

Guide to MS4

Municipal Separate Storm Sewer System

January 2023 Edition



Clogged Storm Drains

The effects of a clogged storm drain can be felt in other areas of the storm water management system.

Lower Allen Township has 634 stormwater inlets within the 10.3 square miles of land. Can you locate all of them? The Township Public Works Department works had to inspect, maintain and clean all 634 of them. Not a small task when you consider all of the other jobs the Public Works Department handles on a daily basis. Consider helping the Public Works Department by cleaning the tops of storm drains, especially before a precipitation event. Keeping the tops clean or the areas around the storm drain free of debris will help to keep the storm drain from becoming blocked or slow-moving.

Dangerous Conditions

Storm drains that are clogged or slow moving can cause water to pool around the drain. Water that collects around a storm drain can cause dangerous driving conditions any time of year. Common issues from pooled water are hydroplaning or poor visibility. In the winter, pooling water can turn to ice causing a loss of traction.

Erosion

Water that pools around a storm drain can not only be dangerous to drivers but it could cause damage to landscapes in the area. Pooling water often drags soil with it as it moves. This erosion can be costly to property owners while the increased sediment in the water will eventually end up in the storm pipes, leading to more flow issues.

Property Damage

Not only can landscapes be destroyed or altered on properties, but a clogged storm drain could cause homes to be flooded or damage to vehicles. A more substantial loss could be greater damage to the entire stormwater management system. Failures in the system can cause widespread structural issues.

Lower Allen Township's

Guide to MS4

Municipal Separate Storm Sewer System

February 2023 Edition



Cost Effective Alternative

Using Brine to pretreat the roads before winter weather occurs can be a cost saving alternative to road salt. Salt brine can save as much as 30% compared to the use of road salt. While Brine is not an option for every winter precipitation event, the ability to use it when it is an option can save the Township money and give added protection to travelers.

Environmentally Friendly

Salt brine is an environmentally friendlier alternative to traditional road salt. The reason being the lower content of salt that can be washed into the local waterways. For instance, one truckload of brine will cover the same area as four full truckloads of salt. The application of the brine with a lower salt content reduces contamination of plants and animals in the area and downstream.

Controllable

The application of salt brine allows for more control of the placement on the surfaces. We have all seen the piles of salt left behind and experienced the slide when a spot is missed during salt spreading. With salt brine, the chance of a missed spot is very slim. The application is consistent, the salt brine sticks to the area it is applied, and it works immediately.

To Brine Or Not To Brine?

Using salt brine on roads can significantly improve road conditions when winter weather is forecasted.

Lower Allen Township consists of more than 62 miles of state and local roadways, all of which get treated with a salt brine mixture whenever possible. When the weather forecast calls for wintery conditions, Public Works employees work 24-48 hours in advance of a storm to treat all the Township roadways. Currently, the Township uses about 2000 gallons of salt brine to treat all state and local roads. Treating the roads in the Township and ensuring that residents and travelers are safe is a full days job for the Public Works staff. Next time you see a Public Works employee out, thank them for assisting in keeping the roads safe to travel.

Lower Allen Township's

Guide to MS4

Municipal Separate Storm Sewer System

March 2023 Edition



Tis the Season to Cut the Grass

As the weather warms and the Spring flowers begin to bloom, so does the grass begin to grow in our yards.

Are you a bagger or a mulcher? Suffice to say that our lawns can be our pride and joy or the bane of our existence. Whether you enjoy mowing or you despise it, deciding what to do with the grass clippings is a decision we all need to make each year. The environmentally friendly decision would be to mulch the clippings back into the yard. Bagging the clippings is a choice that can lead to increased trash each week. That increase in trash leads to more waste in the landfills. Consider alternative options when sprucing up your yard this summer. Maybe the new option could save you valuable time to be spent with your loved ones or pursuing new hobbies.

Safety First

Grass clippings that are blown into the street can be a hazard to cars, motorcycles, and bicycles. Fresh grass clippings in the road can be just as slippery as ice in the winter. The main component in grass is water, whether the grass clippings are wet or dry they still cause dangerous road conditions.

Keep Away From the Drain

Grass clippings contain Nitrogen, Phosphorous, and other elements that can cause harmful effects to water supplies. When grass clippings are blown into the street they can end up in the local waterways causing adverse effects to the stream habitats. Grass clippings can also contaminate waterways with chemicals from lawn maintenance. Pesticides and fertilizers can also cause a negative impact on local Chesapeake Bay Waterways.

Consider Other Uses

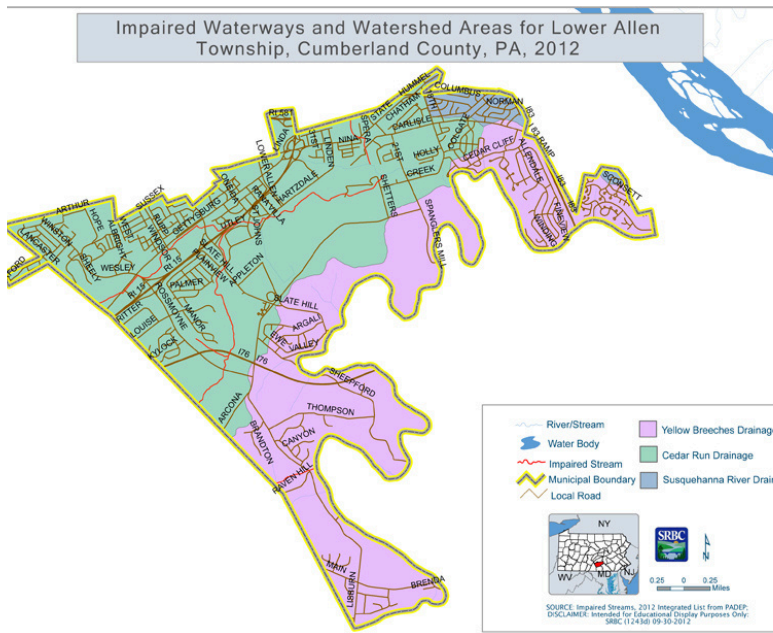
In addition to grass clippings in the street looking messy and being an eye sore, consider alternative uses for them. Grass clippings can be beneficial mulch for your yard by providing Nitrogen back to the soil and protecting the yard from drought. Also, grass clippings can be used for a base in flower beds or can be used to feed animals.

Lower Allen Township's

Guide to MS4

Municipal Separate Storm Sewer System

April 2023 Edition



Where Will the New Basins be Located?

Basin retrofits will take place across the Township in 2023. Locations will include Westport Business Center, Rossmoyne Business Center, BJ's Wholesale Club Basin, Weis Market/United Methodist Home for Children, and Bethany Village West. The area of stormwater drainage for all 5 basins is 297,934 acres. The total sediment reduction for the 5 basins to be retrofitted is 239,099.9 pounds/year, the equivalent of 17 African Elephants. All 5 basins are located in the Cedar Run Watershed of the Chesapeake Bay Watershed. The Township will maintain these basins and the previously retrofitted basins in perpetuity. Lower Allen Township appreciates the cooperation of the property owners that have worked hard to review and collaborate on the agreements to complete these basin projects.

Basin Retrofit Progression

Lower Allen Township will be retrofitting several detention basins into bioretention facilities in 2023 as part of our Pollution Reduction Plan with the Pennsylvania Department of Environmental Protection (PADEP). These projects will reduce pollutants that reach the Susquehanna River and ultimately the Chesapeake Bay.

Over our last PADEP NPDES permit cycle, Lower Allen Township has been retrofitting detention basins into bioretention facilities to reduce pollutants entering our stormwater system that eventually make their way to the Susquehanna River. These projects, along with additional permit requirements, are obligations of our PADEP NPDES permit. Basin retrofit projects have already been completed at our Public Works Facility, Sheepford Crossing East and Sheepford Crossing West, and in the Moreland and Beacon Hill Communities. The 2023 basin retrofit projects are located on private property but will be maintained in perpetuity by the Township. Information regarding the construction and completion of the basins can be found on the Township website, on the Township Facebook page, and by using the QR code on the right side of this article.

QR Code

Use the below QR Code to follow the progression of the basins.



Guide to MS4

Municipal Separate Storm Sewer System

May 2023 Edition



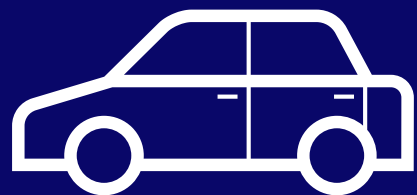
Working at the Car Wash...

There are more and more carwashes popping up in the area. Did you know that a car wash has a positive environmental impact on a community, more so than washing your vehicle at home.

Did you know, washing your vehicle at a car wash can save at least 50% of the water that you would use to wash that same vehicle at home? A car wash uses approximately 45 gallons of water per wash. that same car wash can reuse that water for another vehicle. There are over 100,000 car washes in the United States. Environmentally friendly car washes are popping up all over the United States. An environmentally friendly car wash could be capturing and reusing water, using biodegradable cleaning products, or even using a waterless cleaning system.

Environmental Impacts

- The amount of water used by hand washing a car at home can be 80-140 gallons of water.
- Car washes can be required to recycle their water.
- Even if water is not recycled, the car wash is required to dispose of used water in the sewer system and not in the storm drains.
- Washing your car in the street or anywhere that the water goes to a storm drain is placing all those contaminants directly into the Chesapeake Bay.
- Vehicles often have pollen, zinc from tires, copper from brake pads, motor oil and gasoline along with other heavy metals picked up from roadways.



Lower Allen Township's

Guide to MS4

Municipal Separate Storm Sewer System

June 2023 Edition



Garage Clean Out...Now What?

Every Spring we do it, we head into that garage, shed or basement and explore all of those items we do not use but have no idea how to get rid of.

Has it happened to you? You move into a house only to find a few cans of paint left from the previous owner, hidden away in the far corner of the garage or the basement. I don't know about you, but in my house the cans that were left behind were the colors that I was least fond of in the house. I will never be using those colors. Disposing of Household Hazardous Waste properly is important to all waterways. Dumping these items down a drain is not proper disposal. Storm drains are directly connected to local waterways, specifically the Chesapeake Bay, and Wastewater Treatment Plants are designed to manage organic material not hazardous chemicals. Cumberland County has a HHW event each quarter to allow for proper disposal. Contact the County for more information at www.cumberlandcountypa.gov. June 17th, 2023 will be the next drop off event in Cumberland County.

Acceptable Items for HHW Recycling at Cumberland County Drop Off Site

- Pesticides, Insecticides, Herbicides, Fertilizers
- Oil-based paint, stains, varnishes, sealers
- Oil-based paint cleaners, thinners, removers
- Latex paint & paint related products
- driveway sealers
- adhesives, glues, epoxies, caulking, sealants
- gasoline, diesel fuel, kerosene
- motor oil
- antifreeze, car care products
- lubricating sprays
- pool chemicals
- drain cleaners, degreasers, oven cleaners
- fire extinguishers
- propane cylinders (up to 20 pounds)
- hydrochloric acid, sulfuric acid, & other acids
- mercury, mercury containing devices
- fluorescent light tubes & bulbs
- automotive batteries

Lower Allen Township's

Guide to MS4

Municipal Separate Storm Sewer System

July 2023 Edition



Looking for a Way to Cool Off?

Yellow Breeches Watershed Association is holding a summer clean up on July 23, 2023. Grab your creek shoes, kayaks, canoes, or bring yourself for a clean up along the Yellow Breeches Creek.

The Yellow Breeches Watershed will host volunteers on July 23rd for their annual clean up. Join forces and have fun with a day on the creek. What will you find while cleaning up the Yellow Breeches Creek? A donation of \$10 is requested to help cover the cost of the insurance. Even without a watercraft of your own, you can be apart of the land crew to help clean up the banks of the Yellow Breeches Creek. After we traverse the creek, enjoy a pizza party to celebrate all the hard work.

Looking to Do More Than a Clean Up Event?

Check out all the Yellow Breeches Watershed has to offer and take the opportunity to enhance the Chesapeake Bay Watershed within Lower Allen Township!



Lower Allen Township's

Guide to MS4

Municipal Separate Storm Sewer System

August 2023 Edition



It's the End of Summer But I'm Thinking About...

Did you hear that? The sound of school buses practicing their bus routes are just around the corner. It's soon time to close the pool for the summer.

Whether you plan to lower the water level or empty the entire pool of its water, care should be taken to dispose of the pool water in a safe manner. Discharging pool water into any waters of Pennsylvania is considered a violation of the Clean Streams Law. Pool waters and other waters that contain chlorine or any other chemicals can be detrimental to aquatic life if discharged to the storm sewers. Discharged pool water has been known to cause fish kills and create unsafe aquatic conditions for other living organisms. Lower Allen Township's stormwater ordinance does not allow discharge of pool water to the MS4, whether the water is dechlorinated or not.

What should you do with your pool water?

In some municipalities pool water can be disposed of through the sanitary sewer system. Before discharging pool water into the sanitary sewer system, verify with your sewer authority for authorization to discharge pool water. The increase amount of water and the addition of chlorine into the sanitary sewer system can overwhelm sewer infrastructure and kill good bacteria used to treat wastewater.



If lowering the level of the water in a pool, the water may be used for irrigation purposes. This dechlorinated pool water would need to stay on the property and not run off or enter any portion of the storm sewer. A slow draining of the pool onto a lawn is permissible according to the Department of Environmental Protection. For more information, contact the Department of Environmental Protection.

Guide to MS4

Municipal Separate Storm Sewer System

September 2023 Edition



Fall Fertilizing

May was a long dry month. The official rainfall total for the month of May was 0.19 inches in Harrisburg. The lack of rain made May one of the driest months on record.

Whether you missed fertilizing your lawn this spring due to the busyness of the family or because the dry weather made you question the effect on fertilizer, the fall is still a good time to fertilize your lawn. More important, is to fertilize that the correct ratio and just what your lawn needs. Just because you skipped the spring application doesn't mean that you should double up on the fall fertilizer to make up for it. Fertilizer application instructions should be followed closely. Never over fertilize your lawn and never fertilize within 24 hours of a rain event. Over fertilizing and fertilizing within 24 hours of a rain event can cause fertilizer to run off into the storm sewers, eventually polluting the waters of the Chesapeake Bay.

When to Fertilize

Lawns will go dormant over the winter. Your lawn has had a long summer between children, pets, the weather and insects it is time for your lawn to take a break. Think of that fertilizer as the last meal before a deep sleep. Knowing when the best time to feed a lawn will only keep your lawn looking fabulous next spring. Fertilization should take place 6 to 8 weeks before the expected first frost. The first frost in Lower Allen Township is expected around October 16 according to the Old Farmer's Almanac.

What does your lawn need?

Knowing what your lawn needs and does not need will only benefit your lawn in the future. Have you had your soil tested? Soil testing can tell you what nutrients the soil is lacking and can help you choose the correct fertilizer for your lawn. Many soils contain Phosphorous making the addition of Phosphorous in your fertilizer unnecessary. When reading the numbers on fertilizer, the center number is the Phosphorous number. These 3 numbers are called the NPK ratio; Nitrogen, Phosphorous, and Potassium.

Alternatives to Fertilizer

Choosing an alternative to fertilizer for your lawn depends on the needs of your lawn.

Does your lawn need Nitrogen, which encourages leaf growth. Mulching your grass clippings can provide an excellent source of Nitrogen. If Potassium is needed, try a home composting system enriched with banana peels or a banana peel water solution. For increased Phosphorous naturally consider bone meal, fish meal, or animal manure.

Lower Allen Township's

Guide to MS4

Municipal Separate Storm Sewer System

October 2023 Edition



Dwarf Crested Iris

Fall Native Plantings

Fall is the perfect time to do some work in the yard and add native plantings to your landscaping.

Native plants not only can create a low maintenance landscape but they also add to the local diversity of animals, plants, and insects. Whether your entire yard is planted with natives or you choose to transform that small section along the house that you can't seem to get anything to grow, native plants will help establish a landscape that you can be proud of for the future. What makes a plant a native? A native plant is a plant that grew in Pennsylvania before the European settlers arrived. Recent research has shown that 90% of our insects feed on three or less types of plants. Over three quarters of the staple crops that feed humans require pollination. There are more than 437 bee species in Pennsylvania, the number one pollinator in the world. Whether you want deer resistant, drought resistant, or pollinator friendly there is a native plant species that will work for your landscape.

Why choose natives?

Choosing a native plant for your landscaping can have a multitude of positive advantages. Native plants can resist the varying temperature changes and weather phenomena's that occur in the four seasons of Pennsylvania. The dry weather in April and May of 2023 did not phase the native plants in Lower Allen Township. This also allows natives to be watered less often than a non-native plant. If you are unsure of this fact, check out the Sheepford Basin along Lisburn Road. Native plants also contribute to the diversity of the native insects allowing for increased pollinators which directly affect our food chain.

Butterfly weed or bush?

The most common pollinator enjoyed by gardeners and non-gardeners alike has to be the butterfly. Both the butterfly bush and the butterfly weed attract pollinators. Butterfly bush is an invasive species while the butterfly weed is a native species. The butterfly bush tends to self-seed, making it noxious while the butterfly weed is not a weed at all and is closely related to the common milkweed, a native plant that attracts the Monarch butterflies. Butterfly weeds are cold-hardy plants and grows to 1-2 feet tall while the butterfly bush can grow to 5-8 feet tall or taller.



butterfly weed

How to Choose Natives?

Knowing your planting zone is the first step in choosing the correct native plant for your location. In central Pennsylvania, most of us are in zone 6b. Your soil content can also help choose the native plant for your landscape. Be sure you are choosing native by shopping with a well informed distributor of plants. DCNR is an excellent source to find native plant locations as well as Penn State Extension Offices Master Gardeners. Consider finding a local native plant sale in your area.

Lower Allen Township's

Guide to MS4

Municipal Separate Storm Sewer System

November 2023 Edition



Pic: storm drain picture from Highland Estates, October 2023

Littering is No Joke!

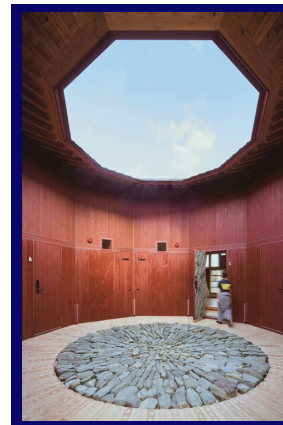
Think before you flick! That was the slogan a few years ago to discourage people from littering cigarette butts.

Cigarette butts are the most common form of litter in the world, with estimates of 4.5 trillion cigarette butts tossed every year. With more than 70 toxins in cigarette smoke alone, imagine all those toxins ending up in our waterways, absorbed by plants or ingested by fish and other animals. According to a study completed in 2021 by Keep Pennsylvania Beautiful, 20% of all litter in the United States is cigarette butts. That means that 9.7 billion cigarettes are littered each year with 4 billion of those ending up in waterways. Proper disposal of litter is necessary to keep streets clean and storm drains clear of all litter. Fact or Fiction: Cigarette butts are biodegradable. This is Fiction. Cigarettes are made of plastic, which makes them definitely not biodegradable.

What do you see?

When out in your neighborhood what litter do you see? Is it cigarette butts in the street, candy wrappers near a garbage can in the park, or glass near your curbside collection location? Wherever you see the litter, what is your response? Do you pick it up or let it for someone else? If you let it for someone else, do you think the next person is actually picking up the litter? Any trash in a place that it should not be is considered litter. Where does the litter come from? According to studies, 53% of litter along roadways comes from motorists while 23% of the litter is from pedestrians.

Kamikatsu, Japan



Imagine a place that has no trash, no litter, no waste. That place does exist, Kamikatsu, Japan. This small town started a journey in 2003 to reduce the use of the waste incinerator that was used to dispose of their waste. After discovering how harmful to the environment a waste incinerator could be, the town launched a zero waste initiative that includes sorting trash into 34 categories for recycling, reuse, or compost their waste. The town efforts led to an 80% decline in waste within the first 10 years of the initiative and 1/3 reduction in waste costs for the town.

Lower Allen Township Clean Up

Interested in getting involved? Do you take walks? Consider joining a cleanup event or taking a trash bag with you when you head out on your walk! Lower Allen Township will be hosting a PA Parks Cleanup Event in November to take a few minutes throughout the day on November 21st and clean up Wass Park. Clean up time will be 9am to 11am and all cleanup supplies will be provided. If you are interested in joining this cleanup event, please email barnold@latwp.org to register for the event.

Guide to MS4

Municipal Separate Storm Sewer System

December 2023 Edition



Pipe removed from Highland Estates during stormwater infrastructure repairs

Your Stormwater Fees At Work

Since July, Lower Allen Township has been working on Stormwater Infrastructure upgrades in conjunction with paving projects within the municipality. Crews have been working hard to complete the projects before the end of the year. Kinsley Construction won the bid for the contract earlier in 2023. To date, stormwater infrastructure repairs and replacements have been completed in the Lower End of Highland Park neighborhood. Progress has continued in the Allendale development through the month of December. While the work can be stressful and be a disruption to the day-to-day activities of the homeowners, the new infrastructure and eventually newly paved roads will be a long-awaited outcome. The Township staff and the Contractors appreciate the continued cooperation and support from the residents to make much needed repairs on Township roadways.

Highland Park Updates

The Lower End of Highland Park experienced the first phase of the stormwater infrastructure repair/replacement and paving project in 2023. Work concluded in the Lower End of Highland Park in mid-September. During the repair/replacement project in this area, 1,900 linear feet of aluminized corrugated metal pipe and 28 manhole and inlet structures were replaced. The choice of aluminum corrugated piping was used due to the location of other utilities during installation.

Allendale Updates

In the Allendale Development, work is continuing with stormwater infrastructure repairs and replacements along with new ADA ramps. Seventy new structures comprised of 12 new manholes and 58 new inlets with approximately 6,100 linear feet of new aluminized corrugated metal pipe. In conjunction with the stormwater repairs and replacements, Kinsley has installed 53 new ADA handicap ramps increasing the safety for residents and improving walkability throughout the development.

2024 Plans

In 2024, plans for the use of stormwater fees includes retrofitting up to 5 basins in the Township to comply with the MS4 permit issued and reviewed annually by PA Department of Environmental Protection. Replacement of stormwater infrastructure is planned in the Highland Estates development including new ADA ramps. Locations in the Harrisburg Manor area and Cumberland Park area of the Township will see some initial televising and analysis work in 2024 as well. This work will give the Township staff information regarding stormwater infrastructure needs in those areas.