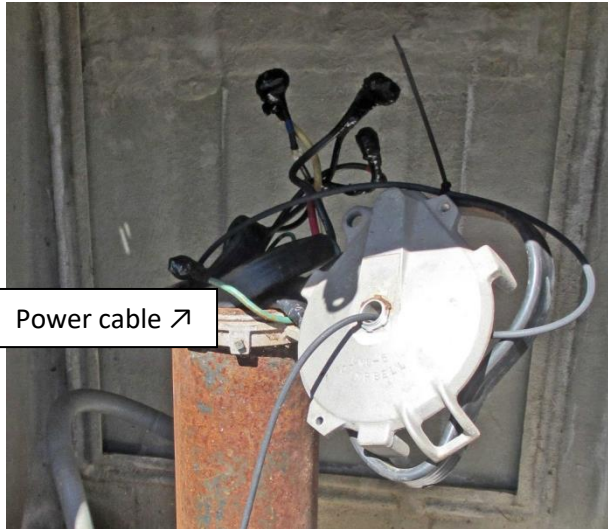


Report, May 30, 2017

On the 1st we had a surprise water system inspection by CDPHE. Almost all was found in order. There were no significant issues, in fact they were even complementary! However, the inspector wanted the cap on Well#9 put back in place. After the lightning strike last year which cut the power and level sensor cables we were



unable to get the power cable back down the pipe to replace the cap. The well pipe and cables were wrapped in plastic to prevent anything getting into the well pipe and of course the wellhead is enclosed in a locked fiberglass security cabinet. With the aid of a crowbar I managed to force the cables down the pipe (photo to the left) and secure the cap. The CDPHE officials were sent a photo of the secured cap as requested.

That afternoon I managed to locate and expose the west bound valve at the Tee on Sunnywood Ln. from the Hopi Tr. line with the help of a neighbor. The discovery of the location of the line from Hopi Tr. into Sunnywood was the result of another good neighbor who knew where it was. On the 5th Jim and I tested the valve and it appeared to be working like new. This is a 6" valve



on the 6" line across the east end of Sunnywood to Lovell Gulch, see photo on the left.

The next day I located the Sunnywood Loop valve that supplies the West end of the Lovell Gulch water main.

While our excavators were unable to get this valve to close for the Lovell Gulch water main replacement work Jim and I were able to work the valve under better circumstances and we got the valve working satisfactory. As the valve is out of the road, I got valve pipe extensions from HD Supply in the Springs to get the valve about 10" above grade. I painted a 6" extension bright yellow and the top 2" extension "water" blue and placed steel

stakes on both sides of the valve "box" also painted yellow to provide visibility even in snow cover for quick access in emergencies

At about this time I began repairing defective domestic water meters. This is a tedious job. First it takes time to contact and schedule a visit and then the repairs are each unique experiences but we are making progress. Some of the internal plastic parts of these meters were found broken and badly worn. The one below was badly cracked:



To date, 8 meters have been repaired but it is beginning to look like I have to learn how to program the reserve Hexagrams to replace not responding units.

I have also begun buying and digging parts out from under stuff in our shed so we have all it takes, as far as possible, to repair the next water main break and install valves if desirable.

We have 3 kinds of pipe and a total of 7 pipes and sizes but we have a fair share of the parts in stock although they need cleaning and positioning. I have always pushed this off for a time when we would have a proper storage facility but in the interim two pallets, one in the GAC and the other in the Treatment buildings will have to do for now.



During the month, I checked the pump and sensors at the tank almost every two or three days. After the repair last month, the pump is running like new. However, Jim and I had to disconnect the PH/temperature sensor because it had failed and that caused the SC-200 to signal errors which disabled communication with the PLC and our remote ability to compare Chlorine levels leaving the Treatment Facility with that in storage. With both readings now on-line I began to see that the tank reading hardly changed, the significant variation is in the Chlorine levels leaving the Treatment building. So, it occurred to me that the tank's Chlorine level could provide a good indication of how well mixing was taking place in the tank overnight. I reset the pump restart point

from 10.5 feet to 9.5 feet and that change clearly indicated that the overnight refill cycle improved mixing significantly.

On the 17th I managed to hitch a ride to Aurora with Holly Link for a National Water Products and Services Assoc. meeting. Holly works for CSU and she is responsible for compliance with the Backflow Prevention regulation. It hadn't occurred to me that we might not be in compliance, but we are not. On the 19th I met with Jim and we discussed the matter. Jim agreed to discuss compliance with Jeremy. Without a doubt, the Church must have a backflow prevention device as well as the Vahsholtz property and probably one or two other horse properties in our District in addition to any home with a fire sprinkler system and maybe a hydronic heating system. Treatment Tech will provide advice on a backflow prevention assessment. To date, we have only had our Water Plant fire sprinkler system's backflow device certified annually.

The NWPSA meeting was very valuable. Among other subjects there was a very interesting presentation about construction standards for trace wire and its installation that the Michigan Rural Water Assoc. has developed. I have downloaded the standards and we will include them in the contract specifications for water main projects in the future.

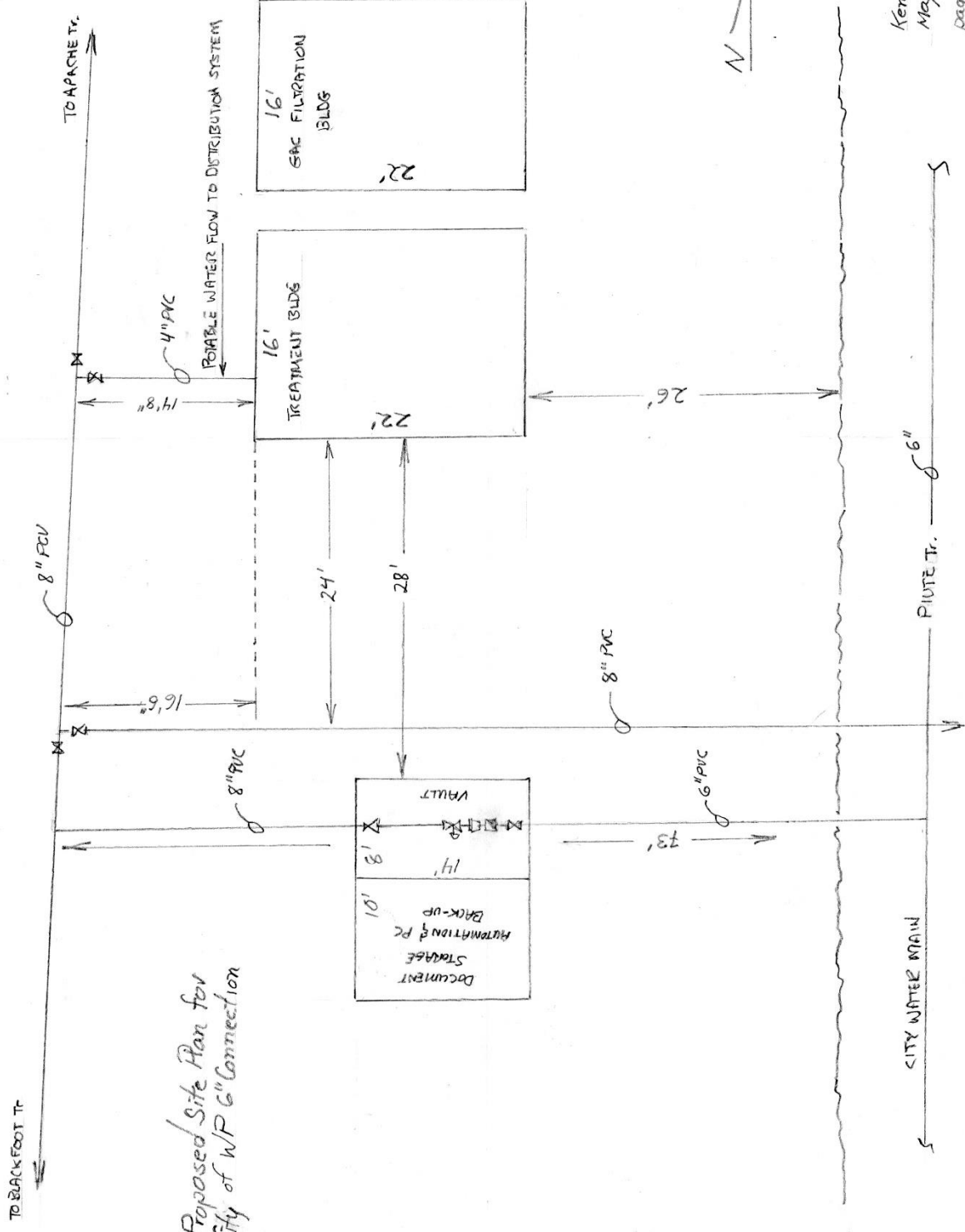
Meanwhile, I have been plowing through the American Water Works Association 758-page filtration manual. During 2011 and 2012 we and the Forest Service studied the addition of an air-stripping system to remove a high concentration of EDB that might occur as had occurred the year before. While this project got derailed because the Forest Service concluded that they were no longer responsible for underwriting our EDB costs it had become clear that air-stripping was a very effective way to remove high levels of EDB. That got me to thinking that backing washing GAC filters with air might be (1) a cost-effective way to "rejuvenate" the GAC and thereby extend its useful life; and, (2) an engineered air-backwash might strip the concentrations of EDB from the GAC while breaking up packed GAC within the vessels. This report makes clear that the use of air in backwashing filter materials such as GAC is substantially more effective than back washing with water only. I have written CSU's Southern Delivery System group for help on this matter, they are deploying a very large scale GAC filtration system in this project and I trust they can give us guidance; moreover, we need their GAC supplier contacts looking forward to having to change out two of our vessels later this year.

Yesterday I phoned Jerry Uhlman at Mountain States for help programming Hexagrams. This morning Paul Carrol (owner?) and Jerry came to have a look at our situation. It was quickly obvious that I needed their meter installation specialist. He was called and while he was on his way we talked about our Hexagram experience and water meter needs. We had a very good conversation. They will have more information for us after the AWWA meeting in Philadelphia during June.

They left when Kirby Lytle arrived and we went to work and programmed the water meter we use to record water we give the Church for their garden project. As the programming tools needs software updates and we need software for our PC he headed home about 1 PM.

I'm attaching two drawings of plans for a 6" connection to the City of Woodland Park.

Kent Brady, Project Manager



Proposed Site Plan for
City of WP 6" Connection

Kent Erady
May 22, 2017
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