

**WYOMISSING PUBLIC WORKS
DEPARTMENT
2018 YEAR END REPORT**



This review is written for the interest of council members, residents and as a matter of record of work performed by the Borough's Public Works Department for the year 2018.

Until last year the Department was made up of 17 full time employees. Since the arrival of Rob Lewis as the Recreation Director, four of the 17 employees have been turned over to his supervision. Although we share employees and work together on many projects, their work is not included in this report.

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 and to control grease 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, and change 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 stations performed well all year with the typical exception of Wynnewood. Three times during the year one of the pumps lost it prime and had to be disassembled and re assembled to clear the problem.

MAIN AND LATERAL BOCKEGES – This was a better year than normal. We average 90 to 100 blocked sewer laterals and 3 blocked mains a year. For 2018 we only had 64 blocked laterals and one blocked main. These issues are usually caused by root intrusion into the sewer main. I believe

to combination of cured in place main lining and chemical root treatment have lowered this number.

CAPITAL SEWER REPAIRS – We cleaned and televised 23,000 feet of sewer mains in the Wyomissing Hills area that drains to Spring Township. These tapes will be reviewed and future repairs noted. The second part of the contract was cured in place lining of 4,800 feet of sewer main where defects were identified from the TV work done 2017. We supply construction observation and inspection of this work.

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 8,000 feet of pipe in areas of known root issues.

BERKSHIRE BLVD FORCE MAIN- Our Berkshire Blvd pumping station pumps sewage for close to a mile from the Shoppes at Wyomissing to a point where it goes gravity in Woodland Road near the Woodland Plaza Apartments. During the winter, this force main broke under the parking lot of the Shoppes at Wyomissing. Due to its depth we contracted out repairs. This event took 2 to 3 days to complete. During this time we had to truck the constant inflow of sewage from the wet well to a downstream manhole.

SEWER FLUSHING – We have our own sewer jetting truck that is used to clean wet wells, address blockages and clean sewer mains. In addition to the contracted cleaning we also cleaned the sewers in the commercial area with our crews. This includes Berkshire Blvd, Woodland Road, Ridgewood Road and Crossing Drive.

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 work is done to clean the distribution system, gather data and identify hydrants that are not working properly.

METER UPGRADES – This was the third year of upgrading residential water meters. The first year we upgraded Birdland, the second year was the area west of Clayton Avenue. This year we changed out all of Berkshire Heights which was 226 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 we can also log information in the event of a leak or high water bill.

METER READING – We read industrial and commercial meters once per month (198) and residential meters once per quarter (2,395).

HYDRANTS / VALVES– If we find a hydrant is not working properly we either replace or repair it. We moved a hydrant on Squire Ct for the street work, replaced the hydrants at Lincoln and Logan and at 9th and Spring. Rebuilt the hydrant at the end of Reed Road and repaired hydrants that were hit by cars at Palmer Candy, Woodland Road and Paper Mill Road, and on Trent at Albright. We replaced valves on Lincoln Avenue and on Squire Court at Durham.

MAIN BREAKS – We had four water main breaks during the year. Two were on the coldest day of the year. One at Farr Road and Summit Ave and the other at Lake Avenue and Parkside Drive North. The other two were on Lake Avenue near Van Steffy and on Old Mill Road across from the stone parking lot. In addition, we located two leaks on private property. One in Mall West and the other in the Woodland Plaza Apartments

VALVE TURNING – If the winter season does not present a lot of snow it allows us the time to “exercise” water valves. This preventative maintenance work of closing and opening valves is good

for the system if we need to shut down areas in the future. This year we did the area west of Clayton Avenue.

MAIN REPLACEMENT – We replace water main almost every year. The main criteria are where we have experienced a quantity of main breaks or for dirty water complaints. This year’s project was Parkside Drive North from Wyomissing Blvd to Wyoming Avenue. The Borough supplies construction observation and inspection along with payment application review.

IN HOUSE METER REPAIRS / REPLACEMENT – After a quarterly reading cycle we will always come across 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 meter reading portion of that meter. This year we replaced 36 full meters and changed the meter heads on 41 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 are damaged 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 were portions of Monroe Avenue, Woodland Road, Old Mill Road, Valley Road, Wyomissing Blvd and Dauphin Avenue.

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

SNOWPLOWING – The 2017/2018 winter season was pretty mild. A lot of events had some rain involved with the snow. We had 7 events that required salting only and 8 events that required plowing. There was only one significant event on March 21st that was a 12” storm. We purchased 880 tons of salt for the year.

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 the second unusual season in a row 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 before Christmas. We dump our leaves at two transfer stations. One in the Parkland near the quarry and one at a Spring Township site. We contract with a hauler thru a county purchasing contract for the leaves to be hauled off site. We collected a total of 9,956 cu yds. of leaves this year, down slightly for previous averages.

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 and attract a lot of residential complaints. We grade and level them each spring and after heavy storm events. This year we experimented with a new type of stone in two alley’s in Berkshire Heights that compacts a little better. Early results look good, but a final determination will be made after a full year.

SINKHOLES – With the amount of rain this season, sinkholes were very prevalent. The major issue was the multiple sinkholes on State Hill Road. It was a tough situation in that it is a State Highway and Penn Dot shows very little interest in addressing the situation for long term. WBWA did pressure grouting under their transmission main, and PA American abandon a section of their distribution main. In addition there were two additional sinkholes on private property in the same area. Other than State Hill Road we reacted to multiple sinkholes in our street right of ways: 1500 block of Dauphin Ave, 1200 Block of Penn Ave, in a utility easement on Ridgewood Road and an Alley behind Van Steffy Ave.

STATE HIGHWAY CLEAN UP – Each spring we take time to clean up all or portions of Penn Avenue, State Hill Road and there 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 fourth year of the program. There were a 37 participating properties and a total of 4,782 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 years project was Wyomissing Hills Blvd from Park Road to Merrymount Road, Reading Avenue from Penn Ave to Hill Ave, Cambridge Avenue from Reading Blvd. to Laures Lane, Farr Road from Oriole Drive to the City line, Van Steffy Avenue from Wyomissing Blvd. to Lake Avenue, 1600 block of Old Penn Avenue, the alley south of Penn Avenue between Park Road and Eighth Street and portions of Old Wyomissing Road in the park. In addition we also micro surfaced (thin preventative maintenance layer) on Berkshire Blvd from Crossing to the 222 bridge, Old Mill Road from Museum Road to Vireo Drive and Spring Street from Van Reed Road to Seventh Street. Wyomissing Hills Boulevard was a total reconstruction with added storm sewers. Prior to this work both UGI and Pa American Water had to lower and move some of utilities. Due to the extent of work and the extremely rainy summer this job was a challenge to say the least. The Borough provides construction observation and payment application review for these projects.

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.

STORM PIPE REPLACEMENT - We had two storm sewer pipes collapse this year. We replaced in full 75' of pipe that runs under Parkside Drive South from the south curb line to the creek and 125' of pipe in the alley behind the 1300 block of Penn Avenue. We also had to repair a new storm pipe on Cambridge Ave that got lifted during the August 31st rain storm.

MS4 PERMIT – As part of our storm water permit we annually inspect pipe outfalls at the creek, inspect storm water facilities on private property, and educate our personnel and the public on

storm water issues and pollution prevention. We are currently waiting on DEP review of our most recent 2017 permit application so we can proceed with installing storm water facilities that will help us meet our pollution reduction numbers.

MISCELLANEOUS

We also do many things not tied to any one category such as:

- Refinished floors at the Stone House and replaced 3 doors.
- Deliver recycling cans to residents.
- Pick up Christmas trees after the holiday.
- Clean gutters on Boro Buildings.
- Pick up roadside trash.
- Assist with the pool start up and shut down.
- Mark our utilities for the one call system.
- Clean the Stone House Pond.
- Misc concrete work at many places for many reasons.
- Assist with parades and events (barricades, no parking signs, trash collection)
- Follow up on street cut permits with UGI and other contractors
- Minor electrical, plumbing and carpentry work on Borough buildings
- Dead animal pick up

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.

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 2018 we pruned a total of 1,486 street trees in all sections of the Borough. Of this total, 502 were mature shade trees and 984 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 2018 were Berkshire Boulevard, Crossing Drive, Birchwood Road, Delaware Avenue (1400 & 1500 blocks), Sturbridge Drive (continued from 2017), Old Mill Road (Cambridge Ave. to Evans Ave.) and Bobolink 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 2019, we plan to concentrate much of our maintenance efforts on Dauphin Avenue, Wayne Avenue, Parkside Drive North and the median dividers on both Reading and Wyomissing Boulevard. In addition, we hope to spruce up the islands on Squire Court and Brandywine Court with a few removals, thorough pruning and new plantings.

The above pruning numbers do not include resident requests. We responded to and resolved 164 resident requests in 2018, many involving multiple trees. One such request involved much needed pruning and elevation of the historic Japanese flowering cherry trees on Cherry Drive. 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 131 trees removed from the streets of Wyomissing in 2018, 94 were taken down by our own crew and 37 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 2019 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. As part of our maintenance work on the median dividers along the boulevards, we will be removing some

declining Norway maples and replacing them with species more suitable to the growing conditions there.

A large amount of firewood is generated in both our pruning and removal operations. We deposit this wood 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 136 trees to the streets of the Borough in 2018, which we purchased from three different area nurseries. Of the total number of trees planted, 123 were replacements for trees removed in 2017 and 13 were planted on new sites. We respond to residents' requests for street trees as much as our yearly budget allows, and 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 21, 2018, 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 2019 due to root damage inflicted during the reconstruction project in 2015. 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 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 2018 were Shumard oak, Chinese elm, Sassafras, Himalayan birch, Tatarian maple and Bur oak.

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 DISEASE

Historically, there have been few pest or disease problems among our street trees that warranted any major resources to control. In 2018 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 presence 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 2018, we continued the tree injection regimen by treating 111 ash trees along Meadowlark Road, Bluebird Road and Museum Road. 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, mainly red maples and Norway maples, we have not noticed any damage that would justify significant chemical control efforts. We will be monitoring again in 2019, responding to residents' questions and concerns and keeping abreast of the ongoing research on the spotted lanternfly.

MISCELLANEOUS

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

In 2018 Wyomissing received The Arbor Day Foundation's Tree City, USA status for the fourteenth 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 Forino Construction to prepare sites for new sidewalk construction. Our involvement and input aided in the installation of new sidewalks adjacent to many 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 approximately 7,600 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.