MINUTES OF THE BOARD OF PUBLIC WORKS
Tuesday, July 12, 2016

The Regular Meeting of the Board of Public Works was held on Tuesday, July 12, 2016 at 7:30 p.m. in the City Council Chambers located at 405 Jefferson Street, Washington, Missouri. The following were present/absent:

MEMBERS:		
Chairman	Kurt Voss	Present
Member	John Vietmeier	Present
Member	Brad Mitchell	Present
Member	Mike Radetic	Present
Ex-officio Member		
OTHERS:		
Council Representative	Jeff Mohesky	Absent
Council Representative	Josh Brinker	Present
Council Representative	Steve Sullentrup	Absent
Council Representative	Greg Skornia	Absent
Mayor	Sandy Lucy	Absent
City Administrator	James A. Briggs	Present
Public Works Director	Brian Boehmer	Present
Water/Wastewater Superintendent	Kevin Quaethem	Present
Water/Wastewater Secretary	Beverly Hoyt	Present
City Engineer	John Nilges	Absent
Assistant City Engineer	Andrea Lueken	Absent
Fire Chief/Emergency Management Director	Bill Halmich	Present

Originals and/or copies of agenda items of the meeting, including recorded votes are available on record in the office of the Public Works Department for one year. Video/DVD and audio tapes are kept only until the minutes have been approved for the meeting. DVD copies of this meeting are distributed to Board Members if requested.

The Board took a moment of silence in remembrance of our former Mayor Bernie Hillermann.

A motion was made by Mr. Vietmeier and seconded by Mr. Mitchell to approve the minutes from the regular June 14, 2016 meeting. The motion passed without dissent.

A motion was made by Mr. Mitchell to appoint Mr. Vietmeier secretary of the Board and seconded by Mr. Radetic. It is approved, Mr. Vietmeier will be the Secretary for the Board of Public Works and will sign all meeting minutes.

Wastewater

There is nothing to discuss on wastewater.

Water – Siemens Presentation by Mr. Wes Walker

This is a follow up from our last month meeting. The Board was given a paper copy of the Scope of Work with contract recaps on the guarantee by Siemens to go over and review.

There is not a lot of additional information that we haven't gone over. The revenue projects that were in the contract were based off of the 5/8" meters and the 2" meters, which both tested lower in accuracy in the existing system.

Contract Scope of Work

Consumption has been lower. The current base rate has a base and three tiers. The base rate captures a flat rate if you only use up to 1,500 kgals. As you go over the 1,500 kgals you get into Tier 1, Tier 2 and 3 as you use more water.

The original model water shows 59,003.05 kgals and actual water was 63,115.31 kgals. This means more people are using less water so they've moved from Tier 1, 2 and 3 to the base rate. As they use less they are charge a base flat fixed amount and there would be no additional revenue.

This could be that they're conserving water more. Usually if your water bill goes up you tend to pay more attention and try conserving water. As time goes on residents start converting back to their normal usage.

The fact that new houses are being built and older homes are being remodeled and are all changing over to the high efficiency washers, toilets and shower heads all these use less water. These are all really good things for the economy in saving water however not so good for the City in repaying back their loan.

Let's say about 20,000 kgals moved into the base rate from the additional tiers. We picked up in some due to accuracy issues with meters. Let's say one of the 5/8" meter that was less accurate, you put a new meter on and with better accuracy it would be put in tier 3 showing an increase in consumption.

There are less 5/8" meters in the system a shift in 5/8" is some of the negative results of less consumption. There's less net water running through the 5/8" meters. It's hard to determine whether it's because of the new meters or from the beginning of bad readings from the old meters.

Guaranteed Short Fall

The meter accuracy is at 98.5% during year 1-6 and 97.5% during years 7-15 down 1% in accuracy a year. They will pull and test meters for accuracy. There are potential causes for a failure, mechanical, corrosion, electrical and in some places even tampering occurs. This is just an illustrated example of some of the causes that cause the meters to register in accuracy.

Hypothetical - Water meter degradation curve, years' water meter is in the ground the efficiency to expect. Year 1 – 98% in Year 15 we would expect accuracy to be 80%. In year 10 we would pull the meters and they would be tested by a third party lab. If there are any problems, Siemen's would step in and work with manufacturer to replace meters if they are not performing to guarantee standards.

Siemens recommends paying annually to Siemens to test and send to lab for 10 year testing. If the City were to cancel, guarantee goes away. Recommendation was made to keep guarantee in place, but use funds to do a water loss study. Amend the contract to say guarantee stays in place and not do the annual testing one year and put that money to a better source.

Donohue - Hydraulic Study

Demand projections broken down into commercial and residential in 2004 were using an average of 209 gallons per customer a day. In 2013 it dropped to 163 gallons per customer per day. The decline in daily consumption is a common trend for residential due to new construction and remodeling of homes and replacing appliances that are energy savers.

Maximum day demand is used for all models. We are working with 10 years' worth of data on how we determined lowest pressure (20 psi). the high ground elevations off Highway A, Clay Street, Lilac, Stone Crest and Washington Heights it's not a consistent low pressure but it does dip below 30 psi a few times during the day but normal psi is 39. MDNR would prefer to see 60 and 80 psi but that's not a logical read, there are too many elevation changes.

The hydraulic study is generally for the internal part of the operations of the department to know what we have got going on at any given time of the day. Like a snap shot we can go back five days and know what the psi was on every well. This would tell us the psi levels in areas where development might occur. Areas like Meadow Lake Farms, there have been a couple of scenarios done.

Wells #10, #11 and #5, if there were ever a power outage they would be able to maintain for about 3 days of normal usage. There's not a huge pressure fluxuation except by Well #10

where those see a fluxuation of 30 psi only when the well kicks on and off. For the most part the system is well connected.

The desired fire flow for residential customers is 1,000 gpm throughout and 1,250gpm for multi-family and 1,500 gpm for commercial.

Recommendations are as follows:

- Install a 12" diameter transmission main from the Well 10 area to provide a better hydraulic connection to the rest of system.
- Install emergency generator capabilities to Well #8
- Install a control valve at the Enduro Standpipe. Standpipe fills quickly when well is on.
- Install approximately 1,100 feet of 12-inch diameter transmission main from High Street to Anniston Dr. This will eliminate dead end mains and increase available fire flow above the 1,000 gpm for residential.
- Install a new 0.5 MG storage tank with overflow elevation 732 feet. This would help maintain during a power failure under the 2028 projected maximum day demand scenario.
- Install approximately 1,600 feet of 12-inch transmission main along Highway 100 from east of Highway KK to west of Highway KK to eliminate large diameter dead end main.

Donohue recommends implementing a program in the downtown area where there are a lot of 2-inch and 4-inch cast iron mains to start a program to prioritize replacement based on fire hydrants that have some mains that are as small as one inch needed to be focused on first. A program needs to be initiated to start a yearly replacement of some 6-inch mains and replace with PVC.

Public Works does have a line item in the budget that allows every year a replacement plan. A plan is in place this year to replace the 6-inch line on Terry Lane up from 5th to 3rd Street and on International from 5th to 3rd Street and set fire hydrants in the middle of each of those blocks. These are on 2-inch lines and no fire hydrants in the middle of the block.

The Hydraulic Study is a good tool for the City as it will be tied into the Engineering GIS System. This will be good for any new developments thinking moving in to the City. Training will be done this month with Keith and others in engineering.

Chlorination System

An invoice from Donohue in the amount of $392.10 has been presented for final pay of the permanent chlorination. Public Works Staff recommends this for payment. All in favor aye, all oppose, none. It has been approved.

Next Scheduled Meeting Date:

The next scheduled meeting date is September 13, 2016.

Adjourn:

There being no further business the meeting adjourned on a motion by Mr. Vietmeier and second by Mr. Mitchell. All in favor aye, those oppose. We are adjourned.

Prepared by: Beverly Hoyt
Beverly Hoyt
Water/Wastewater Secretary

Adopted and Approved By the Board of Public Works:

Date: Aug 9, 2014 Signature: John Vietmeier
Secretary