

AUGUST is

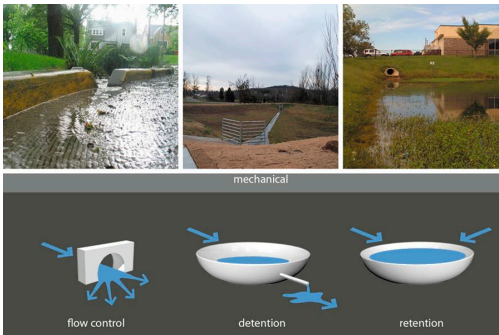
National  
Water  
Quality  
Month

The Stormwater Management Office for the City of Lawton invites you to celebrate Water Quality awareness month in the month of August. Water pollution is a growing issue in America and in the world. With 40% of water bodies in the US deemed unsafe for wildlife r recreation, it is imperative that changes be made in citizens' everyday lives to slow water pollution.

Fortunately, by becoming a water advocate, you can be a part of the solution to the problem of water pollution. First and foremost, to be a water advocate you must educate those around you about the issue of water pollution. By doing this you educate them about the issue, and help your community by further reducing water pollution. Another way that you can be a water advocate is to reduce the amount of stormwater pollution you produce. This includes but is not limited to practices such as picking up pet waste, not sweeping grass clippings into storm drains, and never pouring anything into storm drains. Also, you can install rain barrels or rain gardens.

If you would like a more hands on approach at reducing water pollution, you can volunteer in the Stormwater Management Office's Adopt-a-Stream program. In this program you and a group can choose a local stream, and clean it. The City of Lawton provides all necessary equipment, you bring the manpower. For more information on how to be a water advocate, call the Stormwater Management office at (580) 581-3478.

## Low Impact Development (LID)



### WHAT IS LOW IMPACT DEVELOPMENT (LID)?

LID is an ecologically friendly approach to site development and stormwater management that aims to mitigate development impacts to land, water and air. The approach emphasizes the integration of site design and planning techniques that conserve natural systems and hydrologic functions on a site. The practice has been successfully integrated into many municipal development codes ab stormwater management ordinances throughout the United States. Specifically, LID aims to:

- Preserve open space and minimize land disturbance
- Protect natural systems and processes (drainage ways, vegetation, soils, sensitive areas)
- Reexamine the use and sizing of traditional site infrastructure (lots, streets, curbs, gutters, sidewalks) and customize site design to each site
- Incorporate natural site elements (wetlands, stream corridors, mature forests) as design elements
- Decentralize and micromanage stormwater at its source.

### LID BENEFITS

In addition to the practice just making good sense, low impact development techniques can offer man benefits to a variety of stakeholders.

#### Municipalities

- Protect regional flora and fauna
- Balance growth needs with environmental protection
- Reduce municipal infrastructure and utility maintenance costs (streets, curbs, gutters, sidewalks and storm sewers)
- Increase collaborative public/private partnerships.

#### Developers

- Reduce land clearing and grading costs
- Potentially reduce infrastructure costs streets, curbs, gutters, sidewalks and storm sewers)
- Reduce stormwater management costs
- Potentially reduce impact fees and increases lot yields
- Increase lot and community marketability.

#### Environment

- Preserve integrity of ecological and biological systems
- Protect site and regional water quality by reducing sediment, nutrients and toxic loads to water bodies
- Reduce impacts to local terrestrial and aquatic plants and animals
- Preserve trees and natural vegetation

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# Grass Clippings and Storm Drains don't mix!

With summertime weather comes the mowing season. It is important to remember not to blow grass clippings into the street. Grass clippings in the street ultimately end up in a storm drain where they can build up and cause drainage issues and localized flooding. Grass clippings blown into the street can also create hazardous conditions for drivers, motorcyclists, and bicyclists.

Yard debris, including leaves and other organic plant material like shrubbery trimmings and grass clippings, are a significant source of stormwater pollution.

Did you know that storm drains are not connected to the sanitary sewer systems and treatment plants? There is no treatment to remove the debris from the water before it reaches nearby lakes, streams. The primary purpose of storm drains is to carry rainwater away from developed areas to prevent flooding.

When you blow your lawn waste into the street, it can clog storm drains and cause drainage and flooding issues by clogging curb inlets and pipes, which can cause water to back up and flood within the drainage system or the creek.

Why are grass clippings and leaf litter harmful? When yard waste is discarded within the stormwater drainage system, it will decompose. Decomposing yard waste can supercharge the creek with nutrients such as nitrogen and phosphorus, causing algae blooms resulting in low dissolved oxygen.

When yard waste is discarded within the stormwater drainage system, it can bring harmful chemicals into the creek, including fertilizers, pesticides, and herbicides. While these chemicals can be used to protect grass, they will harm aquatic life and cause additional adverse effects to water quality when released into streams.

What is so bad about algae?

Algae, the nutrient that turns lakes green, will naturally occur in lakes and ponds, but excess nutrients can lead to high levels of algae growth.

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Apart from looking unsightly, excessive algae blooms can block out sunlight, and severely low dissolved oxygen levels in creeks can cause fish kills. According to the U.S. EPA, phosphorus is one of the most troublesome pollutants in stormwater runoff and it is considered the primary cause of water quality problems in our waters. It also leads to unwanted and uncontrolled growth of algae and native and non-native aquatic weeds. One bushel of fresh grass clippings can contain 0.1 lbs. of phosphorus—enough to produce 30-50 pounds of algae growth if it finds its way to a lake or river!

- What can you do to protect water quality while keeping your yard maintained?
  - If your mower shoots grass clippings out of the side, mow a couple of passes with your mower blowing towards your yard and not the street before mowing the rest of your yard. If you bag grass with your mower, make sure you keep the clippings out of the street, curb inlet, ditch, or creek.
  - If you mulch mow, your mower will not blow grass out the side, and you shouldn't have to worry about grass blowing into the street.
  - Mow when your lawn needs it, not on a fixed schedule. Mow your lawn often enough so no more than one-third the length of the grass is removed. Taller grass has deeper roots that prevents soil loss and helps the rain soak into the ground. Lawns mowed higher withstand heat stress better, need less watering, and are more resilient, reducing bare spots and soil erosion.
  - Sharpen mower blades every 1 to 3 years.
  - Leave the clippings on the lawn to improve the health of the lawn itself or compost them. According to the U.S. EPA, leaving your grass clippings on the lawn doesn't cause thatch buildup. Grass clippings are about 90 percent water, so they decompose very quickly. Leaving grass clippings in place leaves the equivalent of 1 pound of nitrogen per 1,000 ft<sup>2</sup>—the same amount you would get from one fertilizer application. Be sure to sweep or blow clippings off paved surfaces and back onto the lawn.
  - Mix grass clippings with leaves and soil to make a backyard compost pile. Intentionally blowing or placing lawn waste in the street is a **violation of the City of Lawton Code** dealing with illicit discharges. There is no excuse for sweeping grass and/or leaves into the storm drains or waterways.
  - Fertilize only when necessary, or not at all if it might rain in the next day or two. Keeping grass clippings on your yard can save money on fertilizer by returning nutrients back into the soil and save money on watering by building organic matter in your soil. With grass recycling, use of fertilizers can be reduced by 30-40% or more!
  - Clean up after your pets. Scoop up pet waste and put it in the trash. People often believe that leaving dog waste to decompose in the yard is good for the lawn, but the truth is that dog poop is toxic for your grass. Unlike cow manure, which is basically composted grass, a typical dog's poop, which is made acidic through natural digestive processes and their microbiome, is enough to destroy the grass underneath it. For this reason, dog poop also shouldn't be placed in your compost or used to fertilize your garden. In either case, it contains bacteria that could contaminate your vegetables. Dog waste that gets washed into waterways may carry pathogens that affect living things in the water and can make people sick that are in contact. Also, nutrients released from dog poop can stimulate the growth of algae and other plant life, making the water unsuitable for recreational uses. Dog waste could contain bacteria and parasites that are harmful to other pets and humans.
  - Only use dry cleanup methods (broom and dustpan or absorbent material) for spills of chemicals or fuels; never hose a spill into a storm drain!
  - Directing your roof drains to a rain garden can significantly reduce the stormwater runoff from your property.

## Give Stormy and the Area Creeks a Hand

**Get involved by participating in a stream clean-up or storm drain marking event.**

**All groups such as civic clubs, schools, scouting organizations, etc., are welcome to participate in either or both events. Contact John Breit Stormwater Management (581-3478) for further details or to schedule an event.**

### STORMWATER CONTACT INFORMATION

212 SW 9<sup>th</sup> Street • Lawton, OK 73501 • (580)581-3478 Office • **(580)581-3565 Hotline**

Environmental Specialist – Cynthia Williams, [Cynthia.Williams@lawtonok.gov](mailto:Cynthia.Williams@lawtonok.gov)

Engineering Associate – Mike Hawkins, [Michael.Hawkins@lawtonok.gov](mailto:Michael.Hawkins@lawtonok.gov)

Vector Technician – John Breit, [John.Breit@lawtonok.gov](mailto:John.Breit@lawtonok.gov)

### Visit the Stormwater Website

Information about stormwater regulations, program updates and upcoming projects can be found online at

<https://www.lawtonok.gov/departments/stormwater-management>

City of Lawton Environmental Service's facebook page to receive conservation and pollution prevention tips.

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