

TOWN COUNCIL

STAFF REPORT

Projects and Watershed Resilience Department



MEETING DATE:	November 14, 2023
SUBJECT:	Projects and Watershed Resilience Department Monthly Report
PROJECT MANAGER:	Kimberly Washok-Jones, Director of Projects and Watershed Resilience

CAPITAL IMPROVEMENTS PROGRAM (CIP) UPDATE

PATHWAYS

1. **Buck Island-Simmons ville Neighborhood Sidewalks and Lighting**
 - Construction of the Phase 6B sidewalks and drainage is complete.
 - **Next Steps**
 - Complete Phase 6B SCDOT closeout.
 - Construction of the street lighting is to be completed in FY 2024 by Dominion.
2. **New River Linear Trail**
 - Conceptual Master Plan is complete.
 - Submitted plans to Santee Cooper for review and cost share for bridge replacements. They stated they will not participate in a cost share; thus, staff is reviewing the easement agreement terms with legal for next steps.
 - Received \$26,000 PARD grant award and \$2 million in appropriations.
 - Easement donation from New Riverside Community Association, Inc. approved at 3/14/23 Town Council.
 - Restroom purchase agreement approved at 7/11/23 Town Council.
 - Well contract finalized.
 - Dominion utility easement approved at 10/10/23 Town Council.
 - **Next Steps**
 - Continue engineering design and permitting for Phase 1 pathway (New River to Hwy 46).
 - Well and bathroom installation schedule being revisited due to Dominion Energy staffing issues and inability to install power poles as scheduled.
 - LED light fixtures switch from Bridge Street to New River Linear Trail.

SEWER & STORMWATER

1. **Buck Island-Simmons ville Sewer (Phases 5A-D)**
 - Permits/Contracts are complete, the project is under construction.
 - **Next Steps**
 - Construction to be complete in January 2024.

2. Historic District Sewer Extension Phases 2 & 3 - Bridge & Colcock Streets

- Jordan Construction of Hilton Head, Inc. continues construction.
- Main line testing and approvals to operate have been issued by BJWSA.
- **Next Steps**
 - Continue house connections.

3. Historic District Sewer Extension Phases 4 through 6 – Lawrence, Green and Water Streets

- Design for Phases 4, 5, & 6 were submitted to BJWSA for initial review.
- **Next Step**
 - Incorporate any Phases 4, 5, & 6 design changes to drawings per BJWSA review.
 - Obtain Quit Claim Deeds from all the property owners along the ghost roads or initiate legal action.

4. May River Watershed Action Plan Impervious Restoration Water Quality Projects

- Initial site investigations are complete for 9 of the 11 participating project sites.
- Palmetto Pointe Towns, Lowcountry Community Church and Apartment One declined to participate in the Program at this time. Updated Policy document for Impervious Restoration Program submitted and under review.
- Geotechnical investigations at 6 school sites complete and field results under analysis for use in development of Preliminary Design. Meeting held with School District on September 28, 2023 to discuss initial Preliminary Design Plan. Geotechnical investigations for remaining sites are being scheduled.
- Initial Property Owner contacts for the selected 15 Additional Sites within Municipal Limits have been made.
- **Next Steps**
 - Geotechnical evaluations at the 3 remaining site locations being coordinated with property owners.
 - Based on comments received from the School District, finalize Preliminary Design plan for School sites.
 - Once Geotechnical information is obtained, begin preliminary site design of the 3 remaining 3 sites.
 - Comments on Updated Draft Policy Document presented to consultant and meeting being scheduled to discuss comments and Final Draft prestatation.

5. Buck Island Drainage Improvements

- Drainage project was closed out.
- **Next Steps**
 - Executed contract with Greenway Bridge to construct the Buck Island Road boardwalk handrails.

HISTORIC DISTRICT IMPROVEMENTS**1. Boundary Street Lighting**

- Complete contract revisions with Dominion to install street lighting on the west side of Boundary Street.
- **Next Steps**
 - Dominion to install street lighting in FY 2024.

2. Squire Pope Carriage House Preservation

- The contract with Huss Inc. was executed and construction began on 1/16/23 with a groundbreaking ceremony held on 2/4/23.
- The structure was lifted. Excavation, footers, slab, blockwork, brick piers, block walls were sealed and insulated, perimeter sill beams and interior beams were installed, flooring at crawl space has been insulated and structure has been lowered. Both masonry fireplaces have been reinstalled. Old roofing has been removed. New sheathing / plywood and ice and water shield has been installed. All windows and doors have been refinished and reinstalled. HVAC, plumbing, electrical, fire suppression and low voltage rough ins are complete. Pending inspections.
- **Next Steps**
 - Insulate all walls. Install exterior wall sheathing / plywood. Waterproof exterior sheathing. Start exterior siding installation. Start painting preparation.
 - SCADpro students are developing conceptual ideas for the Welcome Center for possible construction in FY 2025.

3. Bridge Street Streetscape

- Issued Notice to Proceed for Phase 1 construction to start 12/5/22.
- Obtained survey proposal for Phase II streetscape project.
- Engaged Barrier Island for Phase II design.
- Obtained easement from Cunningham LLC for parking sign installation.
- Installed 3-hour limited parking signs.
- Updated SCDOT encroachment permit for No Parking signs.
- **Next Steps**
 - Phase 1 lighting installation delayed due to Dominion Energy schedule.
 - Replying to SCDOT comments for additional storm drainage plan at Martins Place.
 - Continue phase 2 conceptual plan for SCDOT permitting.

4. Boundary Street Streetscape

- Engineering Design is 70% complete and submitted to Watershed for stormwater for initial review.
- Met with Dominion Energy on 5/17/23. Underground conversion plans from Dominion Energy is subject to the Town obtaining easements for May River Transmission line and switch gear locations.
- **Next Steps**
 - Continuing with Engineering Design, Underground Power Coordination, and Permitting.
 - Obtain easement exhibits and begin appraisals in FY 2024.

- Construction in FY 2025, subject to acquisition of all required easements.

5. Calhoun Street Streetscape

- Preliminary engineering design is 40% complete.
- Met with Dominion Energy on 5/17/23. Awaiting underground conversion plans from Dominion Energy.
- **Next Steps**
 - Begin negotiations with May River Road property owners for main transmission line easements.
 - Once the main transmission line easements have been completed, then continue with engineering design into FY 2024.
 - Prepare easement acquisition plats for Phase 1 in CY 2024 and begin easement acquisition.
 - Phased construction is planned to begin in FY 2025 pending budget approval and acquisition of required easements.

6. Pathway Pedestrian Safety Improvements

- Completed Historic District crosswalk study identifying and prioritizing future intersection/crosswalk improvements to meet ADA compliance.
- Phase 1 ADA sidewalk improvements along Goethe Road were completed in 1/2023.
- Contract with ICE approved at 9/12/23 Town Council meeting.
- **Next Steps**
 - Engineer designs under way.

7. Comprehensive Drainage Plan Improvements

- Asset inventory and condition assessment complete for Heyward Cove.
- 2D H/H model development complete.
- Initial Tidal Gauge information gathering at Calhoun St Dock has been completed.
- Review of 2D H/H model development results and areas of inundation/choke points complete.
- FY24 Scope of Work being developed and evaluating inclusion of Sea Grant work elements.
- **Next Steps**
 - Final Project Report review complete and final review comments provided to consultant. Updates to Final Report in progress.
 - Establish maintenance and CIP project needs list and Master Planning report to reduce risk of flooding.

8. Pritchard Street Drainage Improvements

- Project scope has increased to include streetscape elements, pedestrian connectivity, street lighting and traffic calming evaluation. Updated 70% design submission review meeting held. Growth Management and Stormwater Pre-Application meeting held October 17, 2023, and comments to be utilized in 90% Design development.

- **Next Steps**
 - Coordinate approval for proposed improvements with Beaufort County School District and Beaufort County on Pool operation impacts.
 - Complete 100% design submission, permitting submissions and bid document formulation.
 - 90% design submission and identification of easement and street lighting needs.

PARK DEVELOPMENT

1. Oyster Factory Park

- Civil Construction and Landscape of parking area substantially complete.
- Design of the event area and reconfigured boat trailer parking is underway.
- **Next Steps**
 - Prepare event area plans for bid in November.
 - Construction of the event area is planned for this winter.

2. Oscar Frazier Park

- Started construction of Rotary Center Improvements in June. Construction to be phased and coordinated with events planned for the Rotary Center.
- Council directed staff to not proceed with sports court design at this time.
- Executed contracts for design/build of the splash pad.
- **Next Steps**
 - Complete Rotary Hardscape construction in December.
 - Begin construction of Splash Pad in the Spring of 2024.

3. New Riverside Barn/Park

- Architectural design services for the Barn additions are complete.
- Design of the playground area is complete.
- JS Construction started phase 1 site construction on 1/27/2023.
- The contract has been executed with Nix Construction for Construction Manager at Risk Services with a GMP for Phases 2 (barn, restroom, playground and common areas).
- **Next Steps**
 - Complete construction of Phase 1 Site Development Infrastructure in January 2024.
 - Nix construction to obtain for all building permits necessary for Phase 2 construction.
 - Procure all playground equipment.
 - Nix construction to mobilize with a 12/4/2023 start date.

4. Miscellaneous Park Improvements

- Construction of the DuBois playground addition is underway.
- Design of Buckwalter Place (Evicore) Park is underway.
- **Next Steps**
 - Palmetto Recreation Equipment, LLC to complete installation of the DuBois playground equipment by the end of the calendar year.
 - Complete design of all FY 2024 park improvements (Evicore and Shade Sails).

TOWN FACILITIES AND MISCELLANEOUS PLANNING**1. Town of Bluffton Housing Projects****• Next Steps**

- Provide financial assistance to joint venture partner for planning, design and permitting of Affordable/Workforce Housing at 1095 May River Road.

2. Law Enforcement Center Facility Improvements

- Clearing sodding, columns and fence construction for the challenge course is complete.

• Next Steps

- FY 2024 begin design for FY 2025 construction of an impound lot, and possible storage of Public Service maintenance equipment.

3. Sarah Riley Hooks Cottage

- Completed conceptual master plan concepts and building assessment. Presented plans to Town Council at the April Workshop for review and direction.
- Executed design contracts with Meadors Inc., JK Tiller and Shearlock Engineering for design services of the cottage and site planning in FY 2024.

• Next Steps

- Complete design of Cottage and grounds.
- Begin restoration construction of cottage in FY 2025.

4. Ghost Roads

- Surveying and easement exhibits are complete.
- Bridge Street Quit Claim Deeds are complete. Pritchard and Colcock Streets Quit Claim Deeds are 99% complete. Staff is currently working with Lawrence, Lawton, Green, Pope, Allen and Water Street property owners to obtain Quit Claim Deeds.
- Staff continue to meet with property owners to raise awareness of the acquisition efforts and communicate next steps and requested Council assistance.
- **Next Steps**
 - Obtain remaining Quit Claim Deeds for Historic District Sewer Phases 4-6 or initiate quiet title proceedings.

5. Document Management

- RFP contract was awarded in March 2022.
- Electronic Document Management system is live.
- Documents for 6 departments have been transitioned to DMS.
- **Next Steps:**
 - Historical documents for the remaining 4 departments will transition through FY 2026.

6. Network Infrastructure

- Replaced core switches at Town Hall and the Law Enforcement Center.
- Replaced two VMWare hosts for a more stable server environment.
- Migration of Munis and Energov systems to a hosted environment completed.

- Replaced phone system to a more modern system.
- **Next Steps:**
 - Replacing two more VMWare hosts.
 - Implementation of Executime to replace Intime.

WATERSHED MANAGEMENT UPDATE

1. Stoney Creek/Palmetto Bluff Sewer Partnership

- 2022 updated cost-estimate for the project from BJWSA is \$7.2 million + contingencies. BJWSA has agreed to be the Project Manager.
- Awarded the RIA SCIPP grant in support of Stoney Creek/Palmetto Bluff Sewer Extension with BJWSA and Beaufort County.
- Met with partners to address BJWSA IGA concerns on 3/2/23. A draft 3-party Intergovernmental Agreement was discussed at a follow up meeting on 5/30/23.
- Finalized IGA with Town, County, and grant splitting sewer extension costs and BJWSA funding water extension costs.
- **Next Steps**
 - IGA with Town, County, and grant splitting sewer extension costs and BJWSA routed for signatures.

2. SC Department of Health and Environmental Control May River Shellfish Harvesting Monitoring Data Year-to-Date and May River Shellfish Harvesting Status Exhibit – *Attachments 1 and 1a*

3. May River Watershed Action Plan Implementation Summary - *Attachment 2*

- Staff continue to work with Water Environmental Consultants (WEC) to review continuous flow data from the Stoney Creek, Rose Dhu Creek, and Palmetto Bluff subwatersheds. WEC is reviewing continuous and intermittent flow data in real time. WEC provided recommendations on the Town's water quality grab sampling program to ensure sufficient data for model calibration. Staff began implementing these recommendations on 7/31/23 and current data review indicates staff and instrumentation are collecting quality flow monitoring data.
- The Town's Calhoun Street Dock tidal elevation gauge was repaired and is recording tidal elevation data. Water Environmental Consultants (WEC) established two (2) additional tide gauges near the Stoney Creek and Rose Dhu Creek model boundaries as part of a 4-week headwaters tidal gauge study. The Calhoun Street dock and headwaters tidal elevation data will be used to establish a relationship between tidal amplitude and timing in the headwaters of the May River.
- Staff met with SC Sea Grant on 8/01/23 to discuss components of a Resiliency Assessment as recommended in the Comp Plan and funded in the FY24 budget. Emergency Management, Growth Management, and Watershed presented their needs. Needs for the Buck Island/Simmons ville area for flooding were included. Staff compiled comments on the proposed scope of work and provided them to SC Sea Grant. SC Sea Grant is working to revise the initial scope based on staff feedback.
- Two (2) automatic samplers were deployed in the Bridge Street Streetscape water quality project outfalls following completion of the Streetscape project. The goal was to collect water quality samples for post-construction monitoring. The Town of Bluffton's Watershed Management Division Office weather station recorded 3.82 inches of rainfall on 9/10/23. One (1) automatic sampler was activated due to discharge at the outfall. Fecal indicator bacteria, nutrient, and total suspended solids (TSS) samples were collected from the automatic sampler and submitted to USCB's

Water Quality Laboratory for analysis. Results have been received and staff has included them in the 319-Grant final reports.

4. Municipal Separate Storm Sewer System (MS4) Program Update

5. MS4 Minimum Control Measure (MCM) - #1 Public Education and Outreach, and MS4 MCM - #2 Public Participation and Involvement

- The May River Watershed Action Plan Advisory Committee (WAPAC) was canceled on 10/26/23. The next meeting is scheduled for 11/30/23. - **Attachment 3**
- Staff partnered with Kids with Kayaks on October 9th, 10th, 13th, 16th, and 19th to teach over 200 students from Bluffton Middle School and River Ridge Academy about common types of stormwater pollutants and what they can do to prevent them.

6. MS4 MCM – #3 Illicit Discharge Detection and Elimination

- Stormwater Infrastructure Inventory Map - **Attachment 4a**
- *E. coli* Concentrations Trend Map - **Attachment 4b**
- Monthly, Microbial Source Tracking (MST) Maps - **Attachments 4c and 4d**
 - SC Department of Health and Environmental Control (SCDHEC) collects MST samples for the Town concurrently with their routine shellfish harvesting water quality sampling at stations 19-19, 19-19A, 19-19B, 19-19C, and 19-24. SCDHEC conducted sampling 10/02/23. The human genetic marker was not detected in any of the samples collected.
- Illicit Discharge Investigations – **Attachment 4e**
 - Staff issued a citation to a business for improper disposal of fats, oils, and grease (FOGs).

7. MS4 MCM – #4 Construction Site Stormwater Runoff Control – Attachment 5

8. MS4 MCM – #5 Stormwater Plan Review and Related Activity – Attachment 6

9. MS4 MCM – #6 Good Housekeeping (Staff Training/Education)

- Staff conducted internal training on water quality sampling on 9/19/23.
- Staff attended the Southeast Stormwater Association (SESWA) Conference 10/4/23-10/6/23.
- Joe Sease completed a training course on the implementation and upkeep of rain gardens.
- Staff conducted facility inspections of the Public Services Yard, Wright Family Park, Dr. Mellichamp Drive, Veterans Memorial Park, and Buckwalter Place Park and discussed findings and next steps with Public Services.

10. MS4 MCM – #6 Good Housekeeping (Ditch, Drainage and Roadside Maintenance)

- Public Services performed weekly street sweeping on Calhoun Street, Highway 46, Bruin Road, May River Road, Pin Oak Street, and curbs and medians on Simmonsville and Buck Island Roads.

- Performed ditch inspections.
 - Arrow ditch (2,569 LF)
 - Red Cedar ditch (966 LF)
 - Buck Island roadside ditch (15,926 LF)
 - Simmonsville roadside ditch (13,792 LF)
- Ongoing roadside mowing, litter clean-up and maintenance of Masters' Way, McCracken Circle, Hampton Parkway, Buck Island and Simmonsville Roads, Goethe Road, Shults Road, Jason and Able Streets, Whispering Pine Road, May River Road and Eagles Field.

11. Citizen Drainage, Maintenance, and Inspections Concerns Map – *Attachment 7*

12. Citizen Request for Watershed Management Services & Activities – *Attachment 8*

Attachments

1. SCDHEC Shellfish Harvesting Monitoring Data Year-to-Date
 - a. SCDHEC May River Shellfish Harvesting Status Exhibit
2. Quarterly Update – May River Watershed Action Plan Implementation Summary*
3. MS4 Minimum Control Measures #1 and #2 – WAPAC Public Notice
4. MS4 Minimum Control Measure #3 – Illicit Discharge Detection and Elimination
 - a. Stormwater Infrastructure Inventory Map
 - b. *E. coli* Concentrations Trend Map
 - c. Microbial Source Tracking Trend Map – Human Source
 - d. Microbial Source Tracking Map – All Sources
 - e. Illicit Discharge Investigations
5. MS4 Minimum Control Measure #4 – Construction Site Stormwater Runoff Control
6. MS4 Minimum Control Measure #5 – Stormwater Plan Review and Related Activity
7. Citizen Drainage, Maintenance and Inspections Concerns Map
8. Citizen Request for Watershed Management Services and Activities Map
9. CIP Master Project Schedules

* Attachment noted above includes the latest updates in green.

	19-19				19-19A				19-19B				19-19C				19-24				19-16			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)
December	17.0	79.0	33.0		22.0	49.0	49.0		17.0	4.5	17.0		4.5	17.0	49.0		4.0	6.8	6.8		11.0	7.8	13.0	
November	70.0	33.0	33.0		31.0	33.0	13.0		17.0	7.8	7.8		13.0	4.0	4.5		13.0	4.5	6.1		4.5	2.0	13.0	
October	49.0	49.0	23.0	33.0	79.0	26.0	46.0	23.0	31.0	13.0	13.0	17.0	21.0	23.0	23.0	33.0	33.0	23.0	11.0	2.0	79.0	17.0	14.0	6.8
September	110.0	33.0	540.0	23.0	49.0	11.0	350.0	13.0	49.0	17.0	350.0	13.0	33.0	13.0	170.0	7.8	33.0	2.0	79.0	17.0	33.0	11.0	33.0	13.0
August	49.0	49.0	23.0	23.0	49.0	49.0	23.0	49.0	23.0	23.0	11.0	6.8	23.0	49.0	13.0	13.0	17.0	14.0	17.0	23.0	22.0	14.0	11.0	2.0
July	33.0	350.0	920.0	350.0	13.0	64.0	49.0	920.0	23.0	79.0	95.0	70.0	7.8	33.0	130.0	49.0	7.8	33.0	23.0	33.0	17.0	13.0	46.0	17.0
June	NS	49.0	13.0	14.0	NS	79.0	4.5	7.8	NS	13.0	11.0	23.0	NS	17.0	2.0	13.0	NS	22.0	1.8	33.0	NS	2.0	9.3	13.0
May	70.0	2.0	4.5	23.0	49.0	49.0	4.5	33.0	23.0	23.0	4.0	17.0	22.0	23.0	1.8	13.0	6.8	23.0	1.8	33.0	4.5	7.8	2.0	21.0
April	33.0	33.0	4.5	170.0	33.0	23.0	4.5	130.0	13.0	22.0	1.8	110.0	6.8	17.0	2.0	70.0	13.0	7.8	1.8	NS	13.0	2.0	1.8	7.8
March	170.0	33.0	33.0	23.0	49.0	11.0	23.0	49.0	130.0	17.0	2.0	17.0	49.0	13.0	4.5	17.0	70.0	2.0	2.0	17.0	33.0	2.0	2.0	17.0
February	17.0	79.0	23.0	540.0	7.8	70.0	31.0	350.0	21.0	79.0	17.0	240.0	4.5	23.0	22.0	240.0	4.5	7.8	2.0	33.0	6.8	6.8	11.0	33.0
January	95.0	17.0	49.0	33.0	33.0	17.0	22.0	33.0	33.0	13.0	33.0	13.0	17.0	23.0	7.8	33.0	17.0	17.0	7.8	7.8	17.0	7.8	7.8	4.5
** Truncated GeoMetric Mean	34.0	36.0	40.0	40.0	21.0	26.0	28.0	33.0	16.0	18.0	18.0	18.0	12.0	15.0	14.0	17.0	10.0	10.0	9.0	10.0	9.0	8.0	9.0	8.0
** Truncated 90th Percentile	106.0	139.0	192.0	226.0	59.0	69.0	91.0	152.0	50.0	58.0	72.0	83.0	37.0	39.0	54.0	81.0	31.0	35.0	41.0	47.0	35.0	33.0	32.0	26.0

NS = No Sample

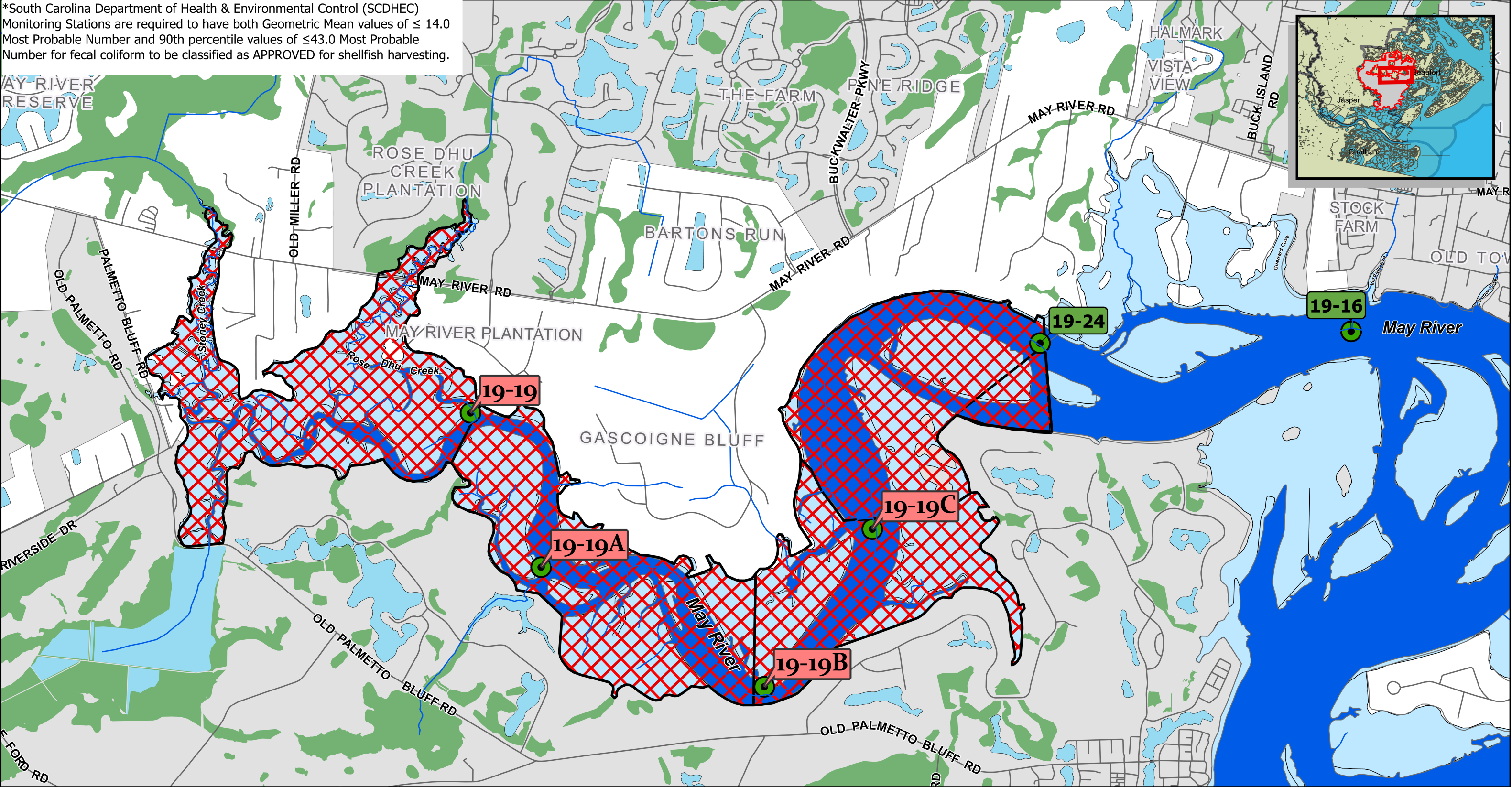
SCDHEC Regulatory Requirements:

Geometric Mean ≤ 14

90th Percentile ≤ 43

** Town staff calculations utilizing SCDHEC statistics

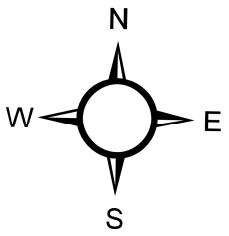
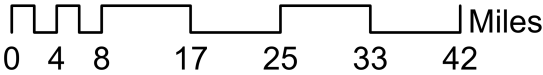
*South Carolina Department of Health & Environmental Control (SCDHEC)
Monitoring Stations are required to have both Geometric Mean values of ≤ 14.0
Most Probable Number and 90th percentile values of ≤ 43.0 Most Probable
Number for fecal coliform to be classified as APPROVED for shellfish harvesting.



- SCDHEC Shellfish Monitoring Stations
- Restricted 2022/2023 Shellfish Season
 - Open SCDHEC Shellfish Monitoring Stations
 - SCDHEC Shellfish Monitoring Station Classification Change
- Legend:
- Streets
 - Drainage
 - Town Jurisdiction
 - County Jurisdiction
 - Water
 - Wetlands

Town of Bluffton
Beaufort County, SC

SCDHEC SHELLFISH HARVESTING STATUS



WAPAC Meeting Presentation
May River Watershed Action Plan Update & Modeling Report
Overview and Status
August 25, 2022

Updated July 27, 2023

Overview

- May River Watershed Action Plan Update & Modeling Report completed November 2020.
- Town Council Adoption of May River Watershed Action Plan Update as a Supporting Document to the Comprehensive Plan completed February 2021.
- May River Watershed Action Plan Update & Modeling Report Summary:
 - **Executive Summary** provides an overview of the project background, findings and interpretation, current state of knowledge concerning fecal coliform fate and transport, and an overview of proposed recommendations for the Town.
 - **1.0 Introduction** includes more detailed project background including the purpose of the document and the Project Team's tasks to 1) develop water quality models to compare current conditions (2018) to pre-shellfish impairment conditions (2002) to develop pollutant load reduction estimates, and 2) evaluate 2011 Action Plan BMPs for appropriateness under current conditions and provide up to eleven (11) alternative projects and preliminary cost estimates.
 - **2.0 Model Setup; 3.0 Model Calibration, and 4.0 Water Quality Model Results** details the methodology used by the Project Team to establish and calibrate the models and the model outputs. This highly technical information is necessary for future Water Quality (WQ) Model calibration and use for consistency.
 - **5.0 Recommendations** includes strategies to improve the Town's monitoring efforts to calibrate the WQ Model further (§5.1), strategies and BMPs for bacteria reduction (§5.2), an evaluation of 2011 Action Plan BMP projects (§5.3), and methodology used to develop 2020 Action Plan Update recommended projects (four septic to sewer conversion projects and eleven stormwater BMP retrofit projects) with cost-estimates and ranking/prioritization (§5.4).
 - **6.0 Conclusions** offers a summary of the WQ Model results in context of current state of knowledge.
 - **7.0 References** documents the prior research findings used to inform recommendations.
 - **Appendices** reference supporting materials:
 - Montie et al. (2019) "Technical Report: Historical Analysis of Water quality, Climate Change Endpoints, and Monitoring in Natural Resources in the May River,"
 - Technical Memo from Dr. Rachel Noble,
 - Watershed Treatment Model Spreadsheets, and
 - Detailed Project Cost Estimate Spreadsheets.

MRWAP 2020 Update Septic to Sewer Project Recommendations/Evaluations:

- Four (4) septic to sewer conversion projects were evaluated in the Rose Dhu Creek and Stoney Creek subwatersheds:
 - Cahill
 - Gascoigne
 - Stoney Creek
 - Pritchardville
 - These projects overlap with 42 subcatchments in the Stoney Creek watershed and 11 in Rose Dhu Creek. Based on WQ Model outputs, these projects alone may potentially reduce FC loading by 3.46×10^{13} FC per year.
- The estimated septic to sewer conversion costs of these projects also requires water capacity upgrades. Previous cost estimates are not accurate and will be updated by BJWSA as each project is considered.

Work Performed and Current Status as of August 25, 2022 Meeting

Discussions with the Town, Beaufort County and BJWSA have been held about future Septic to Sewer Program projects identified above. Stoney Creek Septic to Sewer Project has been identified as the next priority project to pursue under the Septic to Sewer Program.

- The Town and Beaufort County are finalizing Funding and Cost share elements relative to the project. The Stoney Creek sewer and water project cost estimate is nearly \$14 million which is offset by a \$5,925,000 grant.

Update for WAPAC July 27, 2023 Meeting:

Stoney Creek/Palmetto Bluff Sewer: Three-party agreement is being finalized by BJWSA legal team now. BJWSA's RFP for water and sewer design services was supposed to close 6/30/23. Due to RIA protocol, they must review and approve an RFP prior to posting, thus the RFP was canceled. BJWSA received RIA approval and reposted the RFP on 7/17/23 with a closing of 8/1/23.

MRWAP Update Eleven Impervious Restoration (stormwater retrofit) Project Recommendations/Evaluations:

- Eleven (11) project sites (incorporating various individual BMPs) were selected in consultation with the Town (prioritizing subcatchments with FC bacteria hotspot and/or large impervious areas). These sites were evaluated in terms of the potential benefits gained by retrofitting to meet the 95th percentile storm retention, to the maximum extent possible, under the proposed Impervious Area Restoration/Stormwater Retrofit Program.

Eleven (11) proposed project sites Rose Dhu Creek (6 projects) and Stoney Creek (5 projects):

- Bluffton Early Learning Center (BELC)
- Boys and Girls Club of Bluffton (BGC)
- Benton House (BH)
- Bluffton High School (BHS)
- Buckwalter Recreation Center (BRC)

- Example** of Impervious Restoration Project evaluation from May River Watershed Action Plan Update & Modeling Report:



Work Performed and Current Status as of August 25, 2022 Meeting

Update for WAPAC July 27, 2023 Meeting:

Work performed for this project is being performed by MSA Consultant Engineering Firm:

- Drafted a detailed scope of work for Engineering Consultant Firm review and cost proposal (Expression of Interest) regarding performance of the work elements presented herein and related to MRWAP Update recommendations for implementation.
- The Expression of Interest was submitted to 3 consultant firms under existing Master Service Agreements with the Town for review and a request for response.
- All 3 Firms responded and their respective responses were evaluated, scored and discussed internally.
- A recommendation for Award was made to Goodwyn, Mills and Cawood selected.
 - Phase I of this work performed under existing FY 22 funding from Watershed Management Division.
 - Phase II of this work was approved for FY23 funding.

Task 1 : MRWAP Update 11 site locations

Update for WAPAC July 27, 2023 Meeting:

Eleven (11) proposed project sites Rose Dhu Creek (6 projects) and Stoney Creek (5 projects):

Yellow highlight indicates geotechnical evaluations complete.

1. **Bluffton Early Learning Center (BELC)**. Participating in preliminary design development phase.
 2. Boys and Girls Club of Bluffton (BGC). Participating in preliminary design development phase.
 3. Benton House (BH). Participating in preliminary design development phase.
 4. **Bluffton High School (BHS)**. Participating in preliminary design development phase.
 5. Buckwalter Recreation Center (BRC). Participating in preliminary design development phase.
 6. Lowcountry Community Church (LCC). **Declined to Participate.**
 7. **McCracken Middle School/Bluffton Elementary School** (MMSBES). Participating in preliminary design development phase.
 8. **May River High School**. Participating in preliminary design development phase.
 9. One Hampton Lake Apartments (OHLA). **Declined to Participate.**
 10. **Pritchardville Elementary School** (PES). Participating in preliminary design development phase.
 11. Palmetto Pointe Townes (PPT). **Declined to Participate.**
- Evaluate 11 sites and proposed BMPs. **Complete.**
 - Update concept plans for 11 sites based on site evaluations, recommendations and discussions. **Complete.**
 - Perform geotechnical evaluations at each site at locations related to BMP locations of updated concept plans. **Completed for the 5 school sites.** Geotechnical evaluations for the remaining **3** participating partner sites are being schedule based on recent property owner participation status being known/confirmed.

Coordinating geotechnical work approval with property owners and schedule for Benton House (BH), Buckwalter Recreation Center (BRC) and Boys and Girls Club of Bluffton (BGC).

- Refine updated concepts and use for presentations to Property Owner to discuss Impervious Restoration Program goals, objectives and gain support for Program and their participation. **Based on geotechnical investigation results, updated Concept plans for the 5 school sites have been refined. A meeting will be scheduled with School District to discuss the updated concept plans to get their feedback prior to beginning Preliminary Design task.**
 - Develop list of “incentives” to secure Property Owner participation (**see Policy Document Formulation below**).
- Based on geotechnical information and Property Owner feedback further refine concept plans to Preliminary Design :
 - Determine BMP types and location to maximize SWRv/WQ treatment in cost effective approach. **Estimated impervious area treated and SWrv capture based on refined Concept plans developed for the 5 school sites.**
 - Determine estimated pollutant load reductions.
 - Develop site specific BMP details.
 - Develop preliminary BMP maintenance schedule and cost for each site.
- Preliminary Design development plans will be presented to the Property Owner for review and discussion. Other Restoration Program details (maintenance responsibilities, easements, incentives, etc.) developed as part of the Program (see Policy Document Formulation below) will also be discussed in hopes of establishing a commitment from the Property Owner to participate in the Program. Once a “commitment” is secured from the Property Owner, the project site will be moved to Final design, permitting, and ultimately construction.

Task 2 : Identify 15 new project sites for Town of Bluffton Impervious Restoration/BMP Retrofit Projects.

- The Town wishes to identify an additional 15 project sites located within the municipal limits of Bluffton for the Impervious Restoration/BMP Retrofit Program. However, the criteria for site selection will be considered to be more “low hanging fruit” based on the following:
 - Within Town of Bluffton Municipal limits.
 - Soils – sandy soils with high infiltration rates offer the biggest bang for the buck for water quality treatment/improvement. Utilizing soil survey and other information target sites where infiltration can be maximized on-site.
 - Public or governmental agency land/property owner (not SCDOT RoW).

Update for WAPAC July 27, 2023 Meeting:

Finalized the list of 15 additional sites (and 5 alternates) to be considered/evaluated within the municipal limits of Bluffton for Impervious Restoration feasibility and concept plan development. Site evaluations will be performed as property owner approvals for access to property to perform site assessment is obtained.

Town of Bluffton Impervious Restoration/BMP Retrofit Policy Documents.

Task 3 : Section 5.4.4. Stormwater BMP Retrofit Projects of the May River Watershed Action Plan Update and Model Report identifies potential Impervious Restoration/BMP Retrofit projects located on Public and Private Land. As mentioned earlier, one of the primary site selection criteria, at time of report development, was to identify sites with large impervious areas so that pollutant load reductions could be estimated and the benefits of such projects on stormwater quality quantified/estimated, if implemented into construction. Generally, Public Funds are not expended to improve private property nor is Town of Bluffton funding generally expended on Public Land owned by another government entity. In order for such projects identified in Section 5.4.4. to move forward in the interest of improved water quality and for the overall benefit and welfare of the constituents of the Town of Bluffton, Policy Documents need to be formulated that establishes the parameters of such a Program to be initiated and implemented.

Policy Document Formulation has been initiated and includes research of similar programs nationwide.

Update for WAPAC July 27, 2023 Meeting:

- **Updated Draft Policy Document was completed and submitted in June for staff review and comments are being finalized.**
- **Upon Policy Document Final Draft development, the Policy Document will be presented to WAPAC with a request for recommendation to Town Council for adoption.**

Other, Related MRWAP Update Recommendations

- Adopt proposed regional Southern Lowcountry Post Construction Stormwater Ordinance and Design Manual - **complete** September 2021.
- The Town should incorporate volume reduction BMPs (those that encourage infiltration) within existing and future CIP projects to the maximum extent practical, especially for project locations with well-drained soils (HSG A or B) – **in progress**, see below.

○ Work Performed and Current Status as of August 25, 2022 Meeting

▪ Bridge Street Streetscape Project

- Project design/permitting is complete, and Construction Contract has been awarded.
- Incorporated Infiltration BMPs within the project to capture and treat 1.95" of rainfall over impervious surfaces within the project area, prior to discharge into the May River.
- Received Section 319 Grant from DHEC to cost-share cost of construction of proposed BMPs.
- Construction was initiated by JS Construction in early December 2022. Construction considered 65% complete.

Update for WAPAC July 27, 2023 Meeting:

- **Project work is Substantially Complete.**
 - **Partial reimbursement from DHEC for construction cost supported by 319 Grant requested and received.**
- #### ▪ Pritchard Street Drainage Improvement Project

- Project in Design Phase and considered 30% complete.
 - Incorporated Infiltration BMPs within the project to capture and treat 1.95" of rainfall over impervious surfaces within the project area, prior to discharge into Heyward Cove.
 - 70% design plan submitted, reviewed and comments presented to consultant.
 - 319 Grant was awarded by DHEC to the Town.
 - Update for WAPAC July 27, 2023 Meeting:
 - **Project Scope of Work and budget increase approved for FY24 to include streetscape elements of lighting, sidewalk, traffic calming and ADA compliance.**
 - **Updated survey received.**
 - **Updated 70% design drawings received in July and under review.**
- In-House Microbial Source Tracking – **in progress**, see below
 - The Town entered a Memorandum of Understanding (MOU) with the University of South Carolina Beaufort (USCB) in July 2021 to establish and fund a regional Microbial Source Tracking (MST) laboratory capable of accepting environmental water quality samples.
 - Analytical services are provided by the USCB-MST laboratory for all environmental samples collected by the Town.
 - Staff has collected additional fecal samples needed for dog, bird, and deer. The USCB-MST Laboratory is conducting the assessment on additional fecal samples and Dr. Pettay will provide a final report to the Town once all fecal markers in regional watersheds have been analyzed.
 - Update for WAPAC July 27, 2023 Meeting: Additional genetic fecal markers continue to be analyzed by Dr. Pettay and the MST Laboratory.
- Future (new) Bacteria Monitoring Locations - **in progress**, see below
 - Staff increased sampling frequency and implemented additional monitoring sites and parameters in the May River headwaters based upon recommendations in the 2020 May River Watershed Action Plan Update and Model Report.
 - Staff is collecting intermittent flow data at SonTek IQ sites in conjunction with grab FIB samples.
 - Update for WAPAC July 27, 2023 Meeting Staff is working with the consultant to identify recommended strategies for intermittent flow data collection and a review of the Town's FIB grab sample schedule.
- Future (new) Water Flow Monitoring Locations.
 - **Work Performed and Current Status as of August 25, 2022 Meeting**
 - The MRWAP Update included recommendations for the Town to perform certain rainfall and flow data measurements in May River Headwater Watersheds in order to "calibrate" and make more accurate Model predictions. These recommendations were evaluated and a game plan to address recommendations to calibrate model developed.

- Utilizing existing flow and rainfall data collected over past years with rain gauges, IQ Plus and Sontek measuring instruments in Stoney Creek, Rose Dhu Creek, Palmetto Bluff, Duck Pond and Heyward Cove, the Town hired a consultant to review the data and determine:
 - Useful data obtained to gain the required information to calibrate model.
 - The data obtained from Stoney Creek and Heyward Cove was deemed sufficient for Model calibration and Final report for this work is in process.
 - Duck Pond was deemed inconsequential, not needed due to drainage area size and proximity/outfall to tidal waters.
 - Consultant Final Report delivered, and Model Calibration Data for Stoney Creek and Heyward Cove identified.
 - If data review resulted in insufficient data, develop a monitoring program that would produce the data needed.
 - Rose Dhu Creek and Palmetto Bluff flow data review resulted in data that was insufficient to calibrate Model.
 - Potential purchase of telemetry stations to equip continuous flow monitoring stations with real-time data access.
 - Final Report delivered. Based on recommendations of data and process needed, staff has procured needed telemetry station equipment and has hired a consultant to assist in getting the intermittent and continuous flow data and producing a Final Report. The field work installation of equipment is being scheduled. Once installed and operational, data collection will last 6 months.

Update for WAPAC July 27, 2023 Meeting

- The Town of Bluffton procured and installed two (2) SonTek Turnkey Systems that enable real-time continuous flow data review to a cloud-based service. These systems are deployed in the Rose Dhu Creek and Palmetto Bluff subwatersheds.
- A SonTek IQ remains deployed in the Stoney Creek subwatershed. The consultant's first data review determined there was sufficient flow data for model calibration in the Stoney Creek subwatershed. However, staff determined it would continue to collect continuous flow data at this location so that continuous flow, intermittent flow, bacteria samples, and rainfall data were

collected for three (3) of the four (4) Modeling Report subwatersheds simultaneously.

- Consultant is reviewing data and identifying power, beam, or possible maintenance issues weekly.
- Intermittent flow measurements, utilizing the FlowTracker2, will be conducted at the time of grab sampling at the three (3) SonTek IQ flow stations beginning 7/31/23.



PUBLIC NOTICE

The May River Watershed Action Plan Advisory Committee
(WAPAC) meeting scheduled for

Thursday, October 26, 2023

has been

CANCELLED

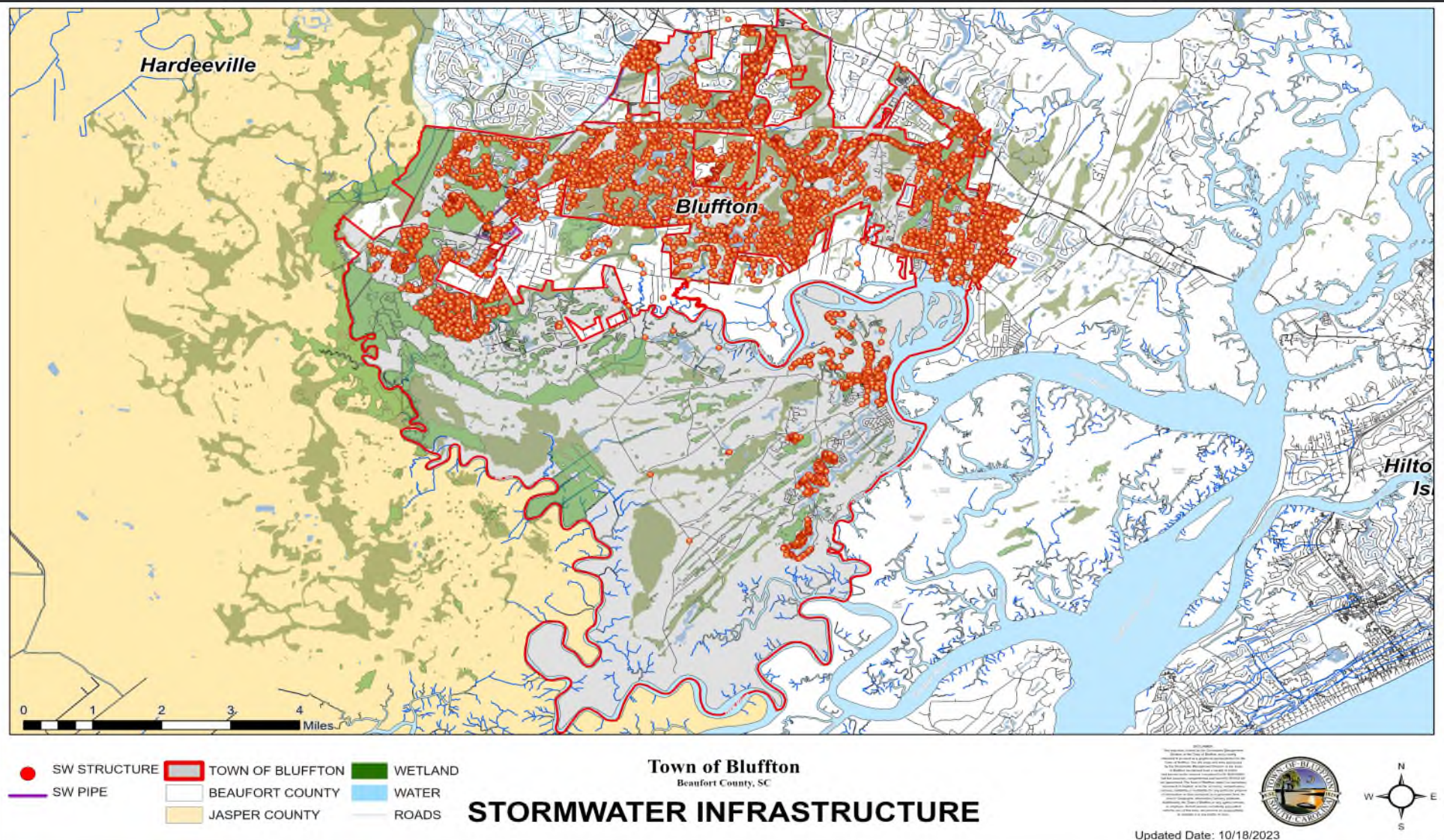
due to lack of quorum.

The next meeting is scheduled for

Thursday, November 30, 2023

If you have questions, please contact
the Watershed Management Division
at: 843-706-4559

MS4 Minimum Control Measure #3 – IDDE (Illicit Discharge Detection & Elimination): Stormwater Infrastructure Inventory



Stormwater Infrastructure Inventory Collection Status

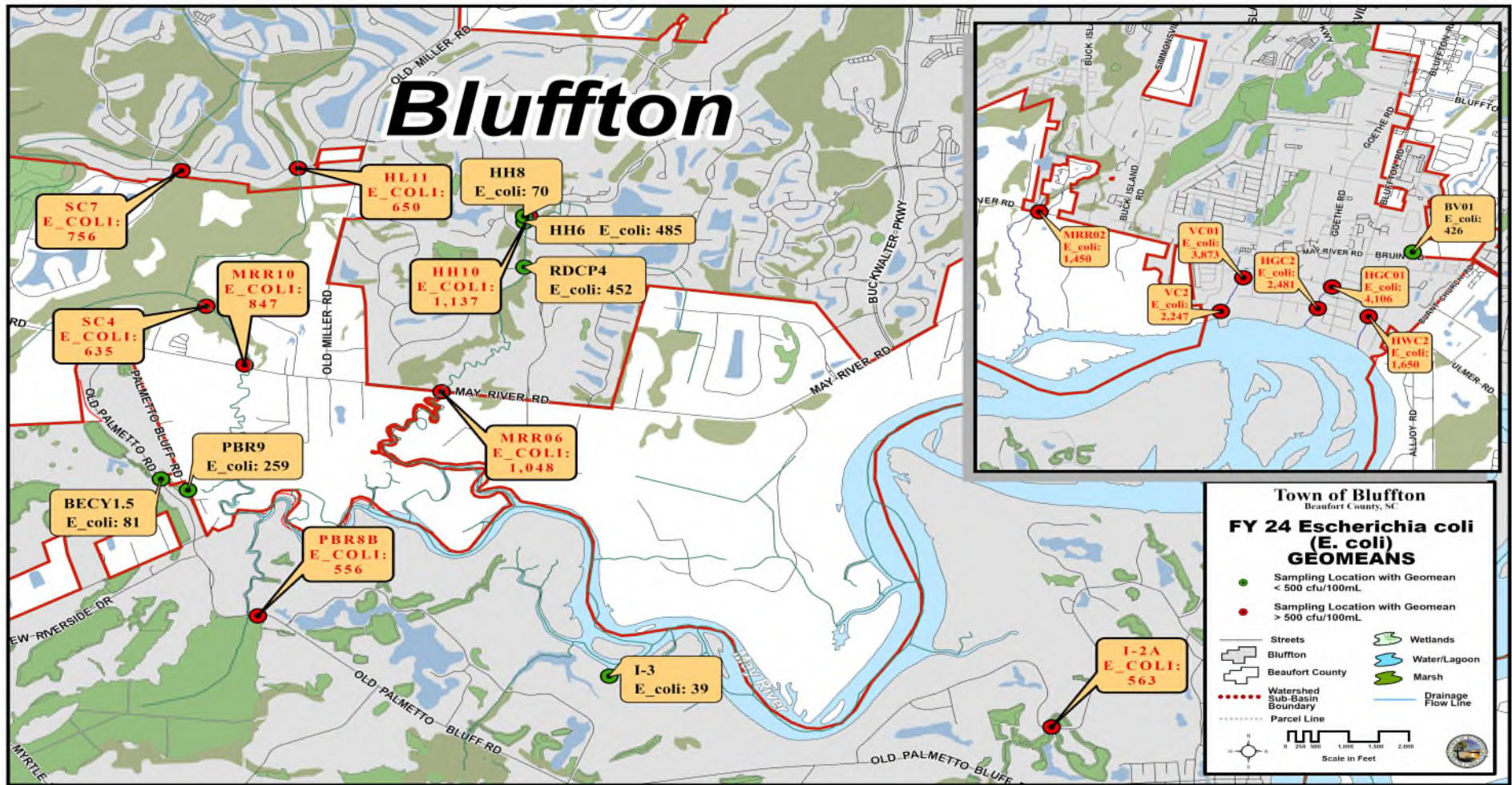
Collection Totals

16,676

FY 2024 YTD

19

MS4 Minimum Control Measure #3 – IDDE: *E. coli* Concentrations Trend Map

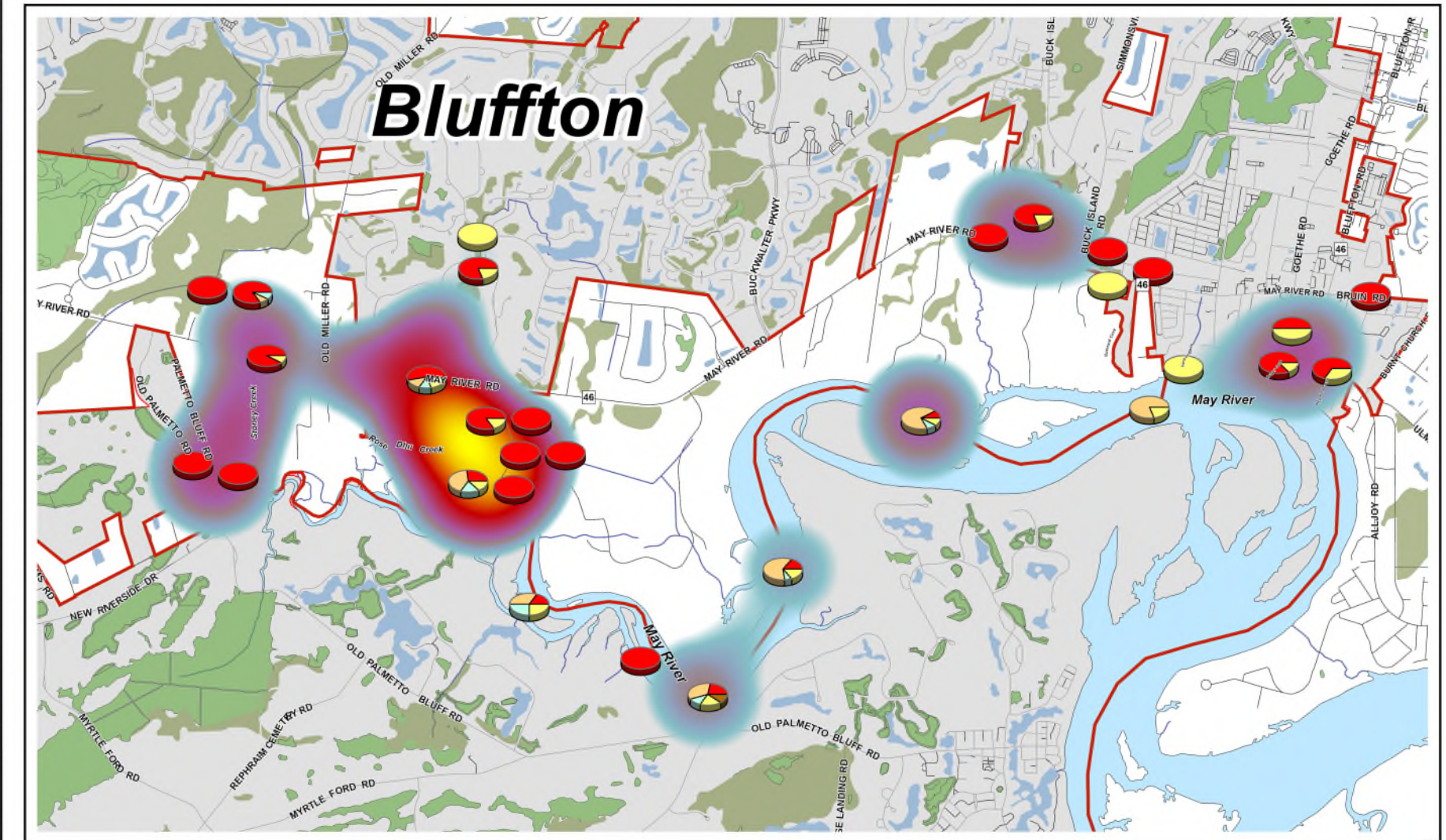


E. coli form geomeans updated as of: 10/18/2023

	USCB Water Quality Samples	Microbial Source Tracking Samples	MS4 Quarterly Samples Collected
FY 2024 YTD Totals	169	14	81
FY 2023 Totals	584	108	108
FY 2022 Totals	447	78	119

Totals include only samples submitted for laboratory analysis, and not *in situ* parameters.

MS4 Minimum Control Measure #3 – IDDE: Microbial Source Tracking (MST) Trend Map



MST Sampling Results



Human
Bird
Deer
Dog
Horse

MST Sampling Sites

Intensity of samples

Representative of Low Sampling Distribution
Representative of High Sampling Distribution

MICROBIAL SOURCE TRACKING (MST) LOCATIONS

Samples at Sites With Positive Detection
and the Intensity of Positive Hits

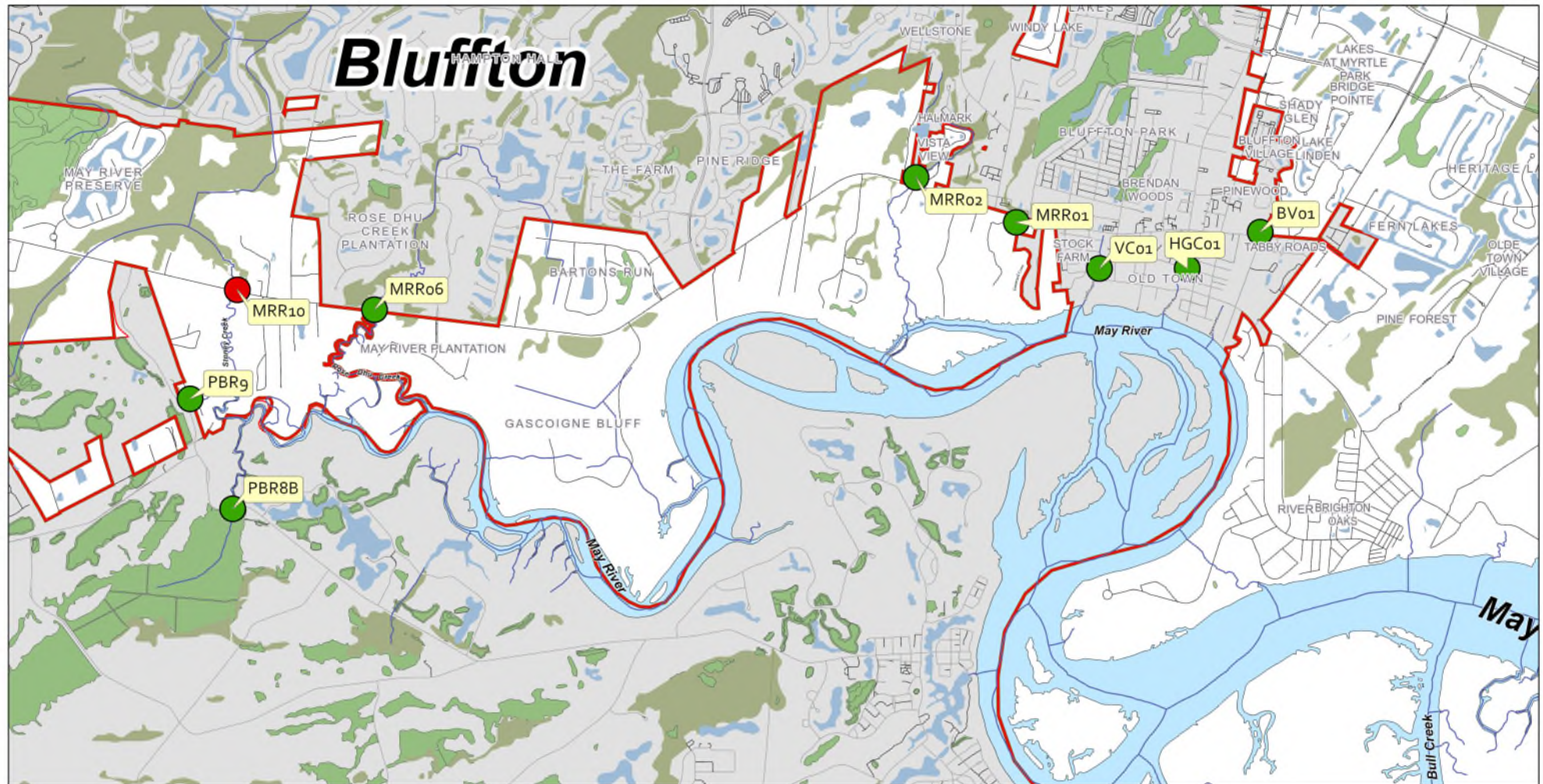
Town of Bluffton
Beaufort County, SC

Town Jurisdiction
Beaufort County
Drainage Flow Lines



Updated Date: 10/18/2023

MS4 Minimum Control Measure #3 – IDDE: Microbial Source Tracking (MST) Map – Human Sources

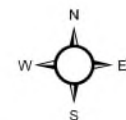


- MST Sampling Location Without Human Genetic Marker Detection
- MST Sampling Location With Human Genetic Marker Detection
- Flowline
- Street
- Town Jurisdiction
- County Jurisdiction

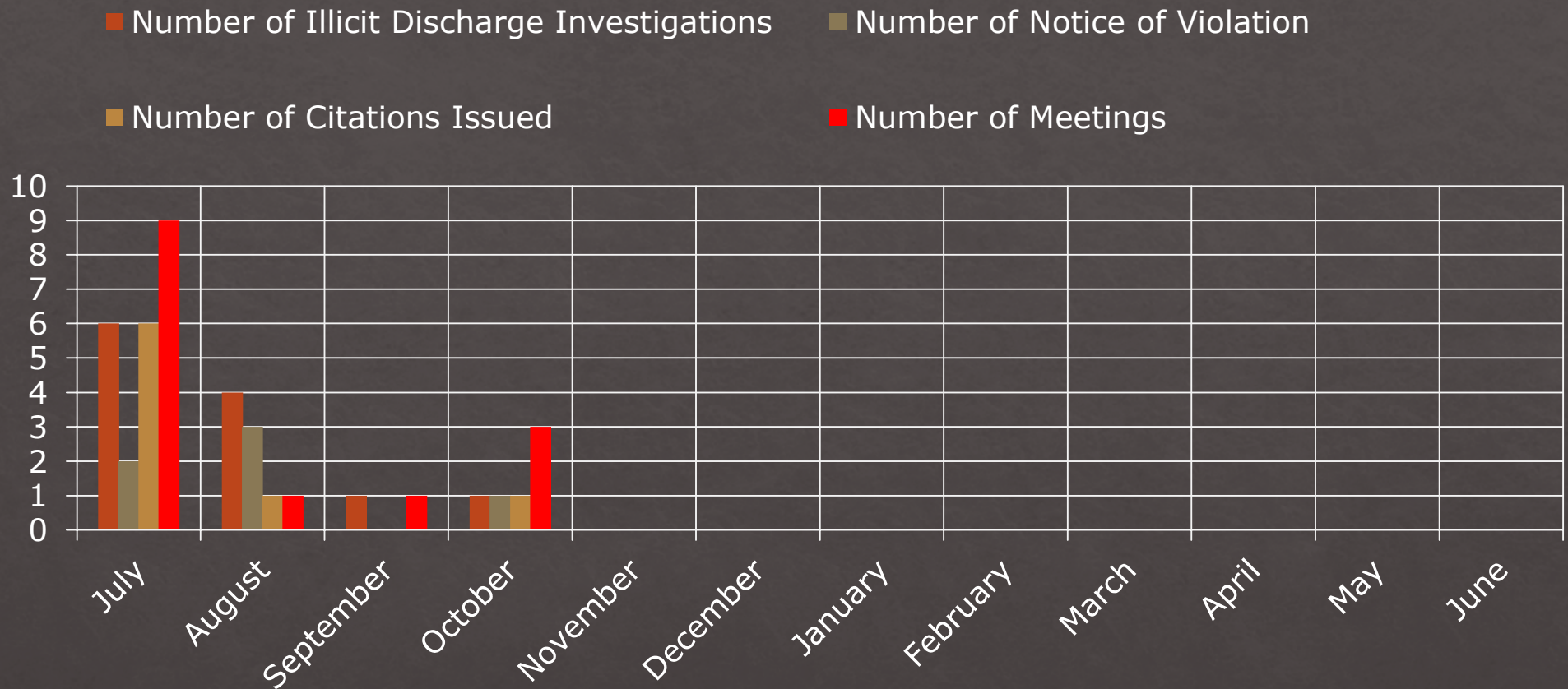
MICROBIAL SOURCE TRACKING LOCATIONS

Sampling Results October 2023 SCDHEC Sampling

Town of Bluffton
Beaufort County, SC

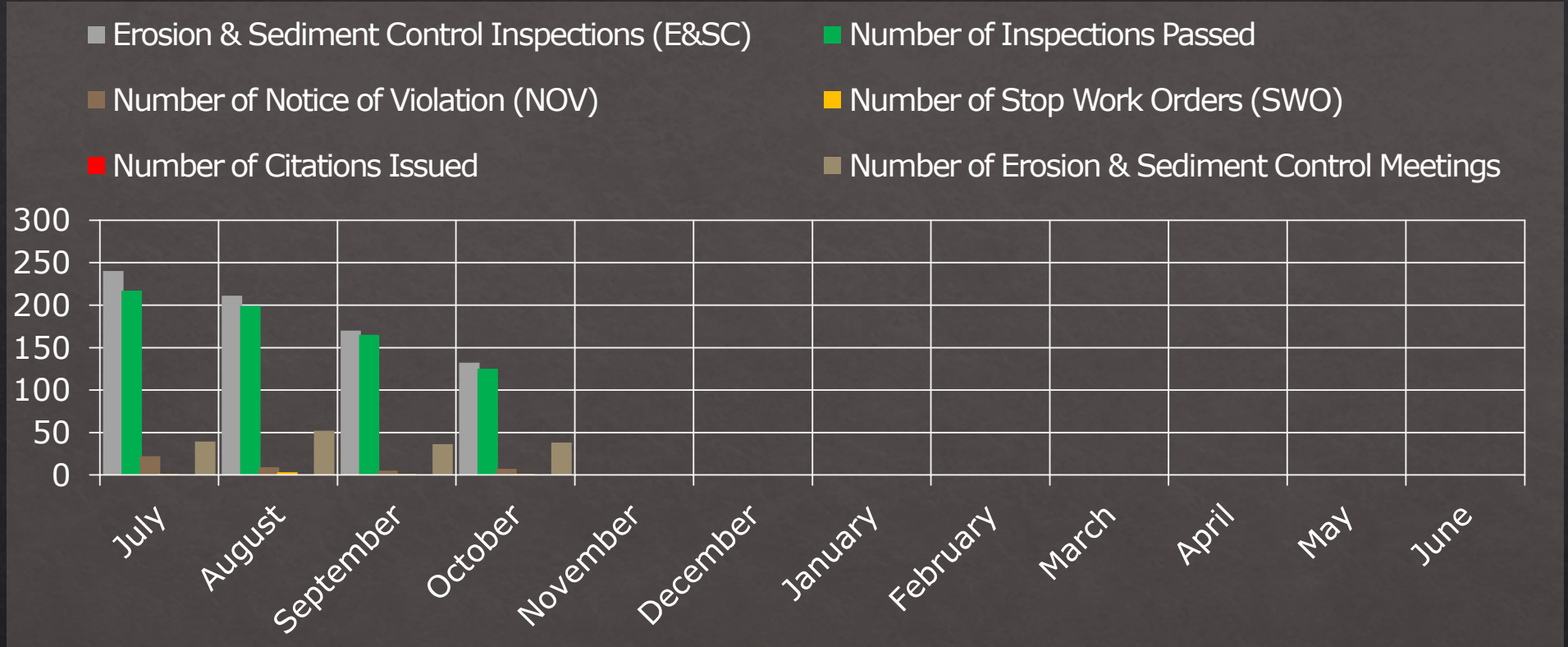


MS4 Minimum Control Measure #3 – IDDE: Illicit Discharge Investigations



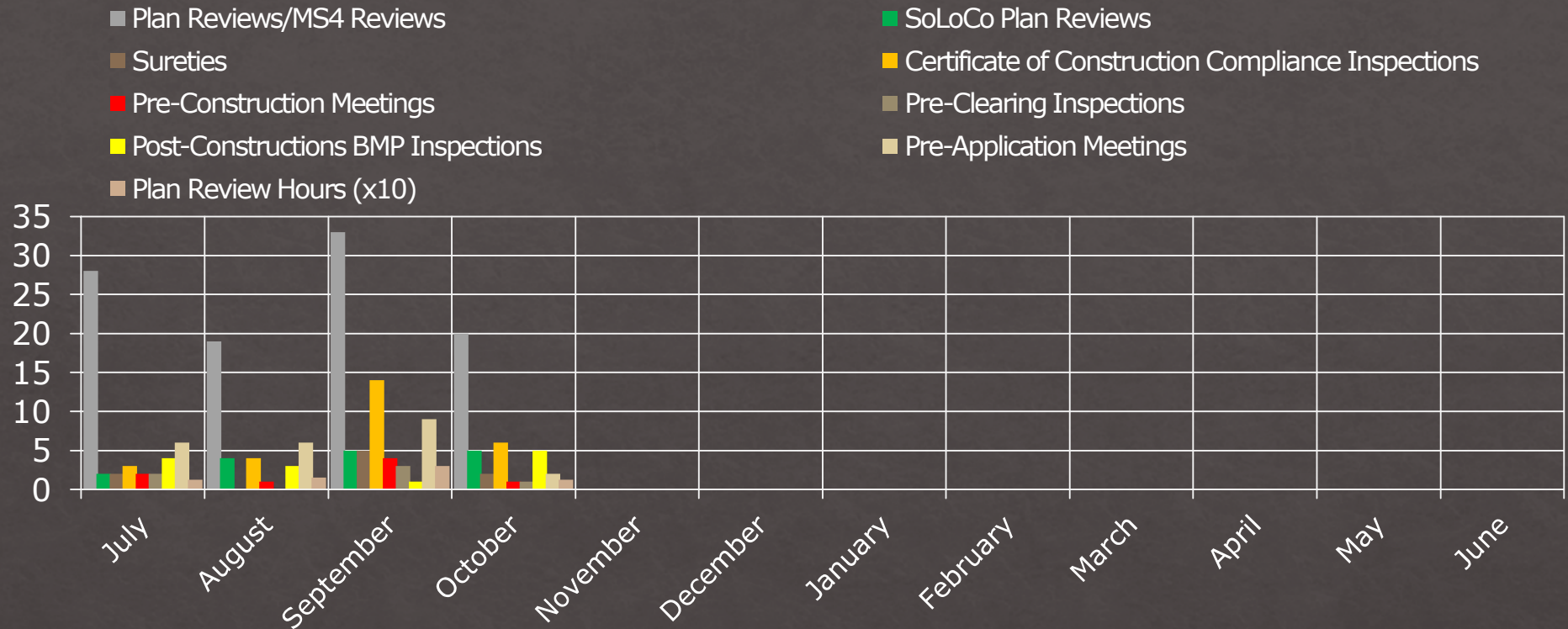
	Number of Illicit Discharge Investigations	Number of Notices of Violation Issued	Number of Citations Issued	Number of Meetings
FY 2024 YTD Totals	12	6	8	14
FY 2023 Totals	27	89	1	20
FY 2022 Totals	30	5	3	17

MS4 Minimum Control Measure #4 - Construction Site Stormwater Runoff Control



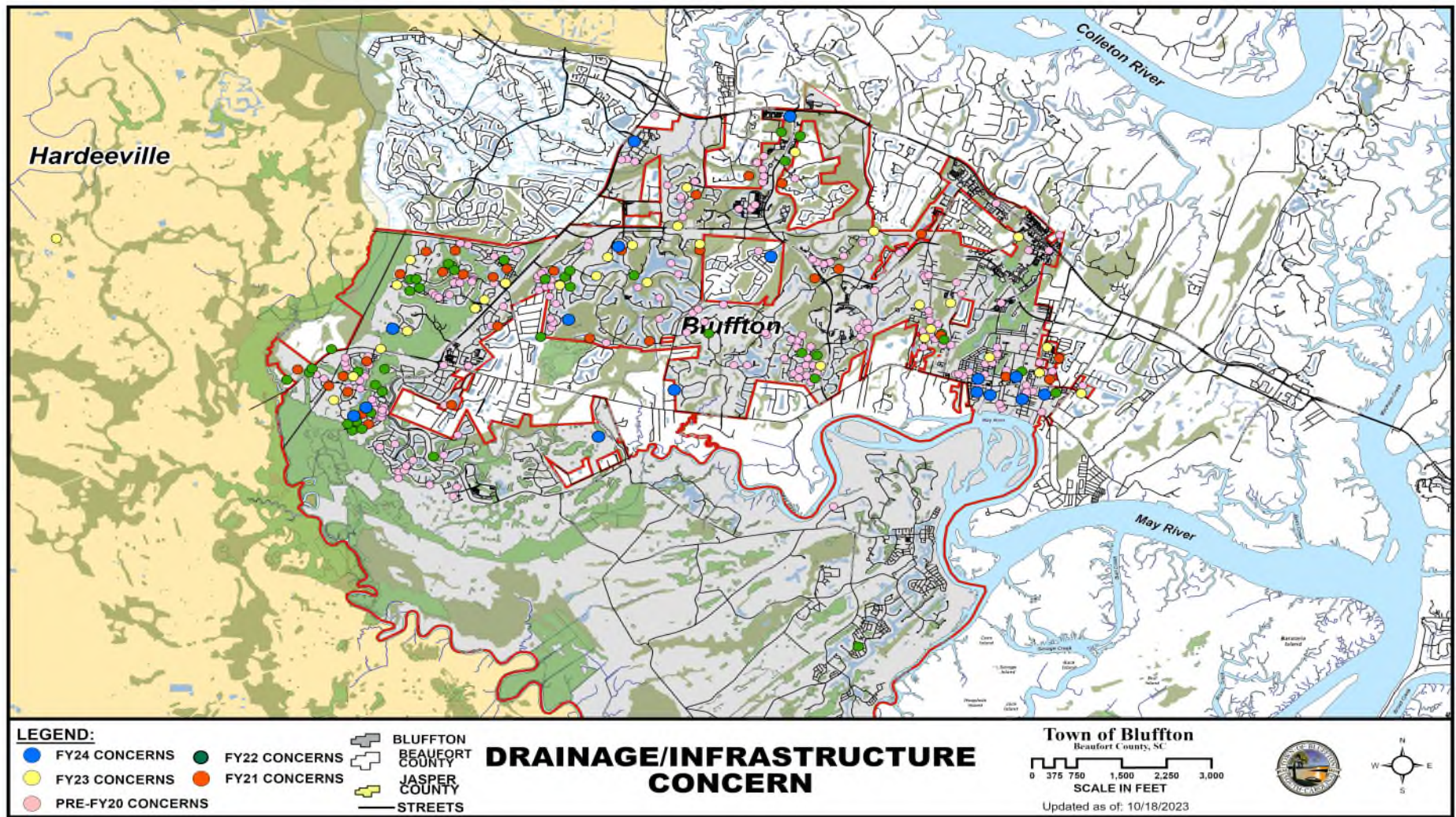
	Number of Sediment & Erosion Control Inspections	Number of Inspections Passed	Number of NOV's Issued	Number of SWO Issued	Number of Citations Issued	Number of E&SC Meetings
FY 2024 YTD Totals	753	706	43	6	0	165
FY 2023 Totals	2,321	2,030	266	26	0	577
FY 2022 Totals	3,127	2,701	392	49	0	673

MS4 Minimum Control Measure #5 Stormwater Plan Review & Related Activity



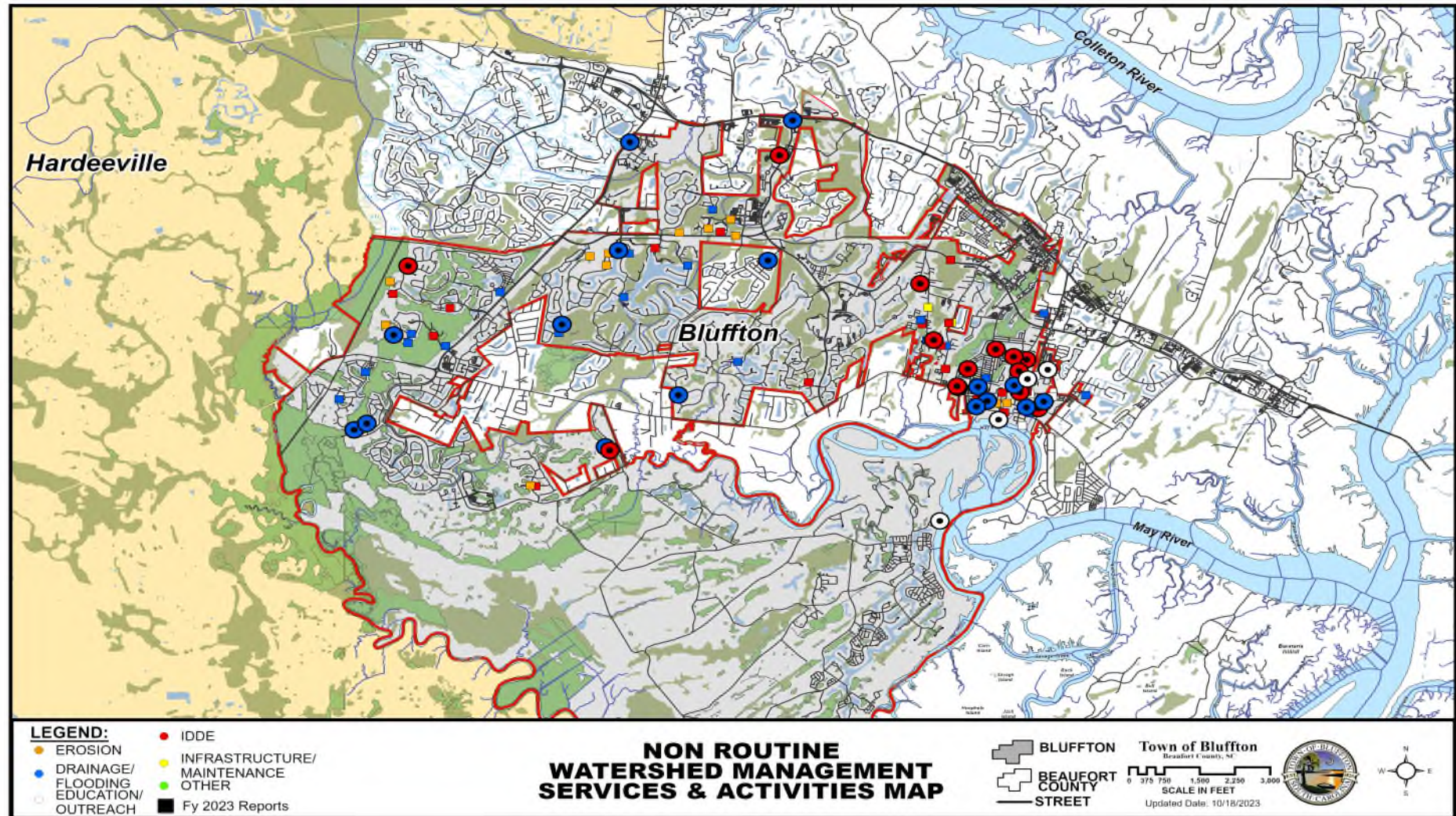
	Plan Reviews MS4 Reviews	SoLoCo Plan Reviews	Sureties	CCC Inspections	Pre-Construction Meetings	Pre-Clearing Inspections	Post Construction BMP Inspections	Pre-Application Meetings	Total Plan Review Hours
FY 2024 YTD	100	16	9	27	8	6	13	23	70 Hrs.
FY 2023 Totals	297	67	42	40	15	13	45	50	386 Hrs.
FY 2022 Totals	231	13	42	26	30	23	44	26	454 Hrs.

Citizen Drainage, Maintenance and Inspections Concerns Map



	Number of Drainage Concerns Investigated	Number of Meetings
FY 2024 YTD Totals	17	2
FY 2023 Totals	61	52
FY 2022 Totals	38	34

Citizen Request for Watershed Mngt. Services & Activities Map



	Number of Citizen Requests Investigated	Number of Meetings
FY 2024 YTD Totals	36	17
FY 2023 Totals	46	23
FY 2022 Totals	33	21

FY24 CIP Master Project Schedule



SUBJECT TO CHANGE

FY24 CIP Master Project Schedule



SUBJECT TO CHANGE