

# HEBER PUBLIC UTILITY DISTRICT

## REPORT TO THE BOARD OF DIRECTORS

**MEETING DATE:** July 17, 2014

**FROM:** Laura Fischer, General Manager

**SUBJECT:** Authorize the expenditures and modify the budget for ongoing repairs at the wastewater plant.

**ISSUE:** Shall the Board authorize the expenditures and modify the budget for wastewater plant repairs?

**GENERAL MANAGER RECOMMENDATION:**

Approve the expenditures and modify the budget for ongoing repairs at the wastewater plant.

**BACKGROUND:**

The wastewater plant improvement project was completed in 2013 and after one year there are still some issues that need to be worked out. I have been keeping you updated on many of the issues and repairs in my monthly General Manager's report, but this report is more detailed and explains the estimated costs to repair after the one-year warrant on the plant expired.

**FISCAL IMPACT:**

Increase in operational expenses – Operations Maintenance and Repairs – to Wastewater Treatment Plant in an amount estimated at \$40,000.

**DISCUSSION:**

Regarding the incident at the Wastewater Plant on May 23<sup>rd</sup>. The PLC, which monitors the plant functions, went out; the VFD on two water pumps also went down. Consequently, the rotary drum screens got clogged up and sewage overflowed into the head works building. The operators were not aware of the problem and no alarms were issued because the PLC was not functioning. HPUD was not in violation of our discharge permit.

**Wastewater Treatment Plant Repairs**

There were several issues with the plant, but staff and THG engineers have been working to make sure the needed repairs or improvements are completed. THG is working with the contractor and product manufacturer to ensure any warranty that may be available is utilized. The issues include:

- Surge Protectors:
  - The surge protector at the power source was tripped. Staff did not report it or repair it. It will need to be relocated and repaired. The cost to complete this action is estimated at \$2,865 by Delta Systems Engineering. This cost includes the electrician, parts and programming.

- The VFDs were replaced and both pumps are operational. However I have requested that a surge protector be installed at the VFDs because they have been burning out quickly. The cost to have the surge protector installed at the VFD is \$1,674.
- Electrical Power Surges:
  - IID has monitored the power as we fell there may have been some surges. HPUD has installed a 'smart' meter, but we don't have the system in place to monitor any spikes or drops in electricity strength, which could cause the PLC to malfunction. The cost to install the wiring to read the 'smart' meter is \$1,752.
- PLC at the Head Works Building:
  - The PLC failed, and was replaced. The PLC in the Head Works and Dewatering Building needed to be hardwired to ensure alarms will be activated if they fail. The PLC in the Dewatering Building as hardwired. The cost to hardwire the PLC in the head works building is \$1,752.
- Aerotors:
  - One of the chains on the aerator broke. The manufacturer will provide us with new and upgraded chains for all six aerators. Three have arrived, and we have scheduled the repairs to start on Monday, August 4<sup>th</sup>. We have reserved a crane and operator to make the repairs. We estimate this to cost an amount not to exceed \$6,400.
  - There is also an issue with one of the brakes on the aerator and we are getting an electrician out to troubleshoot the problem. Cost is estimated at \$2,000.
- Air Conditioning Unit at Head Works Building:
  - The A/C unit at the head works building is failing due to corrosion of the copper wires and coils. This corrosion is due to the location of the A/C, which is near the exhaust of the building. The corrosive gasses cause copper to have pin holes and the Freon is leaking. Staff worked with the A/C manufacturer to determine the best solution to this issue. Staff has determined that a split unit (where the coils are located inside the electrical room) and the coils are specially treated to resist corrosion should be ordered and installed. The treatment on the coils is expensive, but staff has reports that the life of the A/C is extended over three years. Our current A/C only lasted one year. Staff has a quote for approximately \$10,000 and it will take about 2-3 weeks to get the special ordered coils. In the meantime, staff is having the current A/C recharged at least twice a week to keep the electrical components cool and operational.
- Gas Extraction/Ventilation in the Head Works Building:
  - The gasses in the head works building are not exhausting properly. There is a buildup in the lower portion of the building. Staff is working with our engineer to determine the reason that the building was not ventilated properly. The gasses are heavier than air so they settle to the bottom and are corroding some of the components on our VFDs. Additionally the vents are at the top of the building and venting near the A/C, which is causing some damage.

I will update you on our most recent meeting, which is scheduled for Wednesday the 18<sup>th</sup>. The action plan to repair is under development and the cost is unknown at the time.

- Calibration of Equipment:
  - The following equipment needs to be calibrated and we are waiting for quotes:
    - Siemens Magnetic Flowmeter MAG 5000 (Effluent Flowmeter) – **Calibration Verification**
    - Hach ORP Analyzer - **Servicing with salt bridge replacement and solution filling**
    - Hach DO Analyzer – **Servicing**
    - Hach UVT Analyzer – **Servicing**
    - Combustible Gas Detector – MSA Toxgard II – **Calibration and refill Required**

Additionally HPUD has been using the services of Delta Systems Engineering, who is the consultant that we used to program all of the SCADA system at the Plant. They have been on call and helping staff trouble shoot many issues including those mentioned above. They have submitted two invoices for services, which total \$9,290. HPUD must pay these invoices this month.

#### **CONCLUSION:**

Staff recommends authorizing additional expenditures in the amount of \$40,000 to make the necessary repairs to the wastewater plant. These funds are available in the unrestricted fund balance of the wastewater fund.

#### **ALTERNATIVES:**

- 1) If the additional expenditures are not authorized, staff will be required to expend all of the budgeted repair funds for the plant and any additional repairs would be unfunded.
- 2) Do not authorize the repairs. This is not recommended as the wastewater plant is a highly technical plant with many important operations and functions. If we don't keep the plant in repair we could violate our wastewater discharge permit, which will result in several thousand dollars in fines.

Respectfully Submitted,

Laura Fischer  
General Manager

Attachments: Meeting memo with THG/HPUD staff