May River Action Plan 2020 Update

Status Report and Update

Presentation to May River Watershed Action Plan Committee
January 25, 2024
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 3.46×10^{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.

Stoney Creek/Palmetto Bluff Sewer: All parties agreed to the IGA in October. The IGA was presented to TC and approved. Beaufort County will present the IGA at their December meeting.

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 previously.
Blue highlight indicated geotechnical investigation complete this reporting period

- 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).~~ **Declined to Participate**
- 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. **Geotechnical field work for Benton House (BH), Buckwalter Recreation Center (BRC) and Boys and Girls Club of Bluffton (BGC) completed, and data being analyzed and geotechnical report in development.**
- 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 Benton House (BH), Buckwalter Recreation Center (BRC) and Boys and Girls Club of Bluffton (BGC) sites will be 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.** Based on geotechnical information and Property Owner feedback further refine concept plans to Preliminary Design.
- Preliminary Design development plans will be presented to the Property Owner for review and discussion. **A meeting was held with School District on September 28, 2023 to discuss initial Preliminary Design development. Comments were noted and to be incorporated for final preliminary design plan development.**

Impervious Restoration Program Projects

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

Data search for these sites is ongoing in terms of existing plan information, current property owner and contacts.

Yellow Highlight indicate field investigations, drainage pattern evaluations and hand auger soil samples completed.

Green Highlight indicate contact made and coordination in process.

Initial concept plans are being developed for these sites for review. Other site evaluations will be performed as property owner approvals for access to property to perform site assessment is obtained.

- **Dominion Energy Engineering Office**
- **Rose Dhu Equestrian Center**
- **St. Gregory Catholic Church/School**
- **River Ridge Academy**
- **MC Riley Early Childhood Center**
- **MC Riley Elementary School**
- **MC Riley Sports Complex**
- **Bluffton Middle School**
- **Red Cedar Elementary School**
- **Seagrass Station Road**
- **Bluffton Pkwy West (170 to Buckwalter)**
- **Buckwalter Pkwy (Hampton Hall to May River Road)**
- **Persimmon St/Sheridan Park Cir/Pennington Dr**
- **Vaden Nissan Hilton Head**
- **NHC Healthcare/Bluffton (Healthcare, Rehab, Assisted Living)**

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:

- **Internal review, discussion and comments of Updated Draft Policy Document was completed and submitted to Consultant September 10,2023. Initial discussion of comments and path forward held November 3, 2023 with Consultant. Additional discussions with Consultant to be held.**

CIP Impervious Restoration Program Projects

- **Bridge Street Streetscape Project** – Construction Complete.
- Post-construction water quality monitoring Continues.
- 319 Water Quality Grant Total Funding = **$228,165.15**

CIP Impervious Restoration Program Projects

- Bridge St Water Quality Monitoring Update

Water Quality Monitoring Summary: Based on monitoring and rainfall data for the period of July 1-October 11, 2023, the only rainfall event that produced a stormwater outfall/discharge was an intense rain event on September 10, 2023 which produced 3.82” of rain in a 4 hour period. The next most intense storm happened on July 10, 2023 which produced 1.46” of rain in 1 hour and no stormwater outfall/discharge occurred. Based on this data, we estimate the BMP treatment train constructed with this project could accommodate a 10 year storm event (6.9” of rain in 24 hours) with little or zero runoff. Zero runoff equals zero pollutants, and zero freshwater being discharged to Huger Cove and the May River.

RAINSTORMS OVER AND INCH	
Rainstorm Event	Rainfall (in)
July 5th	1.46 inches over 1 hour
July 10th	1.17 inches over 7 hours
July 28th	1.28 inches over the whole day
August 28th	1.23 inches over 1 hour
August 30th	1.23 inches over the whole day
September 1st	1.1 inches over 3 hours
September 10th	3.82 inches over 4 hours
September 17th	1.09 inches over 6.5 hours

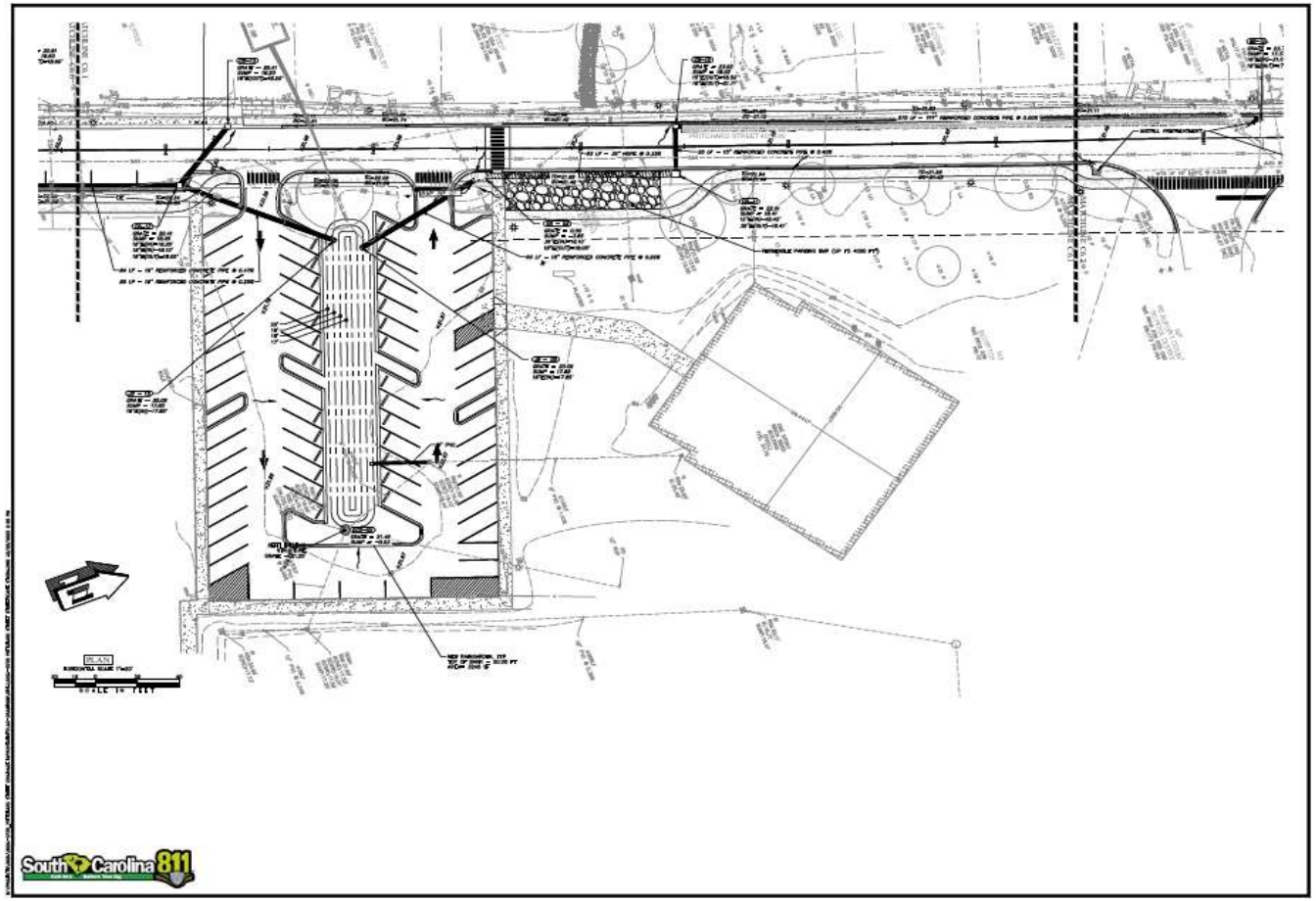
CIP Impervious Restoration Program Projects

Monthly Rain Amounts

Month	Rainfall (in)
July	7.35
August	5.3
September	7.56
October*	0.0
TOTAL	20.21

Impervious Restoration Program Projects

- **Pritchard Street Drainage Improvement and Streetscape Project**
- Pre-Application meeting for Project held with Growth Management and Stormwater Management
- 90% design Submittal December 27, 2023. Under Review
- 319 Water Quality Grant Total Funding = **$124,577.00**



Impervious Restoration Program Projects

In-House Microbial Source Tracking

- Dr. Pettay is now the Lead Principal Investigator (PI) for both the MST and Water Quality Laboratories. Dr. Pettay, Town staff, and County staff met to discuss regional water quality monitoring needs. The MST Laboratory is still processing scat samples, and a final report is forthcoming.

Future (new) water Flow Monitoring Locations

- Staff continues to collect MRWAP bacteria grab samples twice per month at fourteen (14) monitoring locations in the May River headwaters study area. Intermittent flow measurements are collected at six (6) of these monitoring locations at the time of grab sampling.

Impervious Restoration Program Projects

Future (new) Water Flow Monitoring Locations

- Staff continue to operate and maintain three (3) SonTek IQ continuous flow monitoring stations in the May River headwaters. Staff expect these systems to be in place for approximately one (1) full year to account for seasonality.
- The Duck Pond subwatershed has no channelized flow entering or exiting the system. The Town's consultant suggested that the Town monitor water elevation in the Duck Pond for approximately 6 months to ensure water elevations are accurately depicted by future modeling. Staff has requested permission to site a water elevation logger in the Duck Pond, near or attached to the Palmetto Bluff bridge.
- Clarification from the consultant determined that due to limited staff time, intermittent flow measurements would be most valuable at six (6) of the Town's water quality monitoring locations upstream of the SonTek IQ flow stations.
- Staff is working diligently to collect samples following wet weather conditions which have been defined as ≤ 0.50 inches of rainfall within 24 hours of sampling. The USCB Water Quality Laboratory

QUESTIONS & DISCUSSION