

WYOMISSING PUBLIC WORKS DEPARTMENT

2017 YEAR END REPORT



In the interest of council members and residents, this review is written as a matter of record for all work performed by the Borough's Public Works Department in the year of 2017.

The department has a total of 17 hourly employees. There was a change this year in which Rob Lewis, our full time recreation director, now has direct supervision over three Parks employees and one Buildings and Grounds employee. Jim Babb oversees our 13 Maintenance and Tree department employees directly, but also has access to Rob Lewis' crew for snow removal and leaf collection.

The Maintenance department works out of the Fourth and Oley Street main garage, while the Tree Department works out of the "Tree House" located behind the Old Wyomissing Hills Borough Hall.

SEWER

SEWER SAMPLING – We sample 29 sewer connections at commercial restaurants twice per year. These samples are averaged and the businesses are surcharged based on limits of our high strength waste ordinance. We do this to control waste products that are detrimental to the treatment plant, as well to control grease, since that is a maintenance problem in the collection system.

PUMP STATION MAINTENANCE – We have four sewage pumping stations and two metering pits. All require regular and emergency maintenance. The pumping stations are located below the Shoppes at Wyomissing, Wynnewood Apartment Complex, behind our Borough maintenance garage and near the pool at Old Mill Road and Evans Avenue. We drain and clean the wet wells once a year to keep them free of grease and other solids along with changing pump fluids as necessary. Three of the four stations have back-up emergency generators that are exercised and inspected monthly. We visit each station daily to confirm they are running correctly and to log run times. The two metering pits are calibrated twice per year. The only major issue we had this year was with the Wynnewood station. It was losing prime on a regular basis causing it to fail. After trouble shooting over a three month period with no success, we finally purchased two brand new pumps and installed them, which fixed the problem.

MAIN AND LATERAL BLOCKAGES – We responded to 95 calls for blocked sewers. This is an increase of 4 from last year. Of those, 89 were house laterals and 6 were blocked mains. Most of these blockages were caused by tree root intrusion into the main or lateral. There are also occasions where grease build up was the problem.

CAPITAL SEWER REPAIRS – The project for this year had three components. We cleaned and televised 20,700 feet of sewer main in the Wyomissing Hills area that drains to the City of Reading treatment plant. Installed 17 point repairs and lined 4,200 feet of sewer main. We supply all construction observation and payment application review.

LATERAL ISSUES – From previous TV work we found that there was a 500’ run in an alley between Garfield and Cleveland that had 8 broken lateral connections on a very deep main. Of these, 6 could be repaired with a special lining technique and two had to be dug up.

ROOT CONTROL – Due to the extensive tree cover in the Borough, fighting root intrusion is a constant battle. If left unchecked, these roots cause major problems and blockages. We contract with a company that uses herbicidal foam to kill roots in known problem areas. This year we treated 9,500 feet of pipe.

SEWER FLUSHING – In addition to the contracted cleaning and TV work, our crews also cleaned the entire Berkshire Heights drainage basin.

REPORTS AND CERTIFICATION – We annually fill out three DEP Chapter 94 reports, one for each of the three treatment plants we flow to. This report contains information of system maintenance, current flows, future flows and pumps station demands. The City also requires a special report for flow information as part of their consent decree. We have two certified sewer operators on staff. This mandated certification requires continuing education credits over a three year cycle.

WATER

HYDRANT FLUSHING – As part of regular maintenance to our distribution system we flush hydrants every spring. This year we flushed all hydrants out of the larger steamer connection to flow more water, but did not take pressure readings. In 2018 we will flow out of the 2.5” connections and take readings. This process takes about a week and a half.

METER UPGRADES – This was the second year of upgrading residential water meters. The first year we upgraded Birdland, this year was the entire area west of Clayton/Cambridge Avenue. The area had 385 meters. These new meters replace ones that averaged 15 to 20 years of age. They will also allow us to read meters by “driving by” instead of walking up to each individual home, and log information in the event of a leak or high water bill.

METER READING – We read industrial and commercial meters once per month (193) and residential meters once per quarter (2,393).

HYDRANTS – If we find a hydrant is not working properly we either replace or repair it. We made repairs to the hydrants at Park and Hill, Paper Mill and Woodland, and Cleveland and Clayton. We replaced hydrants at Evans and Penn, Sixth and Oley, and Lynn and Lincoln. In addition we found two older lead service lines on Lake Avenue that we replaced with copper. We also had the help of a Boy Scout doing his Eagle Scout project, who painted all the hydrants in Birdland.

MAIN BREAKS – We had three water main breaks during the year. One at either end of Oriole Drive and one at Fourth and Windsor streets.

MAIN REPLACEMENT – We replace water mains almost every year. The main criteria is where we have experienced a quantity of main breaks or for dirty water complaints. This year's project was Farr Road from Oriole to the City line. In an easement between Farr Road and Rose Virginia and a 450' section of pipe that was in the parking lot at the Woodland Plaza Apartments. We provide construction observation, technical assistance, pay application review and liaison with affected customers.

COMMERCIAL METER REPLACEMENT – From testing we did in 2016 we found the meters at the High School and the Inn at Reading were running slow. We replaced both of these with larger commercial meters.

IN HOUSE METER REPAIRS / REPLACEMENT – After a quarterly reading cycle, we will always come across a few residential meters that we could not get a read on or had stopped working. When this happens we will either replace the entire meter or change the reading portion of that meter. This year we repaired or replaced 74 meters.

MISCELLANEOUS – There are many additional things we do with the water distribution system. Respond to and investigate complaints of high water bills, read our five source meters daily, hand out shut off notices, shut off water services for plumbers doing interior work on residential plumbing, get final readings for real estate settlements and repair service laterals that get hit by contractors.

DEP REPORTS AND SAMPLING – Our permit with the DEP requires us to file three annual reports. The Water Allocation Compliance Report supplies information on total water consumption, per capita consumption, and general system maintenance. The Water Supply Report involves water consumption for each source meter and source water supply. The Consumer Confidence Report is a public document that explains general water quality for a calendar year. In conjunction with the Western Berks Water Authority, our water is regularly sampled at 9 different locations for chlorine residuals, coliform, and disinfection by products. We have two certified water operators on staff. This mandated certification involves continuing education credits over a three year cycle.

STREETS

PATCHING – We devote a lot of time and materials each summer to the patching of streets. Fixing smaller problems now delays the need for a full overlay later and lessens the amount of potholes we have to fill in the winter and spring. Some of the larger areas we did this year were on Berkshire Boulevard near the Theater, Park Road South, 800 block of Wayne Ave, 800 Block of Franklin Street, Old Mill Road near Cambridge, Old Wyomissing Road and Park Road in the Hills section. For the year we laid 746 tons of blacktop.

STREET SIGNS – We do some type of sign work on a weekly basis. This could be replacing old or dirty signs, straighten sign posts, replacing signs after an accident or adding signs per a Police request.

SNOWPLOWING – The 2016/2017 winter season was pretty mild. We had 8 snow events that we reacted to. 6 were just salting events and 2 we needed to plow. We only used 438 tons of salt, which is a pretty low number for us.

LEAF COLLECTION – This is most labor intensive job we do. We collect leaves with six to seven trucks at the height of the season. It was an unusual season this year in that the leaves took a long time to fall off. The season started at the normal time, but where we are usually done by the second week in December, this year we went to the just after Christmas. There is a County Co-Op contract with W.D. Zwicky to haul and compost our leaves. Our trucks dump leaves at one of two transfer stations (Spring Twp. and our dump on Old Wyomissing Road in the Parkland). For the year we collected 10,252 cu. yds. of leaves. This is just under our historical average.

STREET SWEEPING – We run our street sweeper more than most municipalities due to the heavy tree dirt. It is generally out at least four days a week during the spring, summer and fall season. We report street sweeping volume to the DEP as part of our MS4 program.

ALLEY MAINTENANCE – All of the alley's in Berkshire Heights are stone along with a few in the older part of town. They are very prone to potholes and washouts after heavy storm events. We grade and level them each spring and after heavy storm events. This summer had a lot of heavy thunderstorms, making us do a little more work than normal.

SINKHOLES – We did not have any serious sinkholes this year, but did have to investigate and fill four smaller ones that were in the street or street right of way. One near the Park Road bridge, one on the shoulder of Museum Road, one on Spring Street and one on Cedarwood Road.

STATE HIGHWAY CLEAN UP – Each spring we take time to clean up all or portions of Penn Avenue, State Hill Road and their interchanges with 222. Most of this is cleaning off medians, curb lines and shoulders of cinders and trash.

CRACK SEALING – Each spring we seal cracks from patching done the previous year and sections of more recently paved roads where longitudinal cracks are forming. This process, like the patching, helps extend the life of the road.

SIDEWALK PROGRAM – This was the third year of the program. There were 45 participating properties and a total of 4,955 sq. ft. of sidewalk was replaced. This program takes a lot of administration from the application process to things like field marking, root grinding, adds and deletes, and just general communication with the property owners.

CAPTITAL STREET WORK – This was a lengthy and difficult year for our paving program. We reconstructed or did partial reconstruction on a portion of Wyomissing Hills Blvd and Girard Avenue. This involved a lot of coordination with our contractor, residents and water and gas utility owners. In addition, we did overlays on Lake Avenue, Bluejay Drive, portions of Sixth Street, Bern Road and Forest Avenue. There were also 45 handicap ramps involved and hundreds of feet of curb replacement. The Borough provides construction inspection, field decisions, residential communication and payment application review.

MECHANIC – Jake Kaylor is our mechanic working out of our main garage. He inspects and repairs over 30 vehicles from administration, police and public works. In addition, he keeps all of our other machinery running. This includes back hoes, skid steers, leaf pickers and small engine equipment. He also maintains the backup generators at pump stations and is in charge of fuel inventory, pumps and underground fuel tanks.

STORM WATER

CATCH BASIN CLEANING – We have well over 700 catch basins in the Borough. During the summer we clean debris off the tops of these basins before and after heavy rain events. We do not do all 700, but over time we know which ones need the most attention.

CATCH BASIN REPAIR – Most basins have a brick riser layer between the box and top casting. Over time, the mortar weakens and bricks fall out allowing the surrounding soil to get into the basin. When we see this we make the appropriate repair. There were six basins repaired this year.

MS4 MAPPING – As part of our new permit application we needed to generate a map showing inlets, drainage basins, area of drainage basins, existing detention basins and outfalls. Using McCarthy's GPS equipment and software we gathered field information on all these parameters to update our map.

MS4 PERMIT – Working with McCarthy's office we submitted our annual report for our existing permit and also applied for our next five year permit. In addition, we did field work looking for illicit discharges, continued our involvement with other groups on permit compliance and documented all pertinent storm water information.

TREES

PRUNING AND GENERAL MAINTENANCE - Maintenance pruning of street trees in the Borough includes hazardous deadwood removal, structural correction and repair, elevation over streets, sidewalks, traffic signals and signs, and training of all trees planted in the past ten to twelve years. In 2017 we pruned a total of 1,275 street trees in all sections of the Borough. Of this total, 403 were mature shade trees and 872 were trees on our small training lists. We consider the training process one of the most important things we do. It involves directional and structural pruning to encourage an appropriate upright structure that reduces future maintenance and damage and gives street trees the best chance at long term survival between the curb and sidewalk. The sections of the Borough that we thoroughly and completely pruned in 2017 were Lincoln Avenue and Court, Logan Avenue, Squire Court, Plymouth Place and Court, Sturbridge Drive and Court, Wickford Place and Court, Greenbriar Road and Court and Regency Drive. We constantly monitor high traffic areas with large trees (Penn Avenue, the Boulevards, July 4th parade route, Monroe Avenue, Van Steffy Avenue, Larchwood Road, Cedarwood Road) to keep hazardous deadwood to a minimum. There are a number of streets in the Borough, in addition to the Boulevards, that are lined with large mature oak trees which are at least 80 to 90 years old and require diligent inspection for deadwood, and structural or root problems. Monitoring these areas is part of our weekly routine and we resolve any hazards we find as soon as possible. Looking forward into 2018, we would like to concentrate much of our maintenance efforts on Delaware Avenue, Dauphin Avenue, Old Mill Road and the streets in the Greenwood Mall section.

The above pruning numbers do not include resident requests. We responded to and resolved 136 resident requests in 2017, many involving multiple trees. Phone calls from residents are valuable in drawing attention to problems we may miss in our own scouting. These concerns include everything from dead branches, elevation and clearance to exposed roots and lifted sidewalks. When we look at damaged sidewalks, we tell residents that after their contractor has the old concrete removed, we will come in and grind or cut the exposed roots to allow the new slab to be formed and poured. We definitely insist that we do the root work, being careful not to grind too much, which could compromise the health of the tree or make it unstable.

REMOVALS - Trees that are declining and becoming hazardous or too costly to maintain are marked for removal. Significant crown dieback, severe decay of large limbs or the trunk, and signs of root rot are the main reasons for removing trees. In some of the older sections of Wyomissing, there are street trees that are probably approaching one hundred years of age. Some of these trees, especially on the narrower streets, are beginning to outgrow the space they were planted in. Though these trees may appear healthy and sound, a storm related failure of all or part of their structure could be catastrophic. Starting in 2015, we included massive size in relation to practical growing space as one of the criteria for considering a tree for removal. Of the 137 trees removed from the streets and parklands of Wyomissing in 2017, 102 were taken down by our own crew and 35 were removed by private contractors. Using contractors to remove the largest and most time-consuming trees allows us more time for pruning and requests. We put out two to three bid requests per year and have been very satisfied with the results.

In 2018 we will continue monitoring and most likely removing several mature Norway maple trees along Woodland Road between State Hill Road and Ridgewood Road. These trees have been

declining for years due to a systemic disease and haven't recovered well from the hail storm a few summers ago. We feel it is time to take many of these trees out and replace them with species that can thrive in the harsh heat, wind and traffic conditions along that busy stretch of road.

A large amount of firewood is generated in both our pruning and removal operations. This wood is dumped at the Park Barn parking area and behind the Tree House in Wyomissing Hills for residents to take free of charge. We also save a number of large oak trunks which are either sold to a saw mill or turned into boards for use on the park grounds. We grind all stumps to a depth that allows us to replant trees whenever practical and where space still allows.

PLANTING - We added 122 trees to the streets of the Borough in 2017, which we purchased from four different area nurseries. Of the total number of trees planted, 118 were replacements for trees removed in 2016 and only 4 were planted on new sites. We respond to residents' requests for street trees as much as our yearly budget allows, but are still catching up on our replacements of trees lost in the two October storms (2011, 2012) and to the Boulevard reconstruction projects.

As part of Wyomissing's Arbor Day Observance on April 22, 2017, a group of local children helped us plant a dawn redwood at Happy Hollow playground, directly across the promenade from the pavilions. We will be losing two more oak trees at the playground in 2018 due to root damage inflicted during the reconstruction project in 2015. Some of these trees will be removed in-house and some will be contracted. We will continue to replace these trees and any future losses with a mix of oaks and dawn redwoods.

In an effort to further diversify the tree population, we continue to look for unique species and varieties to plant, as well as seeking out different local nurseries to obtain high quality trees at the best prices. Streets that were traditionally planted with a single species are being gradually being transformed to contain up to four different species, displaying various sizes, shapes and fall colors. Some of the rarer or underrepresented species included in our plantings in 2017 were shingle oak, red horsechestnut, sassafras and Stewartia.

We didn't include any bare root trees in our plantings again this year. Among the advantages of the bare root method are lower cost, ease of transport and handling because of reduced weight, and possibly faster establishment and increased survivability. The only drawback is that there are currently no local nurseries with any bare root offerings. We would like to increase the percentage of bare root trees we plant each year as more local nurseries begin to sell them. In the meantime, we'll use the next couple of years to evaluate establishment success of the 56 bare root trees we've planted in 2013 and 2014.

PESTS AND DISEASES - Historically, there have been few pest or disease problems among our street trees that have warranted any major resources to control. In 2017 we applied pesticide to honeylocust trees along Berkshire Boulevard to control two different insect pests, and sprayed selected cherry and crabapple trees to eliminate fall webworm. We also used multiple applications of a fungicide on crabapples on High Road to control a rust disease and applied a soil injected pesticide to control aphids and scale in selected trees around the Borough.

There is a concern in our region about the approach of the emerald ash borer, a destructive pest that could inflict significant damage to our ash trees in the future. The emerald ash borer has

arrived in Berks County with confirmed sightings in the area of Hamburg, Bernville and I-78. In the fall of 2012 we began a preventative program of pesticide injections to protect native ash trees along the streets of Wyomissing. In May and June 2017, we continued the tree injection regimen by treating 106 ash trees on various streets of the Borough. We plan to continue treating more ash trees every spring into the future until the threat from the emerald ash borer subsides.

The current outbreak of Spotted Lanternfly in Pennsylvania is the latest pest concern that we need to monitor into the future. Though we have seen them feeding on some street trees in Wyomissing, we have not noticed any damage that would justify any control efforts.

MISCELLANEOUS - Tree Department staff continues to attend one or two seminars each year for continuing education and to keep pesticide certification credits updated.

In 2017 Wyomissing received The Arbor Day Foundation's Tree City, USA status for the thirteenth year. Each year that we renew the award, the Pennsylvania Bureau of Forestry recognizes our effort and presents Wyomissing with a commendation and new banners and signs to post at various entrances to the Borough.

In accordance with the 50/50 sidewalk repair program instituted by Wyomissing in 2015, the tree department worked closely with Austill Construction to prepare sites for new sidewalk construction. Our involvement and input aided in the installation of new sidewalks adjacent to 49 street trees throughout the Borough.

In closing I will repeat the information I presented in 2013 regarding the calculated values of Wyomissing's street tree population. According to a software program called i-Tree, the 7,660 street trees that Wyomissing maintains have a total replacement value of over \$54,000,000. The program also calculates dollar value benefits of Wyomissing street trees due to storm water retention, air quality improvement, carbon dioxide absorption and energy savings. The total of these benefits to the Borough of Wyomissing, according to the i-Tree formulas is \$1,104,215.

MISCELLANEOUS

BOROUGH HALL BATHROOMS – During the winter months employee Craig Heck renovated all three bathrooms at the Borough Hall. Work included paint, new floors, toilets and partitions. The final product was a real improvement.

CONCRETE PAD AT POOL – At the request of the Rec Board and Rec director our crews poured a large new concrete pad the south end of the pool. This was done to make it easier to move and use the lap lane reels for swim meets.

STONE HOUSE POND – When we went to drain the pond for its 4th of July cleaning it did not work. Crews excavated to pipe and channel and re-laid some boulders. It now works and looks a lot better. We also repointed portions of the old stone foundation in the same area.