SouthWest Water Company

SWWC Services, Inc.
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Forest View Acres Water District

Operations Report – May/June 2011
Prepared by Gabrielle Begeman

Treatment Plants:

Arapahoe Water Plant:

- The VFD on the booster pump at the AWP has been installed. The VFD is set to operate off of a pressure switch that will continuously maintain 20 psi on the suction side of the booster pump. This allows for fluctuation of the well production to not inadvertently cause problems with the booster pump or cla-valves.
- The installation of the VFD, check valve and associated pressure switch has simplified the well pump station by removing the necessity of the cla-valve acting as a pump control valve downstream of the booster pump. The valve is still in place but the internal parts have been removed. The parts are in the well house to be used as spares or replacements.
- The installation of all components mentioned above and the removal of relays and timers that previously controlled the booster pump have eliminated some water waste and confusion as to what does what.
- All of the rebate paperwork will be submitted to Xcel Energy for the VFD.

Booster Station

- The booster station has been running well with no glitches.

Surface Water Plant:

- The surface plant had to be shut down for most of the last 2 weeks in May due to high turbidity in the raw water.
- The State has finally approved the pressure reducing valves and booster pump installation.
- I intend to install a chart recorder that I found in the plant to measure and document the raw water turbidity. Eventually I hope to tie this turbidity to the plant on/off switch so that if the incoming turbidity is too high for the plant to accept the plant will shut off. If the incoming turbidity drops, the plant will automatically turn back on.

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- I have ordered the additional online turbidimeter so that we are recording both filter effluent separately and the combined filter effluent as per the state requirements. The upside is that we saved money in only needing to get the sensor vs. the sensor and controller as our current controllers accept 2 sensors each.

Distribution system

- A resident found a leak in the field just East of 17955 Red Rocks Dr on the main line that loops the system back to Red Forest Rd. These valves on either side of this loop have been off for 20+ years, as this line runs through forest land and outside of the districts boundary. The valve near Red Forest Rd began leaking and was the cause of the major leak in the field. This line has now been abandoned, cut and capped approximately 15' downstream from each isolation valve.
- A leak in front of 18075 Stone View was also fixed during the time that J&K excavating was capping the loop.
- I have made contact with 3 different excavating companies in the area to provide bids on installing the main line master meter pit vaults throughout the distribution system.
- I have included a map that details the potential master meter locations and zones.
- Attached is an estimate for compound meters to set into the vaults. You will see that they are not much less than the ultrasonic strap-on meters.
- Attached is a quote for replacing our current direct read meter system with an Orion remote read system. We are estimating that we have replaced 100 bodies within the last 3 years, so we would only need registers for those. My calculations are an approximate $80,000. The metering system comes with a Toshiba toughbook computer that acts as the interface for the remote system.

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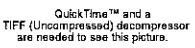
Action Items:

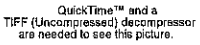
2. Meter Pit Specifications

The current and available meter pit specifications have been reviewed and the following comments/recommendations are listed below.

Pg 1.

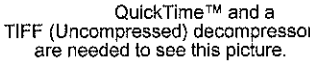


I think this needs to be reworded.



The District can assume that normal household operation should not warrant any potential hazardous cross connections, however without annual surveys of household activities the operator cannot be certain that no cross connections exist. I strongly recommend requiring an integrated backflow prevention device to be installed in the yoke of all new meter pit installations.

Pg 3.



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This diagram indicates that we require a hole in the cast iron lid for a remote read system. We currently have no need for this hole and must fill it or specifically request they get a lid with no hole.

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

We are currently requiring Type K copper pipe to be run both in and out of meter pits. Residents have requested that PE be used. The advantage of PE vs. copper is lower cost, higher strength and durability and it is unaffected by corrosion. The disadvantage is that there is no way to defrost the pipe if it were to freeze without installing an additional metal conductor that runs along side the pipe.

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If the homeowner decides to run PE 5' after the meter pit, it may be more likely for a defroster to hook up to the copper and melt the line.

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

This is not necessary and ruins the insulation properties of the lid. This spec is required when installing a remote metering device.

Summary:

I would like to see the spec drawing a bit more legible. There are a few contradictory statements that need rewording. The District specs seem to be comprised of a few other municipality specs, which is why there is some confusion. The two residents and builders that I have dealt with have not looked at the specs as I believe they are hard to interpret. It would be easier for the operators to fall back on the specs of the district without the need for a lot of clarification or changes.

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5. Map Upgrades

As the District's master plan will likely change the look of the system in the coming years, an interactive mapping system would benefit the District as it could be updated by the engineer or the operator as needed.

There are a number of handwritten revisions on a master map in the AWP that need to be updated. I can get with RG to get those submitted and processed onto new maps.

6. Red Rock Ranch Reserve Transmission Line Maps

John Schwab with JPS Engineering in Colorado Springs will send me the PDF version of all of the as-builts they have done that are within the District. As soon as I get those they will be forwarded to CRS and also printed and hung in the AWP. I have yet to see if they are different than the maps we already have.

7. Valve and Hydrant Management Software

Brenda has purchased a software program that allows the user to compile records of location, condition, maintenance and photos of each valve or hydrant. We must start with a naming/numbering system for all valves and hydrants. Then all can either be entered into the database at once or as information is gathered about the valves/hydrants. The upside is that this program is capable of storing all information in a central place. The down side is that central place is the computer that the program is installed on. The program is close to $500. We can accomplish the same compilation of information via an excel spreadsheet which can be transferred to any computer that has Office.