

Project Status Report: CEEEn-2016CPST- : Pressure Zone Analysis (JUB Engineers)

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| <p><b>1) Summary of technical/non-technical challenges encountered</b></p> <ul style="list-style-type: none"> <li>a) The school computers will not allow any modification to the hard drives. As such, EPANET could be used on those computers.</li> <li>b) No previous experience with EPANET or similar programs outside of DOS. This has made the program even more challenging as it is unsupported on the online help pages.</li> <li>c) The .INP and .NET files included a lot of specific information that was not explained in the tutorials.</li> <li>d) The current Lindon system is highly variable in its pressures. It is difficult to install a tank anywhere without also installing a pump and/or a great deal of more pipes.</li> </ul>  | <p><b>2) Team approaches/resolutions to overcome challenges</b></p> <ul style="list-style-type: none"> <li>a) Personal computers had to be acquired and used to download EPANET. The files could then be used on those computers and copied over to flash drives to be used on the school computers.</li> <li>b) The approach to figure out the program included two extra weeks to explore, learn and complete all the tutorials in EPANET.</li> <li>c) When necessary, communication with JUB will be used via email and phone to gain specific information on Lindon’s culinary water system.</li> <li>d) Once a tank design works in a designated location, additional plans will be used to optimize the design in that location.</li> </ul>   |
| <p><b>3) Status of challenge resolutions &amp; potential project impacts</b></p> <ul style="list-style-type: none"> <li>a) There are two available personal computers that are used in this project. From these computers the program was downloaded onto a flash drive and then used on the school computers. As such, this project impact was minimized.</li> <li>b) Taking extra time to learn EPANET has taken a week longer than desired. Adjustments were made to start the cost analysis as a trial location is completed to increase time efficiency.</li> <li>c) Detailed emails have been sent back with Michael Clark (JUB: P.E., G.I.S.P.) to gather information about the .IMP and .NET files. This information has allowed the progression of the analysis.</li> <li>d) We have scheduled two extra weeks as a time to perform extra tests on different designs. These two weeks were retrieved from our buffer weeks.</li> </ul> | <p><b>4) Project Status &amp; Summary</b></p> <ul style="list-style-type: none"> <li>• All program tutorials have been completed</li> <li>• The .NET and .INP files have been imported into EPANET successfully.</li> <li>• Potential sites have been determined by land owned by Lindon City. These will be the sites that new tank installations will be tested.</li> <li>• Currently, one location (Hollow Park) has been tested positive. Except for the max hr., it runs all Demand Multipliers through a 72-hr. period without any problems. Demand Multiplier of 3.72 fails at 7:00 hrs. More tests will be completed to optimize this location.</li> <li>• There are two other locations being tested presently. They are projected to be completed in a week. This time will speed up as more experience is received.</li> </ul> |