

**WYOMISSING BOROUGH PUBLIC WORKS DEPARTMENT
YEAR END REVIEW FOR 2019**



This review is written for the interest of Council members, residents and as a matter of record for work performed by the Public Works Department in 2019.

The Department is made up of 14 full time employees working out of two buildings, the maintenance garage located at 4th and Oley Streets in Berkshire Heights and the tree house, located off Penn Avenue in Wyomissing Hills.

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. This is done with a four man crew across a roughly two week time period.

RESIDENTIAL METER UPGRADES- This was the fourth year of replacing and upgrading residential water meters. This year we replaced 340 meters in the upper end and Greenwood Mall areas. Along with being more accurate than the old meters, these new ones can capture and hold information about water use which is beneficial when a customer questions their bill.

NEW COMMERCIAL METERS – With the current commercial redevelopment taking place we added many new meter pits to service these new businesses. These included the new Teleflex building, the former VF site (4), Wawa and the new church located in the SSM building on Park Road. In addition we replaced two failing commercial meters at Mall West and Applebee's.

METER READING – We read commercial meters (200) each month and residential meters (2,400) each quarter.

HYDRANT REPLACEMENT AND REPAIR – We replaced 8 fire hydrants that were not operating properly. These were located at 1518 Meadowlark, Logan Ave and Reading Blvd, Parkside Drive South and Wyomissing Blvd, 9th and Spring, Hummingbird and Oriole, Spring and Van Reed, Woodland Road at Woodland Plaza Apartments and Berkshire Blvd. at Starbucks. We also repaired 3 hydrants at Penn and Clayton, Trent and Albright and Woodland Road near Mall West.

AUTO FLUSHER- In an effort to comply with more and more DEP regulations we installed an automatic flushing unit in the cul de sac of Sturbridge Court. This allows us to pull samples easier and to move water at the dead end for better sampling results.

MAIN BREAKS – We only had two main breaks, one in the Long Vue condominium complex. In the end it was not ours, we made the repair and billed them. We also had a leak on a 3” service lateral at 40 Berkshire Ct. Due to leaf collection and staffing levels we contracted this service line replacement to Schlouch.

CAPITAL MAIN REPLACEMENT – This year’s water main replacement project was Cherrywood Road in Greenwood Mall. The project went very smoothly and involved almost 1,000 feet of pipe and 20 service laterals. The Borough supplies construction inspection, pay application review and liaison with the contractor.

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.

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.

SEWER

SEWER SAMPLING – We sample 28 food service locations for high strength waste twice a year. With the information gained we then surcharge them based on their results. This is an effort to lessen grease and other constituents that are bad for the sewer plant along with our collection system and pumping stations.

FORCE MAIN BREAK – In 2018 we had a force main break from the Berkshire Blvd pumping station, this year we had one on the Fourth and Oley line. This one occurred on Park Road in February. Our crews made the repair. We had to hire a contractor to truck the sewage from the pump station while the repair was being made.

BLOCKED SEWERS – We responded to 87 calls for blocked sewer laterals. The vast majority of these are caused by tree roots in the sewer trap. This number is pretty consistent from year to year. We had two blocked sewer mains, one at 6th and Douglas and one in the 100 block of Wingert Road.

SEWER TRAP INSERTS - In the aftermath of the June 20th storm we installed solid lids on approximately 70 sewer traps in an effort to keep rain water out of the sewer system during heavy rain events. This was done mostly in the Brandywine/Lincoln/Reading Blvd Area, along with South Hampton and Downing.

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 exception of 4th and Oley. The station was not reading the wet well level correctly due to a hole in the line that runs from the station to the wet well. We had to replace it.

PUMP STATION UPGRADES - As part of our capital improvement project we added emergency pump connections and flow meters at all three stations. In addition, we enlarged the pipe that runs from 4th street to the 4th and Oley Station. This was done in advance of the expected increased flows coming from the VF North re development site. We provided construction inspection and payment application review.

CAPITAL SEWER WORK – We contracted out the cleaning and televising of the Birdland drainage basin. This totaled approximately 30,000' of work. In addition there were 5 point repairs done and 3 manhole to manhole linings totaling just over 1000'. We provided construction inspection and payment application review.

IN HOUSE CLEANING – In addition to the contracted work, cleaned the West of Clayton Avenue drainage basin with our people and equipment.

MANHOLE REHAB – We have a sewer line that runs down the large swale between Reading Blvd and the Wyomissing Meadows Condominiums. In an effort to reduce infiltration of rainwater we upgraded 13 manholes with frame seals, inserts, wrapping raised man holes and bolting down lids.

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.

STREETS

CRACK SEALING AND PATCHING – We crack seal roads that are relatively new but have developed some minor cracking. This process extends the life of the road by limiting water infiltration into the base material. Museum road was a prime candidate for this so it was done this Spring. We also seal patches from water main breaks and patching. We mill and patch bad sections of streets that may become pothole issues over time or areas that are showing signs of base failure. This practice is labor intensive for us but, can push back the need to fully pave a street for years. This year we laid 433 ton 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 post, replacing signs after an accident or adding signs per a Police request.

SNOWSTORMS- We had twelve snow events during the season. 6 were just salting events and 6 were salting and plowing. We purchased 1,123 tons of salt. The largest snowfall was 6 inches.

LEAF COLLECTION – It was a very unusual leaf season in that leaf drop was slow and consistent from the start in October until the end in late December. We were also very short handed due to 5 full time employees either being injured or having surgery and the lack of finding temporary help. Most seasons we collect leaves with 6 truck and crews, this year it averaged 3. The total volume was very similar to years past totaling 9,337 cu yds. collected.

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.

SINKHOLES – With the above average rainfall for the year, many sinkholes surfaced. Most are small and can be mitigated easily, larger ones must be excavated and filled with stone and fabric. We addressed these sinkholes during the year: Cambridge Ave @ Tennis Court Condos, Dauphin Ave extension, Gail Circle, 56 Wellington, 2020 Lincoln Ave, Ridgewood Road, Campus Road, 501 Park Road, and in a utility ROW behind office buildings on Ridgewood Road.

CAPITAL PAVING PROJECT – We paved portions of four roads using two different processes. Lincoln Avenue from Logan Ave to the cul de sac and Squire Court from Logan Avenue to Reading Blvd were rehabilitated using a process called “full depth reclamation”. Wellington Blvd from Warwick Drive to Devonshire Road and Dorchester Drive were rehabilitated using a process called “Cold in Place Recycling”. Both processes should make these road last longer than typical mill and overlay process. We supply construction inspection, payment application review and curbing identification and inspection for private curb replacement.

50/50 SIDEWALK PROGRAM – This was the fifth year of the program. There were only 24 participants in the program, plus we did portions of sidewalk at the Library and the Parkland at Wyomissing Blvd and Parkside Drive North and South. Square footage of sidewalk replaced was 5,275. We review applications, field mark quantities, inspect construction, review pay applications and field residential questions or concerns.

ROADSIDE MOWING / SPRAYING – We rented a larger tractor and boom mower then the one we own to cut back brush that we normally cannot reach. We cut portions of Penn Avenue, Crossing Drive, Woodland Road, Timberline Drive and around other Borough owned property. We also sprayed certain areas to keep weeds and other vegetation from growing out of curbs, sidewalks and right of ways. We do this on portions of Berkshire Blvd, Penn Ave, State Hill Road, Crossing Drive and North Wyomissing Blvd.

MECHANIC – Jake Kaylor is our full time mechanic. He does all state inspection and repair for the entirety of the Borough fleet including Public Works, Police and Administration totaling 45 vehicles. He keeps all other rolling stock operating, this includes 8 leaf collectors, two back hoes, two skid steers. There is also a quantity of small engine equipment that Jake keeps operational; blowers, mowers, generators, etc..

STORM SEWERS

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.

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.

PIPE AND INLETS – We added inlet capacity by retrofitting inlet tops in the 1800 block of Reading Blvd and on Cheltenham at Warwick. We added an inlet and installed 260' of pipe to improve drainage on Buckingham Drive. The storm of June 20th exposed some other storm water problems. It exposed an unknown inlet box on State Hill Road by the Rail Road. We had a new custom top fabricated and installed it. The same storm exposed some rotten galvanized pipe on Ridgewood Road and Gail circle that we had to replace.

POOL RAIN GARDEN – In conjunction with the Wyomissing Creek Coalition we installed a rain garden at the swimming pool. This project will help us comply with our MS4 storm water permit by filtering rainwater before it enters the creek. Signage installed will also educate the public on storm water issues.

MISCELLANEOUS

RECREATION - We also do a lot of things for the Recreation Department. We assisted them by installing new playground equipment at the Mausoleum playground, and Pool. Installed outdoor speakers at the Stone House and installed new lifeguard stands and a water heater at the pool.

RECYCLING – We deliver residential recycling containers to homeowners who request them. We also deliver the paper recycling bags to businesses who resell them.

JUNE 20TH STORM – This freak rain event caused many issues. We had to drain, clean and refill the pool, fix sections of Old Mill Road that were torn up, pulled dumpsters out of the creek, laid new asphalt in the Stone House Pond that got torn out, fixed stone ally's and just general cleanup of streets and Borough properties.

CHRISTMAS TREES – For a few weeks after Christmas our crews collect and chip residential Christmas Trees.

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 2019 we pruned a total of 1,078 street trees in all sections of the Borough. Of this total, 245 were mature shade trees and 833 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 the Reading Boulevard islands, Squire Court and Brandywine Court islands, Museum Road, Tanager Drive and Greenwich Street. We also did maintenance and safety pruning on selected sections of Garfield Avenue, the intersection of Logan and Cambridge Avenues and the 4th of July parade route (Wyomissing Boulevard, Girard, Evans and Cleveland). We constantly monitor high traffic areas with large trees (Penn Avenue, the Boulevards, 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 2020, we plan to concentrate much of our maintenance efforts on Parkside Drive North and the islands on Wyomissing Boulevard.

The above pruning numbers do not include resident requests. We responded to and resolved 173 resident requests in 2019, 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. Before the process begins, we encourage affected residents to apply for the borough's 50/50 sidewalk replacement program.

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 148 trees removed from the streets of Wyomissing in 2019, 96 were taken down by our own crew and 52 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 2020 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. We will also be removing all of the ash trees on Windsor Street which have succumbed to the emerald ash borer.

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 139 trees to the streets of the Borough in 2019, which we purchased from five different area nurseries. Of the total number of trees planted, 134 were replacements for trees removed in 2018 and five were planted on new sites, three of which were planted on the Wyomissing Library grounds. As part of an Arbor Day observance on April 13, a group of local children helped us plant a sugar maple on the front lawn of the library. In the fall, we added a river birch and a dogwood here. We respond to residents' requests for street trees as much as our yearly budget allows.

We will be losing at least two more oak trees at the playground in 2020 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, chestnut oak, Persian parrotia, sassafras, tatarian maple and bur oak and Kentucky coffeetree.

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 continue 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 warranted any major resources to control. In 2019 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 Wyomissing, impacting green and white ash along our streets, as well as in the parklands. In the fall of 2012 we began a preventative program of pesticide injections to protect native ash trees along the streets of Wyomissing. In June, we continued the tree injection regimen by treating 139 ash trees along Garfield Avenue and Crossing Drive. 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 2020, 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 2019 Wyomissing received The Arbor Day Foundation's Tree City, USA status for the fifteenth 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 concrete contractors 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.