

**Board of Commissioners
Worksession
Minutes
September 7, 2018
(approved November 19, 2018)**

Present: J. Comer, G. Keller, W. von Schoen, D. Provencher, Superintendent R. Miner, Business Manager/Water Quality Support J. Lavoie

Excused: T. Pellegrino

Review of ongoing projects

EGGI Projects

Artificial Recharge – J. Emery gave an update on the artificial recharge project. The goal of this project is to find and utilize additional sources of water. This project would, in effect, create a new source of water through the creation of an artificial recharge source. J. Emery noted that this artificial recharge is not a solution for every town because a sustainable source of water is needed to create the artificial recharge. Merrimack is fortunate to have such a source in the Merrimack River. This River is about 1500 feet away from the area where the artificial recharge basin would be created. When the pipes are run from the Merrimack River to the proposed basins near wells 4 & 5 the length needed might be as little as about 1,600 feet. These pipes would only need to cross one parcel of private land before reaching MVD property. The level of PFOA/PFOS in the Merrimack River is 3-4 ppt. The level of total organic compounds is 1/3 of that found in the Bellamy River which is currently used for artificial recharge in Dover. The color in the Merrimack River is 20-25, while it is 100 in the Bellamy River. At \$100/foot of pipe the cost for the pipe would be approximately \$120,000. There would be an additional estimated cost of \$20,000 for going under the railroad tracks and \$800,000 for the creation of the system. The total cost for the creation of this artificial recharge system would be approximately \$2-3M. If this substantially increases the amount of water that can be taken from wells 4 & 5 the MVD could then possibly use well #3 as a backup. This would reduce the need to build an iron and manganese treatment plant on Well #3, reduce sodium and chloride that is pumped into the water system from well #3 which is elevated. J. Emery noted that he thinks there would be support for this project from NHDES. He also thinks that a withdrawal from the Merrimack River is possible. The next step in this project is to do a 30-day pilot test. Upon questioning J. Emery noted that no red flag concerns have appeared to date concerning this artificial recharge. He noted that he thinks that this project has the potential to replace well #3. EGGI will finish the report with their recommendations. If the Commissioners concur with the findings, the next steps would be to conduct a pilot test and move toward permitting the AR concept at

this location. It is possible that this artificial recharge could double the capacity of wells 4 & 5 (400 gpm to 870 gpm which is the original permitted capacity). R. Merrimack Village District, Board of Commissioners, 9/7/2018, Page 2 of 3

Miner noted that the District does not typically use well #3 in the winter. J. Emery noted that the District has looked at the raising of the level of water at Greens Pond, but that there is a problem with the structure of the road and elevating water levels along the shore front properties. This option has been reviewed by previous administrations but no solution was ever found. Additionally, he noted that Greens Pond has been treated with copper sulfate to control algae in the past but was not sure if this practice has stopped.

In conclusion, J. Emery stated that this artificial recharge basin has the potential to: 1) increase the yield capacity of the MVD water supply system, 2) reduce PFOA/PFOS in the water being treated in Wells 4&5 thereby lengthening the life of the carbon used for treating PFAS while also lowering the long term costs of O&M of the treatment plant, 3) reducing the sodium and chloride levels in water produced from the aquifer, 4) possibly replace Well 3 from active daily duty (reduce the well to a backup well) and thereby save money for MVD by eliminating the need to build an iron and manganese treatment plant estimated at 4+ million dollars and a PFAS treatment plant (cost yet unknown), and 5) defer developing and permitting a new water source. The report on this project will be available the end of October. He noted there is a possibility of state funding for this project.

UEI Projects

State Grant – K. Pratt noted that there is support for the District's application for a grant of \$405K.

Wells 4 & 5 – M. Metcalf noted that there is a need to determine GAC breakthrough for this proposed system. UEI will coordinate with MVD regarding where the water comes from for a short-term test and where the water goes to. The building size was reduced by removing the proposed generator. He noted he would like to arrange a trip to Hoosic Falls, NY to see what has been done there. He noted that GAC elevated pH when such a system is first put online.

Lime Treatment Feasibility for Wells 7&8 and 2&3 – M. Metcalf noted that such treatment would assist in the District's movement away from lime treatment of its water. K. Pratt noted that money has been budgeted for this in the FY19 budget.

Turkey Hill Road Booster Station - K. Pratt noted that the District has applied for money from the state trust fund for this project. This will be a premanufactured building with an external generator. This building will all be

above grade. The electrical work for a mixer for the Turkey Hill Tank will be built into this building.

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Rate Model Update – K. Pratt noted that the last rate model update was done in 2014. The last time there was a rate adjustment was in 2011. The surpluses accumulated from this last rate adjustment no longer exist in the budgets of the MVD. This update uses a 3-year history with a 5-year future. A rate scenario for each of 3 potential projects or any combination of these will be run. A look will be taken at the use of the District's \$5.7M in reserves. R. Miner noted that a vote of the Annual Meeting is needed if bonding is needed for a project; however, only a vote of the Board is needed if the money for a project comes from the District reserves.

CIP – K. Pratt noted that the District looks at the CIP in December with a view to finalizing it prior to the Annual Meeting. He noted this is definitely a fluid document.

D. Provencher noted that the treatment at wells 7&8 for PFAS is more of a priority than wells 2&3 which can possibly be pushed to a later date. It is also possible to push out the well at Mitchell Woods.

R. Miner noted that a PFAS update from NHDES is possible at the October meeting. It is also possible that some money will be forthcoming from a responsible party or parties for treatment of this contaminant at wells 7 & 8.

D. Provencher noted that it is unknown how to get any future treatment tanks that may be needed into the treatment building at wells 7 & 8 now that this building has been built.

Zeolite – There was some discussion of this material that can be used in place of GAC for the treatment of PFOA/PFOS and other chemicals found in water. The Board would like additional substantiated data on this material.

Adjourn

A motion was made by W. von Schoen and seconded by D. Provencher to adjourn the meeting at 4:40 PM. The motion passed 4-0-0.

Respectfully submitted,
Rita Pointon, Recording Secretary