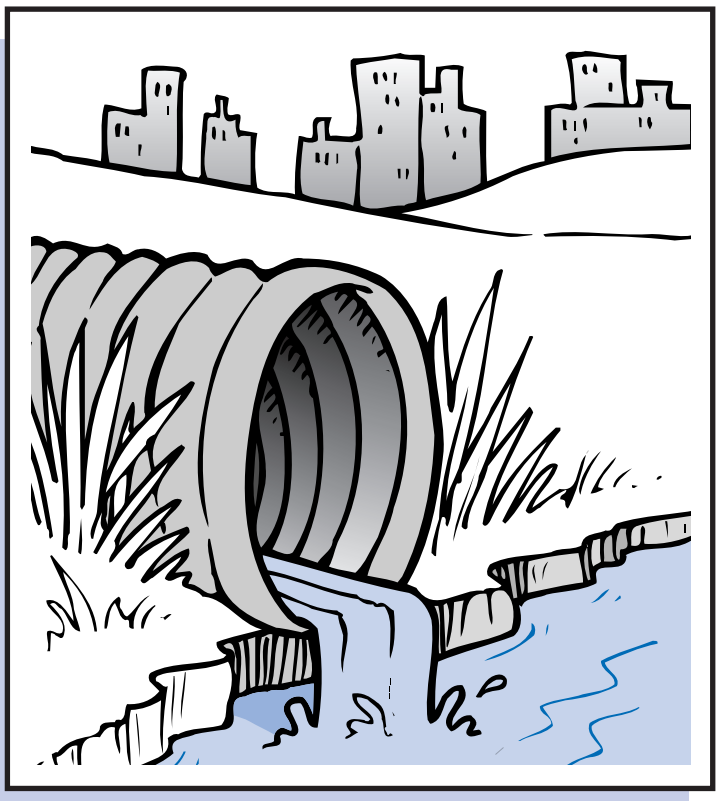
Austell Public Works

Community Partners for Healthy Streams

SERIES #2: STORMWATER SYSTEMS

SERIES #2: Maintaining Engineered Stormwater Controls



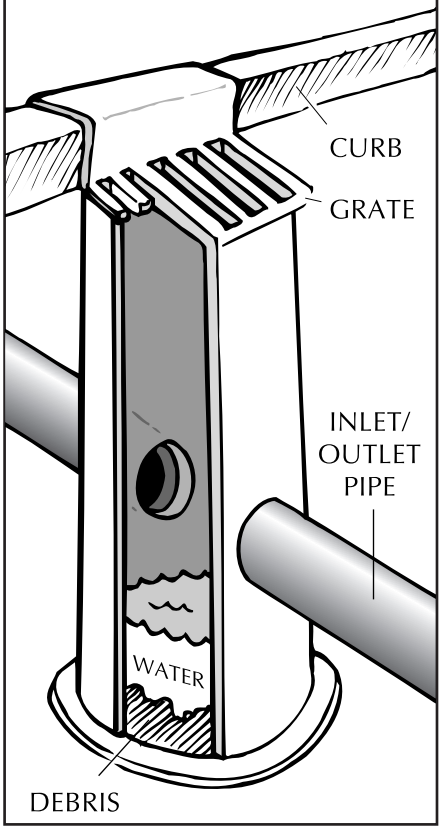
Community Partners for Healthy Streams is a cooperative effort between the Austell Public Works and local business community.

Catch Basin Care

Why be concerned?

Catch basins are structures located where surface water enters a storm drain or where pipes intersect. Their main function is to collect runoff and convey it into the stormwater management system. Many are also designed to let sediment and other debris settle into a storage area at the bottom of the catch basin. This helps prevent debris from flowing into the drainage system.

It's important to maintain catch basins. In addition to preventing storm sewer blockages, proper maintenance prevents accumulated pollutants from being stirred up during storms and washed through the system into rivers and streams.



Removing Debris from Storm Drain Grates

Storm drain grates can become clogged with litter or leaves, especially in the spring and fall. Regular inspection and removal of debris can help prevent blockages that can lead to localized flooding as well as downstream pollution.

The Importance of Regular Inspections

If you own or maintain a business site, inspect catch basins at least twice a year to see if they need cleaning. Regular inspection and cleaning prevents debris from accumulating in the outlet pipe, and reduces maintenance expense.

To find out how much material has accumulated in the storage area of your catch basin, insert a long, thin probe into the storm drain grate. Notice where the probe hits the debris and continue probing to the bottom to estimate how deep the accumulation is.

Cleaning Catch Basins

Catch basins should be cleaned out before the storage area is half full. Once this level is reached, solids begin to be washed out in rain storms. Cleaning should be done in the spring, after the first large snow melt, in the fall, after the trees have shed their leaves, and additionally if needed.

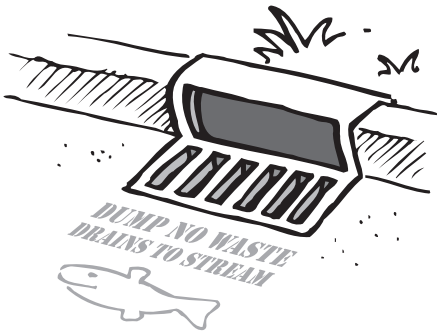
If the catch basin is shallow enough you may be able to clean it out yourself with a shovel and bucket. Be careful not to drop the basin's cover down the opening when you remove it — it can be extremely hard to retrieve. If you can't perform your catch basin maintenance, professional services are available. For assistance identifying contractors, contact one of the agencies listed under "Getting Help."

Disposing of Excavated Material

Solids removed from catch basins may be high in pollutants such as oil, metals, chemicals, nutrients, and bacteria. To determine how to properly dispose of these solids, contact the waste disposal facility where you expect them to be taken. Hiring a professional service to maintain your catch basins can help to ensure that solid wastes are properly disposed.

Stenciling Your Storm Drains

Stenciled or decal messages applied with adhesive that read *Dump No Waste, Drains to Stream* are a good reminder that nothing but water belongs down a storm drain. Austell Public Works Stormwater Management will lend stencils or provide decal resources for use by program participants.



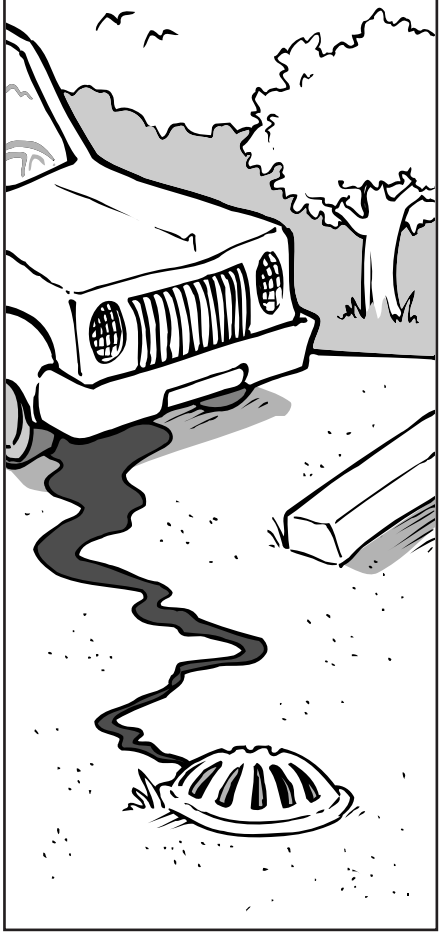
GETTING HELP

Austell Public Works
Stormwater Management.....(770) 944-4325

Oil/Water Separators

Why be concerned?

If allowed to enter a river or stream, one quart of oil can contaminate up to two million gallons of water! In addition, it is *illegal* to dump oil into any stream. The penalties are costly. When the source of an oil spill can be tracked, the responsible business is liable for clean-up costs.



The First Step: Eliminate Oil at its Source

Oil/water separators aren't designed to receive large amounts of oil and don't remove all oil from stormwater before it's discharged. Therefore, it's important to eliminate oily runoff at its source. (For example, promptly repair oil leaks on company vehicles.)

What is an Oil/Water Separator?

Oil/water separators are designed to remove sediment, oil and grease from stormwater runoff. They're used in areas with heavy traffic or high potential for petroleum spills, such as parking lots, gas stations, and loading areas.

Oil/water separators are usually located close to potential pollutant sources, so they can remove contaminants before runoff enters the storm water system. Two of the more commonly used designs are:

- Simple oil/water separators, which are structures with a T- or elbow-shaped pipe that traps floating pollutants.
- American Petroleum Institute (API) separators, which consist of long vaults with baffles. The baffles slow down the water, increasing the opportunity for oil to float to the surface and for heavy pollutants to settle out.

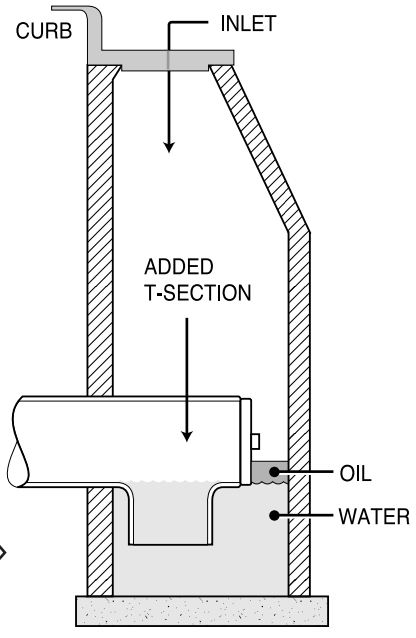
Installing an Oil/Water Separator

Oil/water separators are an effective pollution control device for:

- gas stations
- car repair shops
- fleet vehicle yards
- heavy equipment storage and maintenance facilities

If you store or transfer liquid materials, it's a good idea to have an oil/water separator. An existing catch basin can be converted into a simple oil/water separator simply by adding a T- or elbow-shaped section of pipe. There needs to be at least one foot between the bottom of the pipe and the bottom of the catch basin to provide space for sediment to accumulate. If you use an elbow-section, be sure that it's removable so the catch basin can be cleaned as needed.

HOW TO TURN YOUR CATCH BASIN INTO A SPILL CONTROL OIL/WATER SEPARATOR:



Maintaining Your Oil/Water Separator

Oil/water separators can't function properly unless they're regularly maintained. To ensure that separators are properly maintained, it's a good idea to hire a professional service. (Don't use a septic tank cleaning service; there's no legal environmentally safe way for them to dispose of oily wastes.) No matter who performs your maintenance, make sure that wastes are taken to a licensed treatment facility, where the oil will be further separated for recycling.

If you choose to perform your own maintenance, follow these general guidelines:

Simple oil/water separators: Clean simple separators immediately after every spill. For routine maintenance, clean them as you would a regular catch basin (when deposits fill half of the area between the bottom of the catch basin and the bottom of the pipe).

API oil/water separators: Regularly clean each chamber. Failure to do so will cause previously trapped pollutants to be resuspended and discharged.

To determine an appropriate cleaning schedule, inspect separators after several rain events and note the amount of collected residue. At the very least, separators should be cleaned twice a year. Continue to inspect separators on a regular basis to ensure that cleaning schedules are adequate.

Replace dirty standing water with clean water to prevent oil from being washed out of the separator. Since it could be explosive, standing water that's been removed must be handled as a hazardous waste.

If your separator has oil absorbent pads, replace them in the spring, in the fall, and additionally, if needed. If your separator doesn't have oil absorbent pads, consider putting them in. By maintaining the pads you can reduce or eliminate the need to clean out the entire oil/water separator.

For more information about installing and maintaining oil/water separators, contact one of the agencies listed under "Getting Help."

GETTING HELP

Austell Public Works
Stormwater Management.....(770) 944-4325

AUSTELL PUBLIC WORKS
COMMUNITY PARTNERS FOR HEALTHY STREAMS - FACT SHEET NO. 2.3

Maintaining Stormwater Management Systems

SERIES #2: STORMWATER SYSTEMS

Why be concerned?

The importance of maintaining stormwater management systems can't be overemphasized. Even well designed drainage systems that are not maintained will eventually stop functioning properly and lose the ability to control flooding and remove pollutants from stormwater.

Maintaining Your Detention System

Retention ponds are designed to store stormwater runoff without releasing it (except through evaporation, soil infiltration, or emergency bypass). **Detention** ponds are designed to store stormwater runoff and release it at a controlled rate to systems that ultimately lead to rivers and streams. In order to function properly, retention and detention systems must be rigorously maintained. Your system may have special maintenance requirements; however, in general:

- Maintain thick, native vegetation around ponds to slow and filter stormwater before it enters them. Avoid mowing lawn to the water's edge.
- Regularly remove accumulated sediment and debris, especially around outflow control devices.
- Regularly check and clean inlet sedimentation basins to ensure that there's sufficient storage volume for proper function.
- Inspect the entire system at least once a year. If possible, inspections should be carried out by a professional engineer.
- Immediately repair or replace any damaged or defective structural components.

Herbicide-Free Algae Control

Herbicides and algicides used to control plant growth in ponds can pollute both detention ponds and waters downstream. Algae and aquatic plants can be controlled by limiting the input of nutrients (such as fertilizers, leaves and lawn clippings) and providing aeration.

Developing and Implementing a Maintenance Plan

A plan will help to expedite proper maintenance. Plans will vary, depending on the business and site; however every plan should contain the following:

1. A delineation of all stormwater management facilities (including maintenance access and vegetated buffer areas).

2. Provision for the routine and non-routine inspection of every component within the system. A professional engineer should be retained to inspect structural facilities and to conduct emergency inspections.

3. A list of the tasks required to maintain each component of the stormwater management system and a schedule for completing these tasks. This should include both preventative and corrective activities.

4. The party responsible for performing each of the maintenance activities described.

5. A description of on-going landscape maintenance needs, including soil erosion control.

For help determining how to maintain your system, call Austell Public Works Stormwater Management or one of the other agencies listed under "Getting Help."

GETTING HELP

Austell Public Works
Stormwater Management.....(770) 944-4325

Community Partners for Healthy Streams Fact Sheets

SERIES #1 - HOUSEKEEPING PRACTICES

Fact Sheet 1.1 ..... Storing Materials and Wastes
Fact Sheet 1.2 ..... Preventing and Cleaning Up Spills

SERIES #2 - MAINTAINING ENGINEERED STORMWATER CONTROLS

Fact Sheet 2.1 ..... Catch Basin Care
Fact Sheet 2.2 ..... Maintaining Stormwater Management Systems
Fact Sheet 2.3 ..... Oil/Water Separators

SERIES #3 - MAINTAINING EQUIPMENT AND VEHICLES

Fact Sheet 3.1 ..... Storing and Maintaining Equipment and Vehicles
Fact Sheet 3.2 ..... Washing Equipment and Vehicles

SERIES #4 - MAINTAINING BUILDINGS AND PAVEMENT

Fact Sheet 4.1 ..... Outdoor Pressure Washing
Fact Sheet 4.2 ..... Maintaining Building Facades
Fact Sheet 4.3 ..... Maintaining Paved Areas
Fact Sheet 4.4 ..... Using and Storing Deicing Systems
Fact Sheet 4.5 ..... Cooling Water Systems

SERIES #5 - MAINTAINING LANDSCAPES

Fact Sheet 5.1 ..... Maintaining Healthy Lawns, Shrubs and Trees
Fact Sheet 5.2 ..... Using Fertilizer
Fact Sheet 5.3 ..... Integrated Pest Management
Fact Sheet 5.4 ..... Using Pesticides

SERIES #6 - SITE DESIGN AND CONSTRUCTION

Fact Sheet 6.1 ..... Designing Landscapes for Water Quality
Fact Sheet 6.2 ..... Designing Stormwater Management Systems
Fact Sheet 6.3 ..... Clearing and Grading Land

SERIES #7 - MANAGING WASTES

Fact Sheet 7.1 ..... Minimizing Waste
Fact Sheet 7.2 ..... Recycling
Fact Sheet 7.3 ..... Waste Disposal

SERIES #8 - EDUCATION

Fact Sheet 8.1 ..... Education and Community Leadership

SERIES #9 - FATS, OILS AND GREASE

Fact Sheet 9.1 ..... Food Service Industry Fats, Oil and Grease Recycling/Proper Disposal

SERIES #10 - PRESCRIPTION DRUG AND PERSONAL CARE PRODUCTS

Fact Sheet 10.1 ..... Prescription Drug and Personal Care Product Disposal

Austell Public Works STORMWATER Management

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Austell Public Works
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5000 Austell-Powder Springs Road, Suite 133
Austell, GA 30106