

NORTH SAGAMORE WATER DISTRICT
MEETING MINUTES JUNE 20, 2018

The North Sagamore Water District Board of Water Commissioners held their monthly meeting on Wednesday, June 20, 2018 at 4:15 pm at the North Sagamore Water District office at 14 Squanto Road, Sagamore Beach. Chairperson Mark Melchionda called the meeting to order at 4:15 pm.

Those in attendance at the start of the meeting were: Chairperson Mark Melchionda, Commissioner George Sala, Commissioner Mark Bergeron, Superintendent Matt Sawicki, Treasurer Maureen Fruci, Engineer Mike Ohl from CEI and District resident Stephen Mealy.

4:15 PM – ENINGEER - MIKE OHL – COMPREHENSIVE ENVIRONMENTAL INC.
DISCUSSION OF RATE STUDY & CONNECTION FEES

CEI Engineer Mike Ohl updated the Board regarding the asset management grant and the asset management plan that was completed for the District. The plan has been finalized and a hard copy was given to Superintendent Sawicki.

CEI is also working on a rate study as part of the grant. In addition, CEI is looking at the District's connection fees and system development fees. Mr. Ohl explained that a sample year meter data was put into a wet year/dry year scenario. This would give the District what it would need to pull in for revenue. District taxes also get factored in and get adjusted each year to make the budget work. The wet/dry year will be corrected through the taxes and rates will go up/down depending on the situation.

The District's capital plan was also reviewed. In the past the District has used free cash for smaller expenditures only borrowing for the treatment plant and Norris Road tank project. Future water main replacement projects could require borrowing after the treatment plant debt is paid off. The state's Water Management Act imposes a standard of 65 gppd. The District's per capita demands are 81 gppd. The District could be required to reduce consumption and in turn that would reduce revenues. At this time the budget is stable however, if there were multiple wet years, which would reduce revenues, it could mean a loss of \$75-\$100,000 in water revenues. Mr. Ohl said the District needs to be proactive so borrowing funds for upcoming projects may not be necessary. He suggested setting up stabilization funds that could be voted on for future projects. He said trying to stabilize rates is important. Superintendent Sawicki said the District needs to have a direction. At this point the District doesn't have a lot of debt. If water rates were to go up and tax rates stayed the same the District could put that money in the stabilization funds. Rather than borrowing funds for upcoming projects some of the money from those accounts could be used. Superintendent Sawicki said the budget has been tightened up so there will be less free cash available. Mr. Mealy suggested looking at past year's free cash expenditures and see where it may possibly be put in the budget.

The discussion moved on to the possibility of installing a new well at a cost of approximately \$4 million including a new treatment plant. Superintendent Sawicki said the last time test wells

were done was 1988. The area south of Church Lane looked like the most promising at that point. However, there is a lot of iron and manganese at that site. The Superintendent said there is minimal land available in the District with adequate size to construct a new well.

Mr. Ohl said the District needs to make sure new customers pay their fair share using system development and connection fees. The District needs to come up with a logical, fair and equitable formula to determine these fees. Superintendent Sawicki said these fees would be the same for everybody. Currently the connection fee is \$2,300 for a 1" service.

Mr. Ohl explained the Canal Road Crossing project will push the District to the limit. Commissioner Sala said future buildout has always been a concern. There is still commercial property in the District that is developable. Commissioner Melchionda said in the past the District has considered the lots for the Canal Road Crossing project as residential.

District resident Stephen Mealy asked what the cost would be to do another test well. Mr. Ohl said approximately \$50,000 if the District has a specific location. He said if the District expects more growth another well will be necessary. Superintendent Sawicki said he and Mr. Ohl will discuss other well sites and numbers for the next monthly meeting.

Mr. Mealy suggested the District establish a financial policy and offered to share examples of financial policies he has.

Engineer Mike Ohl left the meeting at 5:04 pm.

DISCUSSION & POSSIBLE VOTE ON VOLUNTARY WATER CONSERVATION MEASURES

Superintendent Sawicki informed the Board the District is currently pumping July numbers. He would like to put voluntary water conservation measures in place. He will place an ad in the newspaper and place signs throughout the District. Commissioner Sala made a motion to approve the implementation of voluntary water conservation measures in the District. Commissioner Bergeron seconded the motion. The motion was accepted.

DISCUSSION OF WATER MAIN REPLACEMENT ON PHILLIPS ROAD

The Superintendent gave the Board a cost estimate to replace the water main on Phillips Road from Standish Road to the Sandwich town line and as a cost comparison from Standish Road to Scusset Beach. He explained the estimate doesn't include de-watering. A 10% contingency was added but the Superintendent isn't sure if that would cover the cost. The District will have to borrow funds for this project. Commissioner Sala said it is on the Town of Bourne DPW's 5-year capital plan to pave. He does not want to pave until the new water main is complete.

Looping of the Phillips Road water main through Scusset Beach was discussed as an additional phase to the project. The estimated cost increase to the project would be approximately \$500,000. The District would have to work with the State and DCR on this part of the project.

Superintendent Sawicki asked if he should start with an RFP. Commissioner Sala said he would like to see 3 quotes for engineering. Commissioner Melchionda asked if the Superintendent was comfortable with the 8" size. He said he will get an estimate for larger size as well.

APPROVAL OF MEETING MINUTES DATED 5/16/18

Commissioner Melchionda had several changes to the meeting minutes dated 5/16/18 under "Discussion and possible vote on capacity analysis – Canal Road Crossing", "Discussion of filter plant rehabilitation" and "Any business not reasonably anticipated within 48 hours of the meeting". Commissioner Sala made a motion to approve the meeting minutes dated 5/16/18 with the changes as noted. Commissioner Bergeron seconded the motion. The motion was accepted.

SUPERINTENDENT'S REPORT

The Superintendent told the Board the Church Lane well is back online.

A copy of the sanitary survey results was given to the Board. There were no violations found. There were several deficiencies noted: several cross connection surveys need to be completed, the floor drains need to be registered with the state and the District needs to dispose of old phosphates and motor oil. DEP recommended the District reconfigure the Bournedale tank overflow.

A gate on Old Plymouth Road will be replaced tomorrow (6/21). Notification of the project was hand delivered to all residences in the area.

The procurement process for the filter rehabilitation project will begin in August.

The Board approved the Superintendent's request to work from 9 am to 6 pm on several days in August because of a childcare issue.

TREASURER'S REPORT

Treasurer Fruci informed the Board there are a total of 40 past due accounts including quarterly billed accounts and accounts with payment plans with outstanding water bill balances totaling \$12,547.35.

July water bills will be issued 7/13-716. There will be an insert included with the bills informing customers of the District's new lien policy.

The District's FY17 audit is complete and copies were given to the Board.

NEW BUSINESS – CORRESPONDENCE FROM 470 WILLISTON ROAD REQUESTING ABATEMENT

The Board reviewed a letter from the owner of 470 Williston Road requesting relief from a \$1242 water bill. Superintendent Sawicki explained the large bill was due to irrigation. The District tested the meter and no issues were found.

The Board explained that unfortunately the bill cannot be reduced because there was not an issue with the meter and the water was used. A payment plan can be set up if necessary.

OLD BUSINESS – CANAL ROAD CROSSING

There was a discussion regarding the Canal Road Crossing project and the water mains in that area. There is a new water main from McDonald's to Friendly's and on Patty's Way. However, there is a main that dates back to 1948 that abuts the property that will have to be upgraded. The developers will be installing a wastewater treatment plant. Irrigation systems will not be allowed in the project. The Board said this development doesn't bring the District over the water permit but other development could.

District resident Stephen Mealy asked that the Board not approve the 30,000 gallons of water requested for this project citing the Capacity Analysis report from Comprehensive Environmental Inc. dated 4/24/18 (page 6 of 8 - highlighted portions):

"The above analysis of existing conditions indicates that the NSWDC has a buffer of 0.03 mgd or 30,000 gpd in its existing WMA Permit with regards to the annual average day withdrawal. The proposed demand of 30,000 gpd for the proposed development would consume most, if not all, of this buffer and may trigger the need to apply for a new WMA Permit to request an increase in the authorized withdrawal. Additionally, exceedance of this buffer may trigger the requirement for the District to implement mitigation activities. Note that the effort involved with application for a new WMA Permit is significant, as well as implementation of any required mitigation activities.

In the future, the additional proposed demand of 30,000 gpd for the proposed development could cause the NSWDC's maximum day demand to exceed the available supply with the largest source off-line more often. The NSWDC could increase their supply by (1) installing a larger pump at the Church Lane Well with associated upgrades to the pumping systems and treatment facility as described below or (2) installing a new source.

See attachment A presented by Stephen Mealy.

BUSINESS NOT REASONABLY ANTICIPATED WITHIN 48 HRS OF MEETING

None

COMMISSIONERS COMMENTS/SELECT NEXT MEETING DATE

The next meeting date is tentatively scheduled for Wednesday, July 18th at 4:15 pm.

ADJOURN

Commissioner Sala made a motion to adjourn the meeting at 5:58 pm. Commissioner Bergeron seconded the motion. The motion was accepted.

Respectfully submitted

Maureen Fruci
District Clerk



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April 24, 2018

Board of Water Commissioners
North Sagamore Water District
14 Squanto Road
Sagamore Beach, MA 02562

**RE: Capacity Analysis
North Sagamore Water District**

Dear Board Members:

The North Sagamore Water District (NSWD) retained Comprehensive Environmental Inc. (CEI) to complete a capacity analysis of the water system with regards to the ability of its existing supply and storage facilities to meet the additional water needs of a proposed development to be located at the property with the current address of 21 Hunter Brook Road, Sagamore Beach, MA.

Proposed Development Summary

A development proposed to be located at 21 Hunters Brook Road is in the conceptual stages and the current plan is to create a mixed-use complex with restricted age housing, assisted living and medical offices. As noted in the March 8, 2017 (received by NSWD on March 8, 2018) letter by Green Seal Environmental, Inc. (GSE) the estimated cumulative sanitary design for the development is approximately 25,000 gallons per day (gpd) based on MassDEP system flow design criteria established in Title V Regulations. Using this estimate, GSE has requested that a capacity analysis of the NSWD water system be completed assuming 30,000 gpd maximum day usage. GSE indicates that the water supply piping for the development would extend across the property and connect to the NSWD's existing 8-inch AC water mains on Hunters Brook Road and Canal Street (water main looped through property).

NSWD General System Information

The NSWD water system has three active gravel-packed wells (Black Pond Well, Beach Well and Church Lane Well), one water filtration facility for iron and manganese removal and corrosion control, two chemical feed treatment facilities for corrosion control, three water storage tanks (Bournedale Tank, Clark Road Tank and Norris Road Tank), two booster pumping stations, approximately 45 miles of water main and associated valves, hydrants and meters. The system has two major pressure zones: the Main Zone and the Booster Zone. The proposed development at 21 Hunters Brook Road would be supplied from the Main Zone.

225 Cedar Hill Street, Marlborough, Massachusetts 01752 508-281-5160 Fax: 508-281-5136
21 Depot Street, Merrimack, New Hampshire 03054 603-424-8444 Fax: 603-424-8441
Gateway Crossing, 1 Hartford Square-East, New Britain, Connecticut 06052 860-224-0442
www.ceiengineers.com

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North Sagamore Water District, MA
April 24, 2018
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⁴Fire flow storage is that volume of water required to fight a fire within the area serviced by the distribution system. Emergency storage provides water during short-term emergency situations such as equipment and main failures.

⁵A rule of thumb for the needed volume of equalization storage is 15% of the maximum day demand.

⁶The fire flow storage is based on the maximum fire flow requirement that a public water system is typically responsible for providing, which for the District is 3500 gpm (gallons per minute) for a duration of 3 hours. The emergency storage requirement rule of thumb is 15 percent of the sum of equalization storage and fire flow storage.

Analysis of Proposed Development Impacts

The above analysis of existing conditions indicates that the NSWSD has a buffer of 0.03 mgd or 30,000 gpd in its existing WMA Permit with regards to the annual average day withdrawal. The proposed demand of 30,000 gpd for the proposed development would consume most, if not all, of this buffer and may trigger the need to apply for a new WMA Permit to request an increase in the authorized withdrawal. Additionally, exceedance of this buffer may trigger the requirement for the District to implement mitigation activities. Note that the effort involved with application for a new WMA Permit is significant, as well as implementation of any required mitigation activities.

The NSWSD is able to meet its maximum day demand with the largest supply well off-line most years. The two highest maximum day demands during the 2007-2017 period did exceed the MassDEP recommendation, although the past seven years (2011-2017) were below 1.4 mgd. In the future, the additional proposed demand of 30,000 gpd for the proposed development could cause the NSWSD's maximum day demand to exceed the available supply with the largest source off-line more often. The NSWSD could increase their supply by (1) installing a larger pump at the Church Lane Well with associated upgrades to the pumping systems and treatment facility as described below or (2) installing a new source.

The Church Lane Well has a permitted withdrawal of 1.44 mgd (1,000 gpm over 24 hours). The existing pump operates at a rate of 450-500 gpm when operated alone and at 350 gpm when blended with the Black Pond Well for a combined treated flow of 1,250 gpm. The well could be pumped at a rate of 1,000 gpm while still meeting compliance with the WMA Permit maximum day withdrawal limitation. However, the filtration facility was only designed to treat 1,400 gpm combined flow from the Church Lane Well and the Black Pond Well given the water quality of these two wells when the facility was designed. For both wells to be pumped at their permitted rates, the filtration facility would need to be upgraded to be capable of treating the water quality produced from the blended wells at a combined rate of 1,900 gpm; this may be possible and would require consideration of the following:

1. Analysis of the blended water quality, specifically the iron and manganese given the existing levels in the two wells. The facility was designed to treat more flow from the Black Pond Well since it has lower levels of iron and manganese than the Church Lane Well. As levels of iron and manganese have increased over time, the flows pumped from the Church Lane Well have been reduced to better manage operation of the filtration facility.

- Engineering
- Design
- Construction
- Inspection

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