CITY OF ANN ARBOR

STORMWATER FAQS

Ann Arbor has had a stormwater utility since 1980 to make sure that all users of this stormwater system pay their fair share for the needed maintenance and system upgrades. During 2006 and 2007, a Stormwater Citizen's Advisory Task Force met to review the rate system and determine how that could be modified to more equitably charge customers. In 2017, a public advisory group reexamined the rate structure to ensure that the rates reflect the cost of the services that are funded by the Stormwater Utility.

As a result of those efforts, a new rate system was developed that charges customers based on impervious area, which was determined to be the best indicator of stormwater runoff. The measurement of impervious area is based on a computer analysis of aerial infrared photography. That information is posted online at www.a2gov.org/storm, allowing customers to provide feedback on areas that may have incorrectly been identified as impervious.

STORMWATER MANAGEMENT

When it rains, the stormwater that runs off roofs, parking lots, and open ground needs to be conveyed to the Huron River through a series of drainage pipes located under the streets, and through small creeks and storm drains located throughout the city. This system is largely hidden from view, except for the approximately 23,000 catch basins located at the curbs of many streets. In fact, the streets themselves are used to convey and sometimes temporarily store these flows before the stormwater system moves the water away. This stormwater system is largely taken for granted by city residents, but it is an important part of making Ann Arbor a desirable community to live in.

Q. What is stormwater?

Stormwater begins as rain or snowmelt that falls on or washes over both pervious (grass, woodlands, gardens and other undeveloped lands) and impervious surfaces (roofs, driveways, parking lots, streets, and other hard surfaces). Stormwater runoff is created from excess water that cannot be absorbed by pervious surfaces or from water flowing off impervious areas. Rather than being absorbed into the ground, rainwater enters the city's stormwater drainage system, a network of catch basins, yard inlets and pipes that keep water from flooding roads and property. Water is diverted through the network to the city's creeks, lakes, and eventually the Huron River.

Q. Why is stormwater such a problem?

Stormwater can cause quality and quantity problems. Stormwater runoff picks up anything in its path and delivers it to our water resources. Pollutants including oil, yard waste, fertilizers, litter, and sediment can create stormwater of poor quality which can harm our waters. The initial inch of stormwater runoff tends to carry the most pollution as it washes fertilizers, automotive fluids, animal waste, deicers, and dirt into the street and down the gutter. Too much stormwater is also harmful. Increased runoff can cause flooding, erosion and property damage if not wisely managed.

Q. Why are the stormwater and sewer systems separate?

Unlike wastewater, which is treated before it is released back into the environment, stormwater goes directly into a community's ponds, streams and lakes. Because stormwater comes in large amounts at unpredictable times, treating it as wastewater would be extremely expensive.

Q. What does the stormwater program do?

The stormwater program is charged with the maintenance and improvement of the drainage systems. These systems consist of storm drains, catch basins, underground pipes, open channels, culverts, and creeks. Program activities include:

- The administration, planning, implementation, and maintenance of stormwater Best Management Practices (BMPs) to reduce the introduction of sediment and other pollutants into local water resources.
- The installation, operation, maintenance and replacement of public drainage systems.
- Activities necessary to maintain compliance with the National Pollutant Discharge Elimination System (NPDES) Permit requirements established by the U.S. Environmental Protection Agency (EPA), including preparation, implementation and management of a Storm Water Management Program (SWMP) to address the following control measures:
  - Public education and outreach on storm water impacts.
  - Public involvement/participation.
  - Illicit discharge detection and elimination.
  - Construction site stormwater runoff control.
  - Post-construction runoff control in new development and redevelopment.
  - Pollution prevention for municipal operations.
- Other education, engineering, inspection, monitoring, testing and enforcement activities as necessary to maintain compliance with local, state and federal stormwater requirements.

Q. Why have cities implemented these programs?

Federal and state regulations require the City of Ann Arbor to address the amount of runoff and the pollution carried by the water that is deposited, untreated, into the Huron River. Stormwater quality management programs are a response to regulations from the Environmental Protection Agency (EPA) connected to the federal Clean Water Act (CWA). These regulations require cities with more than 100,000 people to obtain a permit under the National Pollutant Discharge Elimination System (NPDES) and to create a comprehensive program to seek out and eliminate, to the maximum extent practical, pollutants carried by stormwater.

History

It all started with the 1972 Clean Water Act (CWA) which prohibited the discharge of any pollutant to waters of the United States from a "point source" unless the discharge is authorized by a National Permit Discharge Elimination System (NPDES) permit. A "point source" is a specific site, such as an industry, business, or sewer system, that you can say for sure is polluting streams and water supplies.

In 1987, the US government established that water quality studies showed that sparse sources of water pollution were also significant causes of pollution and the CWA was amended to require implementation of a national program for non-agricultural sources of storm water runoff. These sparse sources of pollutants were called "nonpoint sources." A "nonpoint source" pollution is water pollution that is difficult to trace to a specific discharge point because it comes from many diverse sources. Examples of common nonpoint source pollutants include fertilizers, pesticides, sediments, oils, salts, trace metals, and litter. They come from farms, yards, roofs, construction sites, automobiles, and streets.

Phase I of the U.S. Environmental Protection Agency's (EPA) stormwater program was announced in 1990 under the CWA. Phase I relies on National Pollutant Discharge Elimination System (NPDES) permit coverage to address stormwater runoff from: (1) "medium" and "large" municipal

separate storm sewer systems (MS4s) generally serving populations of 100,000 or greater, (2) construction activity disturbing 5 acres of land or greater, and (3) ten categories of industrial activity. Ann Arbor is considered a "medium" MS4.

Implemented in 2003, Phase II requires permit coverage for all small MS4s located within urbanized areas. An ***urbanized area*** is a land area comprising one or more places — central place(s) — and the adjacent densely settled surrounding area — urban fringe — that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile.

UTILITY FEE

Q. What is a stormwater utility fee?
A stormwater utility fee is similar to a water or sewer fee. In essence, customers pay a fee to convey stormwater from their properties. The utility is the result of unfunded United States Environmental Protection Agency (EPA) and the Michigan Department of Environmental Quality (MDEQ) mandates that require a stormwater utility of all cities with an urbanized area of 50,000 or more people and a population density of greater than 1,000 residents per square mile. The fee is used to finance annual compliance with the National Pollutant Discharge Elimination System (NPDES) permitting standards. The NPDES is the compliance system for the Clean Water Act (CWA) and requires that all stormwater discharges that enter waters of the United States must meet minimum federal water quality requirements.

Q. Why does the City of Ann Arbor charge a stormwater fee?
The utility fee raises the revenues needed to fund the city's stormwater management program. This program brings us into compliance with federal regulations and safeguards our community through improved drainage and protection of local waters. The fee structure primarily enables the city to make needed improvements to storm drainage infrastructure including stormwater inlets and pipes, culverts, open stream channel systems, and other public drainage ways. These improvements will further help protect surface water quality and minimize flood hazards. The utility fee also enables the city to meet its responsibilities to closely manage the storm drain system, study the contents of stormwater, seek out and eliminate illicit connections and illegal dumping, enforce codes more strictly, and facilitate public awareness.

Q. Where do your stormwater dollars go?
The stormwater utility fee pays for the operations and maintenance costs of the stormwater program. Some of the services provided under the stormwater program include:

- Flood protection through capital improvement projects
- catch basin cleaning and repair
- Street sweeping
- Shoulder and ditch maintenance within the publicly owned right-of-way
- Pipe cleaning
- Public education and outreach
- Illicit discharge elimination program
- Post Construction Stormwater Management program
- Construction inspection and runoff control
- Project design and management
- Federal regulatory compliance

Q. Is the stormwater utility fee legal?
Yes, stormwater utility fees are legal. State and federal courts have ruled that stormwater utility fees are necessary to maintain the public stormwater system and such fees represent an equitable way for the community to share the cost of a public service. They are becoming more and more common throughout the United States.

RATE STRUCTURE

Q. How is the stormwater utility rate structured?
The stormwater utility fee rates are based on the total amount of impervious surface on a property (including: buildings, dwelling, parking lots, driveway, sidewalk, etc.). Fees fall into one of two rate categories; single-family or commercial.

The Single-Family and Two-Family Residential rate consists of four tiers:
Tier One – Up to 2,187 square feet = $31.55 per quarter
Tier Two – 2,187 to 4,175 square feet = $55.22 per quarter
Tier Three – 4,178 to 7,110 square feet = $94.65 per quarter
Tier Four – Above 7,110 square feet = $165.66 per quarter
**Note: The above rates do not include the customer service charge $4.15 per quarter.*

Commercial and other properties (e.g. multifamily, office, institutional, commercial industrial land uses): Rate of $851.44 per acre of impervious area per quarter, plus a customer service charge of $4.15 per quarter.

Q. What method is the city using to determine the new stormwater rates?
The stormwater utility fee is based on the estimated use of the stormwater system, calculated through impervious area measurements. Impervious surface is a good gauge of how much runoff your property has during a storm. A fee based on impervious surface area is viewed as a more equitable way to charge and collect revenues for this program.

Q. How does the city determine how much impervious area is on my property?
A computer analysis of infrared aerial photographs is able to distinguish hard, impervious surfaces in contrast to areas that can absorb stormwater, such as lawns and gardens. The computer program assigns the residential property into one of four billing tiers to more equitably distribute costs proportional to use instead of using a flat fee. Homes with larger impervious areas pay more. Customers can download images of their impervious area analysis through www.a2gov.org/storm and submit an appeal if areas were incorrectly identified.

IMPERVIOUS AREA

Q. What is impervious surface?
Impervious surface area is any surface that does not readily absorb water and impedes the natural infiltration of water into the soil. Common examples include roofs, driveways, parking areas, sidewalks, patios, tennis courts, concrete or asphalt streets, and crushed stone or gravel surfaces used for vehicles.

IMPERVIOUS OR PERVIOUS

Following is a list of surfaces that frequently generate questions regarding imperviousness.

Type of Structure	Impervious	Pervious	Notes
Deck, special construction	-	**x**	Spaces between boards with underlying pervious material
Driveway, asphalt	**x**	-	-
Driveway, bank run gravel	**x**	-	Use causes gravel to become compacted over time
Driveway, blue chip stone	**x**	-	Use causes stone to become compacted over time
Driveway, concrete	**x**	-	-
Driveway, dirt	**x**	-	Use causes soil to become compacted over time
Driveway, oyster shell	**x**	-	Use causes shells to become compacted over time
Driveway, standard pavers	**x**	-	Site-specific evaluation determines perviousness
Driveway, permeable pavers	-	**x**	Site-specific evaluation determines perviousness
Parking lots, gravel overflow	**x**	-	Use causes gravel to become compacted over time
Patios, brick on sand	**x**	-	Bricks prohibit growth of vegetation
Patios, slate	**x**	-	-
Sidewalks, concrete	**x**	-	-
Sidewalks, brick and mortar	**x**	-	-
Sidewalks, brick on sand	**x**	-	-
Sidewalk, wood (boardwalk)	-	**x**	Spaces between boards
Swimming pools, in-ground	**-**	**x**	Paved decks adjacent to pools are considered impervious
Walkways, gravel	-	**x**	-
Walkways, wood chip	-	**x**	-
Water, open	**x**	-	

Areas identified as impervious:

1. Hardened surfaces on or near the ground: sidewalks, private roads, private streets, parking lots, walkways, patios, concrete slabs, runways, taxiways, aprons or other hardened surfaces consisting of asphalt, concrete, or other paving material.
2. Hardened surfaces above ground: buildings, foundations, storage tanks, rooftops, athletic courts and tracks
3. Gravel and dirt driveways, and pavers that do not meet requirements to be classified as pervious.
4. Paved decks adjacent to pools
5. Wooden decks covered by a roof or having an impervious underlying surface
6. Surface water that is not part of the public conveyance system.

Areas identified as pervious:

1. grass
2. gardens
3. landscaped areas without impervious underlying membrane
4. natural rock formations
5. open-slatted decks

6. dirt paths
7. swimming pools (since they drain must to the sanitary sewer system)
8. pavers set in porous fill (photos, design plans, and specifications must be submitted)
9. porous pavements (photos, design plans, and specifications must be submitted)

Q. What does impervious surface have to do with stormwater?
Because rainwater can not be readily absorbed by impervious surfaces, the water must be managed through some sort of stormwater system. Furthermore, impervious surfaces are viewed as one of the most problematic factors leading to the degradation of watershed receiving waters by stormwater runoff. Stormwater runoff from impervious surfaces is often polluted with automotive fluids, metals, sediment, or litter. This polluted stormwater runoff eventually ends up in our streams and rivers.

ADDITIONAL QUESTIONS

Q. How accurate are the stormwater rates online impervious area analysis images?
Fairly accurate, but the impervious area analysis images are not without error. We encourage customers to view their images at www.a2gov.org/storm to evaluate whether there have been misinterpretations of their impervious and pervious surfaces.

Q. How can customers apply for an Impervious Area adjustment?
If a customer has reason to believe that their property's impervious area has been incorrectly identified, they should take the following steps:

1. Print the Stormwater Rates Online Impervious Area Analysis image or call Customer Service (734-794-6320) and request that a copy of the image be mailed to you.
2. Identify the areas that have been incorrectly identified as impervious (please use a contrasting pen or highlighter and label the features).
3. Email the document to: STORM@a2gov.org or
   Mail the document to:
   Ann Arbor –Stormwater
   Box 8647
   Ann Arbor, Mi 48107

** Please remember that if you are a one or two family residential property, you will need to reduce your impervious area by an amount sufficient to enter a lower tier. For example, if you are currently at 4,775 square feet, you will need to lower your impervious area by 600 square feet (to 4,175) in order to enter a lower tier.*

Common "Errors" Considered for Adjustment:

- Construction – building and demolition work may necessitate a change in the impervious area calculation for a property.
- Wood Decks - As stated in the ordinance, "Runoff Surfaces do not include wood decks located above a pervious (dirt, grass or gravel) surface area…". Wood decks that are located above an impervious area (e.g. concrete) are included in impervious surface calculations. Since the aerial imagery is unable to show the surface beneath wood decks, it is necessary for customers to contact the city about wood decks above pervious areas in shadows
- Wood chips

NOTE: All surfaces used by vehicles including gravel, dirt, and other graded surfaces should be included in the Impervious Area calculation. Customers should not contact the City to adjust gravel

surfaces used for vehicle use on their property. Please note: the Stormwater Utility Regulations as enabled by Section 2:69 of Chapter 29 and Sections 2:213 and 2:217 of Chapter 33 of the City Code specifies procedures and requirements for charge adjustments, credits, appeals, enforcement and other matters. Section 2 – Definitions reads: "IMPERVIOUS SURFACE. means a surface which is compacted or covered with material that is resistant to or impedes permeation by water, including but not limited to, most conventionally surfaced streets, roofs, sidewalks, patios, driveways, parking lots, and any other oiled, graveled, graded, or compacted surfaces."

Q. Why is gravel considered an impervious surface?
Gravel is an impervious surface because like concrete or asphalt, it functions as a barrier to absorption and places a demand on the storm drainage infrastructure. It is difficult for water to soak into a packed gravel surface. Once gravel is compacted by vehicular traffic, surface water runs off of it much like a paved surface. In addition, runoff from gravel surfaces carries sediment that is not present in runoff from concrete or asphalt. This sediment is problematic in the stormwater system.

Q. Who has to pay a stormwater utility fee?
All developed property within the City of Ann Arbor is charged a stormwater utility fee. This includes properties owned by the City of Ann Arbor, University of Michigan, Washtenaw County, the State of Michigan, and the Federal government. The only exceptions are properties that drain directly to the Huron River, which are still responsible for paying a stormwater customer service fee. Undeveloped properties (vacant lots) are also responsible for this customer service fee.

Q. Why should I have to pay for rain falling on my property?
While the stormwater program is in place to manage the pollution and runoff carried by rainwater, the fee is in no way related to the amount of rain that falls. Users are charged a fee for runoff discharged from their property to the city's stormwater management system, not the amount of rain falling on their property. Property owners control the level of development on their properties, which directly impacts the runoff characteristics of their site.

Q. Why do I have to pay if I don't have a drainage problem?
If you own property with impervious area such as rooftops, sidewalks, driveways, etc., you contribute to stormwater runoff. While you may not have drainage problems on your property, runoff generated from your site may be contributing to problems downstream. The approach being taken through this program recognizes that everyone contributes to the "problem" (runoff and pollution) and everyone will share in the results of the program (improved water quality, reduce flooding, unimpaired access to roads, etc.)

Q. I live in a subdivision with a storm drain that drains into a ditch. Why do I pay a stormwater fee if the city isn't collecting the rainwater?
The city's stormwater conveyance system includes much more than storm drains. Ditches, curbs, gutters, culverts and open stream channels all make up the citywide drainage system that conveys stormwater runoff away from structures and sites in a manner that minimizes the potential for flooding and erosion to properties. The city is responsible for maintaining the entire manmade and natural public conveyance system.

Q. The property I live on has a detention pond that collects all of our stormwater runoff. Why is the city still charging me a stormwater fee?
A detention pond is one example of a Chapter 63 compliant stormwater control that serves to improve the quantity and quality of stormwater that exits a property. However, as beneficial as these devices may be, the effectiveness is not absolute and stormwater still exits a property depending on a

number of factors, such as the intensity and duration of rainfall. While residents must pay the stormwater fee, the city recognizes the value of detention ponds and has established a Stormwater Credit Policy that may offer credits to eligible properties.

Q. If my landscape is designed to minimize run-off by doing things like directing down spouts into grassy areas, why can't my fee be reduced to reflect the steps taken to control the runoff from my property?

Simply directing downspouts into grassy areas will not qualify you for a credit. Rainwater from this arrangement will typically find its way into some part of the stormwater system during a heavy rain. However, if you direct at least 50% of your rooftop runoff into a specially designed rain garden that is at least 130 square feet and at least 3" deep, you can qualify for a stormwater credit.

Q. What credits are available to residential property owners?

The ordinance includes the following credit allowances, upon submittal and review of a request.

- **RiverSafe Homes Program ($1.14/quarter) –**
  - The RiverSafe Home Program, created and maintained by the Washtenaw County Water Resources Commissioner, gives you an opportunity to identify water quality protection activities that you do well and consistently around your home. It also provides an opportunity to commit to other proactive and "easy to do" pollution preventing activities that you may not have considered before. Homeowners complete a user-friendly online survey after reviewing the brief descriptions of the categories of questions in the survey including: Home Toxics Use and Disposal, Yard Care and Outdoor Housekeeping, Vehicle Care, and Pets and Urban Wildlife Waste. In return for taking the survey and making a commitment to water quality protection, participants receive a RiverSafe Homes marker to display in their home. Participants may also choose to be added to an e-mail list to receive periodic environmental tips and information. The survey is also available by mail by phoning (734) 222-6833. There is no cost to enroll at: www.ewashtenaw.org/riversafe.
- **Rain Barrels ($3.01/quarter) –**
  - Rain barrels harvest and store water from your rooftop by collecting it from a gutter downspout. The stored runoff can be used for watering or other purposes that don't require drinking water. Rain barrels offer several advantages. Using the runoff for watering can reduce your water bill, be beneficial for your plants, and help rain percolate into the ground and recharge groundwater supplies.
- **Rain Gardens, Cisterns, or Drywells ($6.24/quarter) –**
  - Rain gardens are planted depressions of deep-rooted native vegetation designed to absorb excess rainwater runoff from a house or other impervious area with a purpose (besides being beautiful) of allowing rain water to pool in a low spot just long enough to percolate into the ground.
  - Cisterns are water management devices that provide retention storage volume in above or underground storage tanks. Cisterns are often larger than rain barrels, with some underground cisterns having the capacity of 10,000 gallons. Only one credit can be taken for utilizing a dry well or cistern.
  - Drywells are small excavated pits, backfilled with aggregate, and used to infiltrate "good quality" stormwater runoff, such as uncontaminated roof runoff. Drywells are not to be used for infiltrating any runoff that could be significantly contaminated with sediment and other pollutants, such as runoff from high potential pollutant loading areas and parking lot runoff. Only one credit can be taken for utilizing a dry well or cistern.

Q. How is the stormwater utility fee different from a tax? (What is a user-fee?)

The storm water utility fee is not a tax. It is a fee generated to maintain the stormwater utility system and fund the NPDES permit compliance. The stormwater utility is a user-fee, much like the fee that you pay for your water utility or sanitation service. Users of these services are charged based on the demand they place on the system. The stormwater that flows off your property places demand on a vast system of infrastructure which is costly to operate and maintain. Stormwater must be channeled through a system of pipes and other devices before it can be safely discharged into local rivers, lakes, and streams. A property's value does not affect runoff, so property taxes are not the most equitable way to pay for stormwater services. While a high-rise building and a shopping mall may have similar property values and similar taxes, the shopping mall probably produces more runoff due to more rooftops and more parking. So, the fee system equitably will ensure that the customer pays only for the runoff that they produce.

Q. Where can I go for more stormwater utility information?

If you would like additional information on the stormwater rate system, or have specific concerns about stormwater issues, visit www.a2gov.org/storm, email storm@a2gov.org, or call 734-794-6320.

Q. Is stormwater management required for my single family residential construction project?

On Nov. 4, 2010, City Council approved an ordinance (Ordinance No. ORD-10-36) to amend the stormwater code (Chapter 63) to require stormwater management on single and two-family residential properties when properties increase impervious area by 200 or more square feet. All grading permit applicants for projects creating new impervious areas must complete an impervious area worksheet and submit it to the Planning and Development Services Unit along with their grading permit application. If the new impervious area is greater than 200 square feet then stormwater management must be provided. If the new impervious area is less than 200 square feet then no further information is necessary to obtain a grading permit.

The amendments to Chapter 63 require control of stormwater runoff from the "first flush" storm event on single and two-family residential property when adding 200-square feet or more of impervious area to the property. The "first flush" is the runoff from the first inch of rain during any storm event and carries approximately 90 percent of pollutants. The new requirement would only apply to the increase in impervious area.

Single Family Residential storm water management information and forms:
www.a2gov.org/StormResidentialConstruction

For general permit questions, contact the City's Permit Desk at (734) 794-6267.

For questions about the Stormwater Code Requirement program, call Peter Stephens at (734) 794-6430 x42592 or e-mail PStephens@a2gov.org