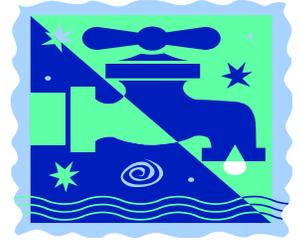




# CITY OF BILLINGS

## PUBLIC WORKS BOARD

*ED HAMMER, CHAIRMAN*



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### PUBLIC WORKS BOARD MINUTES

August 18, 2016

The meeting convened at 5:30 pm.

Members present: Ed Hammer, Tom Llewellyn, David Wanzenried, and Rod Wilson

Staff present: Louis Engels, Kelly Frank, and Vern Heisler

Members Absent: Travis Jones

Guests: none

### OLD BUSINESS

#### APPROVAL OF MEETING MINUTES

The meeting was called to order. Mr. Wanzenried motioned to approve the minutes of the June 16, 2016 meeting with one change to correct Mr. Wanzenried's last name. Mr. Wilson seconded and the motion was passed.

### NEW BUSINESS

#### 1. WASTEWATER PRESENTATION

Louis Engels, Utility Engineer gave an overview of the wastewater system. The city has three sections that consist of the heights, midtown, and the westend wastewater basins. Wastewater from the west end travels 14 miles to the interceptor, the mid-town interceptor runs about 5 miles, and the distance to the interceptor in the heights is about 3 miles.

One of the challenges for the westend is the distance the wastewater has to travel in the pipes and the flat ground that is close to the plant. When wastewater moves slowly, the bacteria creates hydrogen sulfide that eats the pipe. It's important to keep the wastewater moving to keep the solids suspended.

There are two parts to processing all wastewater at the plant. All wastewater enters the plant at the headwaters building that removes all trash, gravel etc., which is hauled to the landfill. In the second step, the wastewater is sent to the clarifiers where more solids are removed.

Step three is the aeration basin where there are organisms to help clean the rest of the water by adding oxygen to consume all organics. The aeration basins electricity costs between \$600k to \$700k per year in power. The next station is another secondary clarification station. The plant uses UV disinfection and not chlorine to disinfect the remaining water. The UV light scrambles the DNA of the bacteria so it is unable to multiply. The water is then discharged into the Yellowstone River and is cleaner than water that is in the river.

More strict nitrogen and phosphorus standards are coming which is why the wastewater plant needs an upgrade. The City of Billings has a 20 years to implement the standards. One obstacle is a lawsuit filed by The Riverkeepers against the State of Montana to make the new nutrient standards law immediately. The Montana League of Cities is counter suing to allow the variance time period. Mr. Mumford stated another new challenge related to ground water and sealing pipes which raises ground water. However, ground water is also not allowed by law into wastewater systems. This discussion is ongoing in hopes of finding a solution.

The solid process consists of condensing the solids in the floatation and gravity thickeners. The solids are then sent to the digesters where there are anaerobics to destroy the solids. The benefit from this process is methane gas that can be used to generate electricity at the plant. However, the methane gas is not cleaned so it is very hard on the motors that generate power. The secondary area is the storage tank for the methane gas. Once the solids enter the final process, they are spun down to "cake" and hauled to the landfill. One idea that is being explored is to remove the phosphorus out the solids to sell as fertilizer.

The wastewater plant also accepts septage from private haulers for a fee. The plant also has an area for used grease from restaurants.

## 2. ADDITIONAL BUSINESS CIP

Mr. Mumford added an extra piece of business regarding the Capital Improvement Program. Mr. Mumford asked for input from the Public Works Board regarding the CIP for next year. Public Works Director asked for any other ideas to incorporate into the CIP rather than just presenting it to the board for feedback. Mr. Hammer asked for a list be sent to the group ahead of time so they can provide input based on the items. Mr. Wilson and all other board members will support Public Works CIP.

The meeting adjourned at 7:15 pm.