

Board of Water and Sewerage Commissioners

Monday, May 12, 2014

12:00 P.M.

MINUTES

PRESENT: Paul Adamski, Eugene Tubbs, Jim Cooper, Mae Nachman and Carl Rasmussen.

ALSO PRESENT: Mayor Halverson, Corey Laddick-City Treasurer, Joel Lemke, Jeremy Cramer, Rob Molski, Mary Klesmith, Jaime Zdroik, and Angel Gebeau of AECOM.

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ADMINISTRATION

1. **Approval of minutes of the April 14, 2014 meeting.**

Motion made by Eugene Tubbs, seconded by Jim Cooper to approve the minutes of the April 14, 2014 Water & Sewerage Commission meeting.

Ayes all. Nays none. Motion carried.

II. **ACCOUNTING**

2. **Discussion and possible action on the following:**

a. Claims for the Water Department.

Paul Adamski presented the statement of claims for the Water Utility for April. The balance as of April 1, 2014 was \$5,112,319.11; the bank deposits recorded in April 2104 was \$1,270,057.21. Checks issued since the April 2014 meeting numbered 47869 through 47959 were in the amount of \$1,566,738.18. The net balance on hand May 12, 2014 was \$4,815,638.14.

Motion made by Eugene Tubbs, seconded by Carl Rasmussen to approve the Water Utility claims for the month April 2014 as audited and read.

Ayes all. Nays none. Motion carried.

b. Claims for the Wastewater Department.

Paul Adamski presented the statement of claims for the Sewage Treatment Utility for April. The balance as of April 1, 2014 was \$5,476,897.96; the bank deposits recorded in April 2014 were \$495,977.32. Checks issued since the April 2014 meeting numbered 30264 through 30315 were in the amount of \$729,525.65. The net balance on hand May 12, 2014 was \$5,243,349.63.

Motion made by Jim Cooper, seconded by Carl Rasmussen to approve the Sewage Utility claims for the month of April 2014 as audited and read.

Ayes all. Nays none. Motion carried.

c. Claims for Stormwater Department.

Paul Adamski also presented the statement of claims for the Stormwater Utility for April. The balance as of April 1, 2014 was \$479,670.42. The bank deposits recorded in April 2014 were \$168,829.05. Checks issued since the April 2014 meeting numbered 1139 through 1157 were in the amount of \$54,172.87. The net balance on hand May 12, 2014 was \$594,326.60.

Motion made by Carl Rasmussen, seconded by Eugene Tubbs to approve the Stormwater Utility claims for the month April 2014 as audited and read.

Ayes all. Nays none. Motion carried.

III. WATER OPERATIONS

3. Report on water distribution operations.

Joel stated that we successfully got through flushing. The water tower on Bliss Avenue was kept open to act as a buffer for system pressure, in doing this we had only 12lbs of fluctuation.

Our annual leak detection starts today.

The water operation reports were distributed and reviewed.

A total of 14 valves have been operated in 2014.

4. Report on water supply operations.

Our pumpage in April was 154,752,000 gallons, an increase of 9,615,000 gallons of water from April 2013.

Water temperatures are about to about 44.

At Well 11 we have 4 emergency generators, due to some emission regulations the exhaust stacks will have to be ventilated vertically instead of horizontally. Also Well 4 media was inspected and that media has been exhausted and it will have to be replaced. Quotes for these items will be brought back for approval next month.

IV. SEWAGE TREATMENT OPERATIONS

5. **Report on Collection System Maintenance.**

Rob stated everything is going well. They had some storm and sewer mains that were frozen.

The sewer report for the month of April was reviewed by the Commission.

6. **Report on sewage treatment operations.**

Jeremy stated everything is going well. The raw pounds of B.O.D. per day spike during the week when the brewery discharges. The High-strength Waste Receiving Station project should alleviate this. The Commission would like to see this data once the project is complete to compare previous years to current.

B.O.D. (5 average ppm), Phosphorus (0.431 average ppm) and Suspended Solid (5.60 average ppm) limits were met for the month of April 2014.

7. **Discussion and possible action on the Compliance Maintenance Annual Report and Resolution.**

The Wastewater Treatment Plant received all A's on the 2013 CMAR.

Jeremy pointed out that the monthly B.O.D. loadings pounds/day will decrease with the completion of the High-strength Waste Receiving Station project.

High levels of phosphorus in the biosolids will become an issue in the future. It will become harder and harder to find enough land for the land spreading in our area.

The Commission congratulated Jeremy and staff on receiving all A's.

Motion made by Carl Rasmussen, seconded by Mae Nachman to approve the 2013 Compliance Maintenance Annual Report and Resolution.

Ayes all. Nays none. Motion carried.

8. **Annual update on Co-gen/Biogas data.**

Jeremy provided an update to the Commission in regards to the biogas generator and the savings realized since the project has been in operation. The

Treatment Plant has reached their goal of becoming energy neutral and the plant on average has been energy positive for 12 months.

Joel commented that the plant is treating wastewater for an equivalent of 69,035 people per day.

The Commission questioned whether Jeremy receives inquiries from around the State in regards to the Biogas Project. Jeremy stated a national wastewater magazine came to the plant last week for an interview. Jeremy has been asked to do presentations at UW Madison and UW Marquette. Calls have been received from around the country.

Mayor Halverson said there is no treatment plant like this one in the country.

Joel said there will be a promotional video put together to give a more publically understandable perspective on the plant and what has been accomplished there.

9. **Presentation on multi-year Capital Improvements Plan.**

Jeremy presented the 2015-2018 Capital Improvements Plan to the Commission.

2015

- Address the increase in biosolids to the plant mainly due to Brewery expansion
- We currently produce approximately 3.3 million gallons per year and will continue to increase. Our current sludge storage space is 3.2 million gallons per year.
- Currently we produce 5.5-6% liquid material, we would like to go the next step and produce a “cake”. A pilot study is currently being done at the plant in regards to this. We would produce a “cake” product first by dewatering our biosolids and building a Solar Biosolids Dryer (Greenhouse) to produce a marketable Class A biosolids that will be similar to “milorganite” which can go just about anywhere. This would eliminate the cost of building a 3rd sludge storage tank for \$3,105,000.00 & eliminate the \$100,000/year sludge hauling costs.
- Jeremy visited a site in Utah that's using the Solar Biosolids Dryer to see if it would work even in winter months and it does.
- A map was distributed to the Commissioners showing which parcels of land Class B biosolids can be placed on. There is only approximately 3,000 acres approved for land application, with only 400 acres used per year. The land that it is applied to has to be rotated every 5 years due to

phosphorus levels. The DNR will be coming down on the farmers in future regulations in regards to phosphorus.

- By going to a “cake” biosolid it would allow us to convert one of sludge storage tanks to an anaerobic digester. This would allow us to bring in more waste to produce more methane gas and would generate more tipping fee revenues. 2013 tipping fee revenues were \$112,793.28. The 2nd tank to be used either as liquid sludge storage if needed or as part of a future nutrient harvesting process
- Joel stated that going to a “cake” product would eliminate the need for that much sludge storage. We then have storage available that we could reuse for digestion, which would increase our capacity. A plant can be the sole limiting factor to development if we don’t accommodate growth. Paul also stated there is not a lot of land available for expansion.
- Jeremy showed pictures and explained how the Solar Biosolids Dryer would work.
- Jeremy stated adding an additional co-gen unit makes sense, we have digestion, more gas and we could utilize the heat generated from that in the Solar Biosolids Dryer by installing in-floor heating. This would keep costs down because we would only have to build two bays for drying instead of possibly 3 or 4. Joel explained that currently the heat off of the co-gen unit allows us to keep the 3 digesters at 96 degrees all winter long. In the summer we have excess heat and this would be a perfect application to beneficially reuse that heat. The Mayor asked if there is enough supplemental heat coming off of the exhaust of the co-gen unit to fire another secondary turbine off of the exhaust only in the summer time during peak demand hours also? Jeremy said we are not quite there yet.
- Jeremy said we would not have to hire any new employees
- Jeremy stated we could implement Nutrient Harvesting which would produce a sellable phosphorus material. There are many areas in the U.S., for instance farm fields, which need phosphorus. Mayor Halverson asked if they had any projections on the amount of phosphorus material that could be produced. Jeremy and Joel explained a nutrient study is being done and is just at the beginning stages so currently we don’t have those figures but should relatively soon.
- Jeremy explained the facility has always done biological phosphorus removal which has saved the Stevens Point rate payers approximately \$130,000.00 annually by not having to buy chemicals in order to remove phosphorus. In order to maintain this savings, we will have to look into the recycled flow. Mayor Halverson stated the chemicals would be injected to adhere to the phosphorus and it settles out. Jeremy stated that was a good point. It would probably be an additional \$20,000 to chemically remove phosphorus because we would have more biosolids to haul out.

- Other benefits of nutrient harvesting are; reduce phosphorus recycled through the plant, thus making it easier to continue with biological phosphorus removal; once lower effluent limits are imposed it will be very hard to continue to do all biological phosphorus removal unless we initiate a side-stream phosphorus removal process; lower ammonia concentrations; and will save on current costly non-controlled struvite issues at the plant.
- Cost savings/impact of implementing the Capital Improvements: eliminate \$100,000 per year in hauling costs; not having to build an additional sludge storage tank for \$3,100,000.00 that would only increase storage and would not benefit the rate payers in the future like a larger digester and Class A biosolids process; would be able to continue to biologically remove phosphorus thus not have to spend \$130,000 per year to do it chemically; increase tipping fee revenue by using digester capacity; installing a second Co-gen unit to produce more electricity to sell to WPS to generate more revenue; and saving on expensive non-controlled struvite issues

Mayor Halverson questioned if replacement funds were depleted using the current rate structure/rate of return the replacement funds would continue to increase again? Joel explained if we finance a project through the Clean Water Fund again they will require additional replacement funds and even if they don't as a staff we would promote increasing replacement funds for any investment so that we have that internal fund for maintenance.

Discussion was held regarding the projected Wastewater Budget Plan.

Discussion was held regarding current tariff with WPS and if there is a way to get around the tariffs by becoming a separate electric utility.

Mayor Halverson stated they are going to have to see a cost/expense savings and borrowing specifics to implement the Capital Improvements.

Paul stated total costs to implement the Capital Improvements \$5,950,000 and if you subtract the cost of not having to build the \$3,100,000 sludge storage tank, that leaves it at \$2,850,000 and then subtract the money we don't have to assess our rate payers which is our replacement fund money of \$940,500 and that comes out to the Capital Improvement projects only costing approximately \$1,900,000 more. You still would have to add in the costs savings of not having to haul biosolids, additional revenue from tipping fees, sellable phosphorus, additional co-gen/electricity selling back to WPS, those total \$442,000 so in 4.3 years the 1.9 million would be paid back.

Joel said having a second co-gen unit would also eliminate an additional \$900,000 because we would not have to upgrade the backup generator so the pay-back period would be even less.

The Commissioners wondered if there would be monies available from Focus on Energy. Joel & Jeremy met with someone from Focus on Energy last week and he said there would be monies available.

No action taken at this time. Joel explained they will come back to the Commission with the Scope of Services for engineering.

V. STORMWATER OPERATIONS

10. Report on Stormwater operations.

No discussion held.

VI. DIRECTOR'S REPORT

11. Verbal Report.

No discussion held.

The next Water & Sewerage Commission meeting will be on Monday, June 9, 2014 at noon.

VII. ADJOURNMENT

Motion made by Mae Nachman to adjourn the meeting.

Ayes all. Nays none. Motion carried.

MEETING ADJOURNED
1:08pm

BOARD OF WATER AND SEWERAGE COMMISSIONERS

EUGENE TUBBS, SECRETARY