



City of Pataskala Utility Department Nathan W. Coey, Utility Director

➤ Director Update

- **City and District Agreement.** The City and District administrative staff have drafted agreeable points of interest for long term contract resolution. We anticipate providing supporting documentation to the legislators before January 31.
- **River Forest Lift Station Improvement Project.** We are in the process of signing contract related documents. We are in conversation with the contractor to set a pre-construction meeting and establish project target dates.
- **Annual Reports.**
 - I am in the process of completing the 2016 Utility Department Annual Report. This coincides with a review of annual operational measures and review of the 2016 initiatives and goals. I plan to have this document to you by the first meeting in February.
 - Annual reporting includes completion of the Water and Water Reclamation Consumer Confidence Reports to provide helpful information of the operation of the department to our customers.
 - Annual OEPA Reporting. The 2016 Annual Sanitary Sewer Overflow (SSO) Report has been completed and submitted to the OEPA. I am happy to share that we had zero SSO's in 2016. I am currently working to complete the 2016 Annual Sludge Report (ASR) regarding our land application efforts in 2016. The ASR is due March 31.
- **Sugar Mill Water Pressure.**
 - In late 2016 a gentleman representing the Sugar Mill the home owners association contacted me regarding water pressure in the subdivision. The water pressure is not ideal but above the OEPA design standards. The department is aware of the lower pressures in this part of the system as the development started building houses in 2012. This was further solidified in our 2013 Water System/Interconnect Hydraulic Modeling Study. 'ISO' requires a minimum 500 gpm water flow for fire hydrants. The 2013 hydraulic modeling utilized a minimum of 750 gpm (1.5 times more

than the ISO minimum) for the study. This identified several areas that were below the set point of 750 gpm. The testing (physical and simulated) indicated only one area below the 500 gpm threshold located in an aged portion of the system (old village).

- I am working with the development representatives to share data in efforts to connect reality with expectations. We have purchased pressure data loggers to provide more information on the delivery and use of water in the subdivision. To date, our testing has been instantaneous via residential hose bibs and fire hydrants with the use of analog gauges. We now have the ability to collect several weeks of data in preset intervals. The deployment of the data loggers have indicated the static pressure is trending as indicated from the hydraulic modeling and past pressure data collection.
- I have shared with the representatives (phone and email) that we are fully aware of this matter. We will continue to inform the interested parties of the reality of the pressure (verbal and writing) as we have done since building began in the development. Residents from the development have expressed their desire to formally bring their concerns before the legislators. I have offered to speak to their home owners association regarding their concerns.
- Any additional data we collect during this information request will help create a long term solution to address the other low pressure points in our system. There is not a mystic valve or pump in our inventory to help improve the pressure for the folks in this area. I have informed the subdivision representatives that future capital improvement projects will improve the system water pressure, but at this point it is several years from reality. Efforts to improve system water pressure residuals (old village, Sugar Mill, Carrington Ridge, West Broad Street) is multifaceted with no final engineering completed on the options. Long term solutions will be a product of future department direction as system needs and funding sources are fully evaluated.
- We will continue, as we have for several years, fulfilling pressure testing requests for the customers in the subdivision and informing residents of the reality. I wanted to provide the elected body with this information incase this is brought forward in an open meeting as suggested by the Sugar Mill representatives. *Please see the attached documents and information we have provided to the residents in Sugar Mill.*

➤ **Water Department**

- The staff is working with the Director to install pressure data loggers in Sugar Mill. We are testing hydrant locations, vacant home meter pits, and points on existing homes when temperatures are above freezing.

- The Utility Superintendent replaced communication radios in the system that were resulting in SCADA system communication failures.

➤ **Water Reclamation Department**

- The new (2016) WRF return activated sludge pumps, with increased pumping capacity are installed and performing well.
- Operational staff continue to find ways to improve solids yield, with a focus on dewatering via the press. Compressed air has been introduced into the press feed line (result of information received at a recent workshop) to improve physical dewatering characteristics. There is an improvement of the product density with less moisture and increased dry percent content. These efforts increase the storage pad detention time and improved transportability.

➤ **Billing Department Update**

- The Billing Department and Field Staff continue to work with the Planning and Zoning Department to close any loops on our new construction inspections. I applaud the staff from both departments and their cooperation to greatly improve our processes.

Highest Regards, Nathan W. Coey, Utility Director

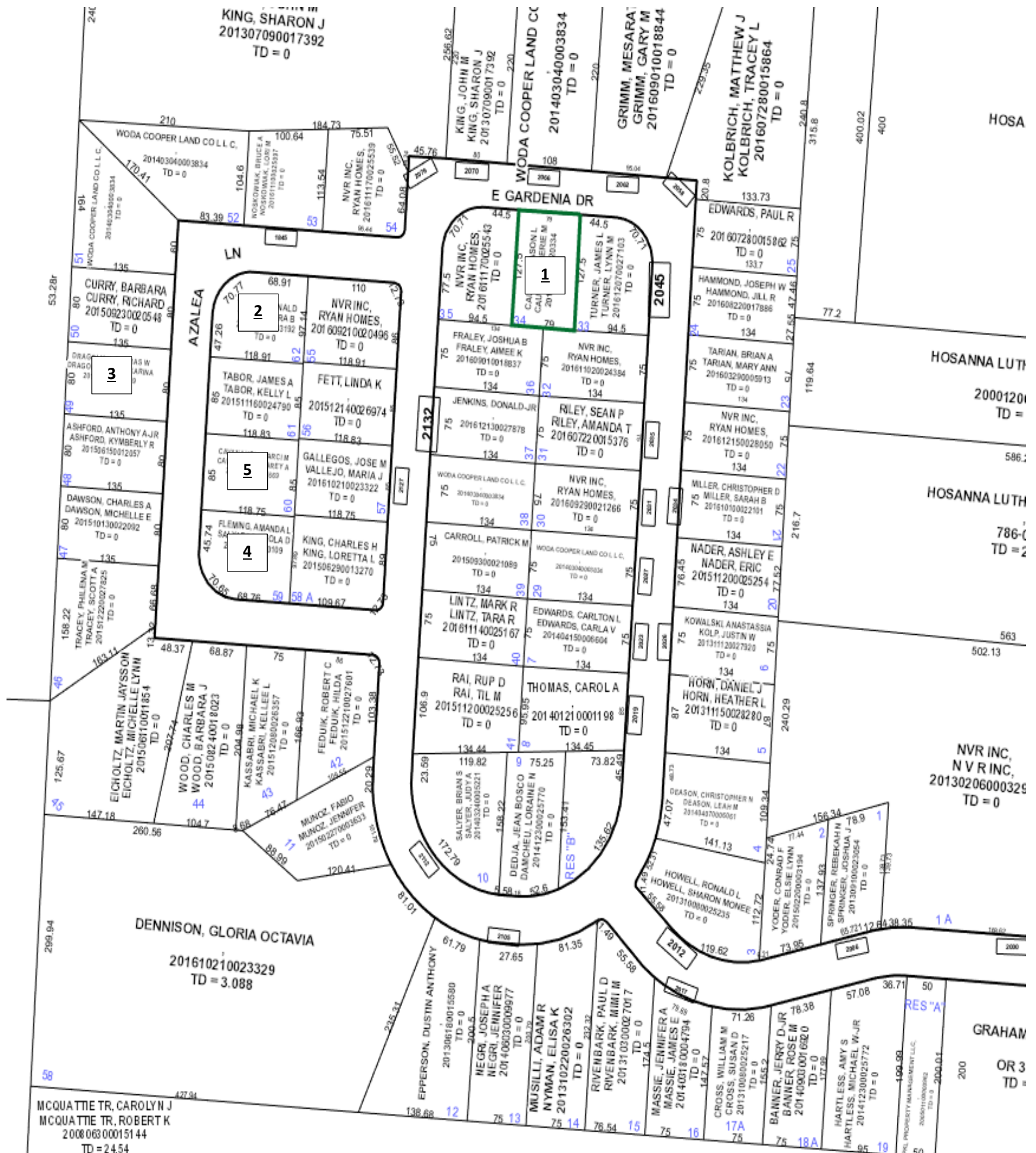
City of Pataskala Hydraulic Model Flow Data 2016

Test Junction	GPM	Static PSI	Flow PSI	Elevation	
J-357	822	51.8	24.6	1015	Sugar Mill South End of System
J-358	664	52.3	12.3	1014	
J-359	612	49.7	7.4	1020	
J-360	551	47.1	0.7	1026	
J-361	566	49.7	1.1	1020	
J-362	561	49.7	0.4	1020	
J-363	560	49.7	0.3	1020	
Test Junction	GPM	Static PSI	Flow PSI	Elevation	
J-347	1324	64.8	47.5	985	Roy Drive
Test Junction	GPM	Static PSI	Flow PSI	Elevation	
J-326	1306	52.3	39.1	1014	Pataskala Ridge
Test Junction	GPM	Static PSI	Flow PSI	Elevation	
J-371	779	58.4	22.5	1235	Highland Hollow-North end
J-372	682	58.4	12.8	1235	
J-373	725	58.4	17.6	1235	
J-374	743	62.7	19.3	1225	
Test Junction	GPM	Static PSI	Flow PSI	Elevation	
J-57	681	39.4	16.5	1044	Buckeye Blvd
Test Junction	GPM	Static PSI	Flow PSI	Elevation	
J-238	555	44.2	3.1	1033	Broad Street-booster suction
Test Junction	GPM	Static PSI	Flow PSI	Elevation	
J-315	403	53.2	0	1012	Licking Street-Old town 6 inch
Test Junction	GPM	Static PSI	Flow PSI	Elevation	
J-58	3500	35.9	35	1056	Headleys Mill Tower

The above junctions are reported as a result of falling below the 750 gpm test threshold.

Relevant Information. ISO (International Organization for Standardization) requires a minimum of 500 gpm for fire flows. This hydraulic water module was conducted (above iso 500) with a 750 gpm through the entire system with opening a fire hydrant to simulate operations. Production versus demand scenario. The "module" was calibrated with actual flow testing of facilities (plants, pumps, and hydrants) to give an accurate representation.

Headleys Mill Road tower is near junction 58. This tower stands about 87 feet tall. This information (model and physical) indicates a static pressure of 35, on a hill at the base of the tower. This pressure does increase slightly when the booster station is off. Highland Hollow (north end of the system) is the low pressure point downside the booster station and BWT Towers.



Service Order PSI test results at the homes 2016

1. 2061 Gardenia East, 45 PSI, 9-12-16
2. 1834 Azalea Lane, 42 PSI, 7-24-15
3. 1831 Azalea Lane, 44 PSI, 8-16-15
4. 1821 Azalea Lane, 45 PSI, 7-22-16
5. 1820 Azalea Lane, 48 PSI, 11-18-16