Stormwater Management Program

The City of Woodway has developed our Stormwater Management Program (SWMP) to comply with State and Federal regulations and to improve the quality of life in our city. The SWMP contains activities to reduce the amount of pollution in the storm water that runs off to our waterways.

Urban storm water runoff is a serious concern. It is contaminated with pesticides, fertilizer, animal droppings, trash, food wastes, automotive by-products and other toxic substances that are part of our urban environment. Waters that flow over streets, parking lots, construction sites and industrial facilities carry these pollutants through a storm drain network directly to the lakes, streams and beaches of Texas.

History

The Environmental Protection Agency (EPA) Stormwater Phase II Final Rule was publicized in 1999 under the Clean Water Act (CWA). Phase II Final Rule requires NPDES permit coverage for stormwater discharges from certain regulated small Municipal Separate Storm Sewer System (MS4) (designated entities between 10,000 and 100,000 people or entities located in an urbanized area) and construction activity disturbing more than one acre of land. Under this rule, the EPA requires that operators of small MS4s to develop, implement, and enforce a Stormwater Management Program (SWMP) limiting the discharge of pollutants “to the maximum extent practical” to any waters of the United States.

In Texas, the EPA delegated full authority to issue permits for the Texas Pollutant Discharge Elimination System (TPDES) program to the Texas Commission on Environmental Quality (TCEQ). On August 13, 2007, under the provisions of Section 402 of the CWA and Chapter 26 of the Texas Water Code, TCEQ issued TPDES Phase II General Permit No. TXR040000 to discharge waste from small MS4s to waters of the United States. Based on the 2000 census from the U.S. Bureau of Census, the City of Woodway is designated as a small MS4 located within an urbanized area eligible for coverage under the Phase II General Permit No. TXR040000. The City of Woodway submitted the Stormwater Management Program (SWMP) and permit application (Notice of Intent, or NOI) to TCEQ and has obtained coverage under the Phase II General Permit No. TXR040000.

Stormwater Management Program

The City of Woodway has developed a Stormwater Management Program to reduce pollutants in the City’s stormwater system and to improve the water quality in the local lakes, creeks, and rivers.

The City's Stormwater Management Plan consists of Best Management Practices (BMPs) in six general categories listed below:

- Public Education and Outreach
- Public Participation and Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Storm Water Runoff Control
- Post Construction Storm Water Managment
- Pollution Prevention / Good Housekeeping for Municipal Operations

Goals of the Storm Water Program:

- To attain and protect the beneficial uses of water bodies in McLennan County;
- Raise citizen awareness of common daily activities, such as car maintenance and yard care, that can adversely impact water quality and to prevent those seemingly harmless activities from becoming causes of water pollution; thereby
- Reducing pollutants in storm water.

About Storm Water

The City of Woodway works to prevent pollution of our creeks and rivers from storm water and urban runoff through education and management.

What is storm water runoff?

Storm water runoff is water that flows after a rainfall. During rainstorms, water drains off driveways, parking lots and streets picking up pollutants while flowing to the storm sewer system. Once storm water enters the storm sewer system of inlets, pipes or channels, it flows downstream to the nearest creek, lake or river.

What is urban runoff?

Urban runoff also flows to the storm sewer system. Urban runoff is water from irrigation, over-watering, car washing and other sources that travel into the street picking up pollutants.

What is the difference between the storm sewer system and sanitary sewer system?

The water that goes down the sanitary sewer system (from sinks or toilets) flows to a wastewater treatment plant where it is treated and filtered prior to entering any water bodies.
The stormwater and urban runoff water that flows down driveways and streets and into the storm sewer system flows directly to our creeks, lakes and rivers. Anything that enters a storm sewer system is discharged untreated into the water bodies we use for swimming, fishing and providing drinking water.

The effects of pollution

Polluted storm water runoff can have many adverse effects on plants, fish, animals and people.

- Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow.
- Sediment also can destroy aquatic habitat. Bacteria and other pathogens can wash into swimming areas and create health hazards.
- Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels.
- Household hazardous wastes like insecticides, pesticides, paint, solvents, grease, used motor oil and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish or ingesting polluted water.
- Debris—plastic bags, six-pack rings, bottles and cigarette butts—washed into creeks and water bodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles and birds.
- Polluted storm water often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.

What can you do to help?

One way to get involved in protecting our water resources is through complaint reporting. City of Woodway residents are urged to be aware of what is going on in the community surrounding them. If you see excessive erosion or sediment escaping an active construction site, or if you witness an illicit discharge entering the storm sewer system, please call the Department of Community Services at 254-772-4050. The largest source of storm water pollution are pollutants such as litter, pet waste, pesticides, fertilizers, leaves and yard clippings, and automotive leaks and spills. These materials are swept away with the storm water and produce what is referred to as non-point source pollution. Harmful bacteria, chemicals, sediment, and

litter enters or blocks the storm drain and leads to flooding, impaired water quality and endangers the health and habitat of local wildlife.

MS4 Annual Reports

On April 10, 2007 the City of Woodway adopted a Flood Mitigation Plan to create a strategy for implementing flood mitigation measures for the community. The plan identified several items for floodplain planning that the city has worked on implementing. These items include:

- Minimize losses due to flooding and achieve a balance between natural open space and improvements for drainage
- Preserve and protect unique open spaces, river corridors, drainage corridors and green spaces within the City and its Extraterritorial Jurisdiction
- Develop a network of pedestrian and bicycle ways for hiking and cycling throughout Woodway

Each year a report is required as part of the City's annual recertification process and must be provided for review by TCEQ and made available to the public. The report will be produced on the City's web page to facilitate this requirement.

- **MS4 2014 Annual Report**
- **MS4 2013 Annual Report**
- **MS4 2012 Annual Report**
- **MS4 2011 Annual Report**
- **MS4 2010 Annual Report**
- **MS4 2009 Annual Report**
- **MS4 2008 Annual Report**
- **MS4 2007 Annual Report**

Storm Water Quality Outreach

Avoiding storm water pollution takes everyone in the community to play his or her part in preventing pollutants from entering storm drain inlets where they live and work. You can help prevent storm water pollution by becoming more aware of the issue, stopping harmful leaks and spills and reporting ones you see.

In April of 2007, the City of Woodway unveiled the BEE Program, a new and innovative form of public outreach. BEE, or Woodway Environmental Education, was created to offer comprehensive community education focusing on the important environmental issues of litter, water conservation, stormwater pollution and solid waste management.

Improving Our Water Quality

What can you do?

As a resident or business owner in Woodway, here are a few ways you can help keep our water resources clean and plentiful.

In My Yard?

- Applying fertilizer just before a storm is a big misconception. Fertilizer needs a day or two to sit. Otherwise, it will simply wash away into a storm drain where it negatively impacts the water quality and the environment. Follow the package instructions and apply only the amount indicated for your lawn's size.
- Never use motor oil, gasoline, or kerosene to kill weeds and insects. These substances eventually wash away into our water resources.
- Use pesticides as a last resort and try less toxic alternatives. Some insects are actually a good thing.
- Plant native or adaptive plants. Texas Smartscape plants require less water and maintenance to thrive; and because they grow well in Texas, they rarely need help from pesticides.
- Use a cycle and soak method when watering your lawn. Our region's predominate clay-like soil does not absorb water quickly. Add an hour between several shortened watering cycles to allow the water you are applying ample time to soak in rather than wastefully running off.

- Bag and dispose of your pet's waste in a garbage can. Pet waste that remains on the lawn contains harmful bacteria that can wash into our waterways and ultimately our water recourses. Pet waste is not a good fertilizer for your lawn.
- Sweep and collect your yard trimmings into a large paper bag designed for yard waste. Never wash your yard trimmings into the street or in a storm drain. Clean storm drains help prevent localized flooding.
- Use a rain barrel to harvest the rain from your rooftop. You can collect and store the rain from a downspout in a collection device to use it on a future, sunnier day.

With My Car?

- Washing your car in the driveway allows soapy water to enter our water resources, but also oil, dirt and grime.
- Another alternative is taking your car to car washing facility where the water is recycled before and later sent to the sanitary sewer system for treatment.
- Repair your vehicle leaks as soon as possible to contain the negative impact that car fluids can have on the environment.
- Dispose or recycle your used oil, oil filters, and antifreeze at an auto service center where these items are collected. Your used motor oil and filters can be collected once a year during the City's "Household Hazardous Waste" collection event.
- Car batteries can be recycled at most of the automotive businesses or where car batteries are sold. There may be a fee for the service.
- Store any automotive parts in an area protected from the rain. This keeps remnants of oil and grease away from the ground and out of our storm drains.

On My Boat?

- Take extra precaution when using gasoline to avoid spilling it on the ground or in the water.
- Never toss your trash into the water. Decomposing litter is harmful to water quality and wildlife. Monofilament fishing line and plastic six-pack rings are particularly harmful to aquatic and bird life.
- Be sure to check your boat engine regularly and fix oil leaks promptly.
- Rather than using soap, rinse and scrub your boat with a brush. When soap is absolutely necessary, try using a phosphate-free and non-toxic soap in moderation. Plan ahead and consider places where you can wash your boat to avoid soapy water from entering and contaminating water resources.

- If you are removing paint from your boat's hull, catch the scrapings in a drop cloth, or sweep and throw them away in the trash. Bottom paints may contain copper or tin which are extremely toxic to aquatic life and water quality.

Illicit Discharge Detection and Elimination

Best Management Practices (BMPs) in this category are designed to eliminate substances other than storm water from entering the City's storm drainage system. Our storm drain system is designed to carry storm water only, and it is illegal to put any other substances in the storm drains.

Woodway's Storm Water Management Program contains three BMPs in the Illicit Discharge Detection and Elimination category including:

- Detection
- Elimination
- Measureable Goals

Things that commonly make their way into the storm drain either accidentally or deliberately are automotive fluids such as used motor oil and antifreeze, paint, grass clippings, and trash. Sometimes plumbing is improperly connected to the storm drain system which allows sanitary waste, grey water or industrial wastewater to enter the storm drain system. The discharge of water from these sources can be very damaging to streams and lakes and can lead to fish kills. If discharged to lakes used as a drinking water source or for recreation, these discharges can also be harmful to humans and can spread diseases. For these reasons, the City is aggressively implementing BMPs to detect and eliminate illegal discharges.

Construction Site Storm Water Runoff Control

Land Clearing and Construction Activities

Why is it important to monitor construction activities?

Dirt, materials and trash from construction and/or land clearing activities can be washed into the City's drainage system. Remember, the drainage system is not a treatment system. These pollutants flow directly to local waterways where they can have a negative impact on water quality.

So, what's the solution?

The solution is to keep dirt and trash on your site by having an adequate plan and simple devices in place to contain runoff.
The City of Woodway prohibits the discharge of pollutants to the City's storm drain system. In order to comply with the Stormwater Management Plan, if your site meets certain criteria, you may need to apply for a Grading Permit and possibly a **(TPDES) Construction General Permit.**

The Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit went into effect on March 5, 2003. The Texas Commission on Environmental Quality (TCEQ) is the permitting authority. The permit authorizes the discharge of stormwater associated with both large (greater than 5 acres) and small (greater than 1 acre but less than 5 acres) construction sites.

Construction Stormwater Management

Best Management Practices (BMPs) in this category are designed to address storm water runoff from construction sites that are 1 acre or larger. Construction site operators are required by the Texas Commission on Environmental Quality (TCEQ) to develop a Storm Water Pollution Prevention Plan (SWPPP) and comply with regulations contained in the Construction General Permit. The City is required to implement ordinances and procedures to ensure that construction site operators comply with State regulations.

Often construction of a site begins with the removal of vegetation and grading of the site in preparation for building. In the case of sub-division development, large areas of bare soil may be exposed to rain during the construction phase. The lack of ground cover makes these sites especially vulnerable to soil erosion. Sediment laden water may be washed off-site and into streets, storm sewers, ponds, streams, and lakes,

making the water cloudy. Besides poor visibility, the sediment prevents sunlight from reaching the aquatic plants and smothers bottom-dwelling insects and fish.

Post Construction Storm Water Management

Best Management Practices (BMPs) in this category address storm water runoff from areas of new development and redevelopment. Unlike the temporary BMPs during construction, post-construction BMPs are permanent and are used to control pollution after construction is completed. Post-construction BMPs should be incorporated into development projects and provide for the long-term operation and maintenance of post-construction BMPs.

Numerous studies have documented that storm water runoff from developed areas contributes significant amounts of pollution to lakes and streams. The increase in impervious surfaces such as rooftops, roads, and parking lots can increase urban runoff and have a detrimental impact on aquatic ecosystems due to increased concentrations of sediment, nutrients, pesticides, heavy metals, pathogenic bacteria, and petroleum hydrocarbons. The best way to reduce the negative effects of storm water from new development is to use BMPs to treat, store, and infiltrate runoff onsite before it can affect downstream waterbodies. Innovative site designs that reduce impervious area and low impact development practices may be used to reduce storm water runoff and improve water quality.

The City of Woodway will inspect construction sites during construction and after construction has been completed to assure compliance with the Stormwater Management Plan. Please be aware that construction owners and operators will need to allow an Inspector of the City ready access for the sole purpose of inspection, surveillance and monitoring for the following:

- Access to NOI, Site Notice (i.e. Small or Large) and Stormwater Pollution Prevention Plan (SWPPP or SWP3) or Erosion Control Plan (ECP
- Evaluation of Best Management Practices (BMP's)
- Illicit connections and discharge
- Overall compliance with City and State TPDES stormwater discharge permit

The City will inspect the construction site periodically or as requested upon complaint.

Storm Water Frequently Asked Questions

The following frequently asked questions (FAQ) and answers have been designed to provide information to customers on the Storm Water Management Program:

Q: What is storm water?

A: Storm water is rain that does not absorb into the soil and runs off buildings, roads and other surfaces into storm water systems, streams, creeks and rivers.

Q: What is a Storm Water Management Program (SWMP)?

A: A SWMP is a plan that outlines how a city will reduce stormwater pollution. A SWMP consists of Best Management Practices that are grouped into six categories.

- Public Education and Outreach
- Public Participation and Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Storm Water Runoff Control
- Post Construction Storm Water Management
- Pollution Prevention / Good Housekeeping for Municipal Operations

Q: Why all the recent fuss about stormwater?

A: The Federal Clean Water Act requires large and medium sized towns across the United States to take steps to reduce polluted stormwater runoff. The law was applied in two phases. The first phase addressed large cities. The second phase, often referred to as ”Phase II,” requires medium and small cities, fast growing cities and those located near sensitive waters to take steps to reduce stormwater. These laws require chosen cities to create a **Stormwater Management Plan** to meet the requirements in the City’s permit.

Q: Why did the City of Woodway develop a SWMP?

A: The City of Woodway developed a Storm Water Management Program (SWMP) to comply with State and Federal regulations and improve the quality of life in our city. The City’s SWMP contains activities or Best Management Practices (BMPs) to reduce the amount of pollution in the storm water that runs off into our streams.

Q: What is a Municipal Separate Storm Sewer System (MS4)?

A: The regulatory definition of an MS4 (40 CFR 122.26(b)(8)) is “a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made

channels, or storm drains): (i) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created to or pursuant to state law) including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States. (ii) Designed or used for collecting or conveying stormwater; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2."

In practical terms, operators of MS4s can include municipalities and local sewer districts, state and federal departments of transportation, public universities, public hospitals, military bases, and correctional facilities. The Stormwater Phase II Rule added federal systems, such as military bases and correctional facilities by including them in the definition of small MS4s.

Q: What types of pollution are found in stormwater?

A: Some of the most common contaminants that are found in stormwater are listed below. For more information see About Storm Water.

- Sediment from eroded soil and construction sites
- Excess nutrients from lawn fertilizers
- Excess organic matter from leaf and grass clippings
- Bacteria and disease causing organisms from pet waste or raw, untreated sewage
- Debris /Trash such as plastic bags, cans, bottles, and cigarette butts
- Household chemicals like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids
- Metal particles deposited on roadways from automobiles

Q: Are sewers and storm drains the same thing?

A: No. They are two completely separate drainage systems. Effluent in the sewer system receives extensive and thorough filtration prior to being discharged. The storm drain system on the other hand, receives no filtration whatsoever, and discharges directly into the local creeks untreated.

Q: Why doesn't the City build a stormwater treatment facility?

A: Such a facility would be extremely costly to build and maintain. And, the massive amount of water coming through the facility during a rainstorm would easily overtax the system.

Q: If it only affects streams and creeks, why should I care?

A: Streams and creeks feed into rivers, lakes and eventually the ocean. We all drink water, so we are all affected when our water is polluted. When water treatment costs rise, the price of drinking water goes up. If you like to fish, swim or boat, you may have heard or been affected by advisories warning you not to swim, fish or boat in a certain area because of unhealthy water or too much algae. Shellfish like clams, oysters, and shrimp cannot be harvested from polluted waters, so anyone that enjoys these foods or makes a living from the shellfish industry is affected. Money made from tourism and water recreation can also be impacted, as are businesses and home flooded by stormwater runoff. When we pollute our water, everyone is affected!

Q: Can I dispose of used motor oil on the ground or in the garbage?

A: NEVER dispose used motor oil on the ground; in a ditch, creek, river, or lake; in a storm drain; or in the garbage. It's against the law. Texas law prohibits dumping used oil on land or into sewers or waterways. Texas has also banned used oil filters from being placed in or accepted for disposal in a landfill.

Q: Why is used motor oil so harmful?

A: One oil change – improperly disposed and not recycled – can contaminate one million gallons of fresh water, which is a year's supply for 50 people.

Q: What are Household Hazardous Chemicals?

A: Many common household chemicals are dangerous to our kids, pets, and the environment. These materials may pollute our waterways if washed or dumped into storm drains or roadside ditches that lead directly to our streams and lakes. Household cleaners, pesticides, gasoline, antifreeze, used motor oil, and other hazardous products should to be labeled, stored, and disposed of properly.

Q: Can leaves and grass clippings go in the storm drain?

A: No. Even though leaves and grass are natural and biodegradable, these organic materials consume oxygen when they decompose and remove dissolved oxygen from the water. Fish and other aquatic organisms require oxygen and will die in the absence of oxygen.

Q: Who do I call if I see anyone illegally dumping into the storm drain?

A: Call the City of Woodway's Department of Community Services and Development at 254-772-4050 to submit an anonymous report if you observe any of the following:

- Illegal dumping of trash and debris along roadways or in creeks
- Leaking automobiles
- Concrete dumped in the street or storm drain
- Paint dumped in storm drain

- Motor oil dumped in storm drain
- Sediment runoff from construction sites
- Yard clippings blown or swept into storm drains
- Sewage or septic tank leaks

Q: I am looking for volunteer opportunities. How can I become involved in storm water management activities?

A: Stream cleanup projects are a great way to improve aquatic habitat, water quality, and aesthetics while promoting storm water awareness. The City continuously encourages volunteer organizations to participate in stream cleanup or to help glue markers on storm drain inlets. Individuals, businesses, civic organizations, Girl/Boy Scout troops, schools, neighborhood and homeowner associations are invited to participate in these efforts.

Q: What does impervious mean?

A: Impervious is defined as a surface that does not absorb water. Several examples of impervious areas include asphalt or concrete pavement, parking lots, driveways, sidewalks and buildings.

Q: What are some of the city's challenges in managing storm water?

A: As rain falls on undeveloped areas, it is primarily absorbed into the ground or slowly runs off into streams, rivers or other bodies of water; however, development including buildings and paved areas blocks the water from being absorbed. Having a storm water management program allows the city to better maintain the drainage system. The primary storm water management challenges include:

- Increased sources of storm water pollution
- Erosion along creeks and streams
- Sedimentation in water ways
- Localized flooding
- Debris in creeks and streams
- Maintaining infrastructure

Storm water can carry contaminants such as plastic bags, detergents, heavy metals and pollution that can be harmful to the environment. In addition, erosion can contribute to the contaminants in storm water runoff, as well as damage residential and commercial property. Debris that is swept into creeks and waterways during storm events can prevent the proper movement of storm water, increasing the risk of flooding.