

PUBLIC WORKS DEPARTMENT

Engineering Division

Policy Number	Title	Date of Issuance or Revision	Author
PW.SW.01	Stormwater Asset Management Program Policy	February 27, 2018	L. Wells

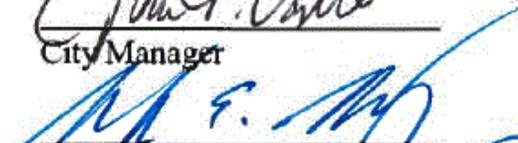
CONTENTS

- I. Purpose
- II. Applicability/Scope
- III. Summary
- IV. Definitions
- V. Roles/Responsibilities
- VI. Guidelines/Practices
- VII. References
- VIII. Revision History

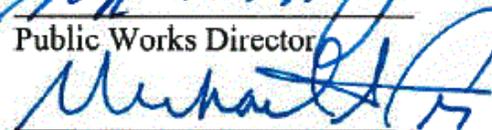
APPROVALS



City Manager



Public Works Director



City Attorney



Engineering Services Manager

I. Purpose

The Asset Management Program Policy for the City's Stormwater system defines the key principles and requirements which the City will apply to relevant assets in order to manage the stormwater system. This policy ensures stormwater assets are managed in a way that improves both the day-to-day management and long-term planning of assets. The City of Greenville will leverage a strategic asset management approach to cost effectively manage the City's physical assets while providing safe and reliable services to the City's citizens and customers.

The City's Asset Management Program Policy was developed to align with the City's overall goals as well as with the goals outlined in the Stormwater Ordinance sections 19-7.2.2, Purpose and listed below.

- A. **Prevent additional harm due to periodic flooding** including loss of life and property and threats and inconveniences to public health, safety, welfare, and the environment.
- B. **Assure that development does not increase flood and drainage hazards** to others, or create unstable conditions susceptible to erosion.
- C. **Create no new financial burden on the taxpayer** for flood control projects, repairs to flood damaged public facilities and utilities, and for flood rescue and relief operations.
- D. **Protect, conserve, and promote orderly development** while protecting and conserving land and water resources.
- E. **Protect buildings and improvements to buildings from flood damage** to the greatest extent possible.
- F. **Conserve the hydrologic, hydraulic, water quality and other beneficial functions of flood-prone areas and Regulatory Floodplains.**
- G. **Prevent additional disruption of the economy and governmental services** due to stormwater and flood drainage.
- H. **Maintain eligibility for the City of Greenville in the National Flood Insurance Program** by equaling or exceeding its requirements and thus make federally subsidized flood insurance available at reduced rates. Comply with the rules and regulations of the National Flood Insurance Program codified as 44 CFR 59-79, as amended.
- I. **Maintain compliance with the provisions of the current, effective State of South Carolina NPDES General Permit** for Storm Water Discharges from Regulated Small Municipal Separate Storm Sewer Systems, SC Water Pollution Control Regulations 61-9. Comply with the rules and regulations of the NPDES codified as 40 CFR 122-131, as amended.
- J. **Conserve and improve the natural hydrologic, hydraulic, water quality and other beneficial functions of wetlands** by having, at a minimum, no net loss of wetlands in the city of Greenville, and further these beneficial functions of wetlands by having an objective of a net gain or improvement of wetland function.

II. Applicability/Scope

This policy sets the principles and guidelines for Public Works Engineering and Operations staff to manage the stormwater program and infrastructure assets.

III. Summary

The stormwater program is intended to cost-effectively and strategically balance the on-going deterioration of many different assets, each with different time scales of deterioration (years to decades), with a vast array of regulatory and customer requirements. To provide a sustainable service, the City's Environmental and Operations team is developing a process to manage asset condition and performance within the context of the utility's overall asset management strategy and level of service goals.

The bulk of the information in the sections below is informed by best practice techniques and standards from: the International Infrastructure Management Manual (IIMM), Institute of Asset Management (IAM), Water Environment Research Foundation (WERF), and ISO55000 (an international standard covering management of physical assets).

IV. Definitions

For the purposes of this policy, definitions of stormwater system components are consistent with definitions being used in other City planning documents.

Asset Classes: A grouping of assets of a similar nature and use.

Asset Management Plan: A combination of technical and financial management techniques over the life cycle of an asset combined with decision making tools to determine the most cost-effective manner by which to provide a specified level of service.

Condition Assessment: The process of a qualified group of trained professionals performing an analysis of the condition of an asset or group of assets that may vary in terms of age, design, construction methods, and materials.

Criticality: Asset criticality is the relative risk of a high cost arising from failure of that asset. Criticality is comprised of two primary components; 1) Likelihood of Failure (LoF) and 2) Consequence of Failure (CoF). LoF is based on the asset's condition. CoF is determined by evaluating factors that measure the impact of a potential failure (e.g., Pipe failure will cause a road closure).

Extent of Service: The physical limits of service provided to stormwater assets. In general, the City of Greenville owns, operates, and maintains stormwater assets within the City's right of way (RoW) and established easements. The City is not responsible for the operation or maintenance of stormwater systems located outside of an established City right of way or easement.

Level of Service: A measure of service quality for a particular activity that defines the frequency and type of action desired to maintain operation of the stormwater conveyance system at an acceptable level. Level of service is composed of two measures of service quality; 1) a strategic measure and 2) a tactical level. The strategic level of service goal is focused on the stormwater program as a whole as defined by the stormwater ordinance to include citizen needs, regulatory

drivers, and environmental concerns of the City. The tactical level of service identifies the infrastructure goals for the maintenance, repair, rehabilitation, and replacement of the system components.

Stormwater Assets: Physical assets owned, operated, and maintained by the City for the purpose of storing, conveying, or treating stormwater runoff. These assets include pipes, culverts, ditches, inlets and junction boxes, and stormwater control measures.

V. Roles/Responsibilities

This policy is intended to provide guidance for the Public Works Director and those designated by the Public Works Director (i.e. Engineering Services Manager).

The Public Works Director oversees the implementation of the asset management policies. In addition, the Public Works Director or those designated by the Director will:

- Implement rehabilitation strategy;
- Develop asset management strategies, guidelines, and practices;
- Monitor and report operation and maintenance of key performance indicators;
- Monitor and report capital improvement project key performance indicators;
- Recommend budgets to achieve stated levels of service for operations and maintenance;
- Recommend budgets to achieve stated levels of service for capital improvement projects, and;
- Develop and maintain asset inventory and condition assessments;

VI. Guidelines/Practices

The City is committed to the guidelines and practices stated below.

- The City will implement a stormwater Asset Management Program based on best practice guidance from nationally and internationally recognized sources.
- The City will define levels of service to meet or exceed legal and regulatory requirements.
- The City will develop and implement a condition assessment program to target critical and non-critical assets.
- The City will utilize an asset management information system and align workflow processes to collect and maintain appropriate high quality data for consistent and transparent analysis and reporting.
- The City will define operation, maintenance, and rehabilitation strategies.
- The City will approach operational and capital improvement project decision-making with data that consistently considers future demands and whole life-cycle risks and costs.
- The City will develop key performance measures to monitor the program.

- The City will align the organizational structure with its Asset Management Strategy and ensure qualified staff are in appropriate roles through training, experience, and personal competence.
- The City will develop, foster, and sustain an asset management culture of program review and continuous improvement.

These guidelines and practices are further defined in the Asset Management Strategy document. This strategy may be supplemented by Standard Operating Procedures for various activities.

VII. **References**

City of Greenville Ordinance (§ 19-7.2.2)

VIII. **Revision History**

Initial Issuance 02/27/2018