

Stormwater Management Workshop

September 30, 2024 @1:00PM – 4:00PM | Live Streamed via [Town's YouTube Channel](#)
Joint Town Council and Planning Commission Workshop

Background

Currently the only construction projects on Kiawah Island which are regulated for stormwater management are projects which are larger than 1 acre and require a National Pollutant Discharge Elimination System (NPDES) Construction General Permit from South Carolina Department of Environmental Services (formerly DHEC). These projects are generally limited to multifamily or large-scale commercial projects which account for a small percentage of the ongoing construction projects on the island.

Most of the coastal communities around the region have adopted ordinances to create their own utility and become MS4's which is a Municipal Separate Storm Sewer Systems that own the stormwater infrastructure. Several of them partner with Charleston County for administrative and regulatory support. The Town of Kiawah would not qualify for that partnership as the Kiawah Island Community Association, a private entity, owns and operates the master drainage system for the island.

Many of the coastal MS4s have adopted additional requirements above the Department of Environmental Services (formally DHEC) and Charleston County Stormwater Program. As such the Town of Mount Pleasant has a specific ordinance for Single Family Stormwater Management and the Town of James Island has Supplemental Stormwater Design Standards for both single-family residences and non-single-family properties.

The Town's planning staff has outlined a phased process and approach to ensure the Town takes deliberate next steps in implementation of the Comprehensive Plan, the Comprehensive Marsh Management Plan ("CMMP" approved in 2023) and recommendations within the 2018 Flood Mitigation and Sea Level Rise Adaptation Report which address concerns of flooding and stormwater management and prioritize flood mitigation and sea level rise for Kiawah.

Specifically, the Comprehensive Marsh Management Plan outlines that the Town should *"incentivize permeable surfaces, formalize stormwater best management practices for private properties and significantly limit impermeable surfaces and incentivize onsite stormwater management, particularly in new developments"*. These recommendations also align with the recommendations within the 2018 Flood Mitigation & Sea Level Rise Adaptation Report. Through introduction of a pathway for stormwater management with a subcommittee of the CMMP workgroup and the Planning Commission, it was imperative that any proposed stormwater management standards consider and address both water quality and water quantity standards.

To date, the CMMP workgroup and the Planning Commission have put forth initial recommendations to include development of supplemental stormwater management standards, and pervious paving requirements. The next phase providing supplemental stormwater standards which address water quality and water quantity metrics has been intentionally paused for purposes to bring in engineering experts. This follows a strategic plan for engaging decisions

makers and the broader community to display and communicate the importance of implementation of these recommendations in the best practical, responsible and efficient manner.

As the next stages of engagement along this process to consider recommendations and consider additional standards, critical education and background knowledge on Kiawah's existing condition was needed for decision makers. Subsequently this upcoming workshop is outlined to amass experts and provide necessary contextual data for the Kiawah community ahead of any consideration for proposed changes to existing standards. Furthermore, while the beach and dune system are a well noted component of resiliency for Kiawah, the marsh and stormwater runoff has been identified as a greater risk. This prepared workshop provides a targeted level setting approach to understand key issues and potential hurdles to achieving success in the arena of flooding, stormwater management and resiliency for the Kiawah community. Other components and focused sessions may be built upon from this session.

Objectives of Stormwater Management Workshop

The principal objectives of this workshop are to:

- Educate the community on general stormwater management and resiliency terminology, the current state of Kiawah Island entities management of stormwater, flood mitigation measures, and the existing regulatory bounds and measures of local and state agencies, specifically as it pertains to development.
- Provide historical context of stormwater management on Kiawah Island.
- Provide resources and contextual data relative to flooding, sea level rise, impervious vs pervious coverage, land cover and other relevant factors.
- Educate the community on supplemental stormwater management best practices and introduce possible steps and actions for addressing stormwater challenges specific to Kiawah Island.
- Showcase plans and actions prepared and taken by adjacent and comparable communities facing similar issues.
- Advance the existing work of the CMMP work group and the recommendations set forth by the Planning Commission on pervious paving requirements and supplemental stormwater standards.
- Provide opportunity for guidance and direction on outlined recommendations and supplemental standards prepared by staff and next steps for the Town and Kiawah community.
- Set foundation for next steps of Kiawah resiliency and review of stormwater management.

Outline of Workshop

- **Welcome & Guest Introductions**
 - *John Taylor, Jr., Town of Kiawah Island Planning Director*
 - Resiliency Planning Timeline
 - Highlight of Recommendations
 - Workshop Objectives
- **Stormwater 101**
 - *Chris Wannamaker, Charleston County Stormwater Utility Manager*
 - Brief background on general stormwater regulations (water quality, water quantity, erosion, green and grey infrastructure)
 - Challenges of stormwater management on barrier island
- **KICA Drainage System Management**
 - *Ryan Ellmers, Kiawah Island Community Association Civil Engineer*
 - Interconnected Pond System – outfalls to River/marsh
 - Impacts of tidal flooding/storm surge
 - Roadway drainage
 - Current projects – additional outfalls/automated flood gates and outfalls.
- **Kiawah Conservancy Field Analysis & Nature Based Solutions**
 - *Lee Bundrick, Kiawah Senior Ecological Health & Conservation Coordinator*
 - Highlight of Conservancy Data & Research
 - Impervious Data, Geospatial Analysis
 - Nature Based Solutions
- **Introduction of Recommendations & Next Steps**

Key Resources:

- [2018 Flood Mitigation Sea Level Rise Adaptation Report](#)
- [Kiawah Comprehensive Marsh Management Plan](#)
- [Nature Based Solutions Manual for Kiawah Island](#)
- [Charleston County Stormwater Manual](#)
- [Charleston Water Plan](#)
- [South Carolina Department of Environmental Services - NPDES](#)

Pending Planning Commission Recommendations:

[#AZO24-000008 - Pervious Paving Requirements](#)

[#AZO24-000007 – Phase I Supplemental Standards – Stormwater Management Plan Review](#)