

# TOWN OF BLUFFTON MAY RIVER WATERSHED ACTION PLAN ADVISORY COMMITTEE

Henry "Emmett" McCracken Jr. Council Chambers, Town Hall  
Thursday, April 27, 2023

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Present: Stan Rogers, Chair; Larry Toomer, Vice-Chair; Al Stokes, Carmen Manning, Jessie White, Amber Kuehen, Chris Shoemaker, Emmett McCracken, Emeritus

Absent: None

Staff: Beth Lewis, Bill Baugher, Christina Hurd, Nicole Wright

Guest: None

Media: None

## I. CALL TO ORDER

1. Mr. Rogers, Chair, called the meeting to order at 3:00PM.

## II. NOTICE REGARDING POSTING OF MEETING PER SOUTH CAROLINA FREEDOM OF INFORMATION (FOIA) REQUIREMENTS

## III. ROLL CALL AND CONFIRMATION OF QUORUM

1. Members introduced themselves.

## IV. ADOPTION OF AGENDA

1. Ms. Manning requested the addition of an update on WAPAC Strategic Plan Priority #1 to the Agenda under Discussion. Following much discussion Ms. Kuehn made a motion to adopt the agenda with the addition of a discussion on a committee presentation on expanding WAPAC's purview to Town Council at their next workshop. Mr. Stokes seconded the motion. Unanimous ayes.

## V. APPROVAL OF MINUTES

1. Ms. Manning noted that she brought up a point of concern during the February 23<sup>rd</sup> meeting and she said they should be included in the official minutes.  
**ATTACHMENT 1** During Mr. Rybak's presentation at the February WAPAC meeting, Ms. Manning noted that Septic and Sewer drawing (Figure 13 of the May River Action Plan Model Report (henceforth: Modeling Report) is incorrect so that puts the entire model in question. Ms. Manning stated the figure shows more of Bluffton on septic and therefore overstates the value of all the Modeling Report projects. Ms. Manning stated there should be a disclaimer on the cover of the Modeling Report that states not to use the figures because they are based on erroneous data. She indicated this was the second time she had brought this to the attention of the committee and said it should be noted in the February minutes. Ms. Manning made a motion to amend the minutes to include her concern under Old Business. Mr. Stokes seconded. Unanimous ayes.
2. Mr. McCracken asked for the specific wording of the amendment and for the location it would be placed in the February minutes. Ms. Lewis stated she would go back and listen to the audio recording and include Ms. Manning's

comments. Ms. Lewis stated that if the committee wished to table the vote on the February minutes, then the committee would have the opportunity to review Ms. Manning's statement prior to adoption. Mr. Toomer agreed this would be a better approach. Mr. Rogers called for a motion. Mr. Toomer moved to table approval of the February 23, 2023 Minutes until the next meeting. Mr. Shoemaker seconded the motion. Unanimous ayes. The approval of the February 23, 2023 minutes was tabled.

## **VI. PUBLIC COMMENTS**

1. None

## **VII. OLD BUSINESS**

1. **WAPAC Strategic Priority Two (2), to Update Assessment of Current Environmental Health Status of the Town's Watersheds Compared to Historical Conditions to Inform Management Opportunities e.g., the 2004 Report "A Baseline Assessment of Environmental and Biological Conditions in the May River, Beaufort County, South Carolina" Completed by SC Department of Natural Resources, USGS, and NOAA to Compare Current Environmental and Biological Conditions to the Baseline**

Ms. Lewis opened the discussion and presented the committee with the Draft Strategic Plan Priority Memorandum drafted at the February meeting. The committee made minor edits to the draft memorandum, which included providing the Blueprint Bluffton section number R2.11 referenced in the Memorandum. Ms. Manning made a motion to accept the memorandum with those edits. Mr. Toomer seconded the motion. Mr. Rogers called for the vote. Unanimous ayes.

Ms. Lewis stated the Memorandum would be sent to Town Council at their June meeting. **ATTACHMENT 2**

2. **Water Quality Monitoring Program**

Ms. Lewis reminded the committee of the February Microbial Source Tracking (MST) sampling results. Ms. Manning had submitted questions to Ms. Lewis via email prior to the meeting. Ms. Lewis addressed Ms. Manning's questions regarding these results. Ms. Lewis also provided the committee with an update on South Carolina Department of Health and Environmental Control (SCDHEC) geometric and 90<sup>th</sup> percentile data for May River Shellfish Harvesting Stations, 19-19, 19-19A, 19-19B, 19-19C, 19-24, and 19-16. **ATTACHMENT 3**

## **VIII. NEW BUSINESS**

1. No New Business

## **IX. DISCUSSION**

1. **WAPAC Strategic Plan Priority #4 Town Council Report**

Mr. Baugher reported the Consideration to Establish a Green Space Policy and Program was voted on and passed unanimously by Town Council. Mr. Baugher

stated that next steps included a staff evaluation of Town policies, Blueprint Bluffton, and ordinances that are currently in place. Mr. Baugher also stated that staff would be evaluating those policies currently not in place and ways to develop a green space policy. Mr. Baugher stated the staff would be examining May River Watershed buyback programs, restoration programs, and open space. Mr. Rogers asked if there was a timeline for Green Space Policy development and Mr. Baugher stated that he did not have a timeline yet. The timeline will be part of the discussion between Growth Management, Building Safety and Watershed.

## **2. WAPAC Strategic Plan Priority #3**

Ms. Lewis invited Mr. Rogers to lead the discussion on how the committee would like to proceed with setting up a framework for this priority, to be ready for a full discussion at the next meeting. Mr. Rogers opened the floor to suggestions. Ms. Manning offered four topics to bring for discussion. First, Ms. Manning stated she would like to get an estimate of the impervious areas in the watershed updated. Second, to review the ordinance and offer suggestions on how to update it so that requirements are increased. Third, Ms. Manning stated she would like to see more enforcement. She questioned why the Town is so hesitant to enforce requirements. She stated that at a minimum new sidewalks should be permeable surfaces. Lastly, Ms. Manning stated the committee could discuss how to address the Planned Units of Developments (PUDs). She stated that if the committee do not start addressing some of these things, we will pass the point of no return.

Mr. Rogers called for a motion to continue this discussion at the May 25<sup>th</sup> work group meeting. Mr. Toomer moved to table the discussion until the next meeting. Mr. Shoemaker seconded the motion. Unanimous ayes.

## **3. WAPAC Strategic Plan Priority #1**

Ms. Lewis stated that the next Town Council Workshop was scheduled for July 18. The topic of the expansion of WAPAC Purview is on the schedule for this meeting. The committee will have additional time to review the slides that Ms. Manning provided comments on.

Mr. Rogers requested that the next meeting be located at a different venue. Staff stated they would see if the Orlando meeting room was available.

## **X. ADJOURNMENT**

1. Unanimous decision to adjourn at 4:50 P.M. Next meeting: May 25, 2023 @ 3:00 PM in the Town of Bluffton Council Chambers.

### **Attachments:**

1. DRAFT February 23, 2023 WAPAC Meeting Minutes
2. Baseline Assessment Memorandum
3. Water Quality Program Update

## TOWN OF BLUFFTON MAY RIVER WATERSHED ACTION PLAN ADVISORY COMMITTEE

Henry "Emmett" McCracken Jr. Council Chambers, Town Hall  
Thursday, February 23, 2023

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Present: Stan Rogers, Chair; Al Stokes, Carmen Manning, Jessie White, Amber Kuehen, Emmett McCracken, Emeritus

Absent: Chris Shoemaker, Larry Toomer; Vice-Chair

Staff: Beth Lewis, Bill Baugher, Christina Hurd, Dan Rybak, Nicole Wright

Guest: Dr. Andrew Tweel, Dr. Denise Sanger, Dr. Peter Kingsley-Smith, and Pam Marcum – South Carolina Department of Natural Resources

Media: None

### I. CALL TO ORDER

1. Mr. Rogers, Chair, called the meeting to order at 3:04PM.

### II. NOTICE REGARDING POSTING OF MEETING PER SOUTH CAROLINA FREEDOM OF INFORMATION (FOIA) REQUIREMENTS

### III. ROLL CALL AND CONFIRMATION OF QUORUM

1. Members introduced themselves.

### IV. ADOPTION OF AGENDA

1. Ms. Kuehn moved to adopt the Agenda. Mr. Stokes seconded the motion. Unanimous ayes.

### V. APPROVAL OF MINUTES

1. Ms. White moved to adopt the January 26, 2023 meeting minutes as presented. Mr. Stokes seconded the motion. Unanimous ayes.

### VI. PUBLIC COMMENTS

1. None

### VII. PRESENTATIONS, CELEBRATIONS AND RECOGNITIONS

1. Proposed Approach to Updating a Baseline Assessment of Environmental and Biological Conditions in the May River, Beaufort County, South Carolina – Andrew Tweel, Assistant Marine Scientist, SC Department of Natural Resources

Ms. Lewis introduced Dr. Andrew Tweel, Dr. Denise Sanger, Dr. Peter Kingsley-Smith, and Pam Marcum with the South Carolina Department of Natural Resources (SCDNR) Marine Resources Research Institution, to the committee. Dr. Tweel presented information about SCDNR's proposed approach to updating the 2004 Baseline Assessment. SCDNR answered questions from the committee following Dr. Tweel's presentation. (ATTACHMENT 1)

### VIII. OLD BUSINESS

**1. May River Watershed Action Plan Project Implementation Status Report - Dan Rybak, Project Manager**

Mr. Rybak, Project Manager, provided the committee with May River Watershed Action Plan Project Implementation Status Report. Mr. Rybak answered questions from the committee following Mr. Rybak's presentation. (ATTACHMENT 2) Mr. Rybak also provided the committee with a May River Watershed Action Plan Update and Modeling Report Overview and Status Report as part of the committee's packets. (ATTACHMENT 3)

**IX. DISCUSSION**

**1. WAPAC Strategic Priority Two (2), to Update Assessment of Current Environmental Health Status of the Town's Watersheds Compared to Historical Conditions to Inform Management Opportunities e.g., the 2004 Report "A Baseline Assessment of Environmental and Biological Conditions in the May River, Beaufort County, South Carolina" Completed by SC Department of Natural Resources, USGS, and NOAA to Compare Current Environmental and Biological Conditions to the Baseline**

Ms. Lewis opened the discussion by presenting the committee with a Draft Strategic Plan Priority Two Letter of Support addressed to Town Council. The committee made edits to the draft letter of support however did not have time to finalize the document. (ATTACHMENT 4).

Following discussion, Mr. Rogers, Chair, stated the committee would continue to draft the Strategic Plan Priority Two (2) Letter of Support. Mr. Rogers stated committee members should email all Letter of Support edits by March 9, 2023. Mr. Rogers stated he would coalesce these edits and present an amended draft to the committee at the March 23, 2023 meeting. Mr. Rogers reminded the committee that a vote to approve the Strategic Plan Priority Two (2) Letter of Support would take place at the March meeting.

**X. NEW BUSINESS**

**1. Introduction of Nicole Wright, Stormwater Technician - Bill Baugher, Watershed Division Manager**

Mr. Baugher, Watershed Division Manager introduced the Town of Bluffton's new Stormwater Technician, Nicole Wright, to the committee.

**2. Port Royal Sound Foundation State of the Sound Symposium Highlights - Al Stokes, WAPAC Committee**

WAPAC member, Mr. Stokes, presented highlights from the Port Royal Sound Foundation's State of the Sound Symposium.

**3. Revised Federal Definition of Urbanized Area (UA) - Beth Lewis, Water Quality Program Administrator**

Mr. Baugher discussed the Revised Federal Definition of Urbanized Area (UA). Mr. Baugher stated that the revised UA definition will not impact the Town of Bluffton's Municipal Separate Storm Sewer (MS4) permit. (ATTACHMENT 5)

**4. Town Requirements for Meeting Minutes - Beth Lewis, Water Quality Program Administrator**

Ms. Lewis, Water Quality Program Administrator, provided the committee with a brief overview of Freedom of Information Act (FOIA) requirements for meeting minutes and outline the Town staff's timeline for WAPAC meeting minutes. (ATTACHMENT 6)

**5. Burnt Church Road Project, Coordination Between Beaufort County and Town of Bluffton – Beth Lewis, Water Quality Program Administrator**

Ms. Lewis stated Ms. Kim Washok-Jones spoke to Beaufort County's Transportation Manager via email on the Beaufort County Burnt Church Project. The County Transportation Manager informed Ms. Washok-Jones that Burnt Church Road was a South Carolina-owned roadway and therefore the County would be required to adhere to South Carolina Department of Transportation (SCDOT) stormwater standards. Beaufort County stated they would take recommendations and incorporate as many possible low impact development (LID) best management practices into the project as possible.

**XI. ADJOURNMENT**

1. Unanimous decision to adjourn at 5:31P.M. Next meeting: March 23, 2023 @ 3:00 PM in the Town of Bluffton Council Chambers.

**Attachments:**

1. South Carolina Department of Natural Resources May River 2023 Overview of Proposed SCDNR Effort to Update 2004 Baseline Assessment
2. May River Watershed Action Plan Project Implementation Status Update
3. May River Watershed Action Plan Update and Modeling Report Overview and Status Report (committee handout)
4. Draft May River Watershed Action Plan Advisory Committee (WAPAC) Strategic Plan Priority Two (2) Letter of Support to Town Council
5. Revised Federal Definition of Urbanized Area (UA) Map
6. Review of Meeting Minutes

# May River Project

Assessing change after 20 years



**Andrew Tweel, Denise Sanger, Peter Kingsley-Smith**

Marine Resources Research Institute

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**Ed Wirth and Marie DeLorenzo**

NOAA Hollings Marine Lab



# Original study 2002-2004

- With substantial planned developments, SCDNR and collaborators were contracted to conduct a comprehensive baseline assessment of the May River drainage system
- Why the May River?
  - Economically and ecologically important area
  - Outstanding Resource Waters (ORW) designation by SCDHEC
  - Significant shellfish resources



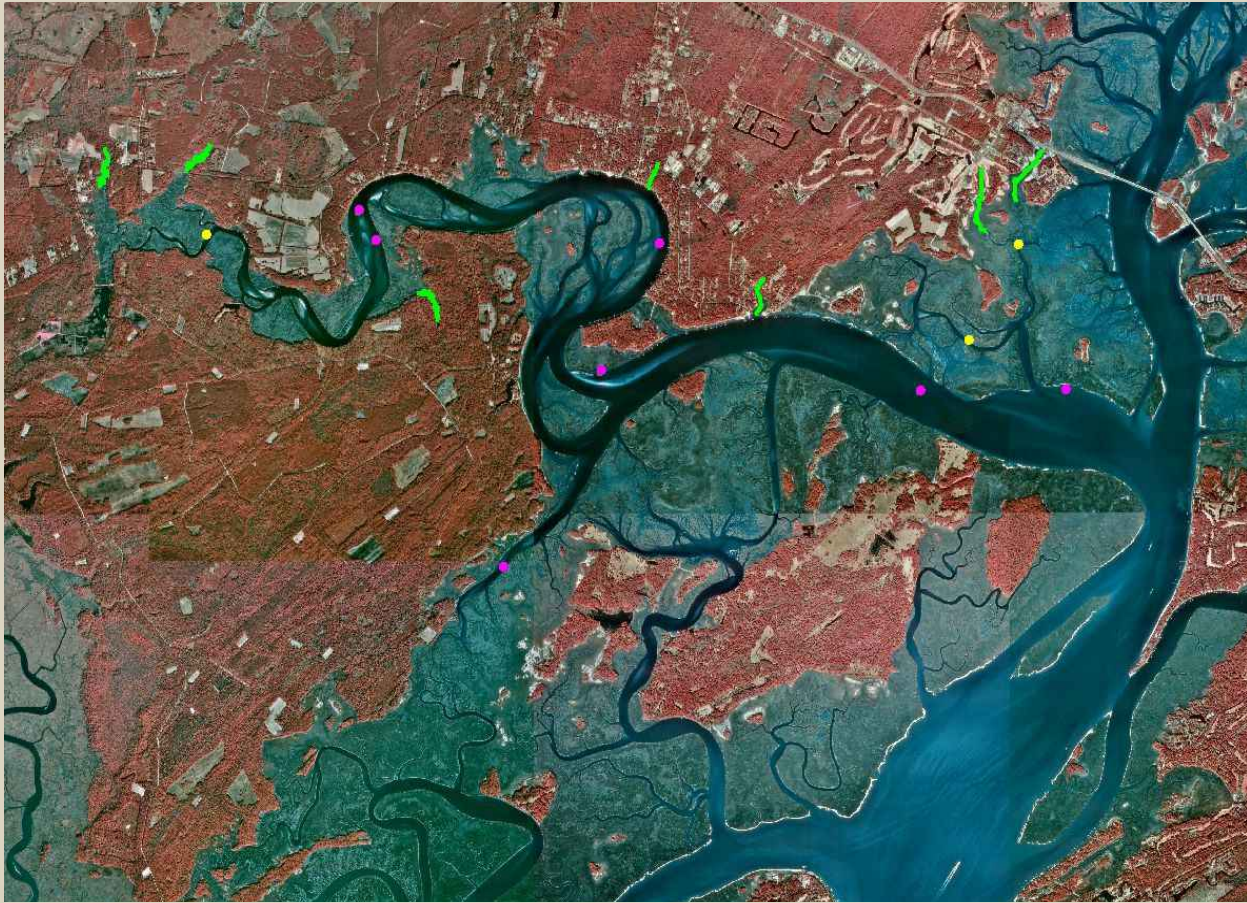
# Original study 2002-2004

- SCDNR, USGS, NOAA
- Water quality monitoring
  - Continuous stream gages (3), quarterly water quality (16) and fecal sampling (6)
- Sediment quality
  - Contaminants, toxicity, composition (summer, 16 sites)
- Biological resources
  - Benthic community (16), fish/crustacean (16), shellfish (11), phytoplankton (16, quarterly)

# What has changed in and around the May River?

- The watershed around the May River has undergone significant development
  - May River headwaters impervious cover: 6% in 2002 to 15% in 2018
  - Increased use of waterways— boat traffic, fish and shellfish harvesting
- Changes in climate and sea level
  - Different types and timing of precipitation events
  - Warmer winters
  - Sea level rise





1994



2021

# Proposed study overview

- Revisit original study sites where possible
- Collect corresponding data
  - Match parameters where appropriate
  - Match seasonal timing as much as possible
- Broad ecosystem approach
  - Habitat quality assessment
    - Tidal creeks (big and small)
    - Open water
  - Oyster health and productivity assessment



# Proposed tidal creek and open water assessments

- Revisit original study sites
  - Broad spatial coverage
    - Upper and lower reaches
  - Diversity of habitat types
    - Shallow headwaters
    - Large tributaries
    - Main branch, deep sites
  - Diversity of development changes



# Proposed tidal creek and open water assessments

- At each site:
  - Basic water quality
    - Temperature, oxygen
    - Nutrients (TP, TN, nitra./nitri.)
    - Fecal coliform
  - Sediment quality
    - Chemical contaminants
    - Toxicity assessment
    - Grain size
  - Biological quality
    - Benthic community
    - Nekton community (large tidal and open water sites only)



# Comparison of original vs proposed habitat quality assessment

	2002-2004 study	Proposed 2023 study	Existing monitoring
Sites	Headwater TC, large TC, OW. Full length coverage.	Headwater TC, large TC, OW. Full length coverage.	
Stream gages	3 sites	No gages	
Water quality	Quarterly (16)	Summer only	
Fecal sampling	Quarterly conc. (6) and summer typing (16)	Summer only, conc.	Existing monthly sampling
Sediment quality	Summer (16)	Summer (16)	
Benthic community	Summer (16)	Summer (16)	
Fish/crustacean	Summer (16)	Summer (10)	Eric Montie, USCB in HTC
Phytoplankton	Quarterly (16)		

# Proposed oyster assessments

- Revisit 6 of 11 original sites
  - Cover entire reach
    - Above and below restricted harvest areas
  - 5 of 6 correspond to habitat quality assessment sites
- Diversity of:
  - salinity regimes
  - development changes
  - residence times/flushing





# Proposed oyster assessments

- At each site:
  - Demographics
    - Abundance, size/height, mortality
  - Disease
    - Dermo and MSX
    - Prevalence and intentisty
  - Recruitment
    - Live, dead, size, count
    - Other fauna identified/counted



2 years



# Comparison of original vs proposed oyster resource assessment

	2002-2004 study	Proposed 2023 study
Oyster demographics: <ul style="list-style-type: none"> <li>• abundance</li> <li>• size (shell height)</li> <li>• % mortality</li> </ul>	11 sites in upper (3), mid (5) and lower (3) zones 5 replicates per site	6 sites in upper (2), mid (2) and lower (2) zones 3 replicates per site
Health / tissue contamination	20 per site, subcellular analyses	Not proposed
Oyster disease	25 oysters per site 11 sites Dermo and MSX Prevalence & intensity	24 oysters (8 x 3) per site 11 sites Dermo and MSX Prevalence & intensity
Oyster recruitment	3 recruitment trays at each of 11 sites Live, dead, measured and counted Key fauna identified and counted	3 recruitment trays at each of 11 sites Live, dead, measured and counted Key fauna identified and counted

# Proposed timeline

- **Spring 2023:** Deployment of oyster recruitment trays (not Town funded)
- **Early July 2023:** Official project start?
- **July-August 2023:** Field sampling (TCP, SCECAP, Oyster disease and demography)
- **Fall/winter 2023:** Laboratory analyses incl. QAQC
- **Winter/spring 2023/2024:** -Data analysis incl. comparison to original datasets  
-Collection of oyster trays
- **Spring/summer 2024:** Writing
- **Fall 2024:** Report complete
- **December 2024:** Project end

# Questions?

Andrew Tweel  
Environmental Research Section  
[tweela@dnr.sc.gov](mailto:tweela@dnr.sc.gov)





# **May River Action Plan 2020 Update**

## **Status Report and Update**

**Presentation to May River Watershed Action Plan  
Committee**

**February 23, 2023**

**Department of Projects & Watershed Resilience**

**Dan Rybak, Project Manager**

# Septic to Sewer Projects



- 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  $3.46 \times 10^{13}$  FC per year.
- The estimated septic to sewer conversion costs of these projects is \$5.5 million.

## Work Performed and Current Status

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.

1. The Town, Beaufort County and BJWSA continue to work on details to draft a proposed Inter-Governmental Agreement (IGA) to be presented to each respective approving authority for review, finalization and approval. It is anticipated that this process is months away from final approval/adoption of the respective parties.



# Impervious Restoration Program Projects



Within the MRWAP 2020 Update, 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.

Proposed project sites Rose Dhu Creek (6 projects) and Stoney Creek (5 projects):

**Yellow** highlight indicates geotechnical evaluations complete.

- **Bluffton Early Learning Center (BELC).** Participating in preliminary design development phase.
- Boys and Girls Club of Bluffton (BGC). Participating in preliminary design development phase.
- Benton House (BH). Participating in preliminary design development phase.
- **Bluffton High School (BHS).** Participating in preliminary design development phase.
- Buckwalter Recreation Center (BRC). Participating in preliminary design development phase.
- Lowcountry Community Church (LCC). Declined to Participate.
- **McCracken Middle School/Bluffton Elementary School (MMSBES).** Participating in preliminary design development phase.
- **May River High School.** Participating in preliminary design development phase.
- One Hampton Lake Apartments (OHLA). Participating in preliminary design development phase.
- **Pritchardville Elementary School (PES).** Participating in preliminary design development phase.
- Palmetto Pointe Townes (PPT). Declined to Participate.

# Impervious Restoration Program Projects



## Task 1 : MRWAP Update 11 site locations

- Evaluate 11 sites and proposed BMPs. **Complete**
- Update concept plans for 11 sites based on site evaluations, recommendations and discussions. **Complete for school sites. These plans were used to determine locations for Geotech boring locations.**
- Perform geotechnical evaluations at each site at locations related to BMP locations of updated concept plans. **Complete at School site locations. Others being scheduled.**
- 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 information and Property Owner feedback further refine concept plans to Preliminary Design



# Impervious Restoration Program Projects



Updated Project Site Concept Plan Example:

H.E. McCracken Middle School (HEMMS)



\* GI/LID Practice Areas are shown to approximate scale based on drainage areas (light green shading).

# Impervious Restoration Program Projects



- Geotechnical Results Summary – School Sites

Test Number	Soil Type	Infiltration Test Depth		Ksat in/hr	Water Table Depth (WTD)		Difference from WTD to Infil Test	Geotech Notes, post-report email	Preliminary Auger Test (GMC) for comparison			
		in	ft		ft	in	in		Site ID	Soil Texture	% Sand	WTD
BELC-1	SAND with silt	42	3.5	0.04	6	72	30		2	Loamy Sand	88%	> 4'
BELC-2	SAND with silt	52	4.3	0.20	6	72	20		4	Loamy Sand	84%	> 4'
BELC-4	SAND with silt	50	4.2	0.06	6	72	22	*50" per email from Nick Johnson	3	Sand	90%	46"
BELC-5	SAND with silt	36	3.0	0.01	6	72	36		1	Sand	92%	38"
BELC-6	SAND with silt	51	4.3	5.77	6.5	78	27		NEW			
BES-1	SAND with silt	32	2.7	0.52	4	48	16		1	Sand	96%	43"
BES-4	SAND with silt	59	4.9	0.06	7	84	25		2	Sand	92%	> 4'
BES-6	SAND with silt	39	3.3	1.76	5	60	21	Offset <5' to the SE (utility conflict)	3	Sand	94%	> 4'
BES-10	SAND with silt	14	1.2	0.05	6	72	58		4	Sand	94%	42"
BES-12	SAND with silt	35	2.9	2.16	5	60	25		5	Sand	92%	36"
BHS-1	SAND with silt	53	4.4	7.21	6	72	19		NEW			
BHS-5	SAND with silt	42	3.5	2.08	6.5	78	36		2	Sand	94%	> 4'
BHS-7	SAND with silt	55	4.6	5.21	6	72	17	Offset <5' to the S/SW (utility conflict)	NEW			
BHS-9	SAND with silt	60	5.0	2.11	6	72	12		3	Sand	94%	> 4'
BHS-11b	SAND with silt	41	3.4	0.11	5.7	68	27		5	Sand	92%	44"
HEMMS-1	SAND	23	1.9	0.42	4.3	52	29		1	Sand	96%	24"
HEMMS-3	SAND with silt	33	2.8	0.35	4.5	54	21		5	Sand	89%	> 4'
HEMMS-5	SAND with silt	51	4.3	5.97	6	72	21		2	Sand	94%	> 4'
HEMMS-12	SAND with silt	49	4.1	3.67	6	72	23		3	Sand	96%	> 4'
HEMMS-14b	SAND with silt	42	3.5	10.65	5.1	61	19		4	Sand	93%	> 4'
MRHS-8	Clayey SAND	84	7.0	0.06	8	96	12		NEW			
MRHS-12	SAND with silt	79	6.6	0.35	7.7	92	13		3	Sandy Clay Loam	59%	
MRHS-27	Clayey SAND	84	7.0	0.11	8	96	12		6	Sandy Clay Loam	65%	
MRHS-34	SAND with silt	89	7.4	0.43	8.5	102	13		NEW			
MRHS-35	SAND with silt	72	6.0	1.76	8	96	24		4	Sandy Clay Loam	73%	
PES-6	SAND with silt	48	4.0	2.08	5	60	12		2	Loamy Sand	86%	> 4'
PES-11	SAND with silt	73	6.1	0.84	7.1	85	12		4	Loamy Sand	88%	> 4'
PES-13	SAND with silt	72	6.0	1.58	7	84	12		3	Loamy Sand	88%	> 4'
PES-16	SAND with silt	85	7.1	0.12	8.1	97	12		NEW			
PES-17alt	SAND with silt	72	6.0	0.31	7	84	12		NEW			

# Impervious Restoration Program Projects



**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:**

Desk top analysis and field work performed to develop a list of 45 sites that potentially meet the criteria above. This list of potential sites is under review/evaluation



[illegible]

# Impervious Restoration Program Projects



**Task 3 :** 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.

## **Update:**

2 *DRAFT* Policy Documents have been submitted for review and comment. Comments are being evaluated and addressed by Consultant and an update *DRAFT* Policy Document is expected by April 2023.



# Impervious Restoration Program Projects



- Bridge Street Streetscape Project – BMP Construction





# Impervious Restoration Program Projects





# ***QUESTIONS & DISCUSSION***



WAPAC Meeting Presentation  
May River Watershed Action Plan Update & Modeling Report  
Overview and Status  
August 25, 2022  
Updated February 23, 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  $3.46 \times 10^{13}$  FC per year.
- The estimated septic to sewer conversion costs of these projects is \$5.5 million.

### **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.

1. The Town and Beaufort County are finalizing Funding and Cost share elements relative to the project and a letter to BJWSA will be developed and sent to BJWSA regarding project funding, capital outlay and schedule for implementation.

### **Update for WAPAC February 23, 2023 Meeting:**

The Town, Beaufort County and BJWSA continue to work on details to draft a proposed Inter-Governmental Agreement (IGA) to be presented to each respective approving authority for review, finalization, and approval. It is anticipated that this process is months away from final approval/adoption of the respective parties.

## **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)

- Lowcountry Community Church (LCC)
- McCracken Middle School/Bluffton Elementary School (MMSBES)
- May River High School
- One Hampton Lake Apartments (OHLA)
- Pritchardville Elementary School (PES)
- Palmetto Pointe Townes (PPT)
- Based on WQ Model outputs, these projects alone may potentially reduce FC loading by
  - $2.99 \times 10^{14}$  FC reduction for the Full SWRv (entire sub-basin drainage area catchment).
  - $2.53 \times 10^{14}$  FC reduction for the Reduced SWRv projects (impervious area drainage area of sub-basin catchment).
- The estimated of Full SWRv projects costs is \$32.7 million and the estimated cost of Reduced SWRv projects is \$22.6 million.
- Currently the Towns' Impervious Restoration Program is targeting Reduced SWRv for future projects.

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



Figure 52. McCracken Middle School/Bluffton Elementary School Proposed Stormwater BMP Retrofits

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

### Update for WAPAC February 23, 2023 Meeting:

- Drafted a detailed scope of work for Engineering Consultant Firm review and cost proposal (Expression of Interest) regarding performance of the following work elements related to MRWAP Update recommendations for implementation:

#### **Task 1 : MRWAP Update 11 site locations**

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

**Yellow** highlight indicates geotechnical evaluations complete.

- **Bluffton Early Learning Center (BELC). Participating in preliminary design development phase.**
- **Boys and Girls Club of Bluffton (BGC). Participating in preliminary design development phase.**
- **Benton House (BH). Participating in preliminary design development phase.**
- **Bluffton High School (BHS). Participating in preliminary design development phase.**
- **Buckwalter Recreation Center (BRC). Participating in preliminary design development phase.**
- **Lowcountry Community Church (LCC). Declined to Participate.**
- **McCracken Middle School/Bluffton Elementary School (MMSBES). Participating in preliminary design development phase.**
- **May River High School. Participating in preliminary design development phase.**
- **One Hampton Lake Apartments (OHLA). Participating in preliminary design development phase.**
- **Pritchardville Elementary School (PES). Participating in preliminary design development phase.**
- **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 4 participating partner sites are being schedule based on recent property owner participation status being known/confirmed.
- 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.
  - Developpe 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.
  - 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 February 23, 2023 Meeting:**

Desktop analysis and field work performed to develop a list of 45 sites that potentially meet the criteria above. This list of potential sites is under review/evaluation.

## **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.

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

- 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 and the Consulting Firm of Goodwyn, Mills and Cawood selected.
  1. Phase I of this work is in process under existing FY 22 funding from Watershed Management Division.
  2. Phase II of this work will be presented for Town Council review and approval in the August Town Council Meeting and FY23 funding.

#### **Update for WAPAC February 23, 2023 Meeting:**

Phase II work was approved by Town Council and work has been initiated and reported herein.

- Phase I work completed by Consultant and Town:
  1. Review of recommendations of the MRWAP Update.
  2. On-site evaluations at each proposed site.
  3. Meetings with Beaufort County School District.
    - 6 of the 11 sites are located on School property. The School District is deemed an important project partner and as such several meeting have been held to discuss the program and need for project BMPs to improve water quality. The School District has granted permission for us to perform initial site investigations, provided site specific plan information, future development plans on each site and expressed a willingness to participate in the Program.
    - Drafted a Letter to Non-School Property Owners describing the Impervious Restoration Program goals and objectives and requesting a meeting to discuss and gain support.
  4. Policy Document Formulation has been initiated and includes research of similar Programs Nationwide.

#### **Update for WAPAC February 23, 2023 Meeting:**

2 DRAFT Policy Documents have been submitted for review and comment. Comments are being evaluated and addressed by consultant and an update DRAFT Policy Document is expected by April 2023.

#### **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.

**Update for WAPAC February 23, 2023 Meeting**  
Construction was initiated by JS Construction in early December 2022. Construction considered 65% complete.
  - 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.
    - Submitted Section 319 Grant proposal to DHEC to cost-share cost of construction of proposed BMPs. Pre-proposal was accepted, and Full Proposal was requested by DHEC. Under Review.

**Update for WAPAC February 23, 2023 Meeting**

    - 70% design plan submitted, reviewed and comments presented to consultant.
    - 319 Grant was awarded by DHEC to the Town.
- 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.
  - **Update for WAPAC February 23, 2023 Meeting** 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.
- 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.
  - **Update for WAPAC February 23, 2023 Meeting** Staff is collecting intermittent flow data at SonTek IQ sites in conjunction with grab FIB samples.
  - **Update for WAPAC February 23, 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.

**Update for WAPAC February 23, 2023 Meeting**

- 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.
  - Final report identifying recommended strategies to gain required data is in process.
  - Potential purchase of telemetry stations to equip continuous flow monitoring stations with real-time data access.

**Update for WAPAC February 23, 2023 Meeting**

- 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.



## TOWN COUNCIL

### May River Watershed Action Plan Advisory Committee (WAPAC) Memorandum



<b>MEETING DATE:</b>	March 23, 2023
<b>SUBJECT:</b>	Letter of Support to Update the 2004 Baseline Assessment of Environmental and Biological Conditions in the May River [Town's Fiscal Year 2024 (FY24) Budget]
<b>FROM:</b>	Stan Rogers, Chair, May River Watershed Action Plan Advisory Committee (WAPAC)

#### **REQUEST:**

The WAPAC recommends that Town Council include in the FY24 budget an update to the 2004 report "A Baseline Assessment of Environmental and Biological Conditions in the May River, Beaufort County, South Carolina" completed by the South Carolina Department of Natural Resources (SCDNR), the U.S. Geological Survey, South Carolina District (USGS), and the National Oceanic and Atmospheric Administration (NOAA).

#### **BACKGROUND:**

The Town of Bluffton commissioned the Marine Resources Research Institute of the SCDNR, the USGS, and NOAA's Center for Coastal Environmental Health and Biomolecular Research (NOAA-CCEHBR) to undertake a multidisciplinary study of the May River. The study was conducted to assess the water, sediment, and biological quality of the entire riverine system in 2002-03 and provide a comprehensive database of these conditions prior to any major development activities in the watershed.

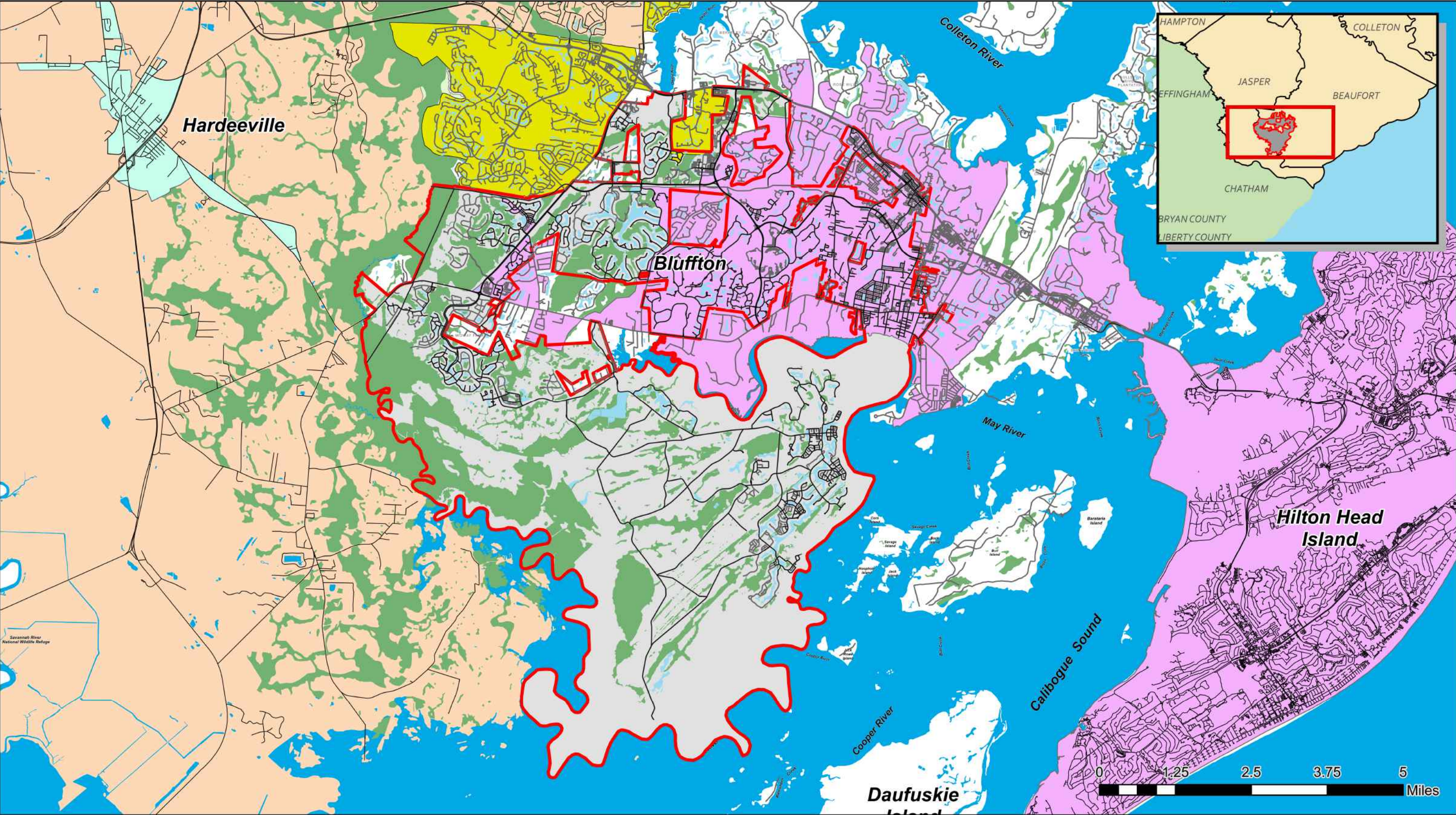
It has been almost 20 years since this study was conducted. The May River is designated an Outstanding Resource Waters (ORW), however in 2009 shellfish harvesting was restricted. It is imperative that the Town update this study in FY24 and on a more frequent basis going forward.

This is also a recommendation from Blue Print Bluffton Section X.

At the February 10, 2022, WAPAC meeting, WAPAC unanimously voted to recommend a list of Strategic Plan priorities. WAPAC Strategic Plan Priority Two (2), is to update the assessments of current environmental health status of the Town's May River watershed compared to historical conditions which will help inform management opportunities, e.g. the 2004 report "A Baseline Assessment of Environmental and Biological Conditions in the May River, Beaufort County, South Carolina" to compare current environmental and biological conditions to the baseline.

DRAFT

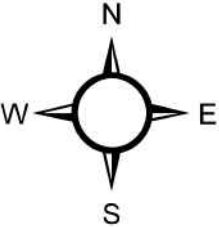




- TOWN OF BLUFFTON
- BEAUFORT COUNTY
- JASPER COUNTY
- TOB UA**
- Hardeeville, SC
- Bluffton\_Hilton-Head, SC
- Bluffton- Sun City, SC

- WETLAND
- WATER
- ROADS

**Town of Bluffton**  
Beaufort County, SC  
**TOB MS4 Jurisdiction**





# **FOIA Section 30-4-90 Minutes of Meetings of Public Bodies**

a) All public bodies shall keep written minutes of all of their public meetings. Such minutes shall include but need not be limited to:

(1) The date, time and place of the meeting.

(2) The members of the public body recorded as either present or absent.

(3) The substance of all matters proposed, discussed or decided and, at the request of any member, a record, by an individual member, of any votes taken.

(4) Any other information that any member of the public body requests be included or reflected in the minutes.

(b) The minutes shall be public records and shall be available within a reasonable time after the meeting except where such disclosures would be inconsistent with Section 30-4-70 of this chapter.

# WAPAC Timeline

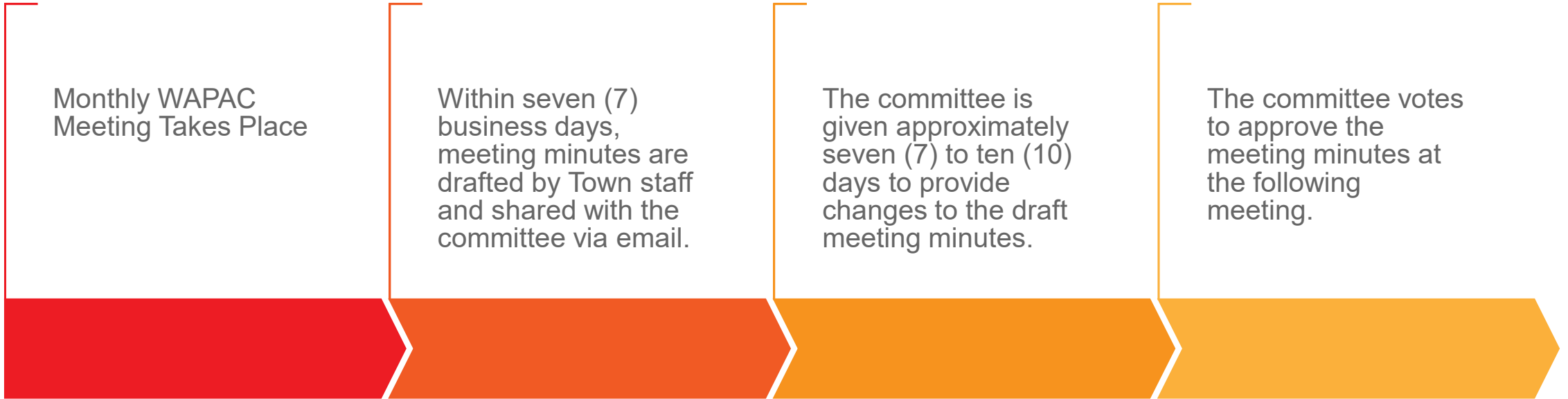
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Monthly WAPAC  
Meeting Takes Place

Within seven (7)  
business days,  
meeting minutes are  
drafted by Town staff  
and shared with the  
committee via email.

The committee is  
given approximately  
seven (7) to ten (10)  
days to provide  
changes to the draft  
meeting minutes.

The committee votes  
to approve the  
meeting minutes at  
the following  
meeting.





## TOWN COUNCIL

### May River Watershed Action Plan Advisory Committee (WAPAC) Memorandum



<b>MEETING DATE:</b>	April 27, 2023
<b>SUBJECT:</b>	Recommendation to Update the 2004 Baseline Assessment of Environmental and Biological Conditions in the May River as part of the Town's Fiscal Year 2024 (FY24) Budget
<b>FROM:</b>	Stan Rogers, Chair, May River Watershed Action Plan Advisory Committee (WAPAC)

#### **REQUEST:**

The WAPAC recommends that Town Council include in the FY24 budget an update to the 2004 report "A Baseline Assessment of Environmental and Biological Conditions in the May River, Beaufort County, South Carolina" completed by the South Carolina Department of Natural Resources (SCDNR), the U.S. Geological Survey, South Carolina District (USGS), and the National Oceanic and Atmospheric Administration (NOAA).

#### **BACKGROUND:**

The Town of Bluffton commissioned the Marine Resources Research Institute of the SCDNR, the USGS, and NOAA's Center for Coastal Environmental Health and Biomolecular Research (NOAA-CCEHBR) to undertake a multidisciplinary study of the May River. The study was conducted to assess the water, sediment, and biological quality of the entire riverine system in 2002-03 and provide a comprehensive database of these conditions prior to any major development activities in the watershed.

It has been almost 20 years since this study was conducted. The May River is designated an Outstanding Resource Waters (ORW), however in 2009 shellfish harvesting was restricted. It is imperative that the Town update this study in FY24 and on a more frequent basis going forward.

This is also a recommendation from Blueprint Bluffton Section R2.11.

At the February 10, 2022, WAPAC meeting, WAPAC unanimously voted to recommend a list of Strategic Plan priorities. WAPAC Strategic Plan Priority Two (2), is to update the assessments of current environmental health status of the Town's May River watershed compared to historical conditions which will help inform management opportunities, e.g. the 2004 report "A Baseline Assessment of Environmental and Biological Conditions in the May River, Beaufort County, South Carolina" to compare current environmental and biological conditions to the baseline.



# Microbial Source Tracking (MST) Update

WAPAC



# MST February Sampling Program Update

- The South Carolina Department of Health and Environmental Control (SCDHEC) conducted regulatory shellfish sampling on 02/13/23.
- Approximately 2.13 inches of rainfall was recorded from 02/10-02/12/23.
- The human genetic marker was detected at three (3) May River SCDHEC Shellfish Harvesting Stations on 02/13/23.

## SCDHEC Shellfish Harvesting Stations – February 2023 Results

Monitoring Location	Fecal Coliform Concentration (MPN/100mL)	MST Human Results (Detected/Not Detected)
19-19 (May River at First Dock in Headwaters past Bluff)	540.0	Detected (1.5 copies/100mL)
19-19A (Unnamed Tributary near SW corner of Gascoigne Bluff)	350.0	Detected (Not Quantifiable)
19-19B (Bend in May River nearest the high bluff of Palmetto Bluff)	240.0	Detected (Not Quantifiable)
19-19C (First Unnamed Tributary leading from Gascoigne Bluff)	240.0	Not Detected
19-24 (May River at Southern end of Crane Island)	33.0	Not Detected

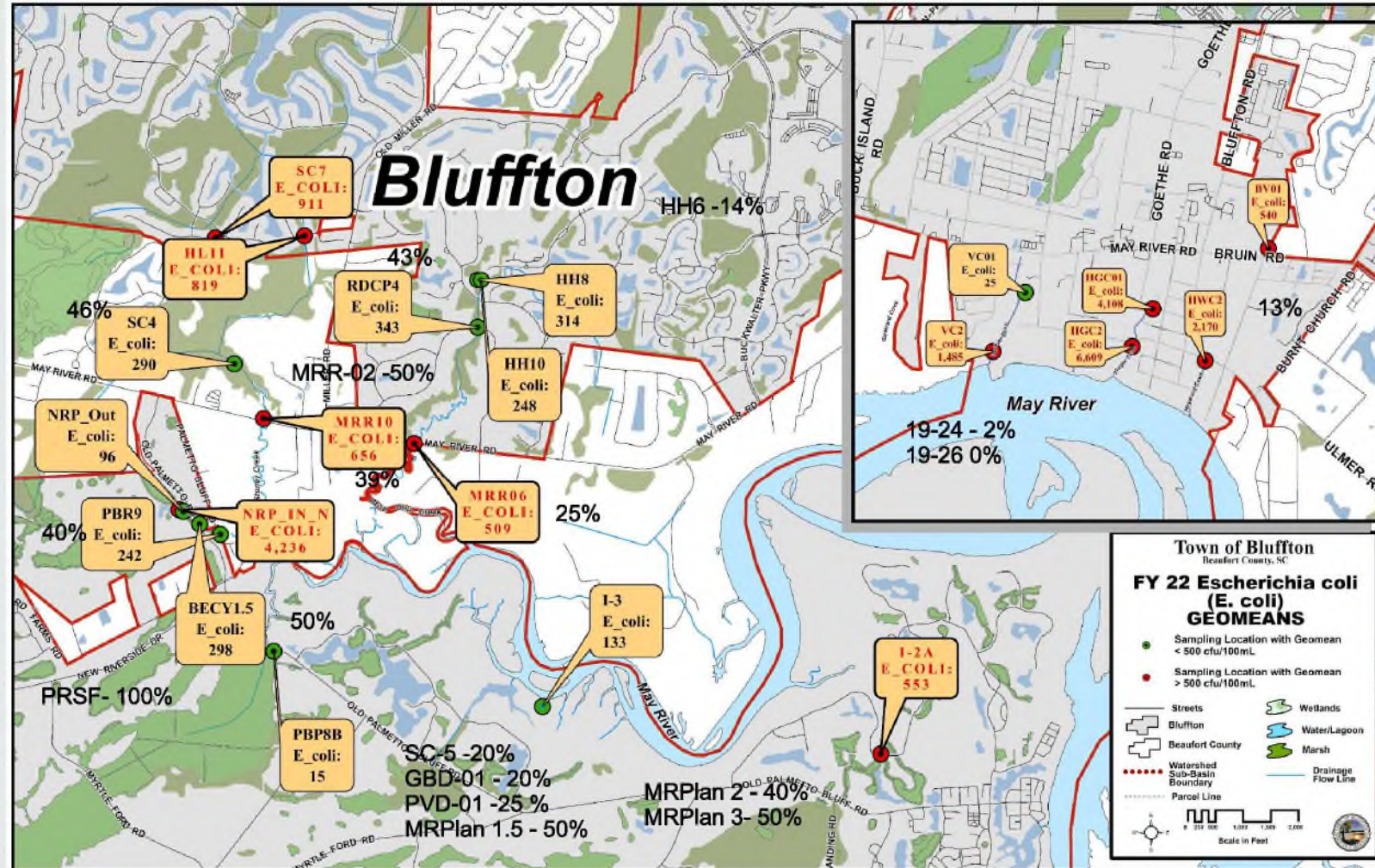
# MST Program Update

Town staff has also included an exhibit (**Attachment 2: Cumulative MST Sampling Results by Location**) which is a summary of all sampling locations that have had at least (1) positive detection of the Human, Dog, Deer, Horse, or Bird genetic marker.

- **To be useful, this compilation must be included on a figure with the sample location AND the location of ALL remaining septic systems. Blueprint Bluffton includes the sewer system within the TOWN only. The Town's septic system analysis of ~85 remaining systems (Old Town and Simmonsville Rd) is missing any systems under the County.**
- **Further, the breakdown by species needs to correlate with each other. In other words, were multiple species identified in the same sample or was it an individual anomaly? I attempted to manually plot the percent human detected on a figure with only some of the sample locations....not accurate but perhaps a glimpse of some insights that this data is telling?(see attached). What is the correlation with the number of septic systems circa 2004 timeframe to 2023 time frame including an analysis of the upgrades and inspection programs that have been also implemented?**

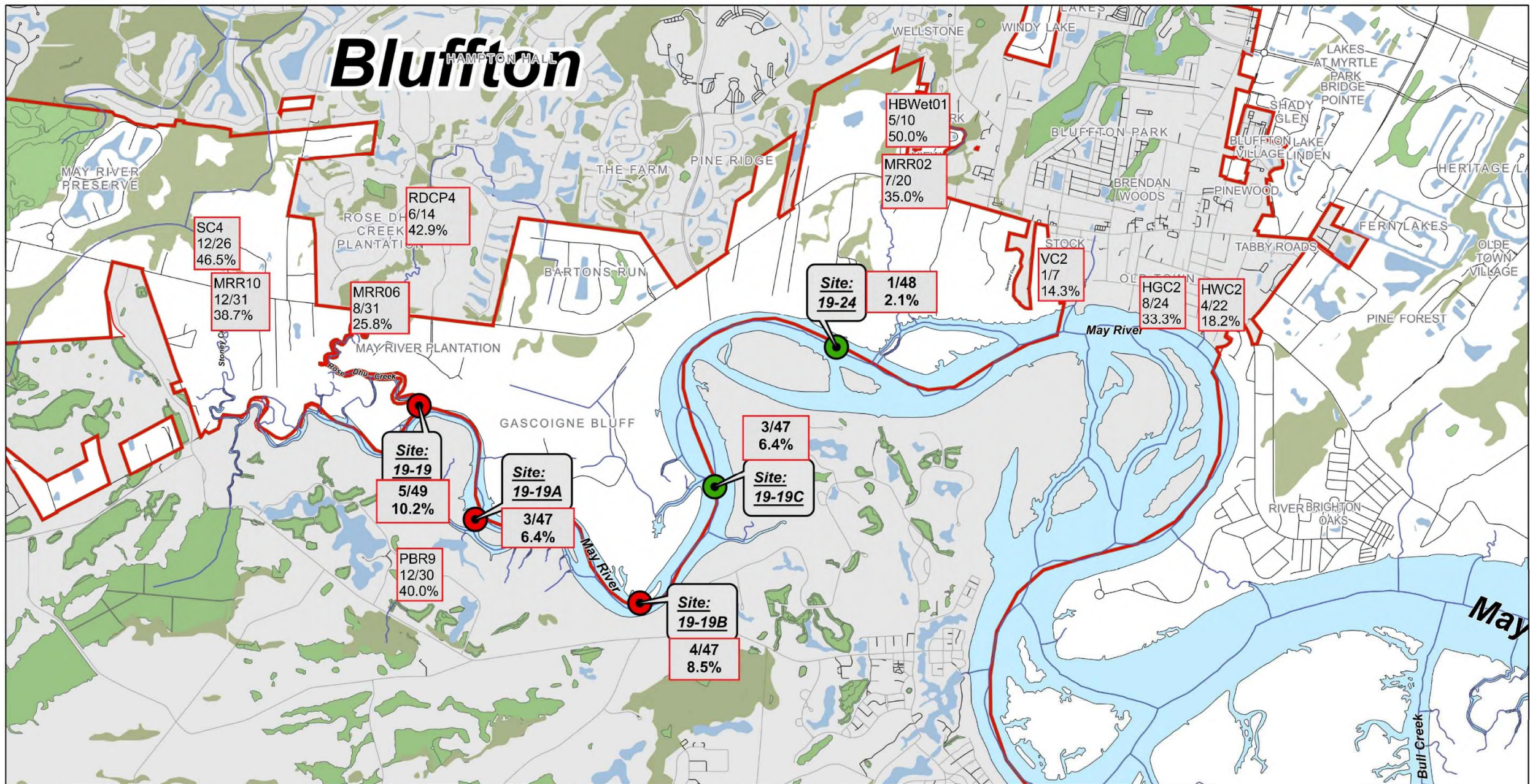
# MST Program Update

## E. Coli Sampling Program Data Fiscal Year (FY) 2022





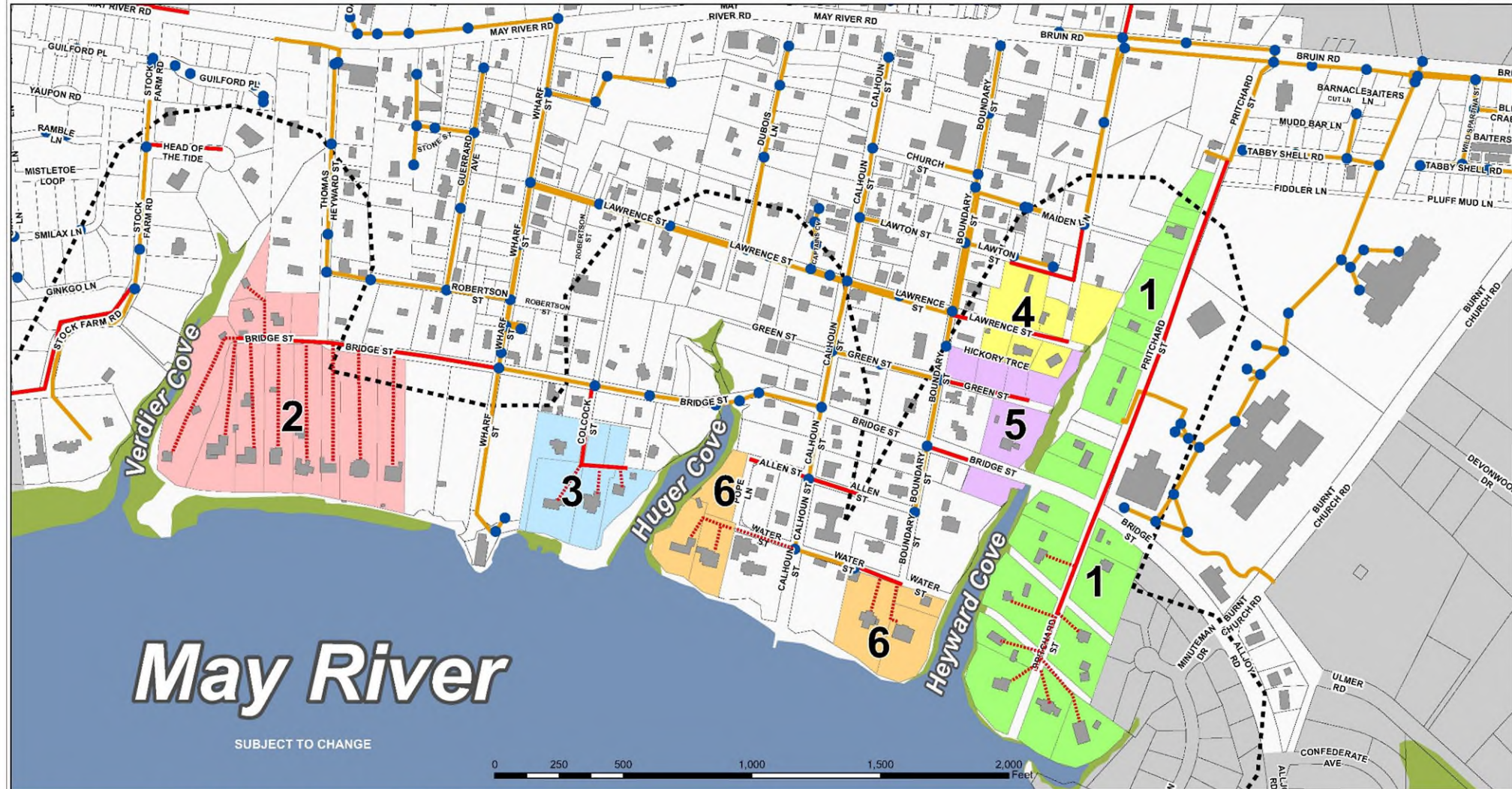
# Bluffton





Town of Bluffton  
Beaufort County, SC

# PROPOSED HISTORIC DISTRICT SANITARY SEWER PROJECT AREAS



- |                           |                          |                      |                   |                   |
|---------------------------|--------------------------|----------------------|-------------------|-------------------|
| — PROPOSED SEWER LINE     | --- 500' BUFFER FROM MAY | 1 PRITCHARD STREET   | 4 GREEN STREET    | ■ MARSH           |
| --- PROPOSED GRINDER LINE | ■ BUILDING FOOTPRINT     | 2 BRIDGE STREET WEST | 5 LAWRENCE STREET | ■ WATER           |
| — EXISTING SEWER LINE     | □ PARCEL LINE            | 3 COLCOCK STREET     | 6 WATER STREET    | ■ BLUFFTON        |
| ● SEWER MANHOLE           |                          |                      |                   | ■ BEAUFORT COUNTY |

DATA USED:  
- 2014 B.J.W.S.A. BILLING DATA  
- AVAILABLE 2017 B.J.W.S.A. AS BUILT DATA  
- 2015 B.C. PARCEL DATA  
- 2017 FIELD DATA COLLECTION  
- AVAILABLE 2017 TUB BUILDING FOOTPRINT DATA

DISCLAIMER:  
This map was prepared by the Town of Bluffton for informational purposes only. It is not intended to be used for legal or financial purposes. The Town of Bluffton is not responsible for any errors or omissions on this map. The Town of Bluffton is not responsible for any damages or losses resulting from the use of this map. The Town of Bluffton is not responsible for any claims or liabilities resulting from the use of this map. The Town of Bluffton is not responsible for any claims or liabilities resulting from the use of this map.



# MST Program Update

Since SCDHEC MST data collection began, there have been two (2) other instances where the human genetic marker was detected at multiple SCDHEC May River Shellfish Harvesting Stations. In both of those instances, water quality sampling also took place within 72-hours of a large rainfall event. Previous instances of human fecal contamination have been the result of stormwater runoff transporting pollution to the May River. **For comparison and for any attempt to dispute inclusion of the Feb '23 results, what were those rainfall amounts and corresponding sampling results?**

Date	Rainfall Total within 72-hours of SCDHEC Sampling	SCDHEC Station 19-19	SCDHEC Station 19-19A	SCDHEC Station 19-19B	SCDHEC Station 19-19C	SCDHEC Station 19-24	SCDHEC Station 19-16
12/11/17	1.42 inches	Detected FC = 1,600	Detected FC = 920.0	Detected FC = 540.0	Detected FC = 240.0	Detected FC = 220.0	Not Detected FC = 49.0
12/18/18	0.63 inches	Detected FC = 79.0	Detected FC = 49.0	Not Detected FC = 33.0	Detected FC = 46.0	Not Detected FC = 23.0	Not Detected FC = 21.0

# MST Program Update

BJWSA placed lime in the grassy area where the SSO occurred, and solids were returned to the system. Signs were posted notifying the public of the SSO on 02/12/23 and a BJWSA press release was sent out on 02/13/23. BJWSA is continuing to conduct repairs to the sewer system in The Farm. **What was the estimated quantity/duration and the specific cause/failure, i.e. maintenance, design capacity, etc.?**

*Gravity manhole in front of 334 Mill Pond Road structurally failed allowing dirt to enter the manhole and clog the mainline. The dirt caused a blockage in the gravity system which led to the SSO.*

# MST Program Update

Staff will work with SCDHEC's Shellfish Harvesting Program to determine if fecal coliform concentrations from this sampling event can be withdrawn from annual geometric and 90th percentile calculations due to the unrecoverable SSO. These calculations use 2023 data to determine the 2024, 2025, and 2026 shellfish harvesting classification status of these shellfish harvesting stations. **Help me understand 1) if not clear if rainfall or SSO event, what is the nexus and rationale for excluding? 2) how does this comply with the state guideline Section 2.5.6. South Carolina Monitoring Strategy by SCDHEC Technical Report 001-2022, under Shellfish Monitoring "Monitoring is based on a systematic random sampling methodology in which coastal shellfish growing area surface waters are sampled in accordance with a preestablished schedule, thereby assuring that a statistically representative cross-section of meteorological, hydrographic, and/or pollution events will be included in the data set. " 3) were the high results omitted from the two historical rainfall events?**



# MST Program Update

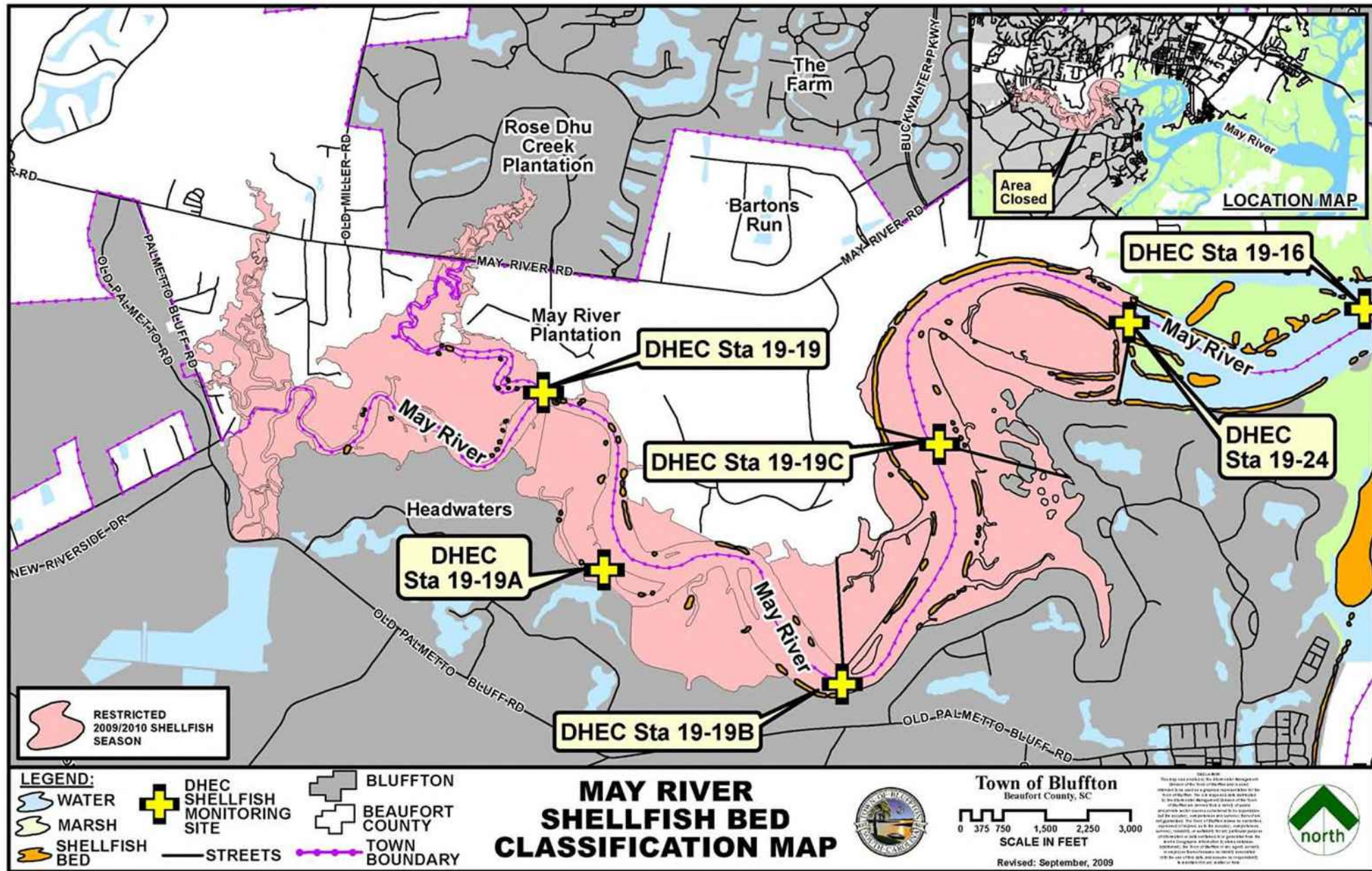
- Staff will continue to coordinate with BJWSA and SCDHEC on water quality monitoring of future SSO's of 5,000 gallons or more (Threshold for BJWSA notification of SSO to SCDHEC). **This threshold is not correct according to DHEC website and BJWSA <https://scdhec.gov/wastewater-sewer-overflow> "Utilities that own and operate sewer collection systems must report overflows to DHEC. As a general rule, utilities are only required to formally report overflows of 500 gallons or more." A 5,000 gallon threshold is termed a "significant spill" and requires additional requirements including a written submission within 5 days. Two or more significant events per 100 miles of piping in 12 months requires a more detailed submittal and certification by a PE. It is interesting to note that overflows below 500 are not reported. Are these a frequent occurrence?**



# SCDHEC Data Update

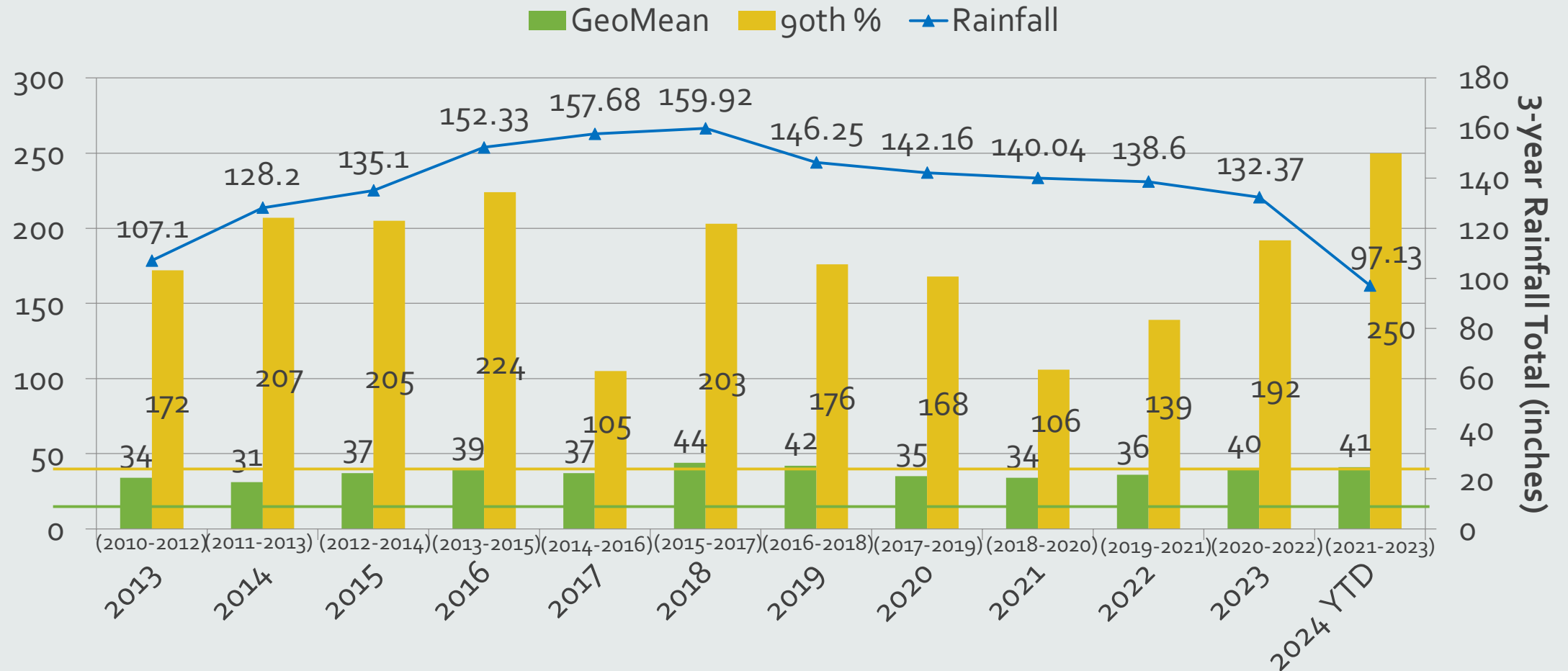
WAPAC





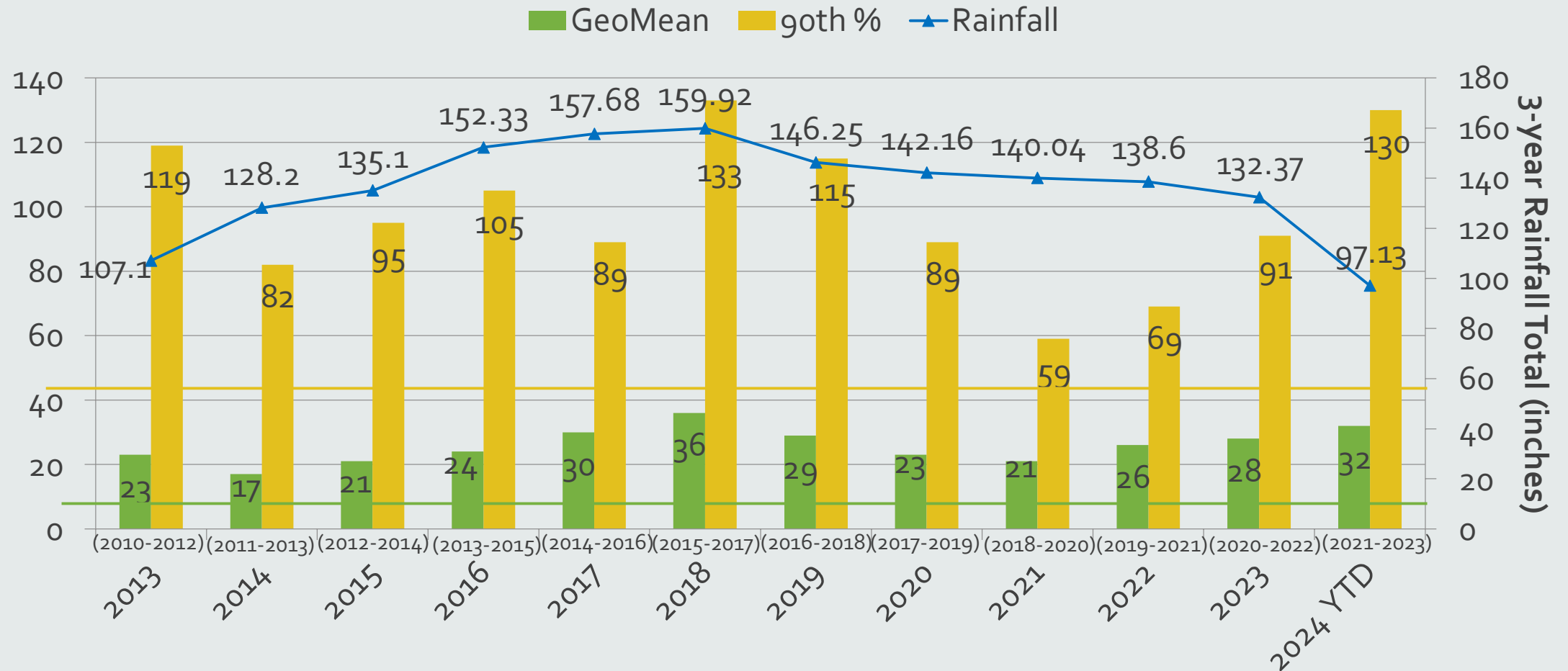
# SC DHEC Shellfish Data – 19-19

GeoMean  $\leq 14$  90<sup>th</sup> Percentile  $\leq 43$



# SC DHEC Shellfish Data – 19-19A

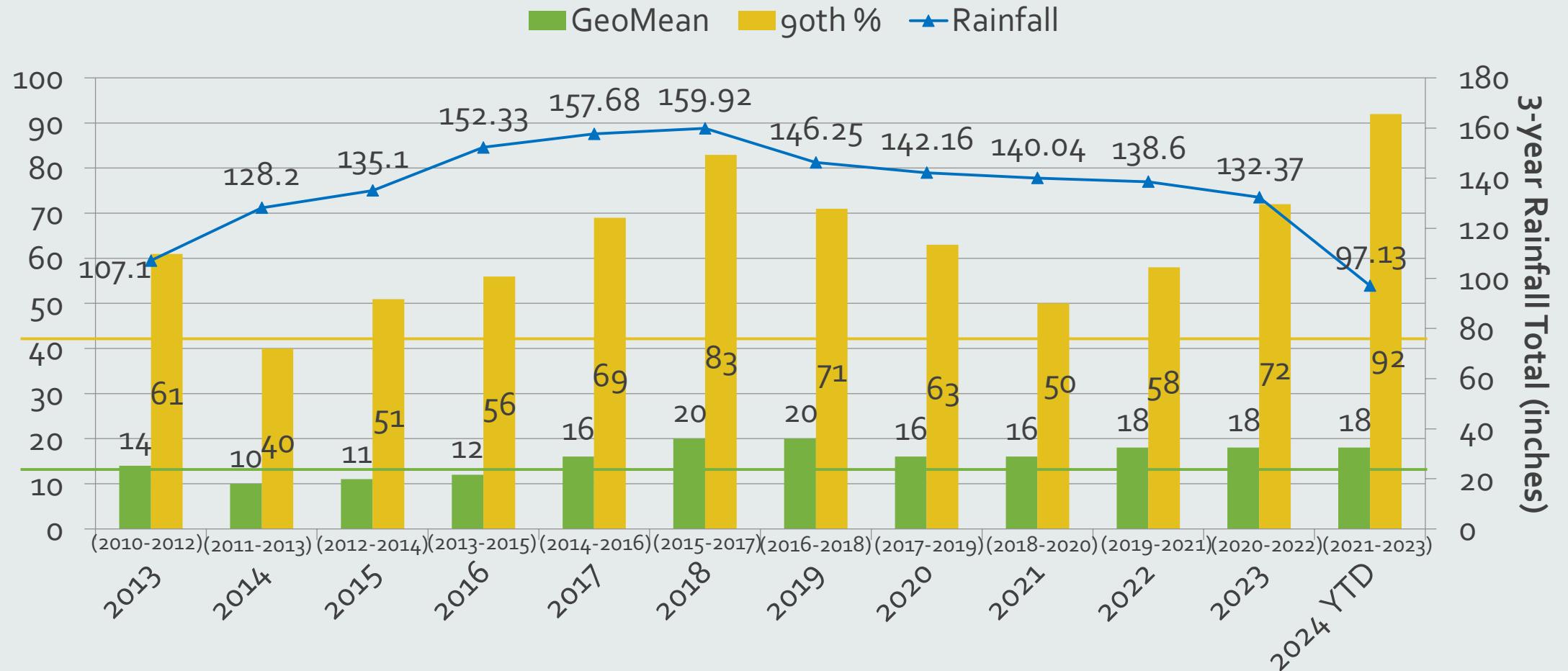
GeoMean  $\leq 14$  90<sup>th</sup> Percentile  $\leq 43$





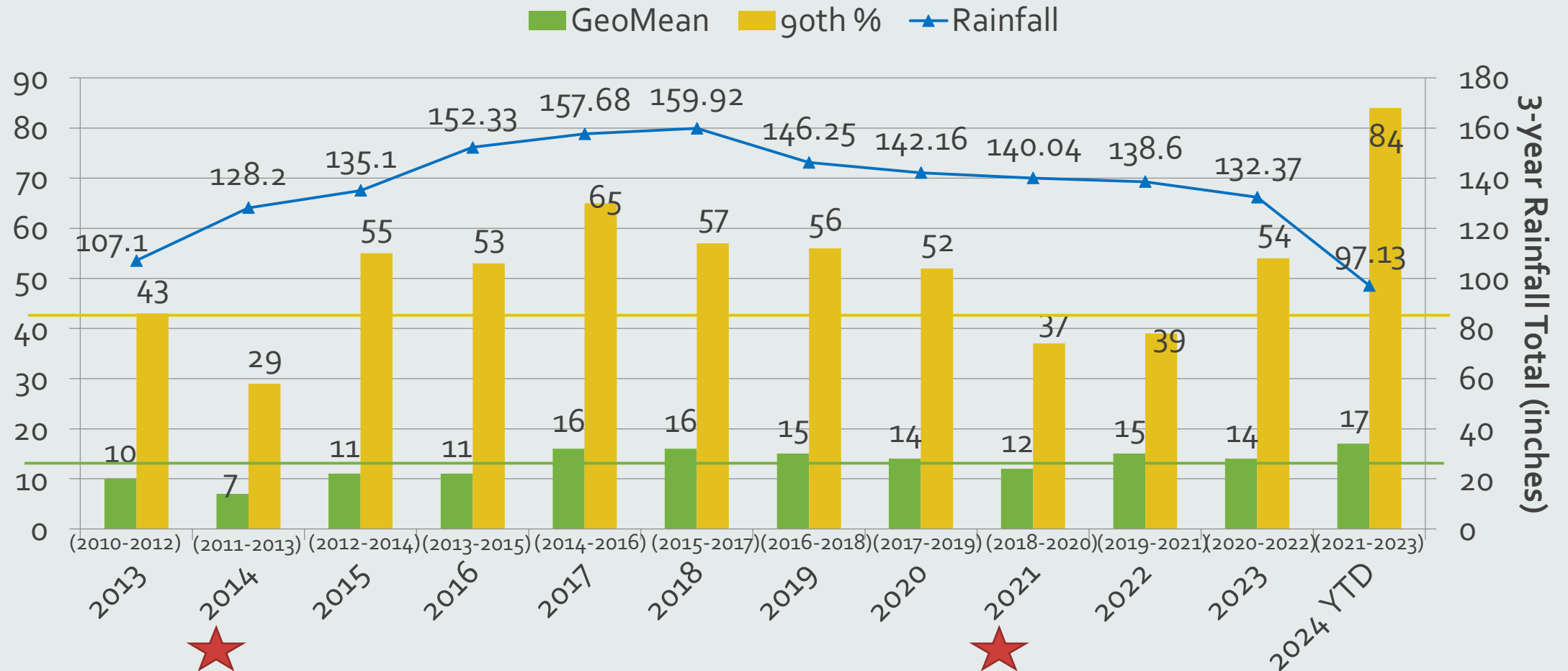
# SC DHEC Shellfish Data – 19-19B

GeoMean  $\leq 14$  90<sup>th</sup> Percentile  $\leq 43$



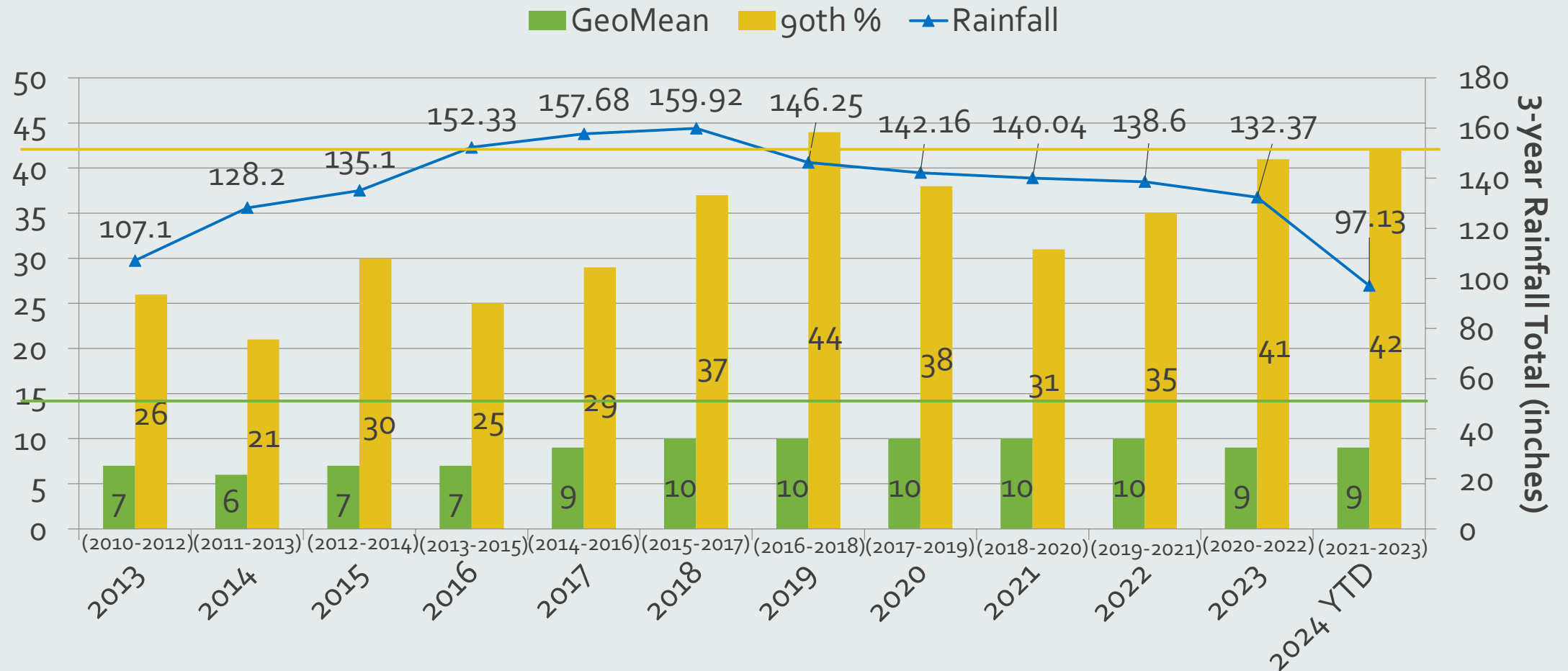
# SC DHEC Shellfish Data – 19-19C

GeoMean  $\leq 14$  90<sup>th</sup> Percentile  $\leq 43$



# SC DHEC Shellfish Data – 19-24

GeoMean  $\leq 14$  90<sup>th</sup> Percentile  $\leq 43$



# SC DHEC Shellfish Data – 19-16

GeoMean  $\leq 14$  90<sup>th</sup> Percentile  $\leq 43$

