

AUSTELL PUBLIC WORKS

IMPLEMENTING GREEN INFRASTRUCTURE / LOW IMPACT DEVELOPMENT POST-DEVELOPMENT STORMWATER MANAGEMENT

In 1992, the Georgia Environmental Protection Division designated the City of Austell as a single unit for Phase I stormwater permitting purposes. The National Pollution Discharge Elimination System Municipal Separate Storm Sewer System permit was first issued by the Georgia Environmental Protection Division June 1994. The permit was re-issued in June 1999, June 2004, June 2009, and the most recent permit on June 11, 2014. As part of new requirements of the permit and to meet requirements of the Metropolitan North Georgia Water Planning District, the City of Austell must adopt new or update existing ordinance to address development and re-development, and enforcement of post-control structures.

OVERVIEW

Austell Public Works has revised the Post-Development Stormwater Management ordinance, to promote the use of green infrastructure techniques on new and re-development projects in the City of Austell, and to address specific problems that have emerged since the original ordinance was approved and adopted by the Austell City Council on March 1, 2004.

WHAT IS GREEN INFRASTRUCTURE?

Green infrastructure is an alternative approach to managing stormwater runoff that emphasizes infiltration, evapotranspiration (uptake of water by plants), and reuse. The goal of green infrastructure is to mimic the natural hydrologic function of our watershed. Examples of this approach on development sites include preserving conservation areas, reducing impervious surfaces, and installing structural measures such as green roofs, vegetated swales, permeable pavement, infiltration planters, cisterns, and rain gardens.

KEY CHANGES

Adds a runoff reduction requirement that promotes the use of green infrastructure. Projects must treat the first 1.0" of stormwater runoff with green infrastructure. This replaces the previous Water Quality requirements of capturing 1.2" of runoff and removing 80% of the Total Suspended Solids.

Revises detention pond requirements. The previous ordinance required new and redevelopment sites to reduce the peak flow rates leaving the site by 30%, up to the 100-year storm event. The City of Austell's requirement was much more stringent and resulted in large dry detention ponds which pose aesthetic and safety issues. The revised ordinance shifts focus to the management of the more polluted runoff generated from the first flush of all storms, while still providing protection from major storm events.

Revises requirements for single family residences. New homes and large additions (> 1,000 feet² of impervious surface) are now required to manage the first 1.0" of runoff on their site. Detention requirements do not apply. Austell Public Works has developed a guidance document that lists the acceptable stormwater practices for single family residential development; provides details and construction specifications; and simplifies the review and approval process. Examples

of runoff reduction techniques for single family residential development include installing a rain garden, replacing traditionally impervious surfaces (parking areas, patios, etc.) with pervious pavers, routing downspouts to underground dry wells or modified french drain, utilizing cisterns for reuse or irrigation, directing sheet flow to adequately vegetated buffers, or any appropriate combination of techniques.

Requires maintenance of existing detention ponds. Stormwater facilities permitted and installed prior to the original Post-Development Stormwater Management ordinance (March 2004) must be maintained in accordance with recorded indemnity agreements.

Adds a stormwater concept plan and consultation meeting. Prior to submitting for a building permit, a consultation meeting with Austell Public Works is required to ensure that the design professional is familiar with the new requirements and to actively promote the use of better site design and green infrastructure early in the design/permitting process.

Stormwater Consultation Meeting

Under the revised ordinance, the following projects are required to have a consultation meeting with Austell Public Works to review the stormwater concept plan prior to the submittal of a land disturbance permit application:

Residential Projects

- Projects reviewed for preliminary plat approval.
- New multi-family, townhome, apartment, subdivision (not individual lots) and condominium developments.

Commercial Projects

- New developments that add any impervious surface OR disturb more than one acre of land.
- Re-development projects that add or replace more than 500 square feet of impervious surface OR disturb more than one acre of land.

BENEFITS OF GREEN INFRASTRUCTURE

Green infrastructure offers a broad range of advantages over traditional stormwater management approaches, including:

Addressing stormwater at its source. Green infrastructure is designed to capture the first 1.0” of stormwater runoff and infiltrate, evapotranspire, or reuse the runoff through rainwater harvesting techniques. The result is lower levels of pollutants entering streams and reduced amounts of streambank and streambed erosion associated with high peak flows of stormwater runoff from impervious surfaces.

Flood protection. Green infrastructure reduces the magnitude and frequency of flooding by reducing the volume of water that enters into our streams during rain events.

Promoting sustainability. Green infrastructure alleviates the impacts of urban heat islands, reduces energy demands by decreasing the amount of energy used for heating and cooling, improves air quality, and increases sequestration.

Cost savings. Numerous case studies have shown that green infrastructure can cost less than traditional stormwater management. By using “green” techniques over traditional “gray” infrastructure, developers, builders, and property owners can lower the cost of development by reducing the need for oversized pipes, curb and gutter, vaults, and detention ponds.

Enhancing aesthetics and public access/use. Well-designed, vegetated practices can provide a visual amenity, particular when compared with hardened drainage infrastructure or large detention ponds. Some practices can double as park space, offering recreational amenities.

FOR MORE INFORMATION

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