Slattery, Southampton		
	R. Newton	<u>X</u>	P. Gambarini, PVPC		

Others present: Gail Bean, Mary Ann Babinski, and Jean Carpenter from Westfield Concerned Citizens; Mary O’Connell, Westfield City Council; Ed Gwinner, Cook Road property owner; Brian Barnes, Barnes Airport; Alex Bernier, Stantec

TIME OF CALL TO ORDER: 3:35 p.m.

TIME OF ADJOURNMENT: 4:55 p.m.

Action Items from Meeting:

PVPC

- Write up 4-1-14 meeting notes
- Check with MassDEP on status of porous paving guidance for Zone 2
- Write DRI letter to Brian Barnes regarding proposed taxi way at airport
- Send SWMI regulations to members for comments at next meeting
- Finish brochure and circulate to committee members for review
- Prepare media release for Drinking Water Week
- Prepare proposal to Easthampton CPA Committee for Cook Road property
- Work with Mark Noonan of Winding River Land Trust on appraisal for Cook Road property
- Prepare and distribute agenda for next meeting
- Continue exploring possibility of aquifer video by CATV

Committee members

- Review draft SWMI regulations to help develop BAPAC comments for submission to MassDEP

1. Adoption of March 4, 2014 Meeting Notes

Adoption of the March 4 meeting notes was recommended by Joe Slattery, seconded by Mike Czerwiec, and unanimously approved with changes recommended by Patty Gambarini.

2. Developments of Regional Impact

Barnes Regional Airport – Repave taxi lanes around T hangars

Brian Barnes and Alex Bernier of Stantec reported that the Barnes Regional Airport is proposing a taxi way reconstruction. Funded in part by MassDOT and the City of Westfield, the project will add almost 1 acre of increased impervious area to the current taxi way area. The project is exempt from stormwater permit or site plan review requirements. Increased paved area is due to FAA requirements for offset distances from buildings to ensure wing tip clearance.

Taxi lanes currently service approximately 20 single engine aircraft and stormwater drainage sheet flows to adjacent grassy areas. With the proposed reconstruction, drainage along the eastern edge of the project site would continue to sheet flow. Drainage from the central taxi area of the project site would be routed to a catch basin that is connected to a 10 x 200 foot long infiltration trench along the northwest boundary of the

project site. At the north east corner of the project site, drainage would flow directly to a 6 by 85-foot infiltration trench. At the southern end of the project site, drainage would flow directly to a 4 by 100-foot long infiltration trench.

Woody Darling expressed concern about the direct connection between catch basin and drywell since there would be no means of disconnections or shut off should a spill occur. He noted Massachusetts Stormwater Handbook guidance in using a stormceptor in these situations within the Zone II. Mr. Barnes said that currently all stormwater is sheet flowing from the paved area and that it is a challenge to gather flow at a central point due to the flatness of the site. Woody reiterated the need for some kind of pretreatment before infiltration.

There was also discussion about a 16-inch water main that passes under the construction area. Woody noted that precautions should be taken to keep the line from breaking. Mr. Bernier noted that they will specify that compaction be achieved through rolling rather than vibration.

Based on question from Mary Ann Babinski, Andrew Smith talked about total suspended sediments requirements within the Massachusetts Stormwater Handbook and credits for certain BMPs. Jean Carpenter expressed concern about the operations and maintenance plan at the Airport.

The follow up letter will include the following recommendations:

- ☞ Pretreat all stormwater before it moves into infiltration trenches to ensure the continued ability of the trenches to infiltrate over the long term.
- ☞ Curb bituminous surfaces so that in the event of a spill, contaminated material can be contained on the impervious area and not move into the stormwater system.
- ☞ The treatment system should include a gate valve before all of the infiltration facilities so that in the event of a spill these valves can be turned off to prevent the spill from reaching the trenches.
- ☞ Ensure that there is a clearly articulated Emergency Spill Response Plan that addresses how the plan itself will be maintained and updated over time and who will have that responsibility. Spill response practices should include regular testing of valve shut off procedures as well as containment of spills so that fuel remains on the bituminous surfaces and does not reach the infiltration trenches.
- ☞ Operation and maintenance should include use of winter deicing materials that will not harm groundwater sources.

Patty noted that this might be a good project for porous paving. She will check with MassDEP to see where they are in revising their recommendation within the Stormwater Handbook against porous paving in the Zone II.

Other DRIs Discussion

Andrew noted that there was a forest cutting plan approved by DCR for the Ashley McLean Reservoir. These projects are typically executed by service foresters. Woody noted that Westfield has similar plans for water supply lands.

3. Work Plan for 2014

Sustainable Water Management Act (SWMI)

Patty reported that she followed up on SWMI questions from last BAPAC meetng with MassDEP's Duane LeVangie and Jen Durso.

Q: What is timetable for draft regulations being issued and comment period?

A: Regulations will begin the public comment process beginning on April 11th and running through June 10th. Six hearings are scheduled, with one in MassDEP Springfield Office on May 8th.

Q: There has been rumor that the state is reconsidering baselines/authorized withdrawal amounts where communities have actual withdrawals that are well below these baseline numbers. Several of the BAPAC members have heard this from consultants. Is there any truth to this?

A: Duane LeVangie is not aware of any changes to the baseline values.

Q: Given the very limited SWMI grant project period, can grants for a project be done in two parts?

A: Yes, but each segment of the project would have to be able to stand on its own as a complete project to get selected, since there is no assurance that the second proposal would be funded in a consecutive year.

Q: Would a study that seeks to better characterize stream flow modeling that accounts for the confined aquifer (which SWMI modeling does not) be eligible for SWMI grant?

A: The type of work you are describing doesn't really meet the criteria for a SWMI grant. However, if you take a look at the proposed regulations, 36.20 has specific provisions for a site specific evaluation that I think would better suit your needs.

Land Protection

Discussion focused on the 30-acre Cook Road property where BAPAC had explored possible protection. There are two lots under purchase and sale and coming out of Chapter 61B so the Southampton Board of Selectmen were considering whether to exercise their right of first refusal or not. Ed Gwinner noted that the family had put considerable resources into the property and needed to move forward with the sale. He referred to an August 2013 letter sent by Patty saying that BAPAC had not moved forward at that time and he was concerned about further delay. Patty explained that the delay occurred because it was difficult to locate funding for an appraisal, but that now it looked like Winding River is able to provide funding for the appraisal. He said that following the sale of these two lots, he will remove additional lots from Chapter 61B to offer for sale.

Patty said that Mark Noonan has some good ideas about how several funding sources might be pulled together to cover the costs of conserving the remaining land. Andrew suggested contacting MassFish and Wildlife once the appraisal is done.

Patty will continue working with Winding River Land Trust on an appraisal and prepare a letter for BAPAC in time for the April 29th Southampton Board of Selectmen meeting. She will also continue preparations for an application to the Drinking Water Supply Protection Grants program. Woody noted that since it is Easthampton's water supply that is of interest in protecting, Easthampton has to buy and own the property. Joe said that the land does relate to Southampton's Pequot Well, but since that well was contaminated and closed, there is a lot of engineering that would have to be done to bring it back on line.

Outreach

Patty circulated a draft brochure that she is preparing for Drinking Water Week. The brochure follows up on work with boards of health on tips for well owners. The brochure however has broader appeal to all property owners in the Aquifer.

She also circulated a concept for a video that might be developed for next year's Drinking Water Week. She has sent this to Easthampton CATV staff to see if there might be interest in collaborating.

4. Next Meeting

May 6, 2014 @ 3:30 PM

50 Payson Avenue, Easthampton

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

DATE: 5/6/14

LOCATION: Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

	D. Conti, Holyoke		J. Burkott, Holyoke		A. Smith, Holyoke
X	D. Buttrick, Easthampton	X	M. Czerwiec, Easthampton		C. Seklecki, Easthampton
X	W. Darling, Westfield		Karen Leigh, Westfield		
	James Labrie, Southampton		J. Slattery, Southampton		
X	R. Newton	X	P. Gambarini, PVPC		

Others present: Mary Ann Babinski, Jean Carpenter, and Barbara Rokoz from Westfield Concerned Citizens

TIME OF CALL TO ORDER: 3:37 p.m.

TIME OF ADJOURNMENT: 4:55 p.m.

Action Items from Meeting:

PVPC

- Write up 5-6-14 meeting notes
- Schedule special BAPAC meeting to discuss SWMI
- Explore what may be needed in preparation for Drinking Water Supply Protection grant
- Prepare and distribute agenda for next meeting

Committee members

- Review draft SWMI regulations to help develop BAPAC comments for submission to MassDEP

1. Adoption of April 1, 2014 Meeting Notes

Adoption of the April 1 meeting notes was recommended by Mike J Czerwiec, seconded by Bob Newton, and unanimously approved.

2. Developments of Regional Impact

There were no projects of regional impact, but in the course of discussing the Sustainable Water Management Initiative below, members noted that there have been several projects of late, particularly in Easthampton, involving water use (breweries). Typically BAPAC does not review projects related to water use if they are not physically located in the Zone 2, but given the new SWMI regulations members suggested exploring whether it makes sense for BAPAC to review and make recommendations on projects that propose to use over a certain threshold amount of water. Mike said he will get brewery use figures.

3. Work Plan for 2014

Sustainable Water Management Act (SWMI)

Patty reminded members about the DEP information session and hearing on SWMI in Springfield on May 8th. Woody and Patty will be attending.

Conversation was somewhat limited in that members had not yet reviewed draft regulations for a full fledged discussion about what comments should be made by BAPAC.

- Darlene said that she had understood that the impact on rates is a concern under SWMI regs. She said there is concern about the consequences for economic development.
- Patty noted that the regulations allow for data refinements in Section 36.20. From previous information provided by DEP, however, the cost of refinement cannot be covered by SWMI grants. She also noted the schedule by which refinements would need to be submitted: Westfield Basin - November 30, 2015 and Connecticut Basin - November 30, 2016.
- Bob noted that he and Mike have been collected some stage data on Broad Brook in September. He said that they could also look at discharge data on the stream and how it relates to pumping.

As suggested by Bob, Patty will schedule a special meeting devoted specifically to comments on SWMI after the DEP hearing.

Land Protection

Patty reported that the appraisal on the Cook Road property was completed by O'Connor Real Estate Associates. She and Mark Noonan of Winding River Land Trust met with the family to give them the appraisal and to begin to get assurances from the family on whether they want to allow the time it would take to work in getting a land conservation funding package together. At the meeting, it was indicated that we needed to know whether all family members are on board with a 1.5-year time frame. Barbara La Flam is going to distribute the appraisal to other family members and let us know where members stand.

Currently, the plan would be to move forward without the two lots for which the family already has a purchase and sale agreement (located to the north). Patty noted that letter just went out from BAPAC to the Southampton Board of Selectmen saying that there will be not action toward preserving the two lots, but that BAPAC is now working with Winding River Land Trust to explore the family's wishes on the remaining land and whether a conservation solution is possible.

Woody noted that in applying for the Water Supply Protection grant program to help cover some of the costs in this acquisition, the Water Department/City of Easthampton must be willing to take on ownership of this land. Darlene noted that she thought this parcel is identified in the Easthampton Open Space and Recreation Plan as a priority so that there ought to be good support for ownership. Patty will contact City Planner Jessica Allan to ascertain how to go about getting such assurances from the City. Woody suggested it might be worth contacting Water Supply Protection Grants Administrator Celia Reichel to see what she will need from prospective landowner. It may be a question for the Easthampton City Attorney as the other wrinkle is that if Southampton CPA monies are used, Southampton will need to hold the CR.

Outreach

Patty distributed copies of the brochure for Drinking Water Week to members and noted the media release that had been sent to promote availability of brochure and BAPAC website.

4. Other Business

Xtra Mart letter to MassDEP

Patty reported that the BAPAC letter regarding the clean up of the former Xtra Mart site had been sent to MassDEP. MassDEP is undertaking an audit of the case and will let BAPAC know of results.

Cultural Chaos event in Easthampton

Mike noted that he had been asked to participate in a June 14th event called Cultural Chaos. He is trying to figure out what to do for the Water Department in this event. Members suggested issuing water bottles or doing a fountain of sorts.

Niagra project in Westfield

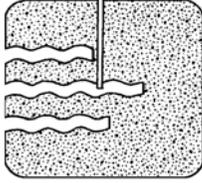
Barbara Rokoz from Westfield Concerned Citizens said that her group is very concerned about proposed rezoning of City owned land on the northside of [REDACTED] from Agricultural to Industrial. She also said the City is trying to revise the Industrial A zone to include plastics, which had been previously prohibited. The land in question had been identified as a good location for small environmentally friendly industries, but now the City has invited proposals for use of the full 25-acres at 32 Industrial Turnpike. The Powder Mill River runs along the property. One proposal is from Niagara Bottling LLC which is proposing a 100,000 square foot facility. The site is not located in the Zone 2, but the facility could use up to 1 million gallons of water per day.

5. Next Meeting

June 3, 2014 @ 3:30 PM

50 Payson Avenue, Easthampton

DRAFT



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

SPECIAL MEETING NOTICE

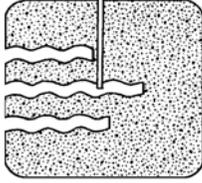
BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, August 5, 2014
TIME: 3:30 p.m.
PLACE: Easthampton City Hall
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Developments of regional impact**
Golden Acres Estates, Westfield
Old 49er Site, Westfield
- 2. Preliminary discussion of 2015 work plan**
- 3. Other business**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

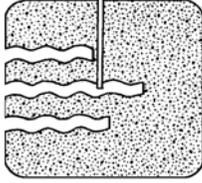
BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, September 16, 2014
TIME: 3:30 p.m.
PLACE: Easthampton City Hall
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of meeting notes**
June 3, 2014; August 5, 2014
- 2. Developments of regional impact**
- 3. Sustainable Water Management Initiative grant opportunity**
- 4. Work plan for 2015**
- 5. Video project**
- 6. Other business**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

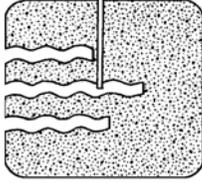
BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, October 7, 2014
TIME: 3:30 p.m.
PLACE: Easthampton City Hall
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of meeting notes**
September 16, 2014
- 2. Developments of regional impact**
 - Westfield
 - Golden Acres preliminary subdivision plan
 - Water Resource Zoning Update
 - Allowing commercial amusement/recreation/assembly uses in Industrial A by special permit
 - Easthampton
 - Request to BOH for variance to allow well for irrigation purposes
- 3. Jeff Auer, West Springfield**
- 4. Other business**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, November 4, 2014

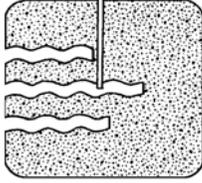
TIME: 3:30 p.m.

PLACE: Easthampton City Hall
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of meeting notes**
September 16, 2014 and October 7, 2014
- 2. Developments of regional impact**
Westfield Water Resource Zoning Update - continue review of proposal (all)
- 3. Updates**
Cook Road land protection – next steps (Patty and Mike)
Sustainable Water Management Initiative regulations (Woody)
Easthampton Board of Health – waiver application for irrigation well (Mike)
- 4. Other business**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

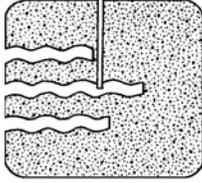
BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, December 2, 2014
TIME: 3:30 p.m.
PLACE: Easthampton City Hall
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of meeting notes**
- 2. Developments of regional impact**
 - Roots Athletic Center, Root Road, Westfield
 - 0 Dox Road, Westfield
 - Westfield Water Resource Zoning Update – review BAPAC letter
- 3. Updates**
 - Cook Road land protection
- 4. Other business**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

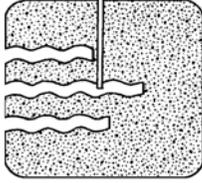
BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, January 6, 2015
TIME: 3:30 p.m.
PLACE: Easthampton City Hall
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of meeting notes**
December 2, 2014
- 2. Developments of regional impact**
Western Massachusetts Demolition – preliminary conversation re: project on Summit
Lock Road, Westfield
Roots Athletic Center, Root Road, Westfield - response
Westfield Water Resource Zoning Update - status
- 3. Updates**
Cook Road land protection
- 4. Other business**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, February 10, 2015

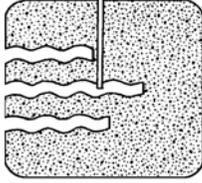
TIME: 3:30 p.m.

PLACE: Easthampton City Hall
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of meeting notes**
January 6, 2015
- 2. Developments of regional impact**
- 3. Work Plan Updates**
Cook Road land protection
Barnes Aquifer video
Geothermal information
Website
- 4. Other business**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

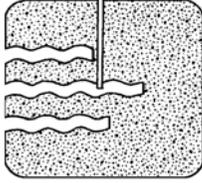
BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, March 3, 2015
TIME: 3:30 p.m.
PLACE: Easthampton City Hall
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of meeting notes**
February 10, 2015
- 2. Developments of regional impact**
Westfield Water Resource Zoning Update
- 3. Salt study 2015**
- 4. Work plan updates**
Cook Road land protection
Barnes Aquifer video
Geothermal information
- 5. Other business**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, April 7, 2015

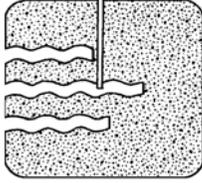
TIME: 3:30 p.m.

PLACE: Easthampton City Hall
Conference Room B, 50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of meeting notes**
March 3, 2015
- 2. Developments of regional impact**
Hampton Ponds - 95 New Broadway, Westfield
Hampton Ponds - 105 Long Pond, Westfield
- 3. Salt study 2015 - update**
- 4. Work plan updates**
Cook Road land protection
Barnes Aquifer video
Geothermal information - meeting with Joe Cerutti, Mass DEP, April 14, 3:30
- 5. Other business**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

MEETING NOTICE

BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

DATE: Tuesday, June 2, 2015

TIME: 3:30 p.m.

PLACE: Easthampton City Hall
50 Payson Avenue, Easthampton, MA

Agenda

- 1. Adoption of meeting notes**
April 7, 2015
- 2. Developments of regional impact**
1006 Southampton Road, Westfield - zoning permit
225 Root Road, Westfield - zoning permit
- 3. Salt study 2015 - update**
- 4. Work plan updates**
Cook Road land protection
Barnes Aquifer video
Geothermal information
- 5. Other business**

**City/Town Clerks: Please post this notice per Massachusetts General Laws,
Chapter 39, Section 23, A-C**

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

DATE: 9/16/14

LOCATION: Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

<u>X</u> M. Czerwiec, Easthampton	<u>X</u> C. Seklecki, Easthampton	
D. Conti, Holyoke	J. Burkott, Holyoke	A. Smith, Holyoke
James Labrie, Southampton	J. Slattery, Southampton	R. Kemp, Southampton
<u>X</u> W. Darling, Westfield	Karen Leigh, Westfield	
<u>X</u> R. Newton	<u>X</u> P. Gambarini, PVPC	

No others present

TIME OF CALL TO ORDER: 3:35 p.m.

TIME OF ADJOURNMENT: 5:05 p.m.

Action Items from Meeting:

PVPC

- Write up 9-16-14 meeting notes
- Prepare and distribute agenda for next meeting
- Prepare matrix to help with understanding proposed water resource zoning changes in Westfield

BAPAC members

- Bob will provide image from USGS professional document that can be used to show formation of the Aquifer
- Woody will contact Jeff Auer to see if there is possible interest in joining BAPAC
- Bob will locate folder provided by Patty some time ago that can help with BAPAC website links to important studies

1. Adoption of June 3 and August 5 Meeting Notes

Patty noted that there are no June BAPAC meeting notes since there was not a quorum for that meeting. Notes from the special meeting in August are brief and will be provided at the next meeting for review.

2. Developments of Regional Impact

Westfield Water Resources Zoning Proposed Changes

Patty shared the copy of a September 12 letter from Westfield's Planner to the Chair of the City Council's Natural Resources Subcommittee recommending updates to the water resource zoning. Patty had just received a copy of the letter that morning so had not been able to prepare any analysis for BAPAC members. While the letter opens with a sentence indicating that the proposed changes are based on PVPC recommendations, one of the major proposed changes---eliminating 2-acre minimum lot size for non residential uses---has not been among any of the BAPAC/PVPC recommendations. It was suggested that Patty should communicate this to the City Planner. To help BAPAC members understand what is being proposed for Westfield, Patty will prepare a matrix showing existing regulations, proposed changes, and how they compare to those changes recommended by BAPAC/PVPC in December 2013.

3. SWMI Grant

Members reviewed a key section of the SWMI RFP to determine whether it might be feasible to apply. Patty said that given the short time frame until the deadline, as well as the very short implementation period for any grant funded project, that it might make sense for a consultant to prepare the application. For example, noted Patty, Tighe & Bond is working with Easthampton on an integrated water management plan. Maybe there is a drinking water component within that plan that could be funded through this grant. Mike noted that there is an interconnections plan in the works with Southampton and suggested maybe there is a component within that effort, such as a general program to lower demand, that could be funded. Bob noted

that it seems that we need to do some more advance planning to prepare an application for these grant dollars.

4. Work Plan

Members reviewed the list of items for the work plan and agreed to continue generally with the plan set forth for 2014 through 2015. Major work for 2015 will be:

- Continue to conduct reviews of Developments of Regional Impact
- Continue to follow developments under the Sustainable Water Management Initiative regulations
- Take any next steps that may be necessary to protecting the land on Cook Road in Southampton
- Continue adding to the new website, preparing a new graphic on the formation of the Aquifer (Bob has graphic that can be used), develop section on K-12 resources, and create links to important studies about the Aquifer (Bob has materials in folder from Patty that he had planned to add to)
- Review of any new regulations developed by BAPAC member communities – continue working with Westfield Planning and Easthampton Board of Health
- Work with ECAT on video to inform property owners about the Aquifer for Drinking Water Week

Other items of importance will stay on the work plan as before so that committee members can keep key Aquifer issues in mind from one year to the next.

5. Video Project

BAPAC members brainstormed footage that ECAT should try to get now in preparing for the video:

- Stormwater running off of roads and parking lots and even roofs
- Puddles with the sheen of oil on them
- Rain falling on lawn
- Rain falling in the woods
- Storm flow into catch basins and coming out of outfalls into streams
- Snowfall
- Snowmelt
- Trees in fall with leaves
- Trees in winter with no leaves
- Streams flowing
- Footage of Bob Newton's model that shows water going through the system to wells

6. Other Business

Patty reported that she had received a letter from Holyoke indicating that the City could not pay BAPAC dues this year due to a \$4.5 million budget shortfall.

7. Next Meeting

October 7, 2014 @ 3:30 PM
50 Payson Avenue, Easthampton

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

DATE: 10/7/14 **LOCATION:** Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

<input checked="" type="checkbox"/> M. Czerwiec, Easthampton	C. Seklecki, Easthampton	
D. Conti, Holyoke	J. Burkott, Holyoke	A. Smith, Holyoke
James Labrie, Southampton	J. Slattery, Southampton	R. Kemp, Southampton
<input checked="" type="checkbox"/> W. Darling, Westfield	Karen Leigh, Westfield	
R. Newton	<input checked="" type="checkbox"/> P. Gambarini, PVPC	

Others present: Jeffrey Auer, Town of West Springfield; Gail Bean, Barbara Rokosz of Westfield Concerned Citizens; and Mary O’Connell, Westfield City Council

TIME OF CALL TO ORDER: 3:40 p.m.

TIME OF ADJOURNMENT: 5:20 p.m.

Action Items from Meeting:

PVPC

- Write up 10-7-14 meeting notes
- Prepare and distribute agenda for next meeting
- Send guidance to Jeffrey Auer re: joining BAPAC
- Contact USGS to see if can determine how might get study done of Barnes/Great Brook Aquifers

BAPAC members

- Mike will attend next Board of Health meeting, possibly with Bob Newton to reinforce objections to irrigation wells in the Aquifer.
- Woody will ask City Planner Jay Vinskey to meet with him and Mary O’Connell regarding proposed changes to water resources zoning.

1. Adoption of September 16 meeting notes

Members agreed to table approval until the next meeting when everyone will have had a chance to review notes.

2. Jeffrey Auer, West Springfield

Jeff, who works for the West Springfield Water Department, would like to explore possible BAPAC membership. He noted the Barnes Aquifer essentially extends down to the Massachusetts border with Connecticut (where it is known as the Great Brook Aquifer). A quarrying operation that has approval to reopen in Suffield, CT, has raised concerns about potential contamination of drinking water supply in the aquifer. This might be an issue in which BAPAC could get involved. Jeff will reach out to see if Southwick might also be interested in joining BAPAC. Patty will look at the Memorandum of Agreement for direction on how to bring in new BAPAC community members and let Jeff know about procedure. West Springfield is a permitted system so is impacted by new SWMI regulations. Perhaps there are other collaborations that could occur relative to SWMI. Patty asked whether anyone had ever been in touch with USGS regarding study of this aquifer system and related stream systems. She had worked with a USGS study done on this topic in Rhode Island some years ago. Something

like this on the Barnes and Great Brook Aquifers would be very useful. Jeff noted that USGS had done a study on the Bear Hole surface system in West Springfield some time ago. Patty will look into how USGS came to do study in RI for some possible insights.

3. Developments of Regional Impact

Golden Acres Estate, Old Long Pond Road, Westfield

Mark Reed of Heritage Surveys communicated by e-mail that the only change from BAPAC's review in August is that all lots are now 2 acres or more. BAPAC's comments were already sent in August 18th letter to planning board. Stormwater system detail will come with definitive plan for BAPAC to review at later date.

Water Resources Zoning Update, Westfield

Patty distributed 24-page matrix she had prepared showing provisions within: 1. existing regulations, 2. former BAPAC recommendations for changes, and 3. proposed regulation changes by the City Planner. Members made comments, reviewing the matrix page by page, but will continue at next BAPAC meeting given time constraints. In the meantime, Woody and Mary will meet with City Planner Jay Vinsky to pass on comments from review to date and get his insights.

Allowing commercial amusement/recreation/assembly uses in Industrial A by special permit, Westfield

This petition for a zoning amendment comes from the Westfield City Council President Bent Bean II. The only information that Patty had in hand is the form filed with the City. Mary and Woody indicated that this use had once been allowed, but then removed in 2007 to require a special permit. They were not sure why the City had decided to create this restriction and suggested talking with former City Planner Larry Smith.

Request to Board of Health for variance to well regulations to allow for irrigation well, Easthampton

Mike reported that the Board of Health is leaning toward allowing an irrigation well at the Hampton East Condominiums development. It seems the Board of Health feels some obligation to allow this type of well. Mike noted that Section 6-4c of the Board of Health regulations, however, is clear that there is no obligation. Mike said he will attend next meeting. He said it is critical for them to realize that 16,000 people in the City rely on the aquifer for drinking water. Furthermore, this request for a variance does not represent a "hardship" as there are other approaches to establishing an aesthetically pleasing landscape. Patty noted that BAPAC has been clear about its opposition to irrigation wells with the October 2013 letter sent to Health Director Jackie Duda.

4. Other Business

None

5. Next Meeting

November 4, 2014 @ 3:30 PM
50 Payson Avenue, Easthampton

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

DATE: 11/4/14 **LOCATION:** Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

M. Czerwiec, Easthampton	C. Seklecki, Easthampton	
D. Conti, Holyoke	J. Burkott, Holyoke	A. Smith, Holyoke
James Labrie, Southamton	<u>X</u> J. Slattery, Southamton	<u>X</u> R. Kemp, Southamton
<u>X</u> W. Darling, Westfield	Karen Leigh, Westfield	
R. Newton	<u>X</u> P. Gambarini, PVPC	

Others present: Mary O’Connell, Westfield City Council; Jay Vinskey, Westfield City Planner; Norman Roy, Easthampton citizen

TIME OF CALL TO ORDER: 3:35 p.m.

TIME OF ADJOURNMENT: 5:05 p.m.

Action Items from Meeting:

PVPC

- Write up 11-4-14 meeting notes
- Prepare and distribute agenda for next meeting
- Contact USGS to see if can determine how might get study done of Barnes/Great Brook Aquifers

BAPAC members

- Mike will help Patty with moving forward in Easthampton on Cook Road Land Protection per the schedule

1. Adoption of September 16 and October 7 meeting notes

Members agreed to table approval until the next meeting since others who had attended those meetings were not present.

2. Developments of Regional Impact

Proposed Changes to Westfield’s Water Resources Zoning

Woody Darling noted that he and Jay Vinskey, Westfield’s City Planner, had met since BAPAC’s last meeting to review zoning changes and share discussion coming out of BAPAC’s October meeting. Jay said that the intent of the proposed changes is to tighten up language, making it easier to administer and to create a consolidated path for permitting. Following are some of the points discussed:

- 3-170.3 (2) Where a lot has a portion of land within the Water Resource Protection District, allowing that portion of lot not within the District special permit exemption from some or all requirements of the District – Jay explained that people need reassurances about what does and does not apply to their land. If the requirements were to apply to the entire lot, then it would make sense in these cases to expand the Zone II boundary to the extent of the lot lines.
- 3-170.4 Definitions of Zone 1 and Zone II – Patty asked why these are not in the definition section. Jay noted that the definitions are within the context of the ordinance.

- 3-170.4 New definition for Common Development Project – Jay noted that this provides flexibility for larger plans and projects
- 3-170.5 plastics production not included in prohibitions - Jay noted that the City’s Industrial A Zoning now distinguishes between plastics manufacturing and plastics production. Plastics manufacturing is prohibited, but production is allowed by special permit.
- Impervious cover limits/triggers – Patty noted that there should be closer examination of what these mean, especially in light of the forthcoming MS4 stormwater permit, the current draft of which requires control of the first 1 inch of runoff from any development. Currently the proposed ordinance has a trigger of 15% or 2,500 square feet that is used in Permitted Uses, Special Permit Uses, and Performance Standards. The proposed changes also include a maximum impervious cover limit of 65% for any lot or common development project in 3-170.8.
- 3-170.8 eliminating the current 2 acre minimum lot size for non residential uses – Patty reiterated BAPAC member concerns from previous meetings that this be worded to apply very strictly to the current 6 non conforming parcels so as to not give way to become a “slippery slope” for allowing reduction of lot sizes below 2 acres generally.

It was agreed that BAPAC would wait to submit comments until the proposed changes move forward within the City Council.

3. Updates

Cook Road Land Protection, Southampton

Patty explained that Winding River Land Conservancy had obtained a signed option to purchase the Cook Road land that extends through October 2015. She distributed a timetable for moving forward with the Cook Road land acquisition and noted that she would be coordinating with Mike Czerwicz and other Easthampton officials as a first step. Randall noted that he is on Southampton’s Community Preservation Committee and could provide some guidance once Easthampton officials and CPC are on board.

Sustainable Water Management Initiative Regulations

SWMI regulations are officially in effect and part of the amended 310 CMR 36.00 – MassDEP Water Resources Management Program. Joe Slattery noted that Southampton will need to apply for additional withdrawal. Coming in the next year, 32 new services will be tied in. Patty suggested that members think about how communities might share in the procurement of services required to comply with SWMI.

Request to Board of Health for variance to well regulations to allow for irrigation well, Easthampton

Patty noted that she and Mike had attended the Board of Health hearing on a proposed variance for an irrigation well at the Hampton East Condominiums development. She noted that the City’s DPW and Water Department had spoken at the hearing to oppose the variance. And that Norman Roy had spoken on behalf of the Condominium community. In the end, the Board of Health voted against issuing a waiver.

4. Next Meeting

December 2, 2014 @ 3:30 PM
50 Payson Avenue, Easthampton

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

DATE: 12/2/14 **LOCATION:** Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

M. Czerwec, Easthampton	C. Seklecki, Easthampton	
D. Conti, Holyoke	J. Burkott, Holyoke	A. Smith, Holyoke
James Labrie, Southamton	J. Slattery, Southamton	R. Kemp, Southamton
<u>X</u> W. Darling, Westfield	K. Leigh, Westfield	
<u>X</u> R. Newton	<u>X</u> P. Gambarini, PVPC	

Others present: Frank Demarinis and Ben Hildebrand of Sage Engineering; Mary O’Connell, Westfield City Council; Carl Vincent, Westfield Planning Board; and Mary Ann Babinski, Gail Bean, Barbara Rokosz of Westfield Concerned Citizens

TIME OF CALL TO ORDER: 3:35 p.m.
TIME OF ADJOURNMENT: 5:05 p.m.

Action Items from Meeting:

PVPC

- Write up 12-2-14 meeting notes
- Prepare and distribute agenda for next meeting
- Prepare DRI letters for: Roots Athletic Center, O Dox Road, Westfield Water Resource Zoning update
- Contact USGS to see if can determine how might get study done of Barnes/Great Brook Aquifers

BAPAC members

- Mike will help Patty with moving forward in Easthampton on Cook Road Land Protection per the schedule

1. Adoption of September 16, October 7, and November 4 meeting notes

Adoption of the meeting notes from the September, October, and November meetings was recommended by Bob Newton, seconded by Woody Darling, and unanimously approved.

2. Developments of Regional Impact

Roots Athletic Center, Roots Road, Westfield

Frank DeMarinis and Ben Hildebrand represented Sage Engineering, the project developers. Mr. DeMarinis explained that they owned the Roots Gymnastics Center, but recently sold the facility. They still own the aquatics center. They are now seeking to develop a 13-acre parcel to the south of the gymnastics center on Roots Road. This is the last piece of developable land based on a negotiation with Natural Heritage, which is seeking to protect turtle habitat. He reported that the soils are medium to coarse sand and are fast draining (percolating in 3 minutes). There is a bordering vegetated wetlands to the East and river to the north, but work will occur outside of these resource areas, according to Mr. DeMarinis.

The proposal involves constructing: an 87,000 square foot metal building to house 3 indoor 100x200 soccer fields; 2 outdoor artificial turf playing fields; and 193 parking spaces (this figure includes 35 overflow parking spaces). Drainage will be directed to an infiltration basin at the

northeastern corner of the site. This area will receive drainage from the roof, all parking areas, sidewalks, and yard drains within the fields. The front parking area, which will be paved and curbed, has 2 deep sump, hooded catch basins that direct flow to a Stormceptor unit. Just beyond the Stormceptor unit, there is an emergency shut off valve for use in case of a spill in the front parking lot to keep contaminated flow from the infiltration basin.

Responding to questions and concerns from BAPAC members, Mr. DeMarinis noted:

- There will be no fill brought in from off site
- The outdoor fields will involve synthetic turf with an 8-inch gravel base, 2-inches of 1/8" stone
- The turf layer will include black rubber beads
- Fields will be crowned in the center and flow to yard drains
- They are not including any recommendations for fertilization of landscaped areas, only mowing

The project is going before the Planning Board on December 16. Patty will draft a comment letter and circulate to BAPAC members for review before forwarding to the Planning Board.

0 Dox Road, Westfield

Based on a request from Westfield's Water Department, BAPAC reviewed a petition from Gerald E. Tracy to the Zoning Board of Appeals. Mr. Tracy was not present at the meeting, but BAPAC members had the public hearing notice and zoning application in hand. The applicant is seeking a variance from the 2- acre lot area requirement to create up to 8 building lots at 0 Dox Road. The proposal involves subdividing a 7.32 acre parcel into either: 8 lots with an average .9 acres each; or 4 lots with an average of 1.8 acres each. BAPAC members indicated there seems to be no reason to increase housing density in the Zone II under this request. Bob Newton noted that in fact, the 2-acre minimum lot size requirement was set to specifically reduce density over the Zone II and protect drinking water supplies for the long term. The recommendation from BAPAC members is to deny the waiver request.

Patty will draft a comment letter for BAPAC and circulate for review in time for ZBA's public hearing on December 3.

Proposed Changes to Westfield's Water Resources Zoning

Patty distributed a draft BAPAC comment letter for member review. Mary O'Connell, Westfield City Councilor noted that she needs a finalized letter by December 4th. There was some discussion about the provision for allowing special permit exceptions to the 2-acre minimum lot size for non residential uses. Patty said that the letter does not recommend eliminating this provision because it seems the City wants to move in this direction, but does indicate that this is very serious concern. Bob Newton, responding to a question from Westfield Planning Board member Carl Vincent, stated,

You cannot keep building on your aquifer. Looking at this long term...where are you going to be getting your water? Two acre lots even three acre lots is not enough. If you keep building on your aquifer the way you are, you are degrading your water supply. It is that simple.

Patty will finalize letter and get to Mike Czerwiec for his signature.

3. Updates

Cook Road Land Protection, Southampton

Patty indicated that she, Mike, and Tom need to appear before Board of Public Works to request that Board name project manager and department responsible for management of land if acquired.

4. Next Meeting

January 6, 2015 @ 3:30 PM

50 Payson Avenue, Easthampton

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

DATE: 1/6/15 **LOCATION:** Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

<input checked="" type="checkbox"/> M. Czerwec, Easthampton	C. Seklecki, Easthampton	
D. Conti, Holyoke	J. Burkott, Holyoke	A. Smith, Holyoke
<input checked="" type="checkbox"/> T. Gaughan, Southampton	R. Kemp, Southampton	James Labrie, Southampton
<input checked="" type="checkbox"/> W. Darling, Westfield	K. Leigh, Westfield	
<input checked="" type="checkbox"/> R. Newton	<input checked="" type="checkbox"/> P. Gambarini, PVPC	

Others present: Ed Gwinner, Jr., and Richard Gwinner - Cook Road property owners;
Mary Ann Babinski, Gail Bean, Barbara Rokosz of Westfield Concerned Citizens

TIME OF CALL TO ORDER: 3:35 p.m. **TIME OF ADJOURNMENT:** 4:45 p.m.

Action Items from Meeting:

PVPC

- Write up 1-6-14 meeting notes
- Prepare and distribute agenda for next meeting
- Follow up on Cook Road land protection work (prepare CPA proposal, contact Southampton CPC chair, etc.)
- Try again to contact USGS to see if can determine how might get study done of Barnes/Great Brook Aquifers

BAPAC members

- Mike will help Patty with moving forward in Easthampton on Cook Road Land Protection per the schedule

1. Introductions

Woody introduced Tom Gaughan, Southampton's new water superintendent in Westfield. Tom had worked with Woody in Westfield previously.

2. Adoption of December 2 meeting notes

Adoption of the December meeting notes was recommended by Bob Newton, seconded by Mike, and unanimously approved.

3. Developments of Regional Impact

Summit Lock Road, Westfield - Woody noted that there has been discussion about a project for this location, but it has not been formally submitted. This project would require a special permit and site plan approval. At this location, there had been illegal clearing of the lot where there are wetlands and a species of concern. Part of the Zone II extends onto the lot.

Roots Athletic Center, Root Road, Westfield - Patty provided to members the letter of response from Bryan Balicki noting specific comments on each of BAPAC's recommendations for the Roots Athletic Center development. Patty specifically noted that the developer will coordinate with the Westfield Water Department and/or BAPAC after a synthetic turf field product is selected. Committee members had no additional comments on the project.

0 Dox Road, Westfield - Woody reported that the Zoning Board of Appeals granted a variance from the City's 2-acre lot minimum in the Zone II, enabling the developer to subdivide a 7.32 acre parcel into 4 lots with an average of 1.8 acres each. Patty noted that BAPAC's letter recommending denial of the waiver, included the three conditions from state law that must be met for a variance to be granted. ZBA members reportedly did not take note of these conditions in its granting of the variance. Patty suggested that BAPAC think about outreach and education on drinking water supply protection for ZBA members in Barnes Aquifer communities for next year's work plan...perhaps roundtables with other town boards as well.

Proposed Changes to Westfield's Water Resources Zoning - Woody reported that the zoning update has been sent to the City Council's Legislative and Ordinance Committee for review in the coming weeks. The points of debate are: whether a lot can seek exemption from zoning requirements if the Zone II is only on a portion of the lot, and whether there should be an exemption on the 2 acre minimum lot requirement for non conforming commercial lots. Bob Newton noted again that the Zone II is only an approximation of the zone from which a well draws and not an absolute line. As such, there should be no exemption for lots where the Zone II is only on a portion of the lot.

4. Updates

Cook Road Land Protection, Southampton - Patty welcomed Ed and Richard Gwinner and asked if they had any comments they wanted to make. They said they are concerned about the schedule for work to acquire their property and noted that Mark Noonan of Winding River Land Conservancy had said he would know whether there would be financing by the end of the year. They had not heard anything and were concerned because they attended Southampton Community Preservation Committee meeting on October and did not see any proposal involving acquisition of their land. They noted too that Peter Kocot is willing to provide his support to the project. Patty said this will be especially helpful in the application to the Drinking Water Supply Protection Grant application.

Patty reported that she had been before the Easthampton Board of Public Works on December 17 to request that a project manager be appointed. The Board appointed DPW Director Joe Pipczynski or his designate to be the project manager for acquiring the land on Cook Road.

Patty will prepare draft applications to the Community Preservation Committees in Easthampton and Southampton and work with Joe to refine for submission. She will also: contact Virginia Ahart of the Southampton CPC to touch base; and ask Celia Reichel about what may be required for appraisals in the submission to the state grant program and whether farming might still be allowed on the land if state grant monies are used for acquisition.

5. Other Business

Annual Report - Given scheduling issues this past fall and the more limited funding available for PVPC staff time this year (with Holyoke not contributing dues), Patty requested that the committee consider the idea that BAPAC issue a biannual report, combining annual reports for 2014 and 2015 into one document. Committee members vote unanimously to approve this idea for the 2014 and 2015 reports.

6. Next Meeting

February 10, 2015 @ 3:30 PM
50 Payson Avenue, Easthampton

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

DATE: 2/10/15 **LOCATION:** Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

<input checked="" type="checkbox"/> M. Czerwec, Easthampton	C. Seklecki, Easthampton	
D. Conti, Holyoke	J. Burkott, Holyoke	A. Smith, Holyoke
T. Gaughan, Southamton	R. Kemp, Southamton	James Labrie, Southamton
<input checked="" type="checkbox"/> W. Darling, Westfield	K. Leigh, Westfield	
<input checked="" type="checkbox"/> R. Newton	<input checked="" type="checkbox"/> P. Gambarini, PVPC	

Others present:: Mary O’Connell, Westfield City Council; Carl Vincent, Westfield Planning Board; Mary Ann Babinski, Gail Bean, Barbara Rokosz of Westfield Concerned Citizens

TIME OF CALL TO ORDER: 3:35 p.m. **TIME OF ADJOURNMENT:** 4:45 p.m.

Action Items from Meeting:

PVPC

- Write up 2-10-15 meeting notes
- Prepare and distribute agenda for next meeting
- Follow up on Cook Road land protection work (prepare CPA proposal, contact Southamton CPC chair, etc.)
- Explore possibilities for video project, including possible funding

BAPAC members

- For BAPAC website:
 - Bob will provide photos to Patty from field trips inside treatment facilities
 - Bob will look for yellow folder of studies. He will also send to Patty: Aquifer Land Acquisition Studies for Easthampton, Volumes 1 & 2 (already scanned); Motts study; Paul Maeski maps
 - Woody will provide photos to Patty from Westfield
 - Woody will send Zone II study for Westfield, DEP well logs, Metcalf and Eddy Study landfill study;
 - Mike will provide Zone II study for Maloney Well
- Mike will help Patty move forward on Cook Road Land Protection per the schedule

1. Public participation (for items not on agenda)

Gail Bean had several questions for committee members. She asked about providing permanent maps of the aquifer to local schools. Patty noted that the BAPAC website now has a series of maps and that she is working to develop a section of the website to link to K through 12 resources. A video that will be produced sometime soon might also be of use with schools. Woody said that the 3rd grade in Westfield has a water unit. There was some discussion about how great it would be to be able to do a lesson on the Barnes Aquifer for school students. Patty will keep this in mind as she works to move forward on the video.

Gail asked about Hampton Ponds and whether they provide a direct connection to the Aquifer. Bob Newton said that while the ponds do provide some contribution to the Aquifer, this is limited due to fine sediments that act as a barrier.

Gail also asked about the impact of emissions from motor vehicle traffic on the aquifer. Bob noted there is a lot that comes down from the air as atmospheric deposition, but it is unlikely that traffic generates enough to provide any impact. Of greater concern are the plants in the Midwest, emissions from which travel here and then get deposited.

2. Adoption of January 6 meeting notes

Adoption of the January meeting notes was recommended by Bob Newton, seconded by Mike, and unanimously approved.

3. Developments of Regional Impact

Proposed Changes to Westfield's Water Resources Zoning - Woody noted that the ordinance changes are still in committee.

4. Updates

Cook Road Land Protection, Southampton - Patty reported that she has prepared a proposal and will meet with Easthampton DPW director Joe Pipczynski before submitting the proposal to the Easthampton Community Preservation Committee. She has also asked Mike and Tom to join her for a preliminary meeting with the Southampton CPC on Wednesday, March 4.

Barnes Aquifer Video – Patty said she is scheduled to meet with E-Town to talk about the idea of a video. She said that there is too much on her plate to fully carry the ball on producing a video. The idea of working with professionals who can provide some substantive help is appealing. Bob said it might be possible to find a student who could do the video. Several from Westfield noted that Marc St. Jean who runs the media program at Westfield State University could be a good contact. Patty said she would explore these ideas in the coming months.

Guidance on Geothermal Projects for BAPAC Communities – Patty reported that she got a summary report along with her folder of geothermal resources from Lucy Salwen, a Wesleyan University student intern who did some research this past summer. Patty will review the summary and provide to BAPAC members. Bob asked if she looked at closed versus open systems. Patty did not have a chance to review yet so did not have an answer.

BAPAC Website – Members agreed that it would be good to have more photos on the website. Bob will provide photos from field trips inside treatment facilities. Woody has pictures from Westfield that he will provide. Members also reviewed the list of studies that Patty provided to be posted on the website and Woody, Bob, and Mike have additional studies that they will send to Patty. Members noted that the links section of the website should provide connection to municipal consumer confidence reports.

5. Other Business

Salt study follow up - Bob has a student who wants to repeat the salt study. Study could occur end of February – 1st week of March. Woody noted that in past Westfield Water Department left a bag, including bottles and instructions for homeowners at individual homes and then picked up in a short time frame. Homes in the study are located in Westfield, with some in Southampton, and a few in Holyoke as well. Bob and Woody will follow up.

6. Next Meeting

March 3, 2015 @ 3:30 PM
50 Payson Avenue, Easthampton

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

DATE: 3/3/15 **LOCATION:** Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

<u>X</u> M. Czerwiec, Easthampton	C. Seklecki, Easthampton	
D. Conti, Holyoke	J. Burkott, Holyoke	A. Smith, Holyoke
T. Gaughan, Southamton	R. Kemp, Southamton	James Labrie, Southamton
<u>X</u> W. Darling, Westfield	K. Leigh, Westfield	
<u>X</u> R. Newton	<u>X</u> P. Gambarini, PVPC	

Others present:: Ed Gwinner, Richard Gwinner; and Mary Ann Babinski, Gail Bean, Barbara Rokosz of Westfield Concerned Citizens

TIME OF CALL TO ORDER: 3:37 p.m. **TIME OF ADJOURNMENT:** 5 p.m.

Action Items from Meeting:

PVPC

- Write up 3-3-15 meeting notes
- Prepare and distribute agenda for next meeting
- Write letter to
- Prepare and submit proposals on Cook Road land protection to Easthampton and Southamton Community Preservation Committees; and do all required follow up with committees, etc.
- Prepare proposal to FSB for video project

BAPAC members

- For BAPAC website:
 - Bob will provide photos to Patty from field trips inside treatment facilities
 - Bob will look for yellow folder of studies. He will also send to Patty: Aquifer Land Acquisition Studies for Easthampton, Volumes 1 & 2 (already scanned); Motts study; Paul Maeski maps
 - Woody will provide photos to Patty from Westfield
 - Woody will send Zone II study for Westfield, DEP well logs, Metcalf and Eddy Study landfill study;
 - Mike will provide Zone II study for Maloney Well
- Mike will help Patty move forward on Cook Road Land Protection per the schedule

1. Adoption of February 10 meeting notes

Adoption of the February meeting notes was recommended by Bob Newton, seconded by Mike, and unanimously approved.

2. Developments of Regional Impact

Proposed Changes to Westfield's Water Resources Zoning - Mary Ann Babinski reported that the zoning revisions went to L&O Subcommittee on February 18th. There have been some changes, including:

- Exceptions from prohibited uses for "aircraft related activities" and ""aviation fuels" in Section 3-170.5

- Increase of maximum impervious threshold from 50% originally to 70% in latest iteration under 3-170.8 (2).

Members expressed concern as they had previously that there are several places within the proposed changes where protection of drinking water supply is being weakened and not strengthened.

Bob asked Woody if there were any drinking water impacts related to air craft. Woody said that recent testing results at the City's Well #7 located down gradient of the airport shows traces of a contaminant that comes from airport activities. He noted that there are also some private wells used for drinking water supply in this same area.

Members noted the importance of recharge to the Aquifer and how impervious cover seriously limits recharge. Patty noted that BAPAC had previously commented that this allowance for such high impervious cover also is working counter to 2 important regulations: the new Sustainable Water Management Initiative provisions under the Water Management Act; and the forthcoming federal stormwater management permit, which requires that stormwater management systems on new and re-developed sites be designed to retain the first one-inch of runoff from all impervious surfaces on site.

Mary Ann observed that the ability to require appropriate groundwater management, including the installation of groundwater monitoring wells and regular testing was weakened. Patty noted that it seemed to be eliminated in one place and confused as stated in another section. Members agreed that this is an important provision and should not be weakened.

Mary Ann indicated there may be a second reading at the City Council meeting this coming Thursday. She noted that there is a lot of confusion about the exemption for non conforming commercial lots from 2-acre lot size. BAPAC members recommended that Patty prepare and send an e-mail to Mary O'Connell about the concerns on recent changes.

3. Salt Study 2015

Bob and Woody shared with committee members the list of homeowners and draft letter inviting participants to participate in well water analysis. They explained that the letters are going out to each of the homeowners who participated in the 2008 sampling. In total, there are 43 homeowners who will receive letters, including 31 from Westfield, 7 from Southampton, and 5 from Holyoke. Bob noted that it is a good time of year to be doing this study because we may see impacts from the melt.

4. Work plan updates

Cook Road Land Protection, Southampton - Patty indicated that she is working to move this project forward: She is meeting Joe Pipczynski on March 4 to get his comments on proposal narrative and will submit proposals to Easthampton and Southampton Community Preservation Committees in the coming weeks. An informal first meeting with the Southampton Community Preservation Committee is scheduled for evening of March 4th. Meeting to discuss proposal with the Easthampton Community Preservation Committee is March 19th.

Barnes Aquifer Video – Patty said she had talked with Thomas Conner at Florence Savings who has encouraged her to submit a proposal the bank's charitable foundation to help fund the Barnes Aquifer video. He suggested submitting funding requests to other banks as well. Patty will prepare a draft and submit to Mr. Conner in advance of the mid April deadline for his

thoughts. Members suggested the following possible businesses to support the video: Westfield Savings, Polish National Bank, Big Y, Big E, Home Depot.

Guidance on Geothermal Projects for BAPAC Communities – Patty provided a packet of geothermal information, including the research document prepared by Lucy Salwen, a Wesleyan University student intern who did some research this past summer. She noted that could invite MassDEP expert on geothermal to come and talk to BAPAC group. Board of health representatives from each BAPAC community will also be invited. Members agreed this would be helpful. Patty will make the arrangements.

5. Other Business

Members congratulated Mike about the great recognition Easthampton received for best-tasting water in the United States. The award was made at the 2015 National Rural Water Association Rally in Washington, D.C. in February.

6. Next Meeting

April 7, 2015 @ 3:30 PM
50 Payson Avenue, Easthampton

DRAFT

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

DATE: 4/7/15 **LOCATION:** Easthampton Municipal Offices, Easthampton, MA

MEMBERS AND DESIGNEES PRESENT:

<input checked="" type="checkbox"/> M. Czerwec, Easthampton	C. Seklecki, Easthampton	
D. Conti, Holyoke	J. Burkott, Holyoke	A. Smith, Holyoke
<input checked="" type="checkbox"/> T. Gaughan, Southamton	R. Kemp, Southamton	James Labrie, Southamton
<input checked="" type="checkbox"/> W. Darling, Westfield	K. Leigh, Westfield	
R. Newton	<input checked="" type="checkbox"/> P. Gambarini, PVPC	

Others present: Mary Ann Babinski, Gail Bean, Barbara Rokosz, and Jean Carpenter of Westfield Concerned Citizens

TIME OF CALL TO ORDER: 3:35 p.m. **TIME OF ADJOURNMENT:** 4:55 p.m.

Action Items from Meeting:

PVPC

- Write up 4-7-15 meeting notes
- Prepare and distribute agenda for next meeting
- Write letter to Westfield Zoning Board re: waivers for lots less than 2 acres
- Attend the following meetings on Cook Road land protection: April 13, Southamton Conservation Commission meeting.
- Relay information and materials to Mike for three meetings he will cover.
- Prepare proposal to FSB for video project

BAPAC members

- For BAPAC website:
 - Bob will provide photos to Patty from field trips inside treatment facilities
 - Bob will look for yellow folder of studies. He will also send to Patty: Aquifer Land Acquisition Studies for Easthampton, Volumes 1 & 2 (already scanned); Motts study; Paul Maeski maps
 - Woody will provide photos to Patty from Westfield
 - Woody will send Zone II study for Westfield, DEP well logs, Metcalf and Eddy Study landfill study;
 - Mike will provide Zone II study for Maloney Well
- Mike will help Patty move forward on Cook Road Land Protection per the schedule, and attend the following meetings in Patty's absence:
 - April 15 – Southamton CPC meeting
 - April 16 – Easthampton CPC meeting
 - April 21 – Southamton Selectboard meeting

1. Adoption of March 3 meeting notes

Adoption of the March meeting notes was recommended by Mike, seconded by Woody, and unanimously approved.

2. Developments of Regional Impact

Hampton Ponds – 95 New Broadway and 105 Long Pond, Westfield

Reporting on information from Westfield Planner Jay Vinskey, Patty explained that the Zoning Board of Appeals in Westfield has approved a variance from the 2 acre lot minimum for 5 lots in the Hampton Ponds area. One of these undersized lots involves the joining of 3 substandard lots that currently have 3 houses on them to form a lot .78 acres in size. Approvals occurred at the ZBA's March 11 meeting for the properties associated with 95 New Broadway and at the ZBA's April 1 meeting for the 3 lots associated with 105 Long Pond. A Planning Board hearing scheduled for April 7th was based on the lots having less than required frontage under the Subdivision Control Act. The applicant for all 5 lots involves the same owner, David Weiss of Hampton Ponds Realty.

Barbara Rokosz of Westfield Concerned Citizens noted that Mr. Weiss has a buyer already for the 3 lots that are being converted to the one lot. She said there was some discussion about using some of the existing structures for office and storage. She was concerned about this conversation since this area is zoned only for single family use.

Committee members noted that it was too bad that BAPAC was not asked to comment on this project earlier in the process. Members observed that it seems the zoning board of appeals is now approving a series of these types of waivers, the last being the Dox Road application in December. Patty noted that in the March 11 decision for 95 New Broadway, the ZBA mentioned that enforcement of the ordinance would involve substantial financial hardship to the petitioner. She observed that this "substantial hardship" cannot involve problems of increased cost or lost money. Members recommended that Patty draft a letter to the ZBA reiterating committee concerns about allowing greater densities in the Zone 2 and the importance of the 2-acre minimum lot size in protecting drinking water supply for the long term.

3. Salt Study 2015 - update

Samples with surveys were distributed as planned and samples were collected. Woody noted that the dates in the letter were slightly off and that some letters were missing the survey so there were some things to straighten out. It will take some time to have results from the study.

4. Work plan updates

Cook Road Land Protection, Southampton - Patty noted that she will be away starting April 15 through 27th and will need help in covering several meetings. She will be able to attend the April 13 meeting with the Conservation Commission, but needs help with the following meetings:

- April 15 – Southampton CPC meeting
- April 16 – Easthampton CPC meeting
- April 21 – Southampton Selectboard meeting

Mike said he could attend these meetings. Patty noted that Joe Pipczynski had indicated that he may be able to cover the Southampton Selectboard meeting. Mike will be in touch with Joe. Patty will provide information and materials to Mike for these meetings.

Barnes Aquifer Video – Patty distributed draft letter of request to Florence Savings Bank. Members reviewed and thought it covered the important points. Patty will finalize and send to FSB. Gail Bean suggested that the video could be used with local officials and that it would be especially good to highlight problems with past contamination, the message being that it is better to protect than pollute given the health problems and costs associated with addressing contaminated drinking water. The video might even be used to help train local officials in aquifer protection.

Guidance on Geothermal Projects for BAPAC Communities – Patty reminded members about the information session with Joe Cerrutti from MassDEP on April 14 at 3:30.

5. **Other Business**

Westfield Airport Committee - Mary Ann Babinski provided members a handout of her notes from the March 18th meeting of the Westfield Airport Committee. She said she is very concerned about what the City may be planning at the airport as one of the City Councillor's said that the airport is an "economic goldmine." They are talking about an industrial park, which could include a 60,000 square foot manufacturing facility and additional expansion for Gulfstream. They are also talking about a composting facility and a solar field. At the south end of the airport, they seem to be talking about additional hangars for parking of corporate jets. Woody said that given this is City property he is not sure that it would be subject to the same review process as other projects. Barbara asked if Westfield airport activities could contaminate wells in other BAPAC communities. Woody noted that the divide is around Hampton Ponds.

Westfield Aquifer Protection District Ordinance – Mary Ann noted that now that the ordinance revision allows for 70% impervious cover, there are serious implications for the Aquifer with airport development. She said that there was some debate about appealing the City Council decision based on a violation of the open meeting law. The thought being that changes made to the ordinance between the L&O committee and City Council should have happened in open meeting. Mary Ann has been watching the video footage from the February 23 City Council meeting and noted that there is total confusion about the 2-acre minimum lot size language in the revisions.

6. **Next Meeting**

April 14 @ 3:30 p.m.

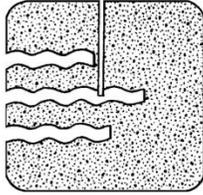
Meeting with Joe Cerrutti of MassDEP re: geothermal energy

May 5, 2015 @ 3:30 PM

50 Payson Avenue, Easthampton

Appendix C: Developments of Regional Impact (DRI) Comment Letters

Left blank intentionally.



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

October 10, 2013

Ms. Jackie Duda
Health Agent
City of Easthampton
50 Payson Avenue, Suite 145
Easthampton, MA 01027

Reference: Easthampton Board of Health Well Regulations and Irrigation Wells

Dear Ms. Duda:

Per your request, I am writing to you on behalf of the Barnes Aquifer Protection Advisory Committee (BAPAC) to provide our thoughts regarding irrigation wells. BAPAC is composed of representatives from the four jurisdictions in which the Barnes Aquifer is located (Easthampton, Holyoke, Southamptton, and Westfield). The committee was created in 1989 to help ensure that drinking water resources remain safe for the more than 60,000 people served by the Aquifer.

From our conversations with you at BAPAC meetings in June and August, we understand that you are considering revisions to Easthampton's Board of Health Well Regulations and are looking for guidance regarding irrigation wells. BAPAC members continue to believe that in the interest of avoiding contamination of the drinking water supply and preserving municipal supply, irrigation wells should continue to be prohibited. There are three major reasons:

1. An irrigation well is a direct connection from the surface to the aquifer and as such it represents a potential pathway for contamination. Backflow from the irrigation system could contaminate the aquifer with chemical fertilizers, pesticides, and other contaminants.
2. Withdrawals from irrigation wells will create cones of depression that could alter the groundwater flow system in such a way as to change the path of existing contaminant plumes. Such changes could lead to contamination of municipal wells. For example, the plume of TCE moving from Southamptton into the Hendrick Street Well Field (where it is removed by treatment) could be induced to flow toward the Brook Street or Nonotuck Park Wells (where there is no treatment).
3. New safe yield definitions under the State's new Sustainable Water Management Initiative indicate that groundwater withdrawals from Easthampton's portion of the Barnes Aquifer may

already be near the maximum allowable limit. Allowing more water to be withdrawn for irrigation could affect the amount of water available for municipal use.

As you may know, U.S. EPA designated the Aquifer in Easthampton as a sole source aquifer in 1995. EPA has noted, "The designated area is a stratified drift aquifer consisting of shallow sand and gravel deposits. The shallow nature of the aquifer allows contaminants to be rapidly introduced into the ground water with minimal assimilation." Easthampton (as well as Southamptton) rely entirely on the Aquifer for drinking water. If contamination were to occur, it would pose a significant public hazard and a serious financial burden to the communities within the aquifer service area.

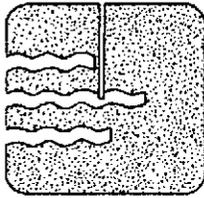
I hope you will give our concerns careful consideration as you move forward with revisions to the regulations. As we mentioned at our meeting with you, we would be happy to review any revisions you may be considering.

Thank you very much for your consideration of our thoughts.

Sincerely,

A handwritten signature in cursive script that reads "Charles Darling" followed by a stylized monogram or flourish.

Charles Darling, Chair



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

September 16, 2013

Mr. John Furman, Chair
Southampton Planning Board
210 College Highway
P.O. Box 155
Southampton, MA 01073

Reference: Pleasant View Estates, Pleasant Street

Mr. Furman:

I am writing to you on behalf of the Barnes Aquifer Protection Advisory Committee (BAPAC) to provide our comments regarding plans for the 10-lot cluster subdivision called View Meadow Estates as presented at our September 10. BAPAC is composed of representatives from the four jurisdictions in which the Barnes Aquifer is located. The committee was created in 1989 to address developments of regional impact proposed within the Aquifer to ensure drinking water resources remain safe for the more than 60,000 people served by the Aquifer.

We understand from the presentation made to us by Mark Reed of Heritage Surveys that the Pleasant Meadows Estate project involves a 10-lot subdivision on 30 acres with each home on a minimum lot size of 40,000 square feet. The project will be on town water, but all properties will have septic systems. For stormwater drainage, Mr. Reed said the plan calls for two stormwater infiltration basins, one basin to the north of Lot 1, and another to the west of Lot 5. Storm runoff from front roofs, driveways, and roadways will drain to a series of 9 catch basins. Five of these catch basins drain to the basin to the north of Lot 1, and four drain to the basin to the west of Lot 5. The design of the two infiltration basins is similar: stormwater will flow into a forebay and then flow over a rip rap berm into the basin itself where there will be a series of 5 leaching galleys with 3 catch basin grates. Stormwater will reach the inlet of the leaching galley at the 100-year design storm. The basin will be loamed and seeded with grasses and the homeowner's association will be responsible for maintenance.

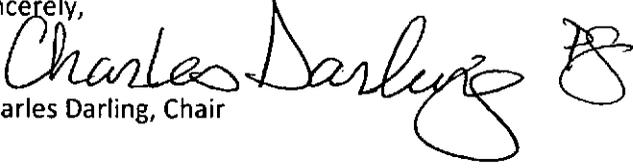
BAPAC members have seven recommendations for this project:

- ☞ Eliminate direct infiltration by removing the leaching galleys in the infiltration basins. Members are concerned that direct infiltration provides greater risk of groundwater contamination.

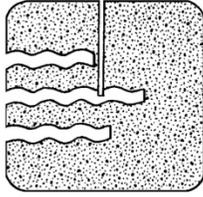
- ☞ Between the catch basins and the leaching basin forebays, add a swirl separator that can achieve 80% TSS removal. Ensure that the unit receives regular maintenance as there are often high failure rates due to lack of maintenance.
- ☞ Add an emergency shut off valve on the pipe draining to each of the leaching basins to isolate the basins from drainage in the event of a spill
- ☞ Label catch basins to remind residents, "No Dumping – Drains to Aquifer"
- ☞ Controls should include minimizing compaction of soils, especially in infiltration basin areas during construction so as to ensure that basins function properly once they are on line
- ☞ Ensure that there is a covenant that prohibits the use of chemical fertilizers and pesticides on lawns
- ☞ A good operations and maintenance plan will be critical to the proper care of the storm water system by the homeowner's association

Thank you for your consideration and the opportunity to comment.

Sincerely,


Charles Darling, Chair

cc: Mark Reed



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

October 1, 2013

Mr. John Furman, Chair
Southampton Planning Board
210 College Highway
P.O. Box 155
Southampton, MA 01073

Reference: Western View Estates, Strong Road

Dear Mr. Furman:

I am writing to you on behalf of the Barnes Aquifer Protection Advisory Committee (BAPAC) to provide our comments regarding plans for the 13-lot subdivision called Western View Estates as presented at our September 10 meeting. BAPAC is composed of representatives from the four jurisdictions in which the Barnes Aquifer is located. The committee was created in 1989 to address developments of regional impact proposed within the Aquifer to ensure drinking water resources remain safe for the more than 60,000 people served by the Aquifer.

We understand from the presentation made to us by Mark Reed of Heritage Surveys that the Western View Estates project involves a traditional 13-lot subdivision with each home on a minimum lot size of 40,000 square feet. The project will be on town water, but all properties will have septic systems. Note that in reviewing the project at its meeting, BAPAC members saw only the approved preliminary subdivision plan, which does not include any details for the stormwater system. Mr. Reed provided verbal detail, saying that stormwater drainage will involve one stormwater infiltration basin to the north west of Lot 8. Storm runoff from roofs, driveways, and roadways will drain to a series of 8 catch basins that deliver flow to the infiltration basin. He noted that design of the infiltration basin will be similar to that proposed for the Pleasant View Estates project whereby stormwater moves into a forebay and then flows over a rip rap berm into the basin itself where there will be a series of leaching galleys.

BAPAC members had the same 7 recommendations for this project as noted for the Pleasant Meadow Estates project:

- ☞ Eliminate direct infiltration by removing the leaching galleys in the infiltration basins. Members are concerned that direct infiltration provides greater risk of groundwater contamination.

- ☞ Between the catch basins and the forebay to the infiltration basin, add a swirl separator that can achieve 80% TSS removal. Ensure that the unit receives regular maintenance as there are often high failure rates due to lack of maintenance.
- ☞ Add an emergency shut off valve on the pipe draining to the infiltration basin to isolate the basins from storm drainage in the event of a spill
- ☞ Label catch basins to remind residents, “No Dumping – Drains to Aquifer”
- ☞ Controls should include minimizing compaction of soils, especially in the infiltration basin area during construction so as to ensure that the basin functions properly once it is on line
- ☞ Ensure that there is a covenant that prohibits the use of chemical fertilizers and pesticides on lawns
- ☞ A good operations and maintenance plan will be critical to the proper care of the storm water system by the homeowner’s association

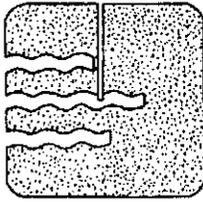
Thank you for your consideration and the opportunity to comment.

Sincerely,

A handwritten signature in black ink that reads "Charles Darling" followed by a stylized monogram or initials.

Charles Darling, Chair

cc: Mark Reed



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

April 16, 2014

Mr. Kevin Daoust, Section Chief, Bureau of Waste Site Clean Up
Massachusetts Department of Environmental Protection
436 Dwight Street
Springfield, MA 01103

Reference: Tier 1C Extension Request, Former Southampton Xtramart, 247 College Highway
MADEP RTN 1-11448 (and linked RTN 1-16602)
Tier 1C Permit #137440

Dear Mr. Daoust:

I am writing to you on behalf of the Barnes Aquifer Protection Advisory Committee (BAPAC) to indicate that we would like to see greater progress on the clean up at the former Southampton Xtramart site, located in the Zone II for Southampton's wells. As you may know, BAPAC is composed of representatives from the four jurisdictions in which the Barnes Aquifer is located. The committee was created in 1989 to ensure that drinking water resources remain safe for the more-than 60,000 people served by the Barnes Aquifer.

We understand that the Xtramart site was initially classified as Tier 1C in 1997 and that subsequently an underground storage tank was removed in 2008. Since that time it appears that 5 permit extensions have been requested and granted. During this period there has been further monitoring and investigation, and only just recently does there seem to have been any move toward further remediation with three in situ chemical oxidation injection events in February 2013.

We urge the Department of Environmental Protection to insist on completion of necessary clean up activities in a tight timeframe so that potential risks to groundwater sources are eliminated. Further, we request that we be sent interim 6-month progress reports for what has been accomplished at the site beginning in 6 months from now. Joe, hard copy to you with cc to me?

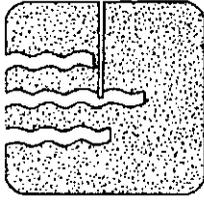
Thank you for your consideration of our comments. If there are any questions, please contact us.

Sincerely,


Charles Darling, BAPAC Chair


Joseph Slattery, Southampton Representative

cc John Furman, Southampton Planning Board



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

January 16, 2014

Mr. Philip McEwan, Chair
Westfield Planning Board
City Hall - 59 Court Street
Westfield, MA 01085

Reference: Whip City Aviation Proposed Hangars, Barnes Municipal Airport, 110 Airport Road

Dear Mr. McEwan:

I am writing to you on behalf of the Barnes Aquifer Protection Advisory Committee (BAPAC) to provide our comments regarding Whip City Aviation's proposed new T Hangar at the Barnes Municipal Airport. BAPAC is composed of representatives from the four jurisdictions in which the Barnes Aquifer is located. The committee was created in 1989 to address developments of regional impact that are proposed within the aquifer to ensure that drinking water resources remain safe for the more-than 60,000 people that it serves.

According to the materials provided and the presentation made by Rob Levesque of R. Levesque Associates, Inc., at our January 7 meeting, we understand that Whip City Aviation is proposing to develop a 7,350 square foot hangar building. The hangar will house 6 "T" hangars to accommodate small general aviation aircraft. This new facility will be part of a 30-year lease with the City for airport property that includes 5 existing buildings and several existing hangars that will be rehabilitated. The new hangar will be slab on grade and made of prefabricated steel and aluminum. Site improvements will include bituminous driveways and taxiway that will disturb 29,947 square feet of land.

Rob Levesque showed the *preliminary plan* for the project at the meeting and said that stormwater from the site will flow to a stormceptor unit for pretreatment and then outlet to a basin for infiltration. He said the inlet will be equipped with an emergency shut off valve. The basin, to be designed for the 100-year storm, will overflow to a flat grassy area on the property, according to Mr. Levesque.

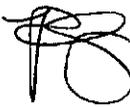
Because the project is located in the Zone II for City of Westfield wells, BAPAC has several concerns and makes the following four recommendations:

- ☛ Curb all bituminous surfaces so that in the event of a spill, contaminated material can be contained on the impervious area and not move into the stormwater system
- ☛ Ensure that there are clear provisions for proper disposal of the fuel sump drainage generated during pre flight preparations – typically this is less than 1 cup of fuel, but there is a cumulative impact to improper disposal
- ☛ If floor drains are required, ensure that they are tied into the City sewer system (and not routed to holding tanks)
- ☛ Ensure that there is a clearly articulated Emergency Spill Response Plan that addresses how the plan itself will be maintained and updated over time and who will have that responsibility. Spill response practices should include regular testing of valve shut off procedures as well as containment of spills so that fuel remains on the bituminous surfaces and does not reach the stormwater system.

Please note that if there are any substantial changes from the preliminary plan and the project as reflected above, BAPAC would like to review and comment on those changes.

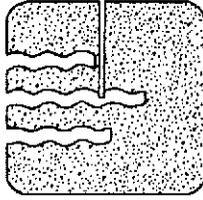
Thank you for the opportunity to comment on this proposed project and your consideration of BAPAC's recommendations. If there are any questions, please do not hesitate to contact us.

Sincerely,

Michael Czerwiec, Vice-Chairman

cc Jay Vinskey, City of Westfield
Rob Levesque, R. Levesque Associates, Inc.



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

April 9, 2014

Mr. Brian Barnes, Manager
Barnes Regional Airport
110 Airport Road
Westfield, MA 01085

Reference: Barnes Regional Airport proposed reconstruction of taxi lanes

Dear Mr. Barnes:

I am writing to you on behalf of the Barnes Aquifer Protection Advisory Committee (BAPAC) to provide our comments regarding the Barnes Regional Airport proposed reconstruction of taxi lanes. BAPAC is composed of representatives from the four jurisdictions in which the Barnes Aquifer is located. The committee was created in 1989 to address developments of regional impact that are proposed within the aquifer to ensure that drinking water resources remain safe for the more-than 60,000 people that it serves.

According to the materials provided and the presentation made by you and Alex Bernier of Stantec at our April 1 meeting, we understand that the Barnes Regional Airport is proposing a taxi way reconstruction, a project that is funded in part by MassDOT and the City of Westfield. The project will add almost 1 acre of increased impervious area to the current taxi way area. The taxi lanes currently service approximately 20 single engine aircraft and stormwater drainage sheet flows to adjacent grassy areas.

With the proposed reconstruction, drainage along the eastern edge of the project site would continue to sheet flow. Drainage from the central taxi area of the project site would be routed to a catch basin that is connected to a 10 x 200 foot long infiltration trench along the northwest boundary of the project site. At the north east corner of the project site, drainage would flow directly to a 6 by 85-foot infiltration trench. At the southern end of the project site, drainage would flow directly to a 4 by 100-foot long infiltration trench.

Because the project is located in the Zone II for City of Westfield wells, BAPAC has several concerns and

makes the following five recommendations:

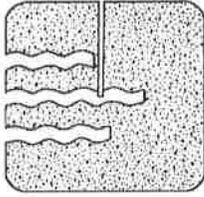
- ☛ Curb all bituminous surfaces so that in the event of a spill, contaminated material can be contained on the impervious area and not move into the stormwater system.
- ☛ There should be pretreatment of all stormwater before it moves into infiltration trenches to ensure the continued ability of the trenches to infiltrate over the long term.
- ☛ The treatment system should include a gate valve before all of the infiltration facilities so that in the event of a spill these valves can be turned off to prevent the spill from reaching the trenches.
- ☛ Ensure that there is a clearly articulated Emergency Spill Response Plan that addresses how the plan itself will be maintained and updated over time and who will have that responsibility. Spill response practices should include regular testing of valve shut off procedures as well as containment of spills so that fuel remains on the bituminous surfaces and does not reach the infiltration trenches.
- ☛ Operation and maintenance should include use of winter deicing materials that will not harm groundwater sources.

Thank you for the opportunity to comment on this proposed project and your consideration of BAPAC's recommendations. If there are any questions, please do not hesitate to contact us.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Czerwicz", followed by a stylized flourish or initial.

Michael Czerwicz, Vice-Chairman



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

August 18, 2014

Mr. Philip McEwan, Chair
Westfield Planning Board
City Hall - 59 Court Street
Westfield, MA 01085

Reference: Golden Acres Estate, Old Long Pond Road, Preliminary Subdivision Application

Dear Mr. McEwan:

I am writing to you on behalf of the Barnes Aquifer Protection Advisory Committee (BAPAC) to provide our comments regarding plans for the 11-lot preliminary subdivision plan called Golden Acre Estates as presented at our August 5 meeting. BAPAC is composed of representatives from the four jurisdictions in which the Barnes Aquifer is located. The committee was created in 1989 to address developments of regional impact proposed within the Aquifer to ensure drinking water resources remain safe for the more than 60,000 people served by the Aquifer.

We understand from the presentation made to us by Mark Reed of Heritage Surveys, who represents the developer, that lots for Golden Acres Estate will be at least 2 acres in size and all drinking water will come from private wells and all wastewater will be treated by septic systems. Several elements of this project, he noted, arise out of a Land Court litigation settlement memorandum of agreement. As part of this MOA, the City Planner and Engineer will recommend to the Planning Board among other things the following:

- Proposed roadway with a 50-foot right of way and a paved width of 20 feet
- Waiver for underground utilities
- Passive stormwater management in compliance with MassDEP standards

Mr. Reed noted that passive stormwater management will include grass swales along the roadway. Because this is a preliminary subdivision application, however, details for this and other stormwater management systems are not yet defined. In a July 10 letter to the Planning Board from Mark Reed on behalf of the developer for this project, there is also a request for a waiver of the Stormwater Management Permit.

BAPAC members have one major recommendation at this early point in the project. We encourage the Planning Board not to waive the Stormwater Management Permit. The permit process provides important controls that help to safeguard drinking water supply during and post construction. These include reviewing stormwater management methods and appropriateness to the site and the Zone II area, promoting good construction practices, and ensuring there is a good operations and maintenance plan in place for the homeowner's association.

We look forward to subsequent review of this project as the plan becomes more articulated.

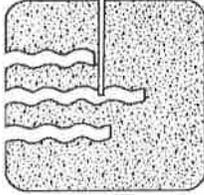
Thank you for your consideration and the opportunity to comment.

Sincerely,

A handwritten signature in blue ink that reads "Michael Czerwiec" followed by a stylized monogram or flourish.

Michael Czerwiec, Vice-Chairman

cc Mark Reed, Heritage Surveys, Inc.
Jay Vinskey, City of Westfield



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

December 16, 2014

Mr. Philip McEwan, Chair
Westfield Planning Board
City Hall - 59 Court Street
Westfield, MA 01085

Reference: Roots Athletic Center, Root Road, Special Permit/Site Plan/Stormwater Permit

Dear Mr. McEwan:

I am writing to you on behalf of the Barnes Aquifer Protection Advisory Committee (BAPAC) to provide our comments regarding plans for the Roots Athletic Center on Root Road as presented at our December 2 meeting. BAPAC is composed of representatives from the four jurisdictions in which the Barnes Aquifer is located. The committee was created in 1989 to address developments of regional impact proposed within the Aquifer to ensure drinking water resources remain safe for the more than 60,000 people served by the Aquifer.

We understand from the presentation made to us by Frank DeMarinis of Sage Engineering that he and his project partners are seeking to develop a 13-acre parcel off of Roots Road. This project complements existing adjacent facilities developed by Sage Engineering, including Roots Gymnastics. Mr. DeMarinis reported that the soils are medium to coarse sand and are fast draining (percolating in 3 minutes). There is a bordering vegetated wetlands to the East and river to the north, but work is reportedly occurring outside of these resource areas. We understand the current proposal involves constructing the following: an 87,000 square foot metal building to house 3 indoor 100x200 soccer fields; 2 outdoor artificial turf playing fields; and 193 parking spaces (this figure includes 35 overflow parking spaces).

Drainage will be directed to an infiltration basin at the northeastern corner of the site. This area will receive drainage from the roof, all parking areas, sidewalks, and yard drains within the fields. The front parking area, which will be paved and curbed, has 2 deep sump, hooded catch basins that direct flow to a Stormceptor unit. Just beyond the Stormceptor unit, there is an emergency shut off valve for use in case of a spill in the front parking lot to keep contaminated flow from the infiltration basin.

Since the meeting with Sage Engineering, BAPAC has learned that there are concerns with the use of artificial turf, and particularly the crumb rubber that is typically used. Connecticut DEP completed a study in 2010 that indicates there is a potential risk to surface waters and aquatic organisms associated with stormwater runoff from artificial turf fields. To understand the risk of exposure to groundwater affected by stormwater runoff from artificial turf fields, the study recommends further sampling and analysis of groundwater at artificial turf fields. See: http://www.ct.gov/deep/lib/deep/artificialturf/dep_artificial_turf_report.pdf It also appears that artificial turf fields are hosed down to provide cooling on the hottest days of summer. This runoff could also be of concern.

Among BAPAC's 5 recommendations for the project, therefore, there are 2 recommendations specific to the artificial turf proposed for the project:

1. Conduct annual groundwater monitoring in location of infiltration basin and provide reports to Westfield and Southampton Water Departments. Monitoring well should be sited and sampled in consultation with Westfield Water Department. Establishing parameters for monitoring should also be done in consultation with Westfield Water Department.
2. Ensure that pipes carrying drainage from the artificial turf fields have solid walls and are not perforated.
3. Pave and curb all parking areas and provide system of drainage that includes directing flow to catch basin(s) to stormceptor and to emergency shut off valve before storm pipe system that leads to infiltration basin.
4. Stipulate that no synthetic chemical fertilizers or pesticides be used in the near term or long term for any landscaping work on site. Also for winter de-icing use ecologically friendly alternatives to sodium chloride.
5. Ensure that there is a good operations and maintenance plan to provide proper care for the stormwater management system, including regular cleaning of catch basins, Stormceptor, and sediment forebay, and regular testing of the emergency shutoff valve(s). BAPAC members have witnessed a high failure rate of Stormceptor units in particular due to lack of maintenance.

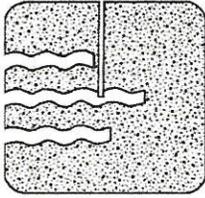
Thank you for your consideration and the opportunity to comment.

Sincerely,



Michael Czerwiec, Vice-Chairman

cc Frank DeMarinis, Ben Hildebrand, and Bryan Balicki, Sage Engineering
Jay Vinskey, City of Westfield



BARNES AQUIFER PROTECTION ADVISORY COMMITTEE

c/o Pioneer Valley Planning Commission, 60 Congress Street, Springfield, MA 01104-3419

December 3, 2014

Mr. Michael Parent, Chair
Westfield Zoning Board of Appeals
City Hall - 59 Court Street
Westfield, MA 01085

Reference: Gerald E. Tracy variance application from 2- acre lot area requirement to create up to 8 building lots at 0 Dox Road

Dear Mr. Parent:

I am writing to you on behalf of the Barnes Aquifer Protection Advisory Committee (BAPAC) to provide our comments regarding a variance application from the 2- acre lot area requirement to create up to 8 building lots at 0 Dox Road. This application is from Gerald E. Tracy. As you may know, BAPAC is composed of representatives from the four jurisdictions in which the Barnes Aquifer is located. The committee was created in 1989 to address developments of regional impact proposed within the Aquifer to ensure drinking water resources remain safe for the more than 60,000 people served by the Aquifer.

We understand from the application reviewed at our December 2 meeting that the proposal involves subdividing a 7.32 acre parcel into either: 8 lots with an average .9 acres each; or 4 lots with an average of 1.8 acres each.

BAPAC members see no reason to increase housing density in the Zone II under this request. In fact, the 2-acre minimum lot size requirement was set to specifically reduce density over the Zone II and protect drinking water supplies for the long term. So based on M.G.L. Chapter 40A, Section 10 this request does not meet the requirements of a variance. (Three conditions that must be met for a variance: 1. soil conditions, shape or topography are unique to particular property and don't affect the rest of the properties in that district; 2. substantial hardship (court cases have ruled that the "substantial hardship" cannot be self-created nor involve problems of increased cost or lost money); 3. not a detriment to the public good and will not nullify or derogate from the intent and purpose of the subject ordinance.

The recommendation from BAPAC members is to deny the waiver request.

Thank you for your consideration and the opportunity to comment.

Sincerely,

Michael Czerwec, Vice-Chairman

cc Jay Vinskey, City of Westfield