

Oconee County Green Infrastructure/Low Impact Development Program

Background

Oconee County's Storm Water Management Program was created in 2004 to comply with Phase II of the National Pollutant Discharge Elimination System, part of the Federal Clean Water Act, that requires local governmental agencies to obtain a permit and monitor the storm water runoff in their jurisdictions. The purpose of the program is to reduce water pollution caused by storm water runoff. Stopping pollution at its source is the most effective way to prevent harmful pollutants from being washed by storm water runoff into our storm drains, and ultimately, our rivers and creeks. Our program consists of six elements:

- Public Education and Outreach
- Public Participation
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Runoff Control
- Pollution Prevention and Good Housekeeping

The MS4 area encompasses the urbanized area in the northern part of the County. This area has transitioned from rural and heavy agricultural to a mix of commercial, residential, and still maintaining some agricultural areas. The MS4 area encompasses approximately 16,584 acres as determined by the 2010 census data. This area is expected to increase with the 2020 census data. The MS4 area is primarily composed of Cecil Sandy Loam, Appling Coarse Sandy Loam, and Pacolet Sandy Clay Loam. The slopes range from 2-15%. The soils range from slightly eroded to severely eroded. Drainage and permeability of the predominant soils is well drained, medium to rapid runoff, and moderate permeability. The MS4 area includes several named streams and tributaries throughout the area.

Legal Authority

MS4 permittees are required to review and revise, where necessary, building codes, ordinances, and other regulations to ensure they do not unnecessarily prohibit or preclude the use of green infrastructure/low impact development components. In addition, the permittee should encourage the use of GI/LID practices during the rezoning and development review phase of the project. Section 1116.13.b.2 of Oconee County's Unified Development Code allows for the use of non-structural BMP's, as detailed in the Georgia Stormwater Management Manual, Volume 2 (GSMM). The use of one or more of these non-structural BMP's may allow for the reduction of the water quality treatment volume. For each potential credit, there is a minimum set of criteria and requirements which identify the conditions or circumstances under which the credit may be applied. The site design practices that qualify for this credit and the criteria and procedures for applying and calculating the credits are included in the GSMM, Volume 2.

GI/LID Program

The County will allow the use of all GI/LID structures, better site planning techniques, and better site design techniques listed in the GSMM, Volume 2. The County will focus on encouraging and implementing the following structures:

- Bio-Retention
- Enhanced Dry/Wet Swales
- Infiltration Practices
- Permeable Paver Systems/PerVIOUS Concrete/PerVIOUS Asphalt

Volume 2 of the GSMM provides detailed information about the design criteria, advantages/disadvantages, maintenance needs, pollutant removal calculations, storm water management suitability, implementation considerations, runoff reduction credits, and other information.

GI/LID Inventory

As of the date of this update to the County's storm water management plan, the following structures have been identified as GI/LID structures:

Structure Type	Year Installed	Location	Maintenance
Bio-Swale	2013	Union Christian Church	Private

The County will track the addition of new water quality-related GI/LID structures through the development plan review process and ensure the structures are added to the inventory.

Site Feasibility Study

The County encourages the use of GI/LID structures and practices on all developments. A site feasibility study will occur that will investigate the applicability of the County's preferred structures. The setting of the BMP, construction cost, ease of maintenance, space limitations, and soil percolation rates will be considered. The following factors will be considered when conducting a site feasibility study:

- A separation distance of two (2) feet is required between the bottom of the structure and the elevation of the seasonally high-water table.
- Pre-treatment measures should be used to prevent clogging of the basin bottom if runoff is expected to contain heavy sediment loads.
- A separation distance of two (2) feet is required between the bottom of the structure and underlying confining layers such as bedrock or clay layers.
- Minimum setback requirements for most GI/LID structures can include many of the following, depending on the structure type:
 - 10 feet from building foundations/property lines
 - 100 feet from septic systems

- 100 feet from private wells
- 200 feet from public water supply reservoirs
- 1,200 feet from public water supply wells

Specific site characteristics can limit the installation and use of GI/LID infrastructure. The County will consider the following criteria when determining whether GI/LID practices are infeasible:

- Minimum soil infiltration rate cannot be achieved.
- Minimum separation between seasonally high-water table cannot be achieved.
- Minimum separation between underlying confining layers cannot be achieved.
- Minimum setbacks to property lines, building foundations, wells, septic systems, or surface waters cannot be achieved.
- Minimum land requirements for the structure cannot be achieved.
- Minimum space requirements for necessary pretreatment cannot be achieved.
- Utility conflicts cannot be resolved.
- Maximum drainage areas cannot be reduced into multiple sub-basins meeting the BMP requirements.
- Existing site conditions/contaminants cannot be remediated.

GI/LID Structure Inspection and Maintenance Program

The permit requires inspections on 100% of the GI/LID structures included in the inventory within a 5 year period. Oconee County will inspect or ensure inspections are conducted on 100% of the privately owned non-residential and publicly owned GI/LID structures within in the 5 year period for permit compliance.

- Inspection and maintenance of privately-owned GI/LID structures is the responsibility of the property owner. Section 1117.13 of the County's Unified Development Code specifies that the property owner or developer, whichever is the responsible party, execute an inspection and maintenance agreement, which shall be binding on all subsequent owners of the site, for any land development activity requiring a storm water management facility or practice hereunder and for which the County requires ongoing maintenance. The inspection and maintenance agreement requires the owner/developer to submit a schedule for inspections that complies with the permit. Section 1117.13 further outlines the procedures the County will follow if the BMP's are not maintained. A blank example maintenance agreement is included as an addendum to the GI/LID Program. County staff will conduct inspections of 100% of privately-owned GI/LID structures within the 5-year permit term in order to verify proper maintenance.
- Inspection and maintenance of publicly owned GI/LID structures will be the responsibility of the County. County personnel or contractors will conduct required inspections. County personnel or contractors will perform any necessary maintenance of the structures. Maintenance records will be retained.