

Minutes of the Board of Water/Sewer Commissioners
August 16, 2017 5:00pm
DPS Administration Building – 16C Perry Way

Present Commissioners: John Tomasz, Robert Cook, Roger Jones, Brendan Coffey, Larry Kelley

Staff:

DPS Director, Anthony Furnari

DPS Business Manager, Kathe Talkington

Sewer Chief Operator, Chris Pratt

Sewer Superintendent, Jamie Tuccolo

Water Superintendent, Ted Angelakis

Assistant Water Superintendent, Chris Hood

Guests:

Mayor Holaday

Councilor O'Brien

Councilor Eigerman

Andy Port, Planning Director

Doug Gove, AECOM

Doug Denatale, AECOM

Attorney Lisa Mead

Laura Hynes, 6 South Pond Street

Brett Reily, 17 South Pond Street

Peter Hatcher, 15 Boyd Drive

Karl Maas, 6 Boyd Drive

1. Mayor Holaday

Doug Gove of AECOM was invited to speak about the results of groundwater exploration at Evergreen Golf Course. A draft report was submitted August 11, 2017.

There were six goals for testing groundwater;

- (1) Evaluate the size and yield of the aquifer that supports Well #1 and #2 and any new supply well at the Evergreen Golf Course

The sand and gravel aquifer supporting Well #1 and #2 is about one square mile in area. Based on this, AECOM estimated the theoretical yield of the aquifer to be about 1.1 million gallons per day. If the City were to withdraw 1.06 MGD on average over a year from Well #1 and #2, AECOM opinion is that a new municipal water supply well at the Evergreen Golf Course may not provide additional long-term water supply capacity. However, a new water supply well at Evergreen Golf Course could be beneficial and serve as a redundant groundwater source. Both Well #1 and #2 are approaching 60 years old and will likely need to be replaced in the near future.

- (2) Review historical ground water levels and trends

Groundwater levels from 2000-2016 were reviewed. Well #2 observation well OB-6 is 700' southwest of Well #2. Ground surface elevation here is 62.5' above sea level. A 14.4' fluctuation in groundwater levels was found at the site, with a high at 59.4' and a low at 45'. Mr. Gove presented a chart showing fluctuations. Mr. Gove explained that the area is essentially a 'bowl' with no actual outlet. It goes to groundwater, and then on to the river.

- (3) Install 2.5" diameter test wells at two locations and evaluate whether the aquifer could support a new supply well

The first test well was drilled in the center of the golf course near the course's main irrigation well. The test well was pumped for four hours at a rate of 52 gallons per minute. A second test well was drilled in the northwest corner of the golf course. The test well was pumped for three hours at a rate of 22 gallons per minute.

- (4) Install 8" diameter test well and run a 72 hour pump test to estimate the potential yield from a new water-supply well

Based on findings, it was decided to proceed with the installation of an 8" test well at the first location. A 72-hour pump test was conducted 7/24/17-7/27/17 at a rate of 212 gallons per minute. AECOM's opinion is that a properly constructed well at this location could yield in the range of 300-400 gallons per minute.

(5) Test the water quality during the pump test to determine whether the new supply would require treatment. During the 72-hour pumping test, iron levels escalated to a maximum of .28 mg/L. The trend suggested that beyond the 72-hour pumping test, levels might exceed the Secondary Maximum Contaminant Level (SMCL) of .30 mg/L. Manganese levels were found in the range of .16 to .21 mg/L, above the SMCL of .05 mg/L. Some form of water treatment would likely be needed. Possible options include:

- a. Construction of a greensand water treatment plant at the site of the new well, at a cost of \$3-6 million.
- b. Piping the water to the City's Water Treatment Plant, requiring a new pipeline between the new well and treatment plant on Spring Lane.
- c. Addition of sequestering chemicals at the new well site to keep the iron and manganese in a dissolved state.

- (6) Identify next steps to develop a new water supply well

The benefits of a redundant well at the Evergreen Golf Course would be;

- a. Provide redundancy for Well #1 and #2 in case of emergency, breakdown or service.
- b. Provide redundancy for Well #1 and #2 to create operational flexibility
- c. Provide additional short-term capacity
- d. Improve water supply protection for Wells #1 and #2

Next steps for design and permitting would be;

- a. New Source Approval, DEP Well Permitting Process: DEP Site Exam/Pumping Test Proposal, minimum five-day pumping test under controlled conditions, DEP Source Final Report, Water Management Permitting, MEPA review; 12-18 months process; in the range of \$250,000
- b. Design and Construction of Well: 12-15 month process; in the range of \$350,000
- c. Design and Construction of Pumping Facilities: 12-16 month process; in the range of \$1.5 million. The construction of a new treatment plant for the new supply well will require additional permits and result in an additional cost of \$3-6 million.

Commissioner Cook brought up the previously talked about potential blockage or bedrock ridge between this site and the two existing wells. Doug Denatale, of AECOM commented that they do not know the answer to this. Commissioner Cook asked if they could add to the final report that this is not conclusive.

There was discussion on if Well #1 or #2 failed, if there was adequate space to drill another. There would be adequate space near Well #2, and at #1 there may also be adequate land.

Commissioner Kelley brought up exploration at March's Hill and the need for iron and manganese treatment. He felt this was a similar situation, but we would be stressing what sounds marginal.

Commissioner Jones asked why the iron and manganese are prevalent in the test well and not in Well #1 or #2. Mr. Denatale said it was hard to know, but it could be irrigation ponds.

Commissioner Coffey commented on adding to capacity with March's Hill and there being more variables in the system.

Commissioner Tomasz asked if we were to add the third well would DEP raise the Water Management Act Permit. Mr. Denatale explained it would likely depend on how the source is used; as a redundant well or as a new source.

Commissioner Tomasz asked about treatment costs. Sequestering the water would add about \$100,000-200,000 to the project, \$1-2 million pumping back into the distribution system. The cost of a new 8" well if Well #1 or #2 were to fail would be approximately \$600,000.

Peter Hatcher, 15 Boyd Drive

Mr. Hatcher was concerned that the proposed 38 homes will have basements below the 59.4' high groundwater level.

Karl Maas, 6 Boyd Drive

Mr. Maas was concerned with the smell of the water at his home. Mr. Angelakis noted that it is a shallow aquifer system that could be the cause. Mr. Maas wanted to know if it will get worse with more houses. Mr. Angelakis commented that the water is safe to drink. Mr. Maas commented that this is a very dangerous place to build and he does not believe lawn treatment chemicals will be able to be controlled as the buyer's attorney suggests.

Mayor Holaday commented on the groundwater level. The City will reach out to a third party engineering firm that will take a look at reports and the construction documents in more depth. She has spoken to the Planning Board Chair and will recommend the firm to the Planning Board at tonight's meeting.

Attorney Mead commented that the applicant would meet all storm water and Board of Health requirements. She asked Mayor Holaday who the engineering firm would be. The firm is Woodard & Curran.

Commissioner Tomasz commented that we now know the potential and cost at the site. Mayor Holaday also commented that we know much more about our water supply.

Commissioner Cook confirmed that the Results of Groundwater Exploration at Evergreen Golf Course report would be finalized by the next meeting.

Mayor Holaday noted that the new commissioner will be at next meeting –Sandy Friede. Another will be coming on Board after City Council readings – Charles Kennedy.

2. Appointments/Customer Issues

Brett Reily, 17 South Pond Street

Mr. Reily and his family have been living at the property for 20 years. Many neighbors have already tied in to sewer. He spoke with Jamie Tuccolo about the process for connecting and is now requesting permission from the Board.

Commissioner Tomasz asked if the home was connected to Newburyport water. They are. They have failing septic and know they need to connect soon. Mr. Tuccolo noted there is capacity in that area and he does not see an issue with the connection.

Commissioner Cook asked if we are inspecting properties in Newbury after connect to the Newburyport sewer system. Mr. Tuccolo noted that Newbury has been receptive to sending contractors and home owners to our departments for building permit signatures.

Commissioner Cook made a motion, seconded by Commissioner Jones to allow 17 South Pond Street to connect to the Newburyport sewer system.

Vote: 5 yes

Laura Hynes, 6 South Pond Street

Ms. Hynes had the same request; to connect to the sewer system due to failing septic.

Commissioner Jones made a motion, seconded by Commissioner Kelley to allow 6 South Pond Street to connect to the Newburyport sewer system.

Vote: 5 yes

Brian Moore, 2 South Pond Street

Mr. Moore was interested in connecting his home in the future and asked if it would make sense to get others on his street to all connect at the same time. Mr. Tuccolo answered that this would make sense, as some kind of pump system will need to be installed on the street. He would gladly help Mr. Moore and his neighbors with any questions on the process.

Gary Duclos, 12 Coombs Circle

Mr. Duclos appealed an abatement denial last Fall. He has since had repairs made to his pool to remedy the issue causing the large bill. Mr. Tomasz commented that if Mr. Duclos now qualifies for the abatement, he would have no problem approving it.

3. Approval of Minutes

Commissioner cook made a motion, seconded by Commissioner Tomasz to accept the July 12, 2017 minutes.

Vote: 5 yes

4. Business Manager's Report

Ms. Talkington noted the following in the Business Manager's Report;

- Finished FY17 in the black
- Solar credit auction yielded just under \$10,000 that will go into sewer undesignated fund balance
- Started spending in FY18
- In the red due to paying debt early in July, as well as retirement expenses

Commissioner Jones made a motion, seconded by Commissioner Tomasz to accept the report as presented.

Vote: 5 yes

5. DPS Operations Reports

Mr. Furnari noted the following on the Engineering Report;

Mr. White was not present.

- Plum Island Hydrant Replacement project was discussed under old/new business below.
- Commissioner Tomasz asked where we are on the West End Easement project. Mr. Furnari noted that this will be discussed at City Council on 8/28/17.

Mr. Furnari noted the following on the Water Construction Report;

Mr. Lynch was not present.

- Will be replacing 500' of water main and adding hydrants on Finnegan Way

-Working on replacing outdated hydrants. Commissioner Tomasz asked how many need to be replaced. Mr. Furnari commented about 50. Mr. Cook asked if usable hydrants from Plum Island would be used as replacements in town. They would be in the future.

Mr. Pratt presented the following on the Sewer Report;

- Plant running well and in full compliance
- 3 odor complaints all summer
- As far as pretreatment, the FOG program is on hold and hope to kick off by October
- SCADA upgraded successfully
- Continuing modifications and improvements at the plant
- Forthcoming; will provide AECOM's feedback on Wastewater Treatment Plant Evaluation Study and estimates on work
- Change Order #1 with Methuen Construction includes odor control on Plum Island with a system from Evoqua. It is slated to be delivered late Fall.

Mr. Angelakis noted the following on the Water Operations Report;

- Ending July; 67million gallons pumped, 2.1 million gallons per day
 - Reservoirs are still 98-99% full
 - The Board heard the update on Evergreen – the plant worked with the owner to restore the sites through last week
 - Spoke with AECOM safe yield draft report
 - Usual maintenance at the Water Treatment Plant
 - Northeast System Controls and Engineering has been on site updating computer systems
- Commissioner Kelley asked if there were any issues with fans at the Artichoke pump station. There have been no issues. At well #2, there was an issue and a belt was replaced for the fresh air fan.
- Commissioner Kelley asked what temperatures the water was coming in at. Mr. Angelakis thought the temperatures were comparable to last year.
- Commissioner Cook asked Mr. Angelakis for the next meeting to compare flows from last June, July and August to this year.

Mr. Furnari noted the following on the Director's Report;

- The Department of Labor and Standards toured the Wastewater Treatment Plant. OSHA will soon be coming into municipalities. DPS had a staff meeting this week to look at all facilities and work on suggestions.
- Record requests have been coming in lately; so much time has been spent on that

Mr. Tuccolo noted the following on the Collections Report;

- Graf Road is cleared out. Sheathing getting dropped off and they will begin digging next week.
 - In the process of setting up a motion camera for the project
 - Seems like one year timeline
 - Trailers coming tomorrow
 - FEMA/MEMA met today regarding closeout of Plum Island alarm system project. It was a huge success
 - Will be attending training in 2 weeks on SCADA side of this
- Mayor Holaday commented on the incredible project, new sophisticated system and credited Mr. Tuccolo and all for a job well done.

Commissioner Jones made a motion, seconded by Commissioner Coffey to accept the reports as presented.

Vote: 5 yes

6. Sewer Pretreatment Report

See above – Chris Pratt update

7. New/Old Business

-West End Easement Update: *See above – Tony Furnari update*

-Odor Control Project Update:

Mr. Pratt noted that the project is ongoing and on schedule and slated for a January or February completion date.

Commissioner Tomasz commented on the three odor complaints this summer. Mr. Pratt responded that they were before Yankee Homecoming week. One came in when a temporary fan was down for maintenance. The other two were from the same resident early around 4am and could have been the result of a combination of things. Mayor Holaday commented that in general the residents have been pleased with the odor improvements this summer.

-Graf Road Lift Station Update: *See above – Jamie Tuccolo update*

-Evergreen Commons Project Update: *See above – AECOM update and Ted Angelakis update*

-Plum Island Hydrant Replacement Update:

Mr. Furnari noted that the kickoff meeting will take place on Tuesday to decide start date with N. Granese & Sons. We are awaiting contracts and final approval from City Council.

Mayor Holaday brought up the public meeting at PITA Hall on Wednesday 8/23/17 at 6pm to present the schedule to the public. The project is slated to start right after Labor Day. She also noted that the \$750,000 being held by the Attorney General's office for one year will be released on 8/31/17.

-Bathymetric and Sediment Thickness Surveys & Water Supply Yield Estimate/Demand Projection Update Draft:

Doug Gove, of AECOM spoke briefly about the drafts that were distributed at the meeting. CR Environmental performed bathymetric surveys of the reservoirs in order to calculate capacity. Bathymetric studies were done in 1998 and essentially had the same storage as today. Demands are projected to go up slightly. From 2011-2015 the average demand was 1.95 million gallons per day. Last year during the second worst drought, it was 2.29 million gallons per day. Total yield is 2.87 million gallons per day. Demand projections for 2040 are expected to be 2.36 million gallons per day. The Board would digest the information in these reports and discuss at the next meeting in September.

8. Executive Session: None

9. Confirm Next Meetings

The next meeting will be held at 5:00pm at 16C Perry Way; Wednesday September 20, 2017

Vote: 5 yes

10. Warrant Contract Signing

Commissioner Jones made a motion, seconded by Commissioner Cook to accept the warrants as presented.

Vote: 5 yes

11. Adjournment

Commissioner Jones made a motion, seconded by Commissioner Cook to adjourn the meeting at 6:05p.

Vote: 5 yes

Respectfully Submitted By: Katie Mahan