

The information provided here is for informational and educational purposes and current as of the date of publication. The information is not a substitute for legal advice. Consult your attorney for advice concerning specific situations.

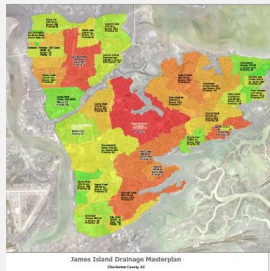
RESILIENCY THROUGH DESIGN

- ## COMPOUNDING ISSUES
- Series of Severe Weather events
 - Sea Level Rise
 - Aging Infrastructure
 - Infill development not taking into account surrounding parcels and drainage challenges

FIRST STEP – KNOW YOUR COMMUNITY

In 2019, the City and Town partnered with Charleston County on an Island-Wide Drainage Study

- Identified Basins
- Master Inventory List
- Prioritized Problem Areas



- ## STORMWATER DESIGN STANDARDS MANUAL
- The Stormwater Design Manual standardizes how stormwater elements of a project are designed, submitted, reviewed, approved, and inspected.
 - Each entity tackled revisions to their manual:
 - City of Charleston – Changes Adopted in Feb 2020
 - Town of James Island – Changes Adopted in May of 2020
 - Both took effect in July 2020

Stormwater Design Standards Manual Update 2020 Focus Areas – City of Charleston

•Design for Bigger Rainstorms	•Develop to Mimic Natural Systems	•Restrict Release of Additional Water
•Incentivize Green Infrastructure	•Prevent Poor Use of Fill	•Design for Future Sea Level Rise
•Add Standards Appropriate for Small Sites	•Add Special Rules for Areas with Flooding	

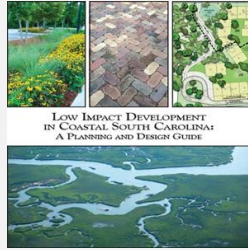
TOWN OF JAMES ISLAND

Primary Objective was to protect older homes from drainage issues caused by newer builds.

- Reduce / Eliminate "Fill & Build"
- Require off-site drainage impacts to be identified and managed
- Provide easy, low-cost solutions

LOW IMPACT DEVELOPMENT

- Working with the Landscape
- Focus on Stormwater Runoff Prevention
- Micromanage Stormwater – Keep it Simple
- Practice Multi-tasking – Maintain and Sustain



LOW IMPACT DEVELOPMENT IN COASTAL SOUTH CAROLINA: A PLANNING AND DESIGN GUIDE

<https://www.scsesgrant.org/sc-lid-guide/>

WORKING WITH THE LANDSCAPE

BENEFITS

- Integrates existing and natural systems as the framework for site planning
- Identifies environmentally sensitive areas and local features
- Outlines the development envelope
- Reduces the amount of hard stormwater infrastructure
- May reduce stormwater management costs

EXAMPLE: BIOSWALES



STORMWATER RUNOFF PREVENTION

- Minimized by reducing road widths and parking areas, using shared driveways, and disconnecting impervious surfaces
- Clearing and regrading can be minimized by clustering and reducing building footprint
- Reduce runoff at the source by employing techniques like green roofs that can store and evaporate rainfall before it reaches the existing ground/grade



MICROMANAGE; SIMPLICITY; MULTITASKING; SUSTAINABLE

- Manage stormwater where it falls instead of conveying long distances
- Maximizes sheet flow with Open Drainage Systems; Rain Barrels
- Systems should address filtration, treatment, infiltration
- Require Native plants – ease of maintenance also improves water quality



QUESTIONS?

Link to each Manual:

<https://www.charleston-sc.gov/351/Stormwater-Design-Standards-Manual>

<https://www.jamesislandsc.us/Data/Sites/1/media/stormwater/supplemental-sw-design-standards-manual.pdf>

Staff Contacts:

Matthew Fountain, PE
 Director of Stormwater Management
 City of Charleston
 843-724-3798
 fountainm@charleston-sc.gov

Mark Johnson
 Public Works Director
 Town of James Island
 843-795-4141
 mjohnson@jamesislandsc.us