

SUSSEX COUNTY WATER QUALITY MANAGEMENT

POLICY ADVISORY COMMITTEE

MINUTES

MARCH 8, 2012

The meeting was opened at 7:30 p.m. by Vice Chairman Butz. The meeting was held in compliance with the Open Public Meetings Act, N.J.S.A. 10:4-1 of 1975, as amended, and notice has been forwarded to the newspapers and posted on the bulletin board maintained at the Sussex County Administrative Center for public announcement.

**ROLL CALL:**

MEMBERS PRESENT: James Landrith, Andover Borough  
Troy Orr, Branchville Borough  
Jeffrey Butz, Vice-Chairman, Fredon Township  
Keith Gourlay, Hampton Township  
Howard Baker, Hopatcong Borough  
David Muscalo, Lafayette Township  
Joe Pinzone, Sandyston Township  
Eric Powell, Sparta Township  
Michael Furrey, Vernon Township  
Richard Gottemoller, At-Large  
Kathy Little, At-Large  
Eleanor Mensonides, At-Large

EXCUSED MEMBERS: Gary Larson, Frankford Township  
Christopher Bilik, Green Township  
James Benson, Stanhope Borough  
John Armeno, Chairman, At-Large  
Ernie Hofer, At-Large

STAFF MEMBERS: Alice Brees, Principal Planner  
Antoinette Wasiewicz, Recording Secretary

ALSO PRESENT: Professor Rebecca Boger, Brooklyn College  
Dr. Montgomery, City University  
Bob McDowell

Because the presenter was still setting up her equipment, a motion was made by Jim Landrith to amend the Agenda to go to "Review and Approval of Minutes". The motion was seconded by Kathy Little and carried unanimously.

**MINUTES CORRECTION/APPROVAL:**

A motion was made by David Muscalo to approve the Minutes of February 9, 2012. The motion was seconded by Eric Powell. All were in favor, with abstentions from Troy Orr, Keith Gourlay, Howard Baker, Joe Pinzone, Michael Furrey and Eleanor Mensonides. Motion carried.

**PRESENTATION:**

A. HYDROGEOLOGIC STUDY OF LOCAL AQUIFER, ANDOVER TWP./LAFAYETTE TWP. BY N. SULTANA, GRADUATE STUDENT, BROOKLYN COLLEGE:

Alice Brees introduced N. Sultana, a graduate student of geology at Brooklyn College. She has been collecting and studying local well data for a couple of years.

Ms. Sultana introduced her professor and advisor, Professor Boger. Professor Boger said another Professor, Dr. Montgomery from City University may also attend this evening's meeting. She said they have been working with County officials using local data to better understand the aquifers in one of the watersheds.

Ms. Sultana did a Power Point Presentation and said the purpose of her research is to evaluate models and tools for assessing ground water availability and sustainability. Their case study site is HUC -14 Subwatershed. The hydrological setting of the study area is the Upper Delaware Watershed. It falls within the Townships of Sparta, Andover and Lafayette and covers an average area of eight square miles. For this research they are attempting to do aquifer characterization of a fractured flow system using geographic information system.

She said in order to have a better understanding of the ground water system to determine sustainable yield of ground water for future development, they must answer two main questions: What is the quantity of ground water in HUC 14 and at what rate is the water recharged in the aquifer? Preparing for sustainable management falls within three broad categories: management, monitoring and mapping.

Mapping provides the data information needed to develop an accurate inventory of ground water resources, including classification of aquifers and other resources. Mapping also provides an assessment of resource vulnerability.

Monitoring provides critical behavior about the system within its network. It also integrates data from all aspects of the hydrologic cycle. This data supports a variety of

models that relate aquifer levels to the health and status of drinking water supplies and other ecologic systems.

Management success depends upon accurate mapping and monitoring of information at both the local and regional scale. One principal idea of management is that you cannot manage what has not been assessed.

Ms. Sultana showed a flow chart which represented ground water management planning process. For successful planning you must have a conceptual model with high quality data and well documented, robust ground water sustainability analysis tools. There also must be continuous data collection efforts and modeling tool refinements in order to assess ground water. By adopting a GIS platform, the results obtained will be faster, more accurate and updates can be made more easily. The result of this research will give County managers a better understanding of special distribution of their wells, the lithological makeup of the watershed, depth to ground water level, and it will identify the connectivity of the aquifers, flow direction and velocity.

This research will build on current work done by the County but on a watershed scale. They will be able to quantify available groundwater which will enable Planners to make decisions on safe yield. It will also help the County to determine if their ground water is pristine, developed or depleted. Ms. Sultana explained that pristine is when ground water is in equilibrium at the absence of pumping; developed ground water is at steady state with moderate pumping at fixed depth; and depleted ground water is when the system is in non-equilibrium state with heavy pumping at increasing depth. Ms. Sultana's method of analysis began with analyzing well construction reports which contains key parameters such as well location, total depth drilled, static water level and geologic log information. They also use the Sub-surface Analyst tool for model development in GIS.

Ms. Sultana described the details of the slides she presented and talked about the geology of the study area. She said it is important to know the type of formation or rock type in order to determine the porosity and permeability of each rock. The porosity and permeability are two of the primary factors that control the movement and storage of fluids in rocks and sediments. The porosity measures how much of rock is open space. This space can be between grains or within cracks or cavities of the rock. The permeability is a measure of the ease with which a fluid can move through a porous rock. High permeability is likely to be found in sand containing sedimentary deposits. You also have to account for the fact that you are dealing with a fractured system. Ms. Sultana said once they've they have determined all the parameters they will be able to figure out how much water there is, how long it will last and how it is recharging. Based on that, they can make future development plans.

There was a brief period of questions and discussion. Ms. Sultana attempted to show the 3-D computer model, but there was a compatibility problem with the computer. Alice Brees suggested that when she is farther along with her research, that Ms.

Sultana come back to do an update and the compatibility issue can be resolved. There was also discussion with Dr. Montgomery on the research.

**CORRESPONDENCE:**

Alice Brees said there was very little correspondence this month. She received correspondence regarding a remedial ground water permit from DEP for Route 94 in Fredon that related to a Classification Exception Area. It was a former gas station and there is pollution on the property. DEP will be monitoring the site.

Ms. Brees said she will discuss other correspondence under Unfinished Business, A.

**PLANNER'S REPORT:**

Alice Brees said the Frankford Township Wastewater Plan Amendment that was discussed at the last meeting was on the Freeholder Agenda on February 22. They adopted their Resolution and she forwarded it to DEP for their review. This is being processed as a Site Specific Amendment.

The Byram Wastewater Plan was also on the Freeholder Agenda on February 22 for their Public Hearing. The 15- day comment period following the Public Hearing will end today or tomorrow. Ms. Brees said she has not received any comments and will check with DEP to see if they received any comments. If there are any comments, Byram will be responding. Ms. Brees said she will forward to DEP all the necessary documents and this should be finalized within a month or two. It will need to go back to the Freeholders for a Final Resolution and then DEP will send the approval letter.

**UNFINISHED BUSINESS:**

A. DEP REVIEW – NEW LEGISLATION ON SEWER AREA MAP:

Alice Brees provided PAC with copies of recent correspondence from DEP. The County will be sending a sewer area map to DEP within the next four to six months. Once DEP receives the map, it will open up the process for Site Specific Amendments. DEP is trying to take care of a backlog of amendments that have been stalled in the process statewide. There are still problems with the maps. County staff has been pointing out specific areas to DEP where the County continues to have problems with DEP's mapping.

Ms. Brees provided PAC with a handout showing sewer service areas in Hardyston and Franklin. On the left side of the handout shows DEP's version of the sewer area map. She said DEP staff used aerial photos and cut out areas to put the sewer boundary around existing buildings. She said that DEP rules do not say they should be doing that. They also excluded sewer areas using tree lines. The right side of the handout is the County's version of the map. The DEP is even removing areas where there are sewer lines in the road serving the property. The County is trying to show them that these should not be removed. Ms. Brees said at some point these maps will be posted on the County website.

B. WATERSHED UPDATES: UPPER DELAWARE, WALLKILL:

Jeffrey Butz said he did not have anything to report on the Upper Delaware Watershed. No one present had anything to report on the Wallkill Watershed.

David Muscalo said at the last meeting PAC voted to accept the Frankford Township Amendment. There was a gentleman from the public that spoke at the end of the meeting. He questioned why PAC approved it because it was more than 20,000 gallons per day, limited by the new legislation. Mr. Muscalo asked if Alice Brees checked with the County Attorney on that. Ms. Brees said she did speak with Dennis McConnell, County Counsel and he explained the DEP letter was written in December and the legislation was adopted after that in January 2012. In the end, if there is an issue it will be DEP's issue.

**NEW BUSINESS:**

None

**PUBLIC COMMENT:**

None

**ADJOURNMENT:**

All business having been completed, a motion to adjourn the meeting was made by Howard Baker. The motion was seconded by Eleanor Mensonides and carried unanimously. The meeting adjourned at 8:35 p.m.