

MINUTES OF MEETING OF BOARD OF SEWER COMMISSIONERS

Date of Meeting: May 17, 2018
Date of Transcription: May 29, 2018
Transcribed by: Rebecca Benitez-Figueroa

1. MEETING TO ORDER

The meeting was called to order by Chairman Giberti at 6:30 pm

2. ROLL CALL

Sewer Commissioners Present: James R. Giberti
Peter G. Dunlop
Donna M. Bronk
Sandra L. Slavin arrived at 6:37 pm

Sewer Commissioner Absent: Malcolm R. White

Also Present: Guy Campinha, Sewer Superintendent

3. APPROVAL OF MEETING MINUTES

(none)

4. SEWER BUSINESS

1. Discussion with Water Warriors

Present: Dr. Rakesh Govind and Steve Chamberland

Dr. Govind presented the benefits from the Water Warriors' technologies and further explained the current issues at the WPCF due to nutrients in the waste water with a requirement that the total number of nutrients be limited in the effluent. By removing nitrogen and phosphorus, the capacity of the treatment can be increased without the cost of infrastructure. The technology would remove the nutrients in addition to treating the waste water. The proposed technologies include microbubble aeration biomedica.

Microbubble aeration would increase the amount of air bubbles creating more area that would dissolve more oxygen in the water. The increase in air bubbles would take longer for the bubbles to rise in the water. The increase oxygen is needed to oxidize the ammonia to nitrate; the nitrate would be reduced to nitrogen gas. Maintenance would be easier and require only a pump and recycled water. There would not be a need for blowers. The pump would be position out of the water wherein more air can be pumped into the basin. Only the header and nozzles would be locate in the water. Without the need for blowers, the cost of electricity at \$0.15/kwh could result in an approximate annual cost of \$59,000/yr. to run the pump in the aeration basin. This would greatly reduce the cost of electricity at the treatment plant.

Biomedica (football shaped equipment) would increase the current concentration of biomass (2500-3000 milligrams per liter) at the WPCF ten (10) times higher. The higher the biomass along with increased aeration would allow for greater treatment of the waste water. Any grease

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entering into the sewer system becomes food for the bacteria that would be adhering on the sponge like material in the 'football'. The 'football' is a nutrient removal mechanism.

Dr. Govind briefly explained that super biomedica is currently being operated in over 30 advanced septic tanks in Kentucky which reduces both ammonia and phosphorus from the septic tanks. The cost is approximately \$21,000 (with installation). This is being used as an alternative to connection to sewer systems that may not be available in certain locations.

The advantages of the technology would be many to WPCF, including reduction in electrical, chemicals and sludge removal. The total project cost would be approximately \$584,000 for 1 year which includes cost of equipment, design and engineering, data analytical, data gathering, etc. With a Mass CEC grant, the cost to WPCF would be \$166,346. A further breakdown of cost: \$160,000 for microbubble aeration, \$133,346 for moving SuperBiomedica (footballs) for a total of \$293,346 for retrofitting. WPCF expense cost would be the \$66,346 after the grant. WPCF could have a savings of less than 9 months. Other benefits include, but not limited to: easy installation, no infrastructure needed; some piping installation, removal of nutrients, lower energy consumption and increased the treatment's capacity.

Brief discussion ensued.

MOTION: Commissioner Bronk moved to give Superintendent Campinha authorization to move forward with the project. Commissioner Slavin seconded.

VOTE: 3-0-1 (Commissioner Giberti abstained)

Mr. Campinha spoke briefly on other proposed options which have not been tested or used.

5. SEWER SUPERINTENDENT'S REPORT

1. Outfall

Mr. Campinha reported on meeting with DOT (Dept. of Transportation) regarding use of railway. The DOT would require pilings and installation of a wall the entire length of the railway. This would be cost prohibitive. Tunneling to Mass Maritime is being looked into as an alternative.

2. Hathaway Street

Mr. Campinha explained that in the process of bringing a line to the Beaton property (2 vacant lots), that a 16" water main pipe was broken resulting in the opening of (2) 6" lines flowing into the sewer system. The entire area was surcharged with approximately 500,000 gallons going directly into the river. The water level in the wet wells were so high, it took 6 hours of pumping to reduce the water to normal levels. Problems were created in the Rose Point area with low water pressure and the fire department expressed concerns of impact of the hydrants in that area. Fortunately, the concerns were addressed without incident.

6. UNFINISHED BUSINESS AND GENERAL ORDERS (Unanticipated Items)

(none)

7. NEW BUSINESS

(none)

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8. NEXT MEETING DATE AND TIME

The next scheduled meeting will be May 24, 2018 at 6:30 p.m.

9. ADJOURNMENT

MOTION: Commissioner Bronk moved to adjourn. Commissioner Slavin seconded.


VOTE: 4-0-0 (Unanimous)

Meeting adjourned at 8:05 pm/.

Respectfully submitted,

Rebecca Benitez-Figueroa

Department Assistant

Attest: 

Sandra L. Slavin, Clerk

BOARD OF SEWER COMMISSIONERS

Date Signed: 6/21/2018

Date sent to the Town Clerk 6/25/2018