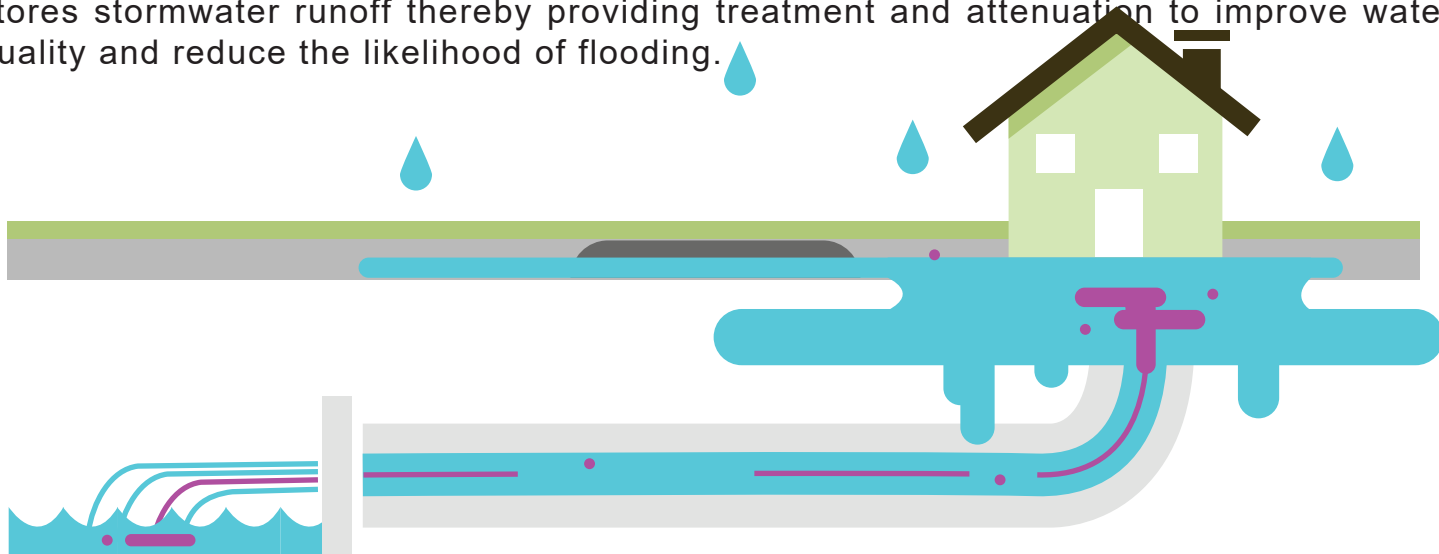


# STORMWATER TREATMENT

## What is Stormwater?

Simply put, stormwater is water from a storm. In Florida, stormwater is most often produced from excess rainfall. Excess rainfall, which is rainfall that is unable to infiltrate into the ground, is called stormwater runoff. In heavily developed areas, impervious surfaces such as streets, parking lots, driveways and roofs prohibit rainfall from infiltrating which can result in large influxes of stormwater runoff that must be managed by the stormwater management system. The stormwater management system is a network of swales, ditches, inlets, pipes and ponds that collects, conveys and stores stormwater runoff thereby providing treatment and attenuation to improve water quality and reduce the likelihood of flooding.



## What is Stormwater Pollution?

As stormwater flows over driveways, parking lots, streets and lawns, it picks up pollutants along the way. These pollutants can include fertilizer, pesticides, litter, automobile fluids, yard debris and other unfriendly elements. Across a watershed these pollutants add up and can cause or contribute to poor water quality in our local water resources.



## Purpose and Types of Stormwater Ponds

Stormwater facilities, often referred to as stormwater ponds, are designed to capture stormwater runoff and then treat and release cleaner water. This treatment process occurs through a combination of physical, chemical and biological processes depending on the type of stormwater facility and its specific design.

In Tallahassee there are two general types of stormwater treatment facilities; detention facilities which are those that capture, hold (detain), treat and release stormwater to a surface water or back into the stormwater management system, and retention facilities which are those that capture, hold (retain), treat and allow stormwater to infiltrate into the bottom soils of the facility.

The City of Tallahassee also operates two aluminum sulfate chemical treatment facilities. These highly efficient treatment facilities combine wet detention with chemical treatment. The Lake Ella facility, constructed in 1986, was the first facility of this type in the State of Florida and treats approximately 60 million gallons of stormwater runoff on an annual basis. The Upper Lake Lafayette Nutrient Reduction Facility, also known as the Weems Pond Facility, was constructed in 2015 and is one of the largest facilities of its type in the State with the ability to treat 128 million gallons per day.

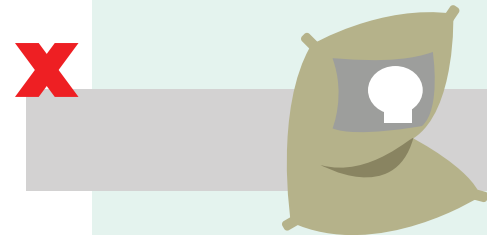
## Challenges Associated with Stormwater Ponds

Stormwater facilities receive runoff from our landscape, which includes our streets, parking lots, homes and yards. These facilities receive and accumulate trash, sediment and pollutants ranging from nutrients such as phosphorus and nitrogen to bacteria, heavy metals, oil and greases. At times, the water within a stormwater facility can exhibit signs of distress such as algae blooms, oily sheens or excess plant life. It is important to remember that the facility is working to cleanse the water prior to discharging to downstream water resources. While at times stormwater facilities will appear as inviting freshwater resources, visitors to these features, including pets, must observe from a distance. Not only are there water quality concerns within these facilities, but other creatures, such as venomous snakes, spiders and alligators, lurk in and around that are potentially dangerous to both people and pets.



## How can you help?

- Properly dispose of oils and other household chemicals and never pour any chemical directly into stormwater drains, which are direct conduits to your stormwater pond or natural water body.
- Never blow lawn clippings into the street or down a storm drain as this can increase nutrients and oxygen demand in the receiving water, which can lead to algal blooms and harm fish and wildlife. Instead, use lawn clippings for mulch or compost.
- Avoid overuse or improper use of fertilizers. Follow the guidelines for Florida-Friendly Landscaping and the City of Tallahassee's fertilizer ordinance.
- Clean up after your pet. Pet waste contains high concentrations of nutrients and bacteria that can enter the stormwater system and pollute your local stormwater pond, stream or lake.
- Keep vehicles in good operating condition. Check for drips and repair leaks immediately to keep oils and fluids off the pavement.
- Wash your vehicles, bicycles and yard equipment on the lawn, where soapy water can't quickly run toward the nearest storm drain. Wash your car with nontoxic, low phosphate soap and use water sparingly.



For more tips regarding ways to reduce your impact please visit [www.tappwater.org](http://www.tappwater.org)

For more information related to stormwater and water quality please contact Underground Utilities and Public Infrastructure Engineering at (850) 891-6860



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