

KEEPING OUR RIVERS CLEAN: MANAGING STORMWATER POLLUTION

River Facts

- 1** Comal Springs are the largest springs in the southwestern United States.
- 2** The Comal River is the shortest river in Texas.
- 3** Four endangered species live at the headwaters of the Comal River.
- 4** Stormwater runoff drains to our rivers and creeks with little or no treatment.
- 5** Pet waste is a significant source of bacteria and nutrients to surface waters.
- 6** NBU uses water from the Guadalupe River to supply the residents of New Braunfels.

WHY IS IT IMPORTANT TO MANAGE STORMWATER POLLUTION IN NEW BRAUNFELS?

Residents of New Braunfels are fortunate to have aquatic resources such as the Comal and Guadalupe Rivers. Our rivers are utilized for recreational activities such as fishing, tubing, & swimming. In addition, our rivers provide a valuable water supply for New Braunfels and provide habitat for federally-listed endangered aquatic species such as the Fountain Darter, Comal Springs Riffle Beetle, and the Comal Springs Dryopid Beetle.

Stormwater runoff flows into our rivers and creeks with little or no treatment. Therefore, it is important to minimize the amount of pollutants that are washed into our rivers and creeks during rain events. Managing stormwater pollution will help to ensure that our rivers and creeks remain clean for ourselves and for generations to come.

WHAT IS STORMWATER RUNOFF?

Stormwater runoff occurs when rain flows over the ground surface. In natural areas, a large portion of rain soaks into the ground surface. Impervious surfaces such as parking lots, streets and driveways increase the amount of runoff by reducing the amount of rain that is able to soak into the ground surface.

HOW DOES STORMWATER RUNOFF BECOME POLLUTED?

As stormwater runoff flows over the ground surface, it is able to pick up materials and debris it comes into contact with. Common pollutants found in stormwater runoff include sediment (dirt), nutrients from fertilizers, oil and grease, chemicals, and yard debris.

THE EFFECTS OF STORMWATER POLLUTION

Polluted stormwater runoff can have negative impacts on fish, plants, animals, and people.



Bacteria and other pathogens can wash into creeks and rivers making it unsafe to swim.



Sediment can wash into waterways causing the water to become cloudy making it difficult for aquatic plants to grow. Excessive sediment accumulations can destroy other aquatic habitats.



Nutrients such as nitrogen and phosphorus can cause algae blooms. When algae dies, it decomposes and uses up oxygen in the water. Algae blooms are also visually unappealing.



Debris and litter, such as six-pack holders, plastic bags, and plastic bottles can injure or kill birds, ducks, and fish.



MINIMIZING STORMWATER POLLUTION: WHAT CAN YOU DO TO HELP IMPROVE WATER QUALITY?

Ten things you can do to reduce stormwater pollution:

- 1 Pick up after your pet. Dispose of waste properly.
- 2 Use fertilizers and herbicides sparingly.
- 3 Do not dump anything into a storm drain!
- 4 Avoid feeding wildlife such as deer, geese, and ducks.
- 5 Vegetate bare spots in your yard.
- 6 Check your vehicle for oil and fuel leaks. Repair leaks ASAP!
- 7 Wash your car at the car wash instead of at home.
- 8 Inspect and pump your septic system regularly.
- 9 Don't litter! Pick-up litter and trash.
- 10 Dispose of household hazardous waste at designated collection locations.

MINIMIZING STORMWATER POLLUTION IN RESIDENTIAL AREAS

Lawn Care	Septic Systems	Pet Waste	Auto Care
<ul style="list-style-type: none">Excess fertilizers, pesticides & herbicides can be carried by stormwater runoff into our creeks and rivers.Use fertilizers, pesticides & herbicides sparingly!Compost yard waste such as leaves and lawn clippings. Never rake into the streets or into storm drains.	<ul style="list-style-type: none">Leaking and poorly maintained septic systems can release pathogens, such as bacteria & viruses, and nutrients that can be washed into waterways during storm events.It is recommended that your septic system be inspected & pumped every 3-5 years.Don't dispose of household hazardous waste in sinks or toilets.	<ul style="list-style-type: none">Can be a significant source of bacteria to our rivers and creeks.Always pick up after your pet!Dispose of pet waste in the toilet or in the garbage.	<ul style="list-style-type: none">Washing your car at home can result in soaps and detergents being washed into the storm drain system.Dumping automotive fluids such as oil and anti-freeze into the storm drain is the same as dumping it directly into a river or creek.Wash your car at a commercial car wash.Check for and repair auto leaks ASAP.

MINIMIZING STORMWATER POLLUTION IN COMMERCIAL AREAS

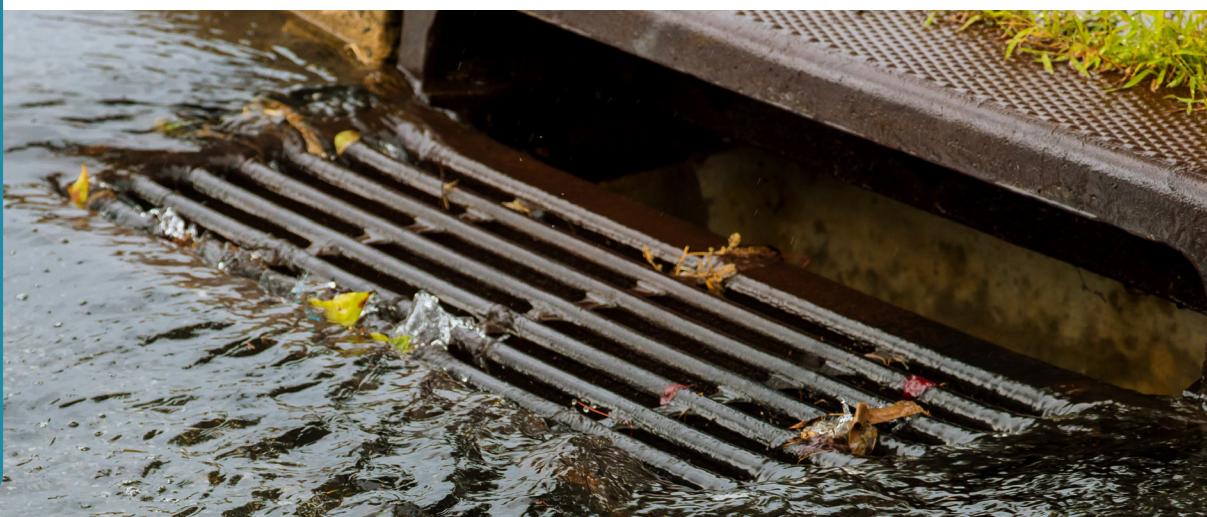
Dirt, oil, and debris that collect in parking lots, sidewalks, and roads can easily be washed into storm drains and waterways.

- Report fuel or chemical spills to the City of New Braunfels.
- Cover trash dumpsters and used oil bins!
- Clean-up debris, oils, & litter from roads, sidewalks, and parking areas to prevent them from reaching our waterways.

MINIMIZING STORMWATER POLLUTION AT CONSTRUCTION SITES

Construction sites have the potential to contribute large volumes of sediment and other pollutants to our creeks and rivers.

- Utilize erosion control devices to minimize sediment discharges.
- Maintain installed erosion control devices to ensure optimal performance.
- Keep existing vegetation in place to the maximum extent practicable.
- Avoid disturbing more area than necessary when clearing a construction site.





MANAGING STORMWATER POLLUTION: WHAT IS THE CITY OF NEW BRAUNFELS DOING?

In order to manage stormwater pollution and protect water quality in the Comal River, Guadalupe River, Dry Comal Creek, and Blieders Creek watersheds, the City of New Braunfels has developed a Stormwater Management Plan (SWMP). The SWMP includes stormwater pollution management measures such as Public Education & Outreach, Illicit Discharge Detection & Elimination, Construction Site Stormwater Management, Stormwater Management Measures in Areas of New Development, and Pollution Prevention for Municipal Operations. A description of each stormwater management measure is included below.

- 1.** **Public Education & Outreach:** The City of New Braunfels will implement a public education program to inform the community about the impact of stormwater discharges on water quality, hazards related to illegal discharges & dumping, improper disposal of waste, & steps that the public can take to reduce pollutants in stormwater. The City will also hold events to involve the community in stormwater planning and education efforts.
- 2.** **Illicit Discharge Detection and Elimination:** The City of New Braunfels will develop, implement, and enforce a program to detect and eliminate illicit discharges. The program includes mapping of the storm sewer system, screening stormwater outfalls to detect pollutant discharges, tracking and elimination of illicit discharges, and establishment of a city ordinance prohibiting illicit discharges.
- 3.** **Construction Site Stormwater Management:** The City of New Braunfels will develop, implement, and enforce a program to reduce pollutants in stormwater runoff associated with construction activity. The program will include review of site plans to assess for adequate stormwater controls, routine inspections of active construction sites, and establishment of a city ordinance to require erosion and sediment controls.
- 4.** **Stormwater Management in Areas of New Development:** The City of New Braunfels will address stormwater pollution in areas of new development by developing & implementing permanent stormwater BMPs, inspecting existing stormwater controls, such as retention basins, to ensure adequate operation, maintaining City-owned stormwater BMPs, and establishing a ordinance to address post-construction stormwater runoff.
- 5.** **Pollution Prevention and Good Housekeeping for Municipal Operations:** The City of New Braunfels will develop and implement an operation and maintenance program to prevent and reduce pollutant runoff from municipal operations. The City will adopt and implement stormwater management policies and procedures designed to protect water quality. This program will include employee stormwater management training and routine inspections of City-owned facilities to identify and address stormwater concerns.

For additional information, or to report a spill or other water quality concern, please contact the City of New Braunfels' Watershed Team at (830) 221-4020 or visit our website at www.nbtexas.org/watershed

