

COUNTY COUNCIL OF BEAUFORT COUNTY
ADMINISTRATION BUILDING
BEAUFORT COUNTY GOVERNMENT ROBERT SMALLS COMPLEX
100 RIBAUT ROAD
POST OFFICE DRAWER 1228
BEAUFORT, SOUTH CAROLINA 29901-1228
TELEPHONE: (843) 255-2180
www.bcgov.net

D. PAUL SOMMERVILLE
CHAIRMAN

GERALD W. STEWART
VICE CHAIRMAN

COUNCIL MEMBERS

RICK CAPORALE
MICHAEL E. COVERT
GERALD DAWSON
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ALICE G. HOWARD
STEWART H. RODMAN
ROBERTS "TABOR" VAUX

JOSHUA A. GRUBER
INTERIM COUNTY ADMINISTRATOR

THOMAS J. KEAVENY, II
COUNTY ATTORNEY

ASHLEY M. BENNETT
CLERK TO COUNCIL

AGENDA
NATURAL RESOURCES COMMITTEE

Tuesday, January 16, 2018

3:00 p.m.

Executive Conference Room, Administration Building
Beaufort County Government Robert Smalls Complex
100 Ribaut Road, Beaufort

Committee Members:

Brian Flewelling, Chairman
Roberts "Tabor" Vaux, Vice Chairman
Rick Caporale
Gerald Dawson
Steve Fobes
York Glover
Alice Howard

Staff Support:

Anthony Criscitiello, Planning Director
Gary James, Assessor
Eric Larson, Division Director
Environmental Engineering
Dan Morgan, Mapping & Applications Director

1. CALL TO ORDER –**3:00 P.M.**
2. UPDATE / PREVIOUS PLANNING COMMISSION MEETING
3. UPDATE / PREVIOUS SOUTHERN LOWCOUNTRY REGIONAL PLANNING COMMISSION (SOLOCO) MEETING
4. CONSIDERATION OF CONTRACT AWARD TO C. MERRILL CONSTRUCTION OF STATESBORO, GEORGIA FOR \$1,000,980 TO CONSTRUCT AN INTERPRETATION CENTER AT FORT FREMONT ([backup](#))
5. PRESENTATION / BEAUFORT SOIL & WATER CONSERVATION DISTRICT / 2017 ANNUAL REPORT ([backup](#))
6. CONSIDERATION OF STORMWATER EASEMENT CONDEMNATION / PALMETTO RIDGE DRIVE ([backup](#))
7. UPDATE / OKATIE WEST 319 GRANT PROJECT ([backup](#))
8. INFORMATION / OKATIE REGIONAL WATERSHED / WATER QUALITY DATA ([backup](#))
9. TEXT AMENDMENT TO BEAUFORT COUNTY CODE OF ORDINANCES, CHAPTER 99, STORMWATER MANAGEMENT / PAVING OF DIRT ROADS ([backup](#))
10. TEXT AMENDMENT TO THE BEAUFORT COUNTY COMMUNITY DEVELOPMENT CODE (CDC), SECTION 1.3.50 (EXEMPTIONS) (TO EXEMPT EXISTING DIRT ROADS PAVED AS PART OF THE COUNTY'S DIRT ROAD PAVING PROGRAM FROM THE STANDARDS OF THE CDC) APPLICANT: BEAUFORT COUNTY PUBLIC FACILITIES COMMITTEE AND COMMUNITY DEVELOPMENT STAFF ([backup](#))

11. LADY'S ISLAND ZONING MAP AMENDMENT/REZONING REQUEST FOR R200 019 000 013A 0000 (0.21 ACRES AT 391 SEA ISLAND PARKWAY) FROM T2-RN (RURAL NEIGHBORHOOD) TO T2-RC (RURAL CENTER); OWNER: CAVU HOLDINGS, LLC/ APPLICANT: STAFF (TO CORRECT A MAPPING ERROR) ([backup](#))

12. CONSIDERATION OF REAPPOINTMENTS AND APPOINTMENTS

- A. Design Review Board
- B. Historic Preservation Review Board
- C. Planning Commission
- D. Rural and Critical Lands Preservation Review Board
- E. Southern Beaufort County Corridor Beautification Board
- F. Stormwater Management Utility Board
- G. Zoning Board of Appeals

13. ADJOURNMENT

2017 Strategic Plan Committee Assignments

Hilton Head National Rezoning/Development Agreement
Priority Investment – Capital Projects Long-Term Prioritized Requirements
Passive County Parks: Plan, Funding
Comprehensive Countywide System/Stormwater Utility (Agreements with Municipalities)
2018 Priority Projects: Immediate Opportunities
Stormwater Management Program/Policy: Implementation
Okatie River Restoration: Funding
May River Action Plan
Rivers and Creeks Water Quality: Evaluation
Transfer of Development Rights
Buckingham Plantation Community Development Plan: Amendment



**COUNTY COUNCIL OF BEAUFORT COUNTY
PURCHASING DEPARTMENT**

106 Industrial Village Road, Bldg. 2, Post Office Drawer 1228
Beaufort, South Carolina 29901-1228

David L Thomas, Purchasing Director
dthomas@bcgov.net 843.255.2353

TO: Councilman Brian Flewelling, Chairman, Natural Resources Committee

FROM: David L Thomas, CPPO, Purchasing Director

SUBJ: New Contract as a Result of Solicitation

Invitation for Bid (IFB) 101917, Fort Fremont Historical Park Interpretive Center

DATE: 01/11/2018

BACKGROUND:

Fort Fremont Historical Park is a 17 acre passive park purchased by Beaufort County through the Rural and Critical Lands Preservation Program in 2004. The park is home to Fort Fremont, a Spanish-American War era battery. Built in 1898, the fort is significant as an intact example of late 19th and early 20th century military architecture. Fort Fremont was also the major armament at one of two surviving coastal fortifications in the U.S. intact from the Spanish-American War era.

When the Dowling family sold the property to Beaufort County it was their intent that the public have access to and historical interpretation of the fort. They also envisioned that the property capitalize on its prime location on the Beaufort River to offer the public views and access to the beach at Lands End. To this end, the Dowling and Stewart families provided the County gift money to develop a concept plan for the park, which was prepared by J. K. Tiller and Associates in 2004. To implement the plan, Beaufort County then procured Carolina Engineering Consultants, Inc. and the architect, Michael Griffith to design an interpretive center and picnic pavilion. Because of the historic nature of the site, the interpretive center was carefully scrutinized by the County's Historic Preservation Review Board, which required several significant revisions to the design.

The County received the following two bid responses on October 19, 2017 and considered C. Merrill Construction to be the lowest responsive/responsible bidder:

VENDOR INFORMATION:

1. C. Merrill Construction, LLC, Statesboro, Ga

Base bid for Interpretive Center and Pavilion	\$941,550
Alternate 1 – Landscaping (North Circular Walkway Area)	\$5,635
Alternate 2 – Landscaping (Central Walkway Area)	\$12,650
Alternate 3 – Landscaping (Interpretive Center Area)	\$27,000
Alternate 4 – Landscaping (South Pedestrian Entry Gate)	\$14,145

2. Savannah Construction & Preservation, Savannah, GA

Alternate 1 – Landscaping (North Circular Walkway Area)	\$5,687
Alternate 2 – Landscaping (Central Walkway Area)	\$12,852
Alternate 3 – Landscaping (Interpretive Center Area)	\$27,607
Alternate 4 – Landscaping (South Pedestrian Entry Gate)	\$14,394

COST:

\$1,000,980

\$1,029,755

FUNDING:

Account #45000011-54405, Fort Fremont - Beaufort County Community Development Department

Funding approved: By: Date:

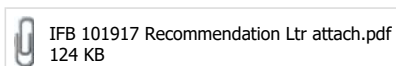
FOR ACTION:

Natural Resources Committee meeting occurring January 16, 2018.

RECOMMENDATION:

The Natural Resources Committee approve and recommend to County Council the contract award to C. Merrill Construction, LLC in the amount of \$1,000,980.

Attachment:



cc: Joshua Gruber, Interim County Administrator

Approved: Date:

Check to override approval: ☐ Overridden by:

Override Date:

Alicia Holland, Assistant County Administrator, Finance

Approved: Date:

Tony Criscitiello, Director, Community Development Department

Approved:

Date:

Check to override approval: ☒ Overridden by:

Override Date:

ready for admin: ☒

Mark Roseneau, Director, Facility Management Department

Approved: Date:

Check to override approval: ☐ Overridden by:

Override Date:

ready for admin: ☒

After Initial Submission, Use the Save and Close Buttons

IFB 101917 Voter's Registration WarehouseFt Fremont Construction & Landscaping
BID FORM

Project Number	Location	Name of Company	Number of Days to Complete Project	Base \$	Alternate 1 \$	Alternate 2 \$	Alternate 3 \$	Alternate 4 \$	
1	Ft Fremont Construction & Landscaping	C. Merrill Construction, LLC	216	\$941,550.00	\$5,635.00	\$12,650.00	\$27,000.00	\$14,145.00	\$1,000,980
		Savannah Construction & Preservation	360	\$969,215.42	\$5,687.25	\$12,852.57	\$27,607.03	\$14,394.04	\$1,029,756
IFB 101917									

C. Merrill Construction, LLC	Savannah Construction & Preservation
\$1,000,980	\$1,029,756

Beaufort Soil & Water Conservation District

2017 Annual Report

Serving Beaufort County for over 70 years

Mission

“To help people conserve, maintain and improve our natural resources and environment by promoting wise land use practices,



environmental education,



and technical assistance”



Board of Commissioners:

Alan A. Ulmer, Jr., Chair
Claude McLeod, Vice Chair
Denise Parsick, Sec/Treasurer
Luke Inabinett, Member
Don Sanders, Member
Art Holland, Associate
Carol Murphy, Associate
Howard Heckrotte, Associate

District Staff Members:

Shelby Berry, District Manager
Pam Floyd, Education Coordinator
Debby Way, Education Specialist
Phyllis Atkins, Community
Health, Safety, & Trails

We've Moved! New location & New Phone #

We are now at Crystal Lake Park, a Beaufort County passive park at 124 Lady's Island Drive. Our new phone is 843-255-7306. Come see the park and our new office.



The Conservation Partnership includes:

USDA-NRCS, Natural Resources Conservation Service:

Fred Tritapoe, Acting District Conservationist

SC Dep. of Natural Resources, Land Conservation Division:

Marc Cribb, Program Director for Conservation Districts

Professional Memberships:

SCACD—SC Association of Conservation Districts

NACD— National Association of Conservation Districts

SCCDEA—SC Conservation District Employees Association

Beaufort Soil & Water Conservation District 124 Lady's Island Dr. Beaufort SC 29907
Mailing PO Box 70, Port Royal, SC 29935 Tel: 843-255-7306
Email: bswcd@islc.net www.beaufortconservationdistrict.org



Natural Resources Conservation Service

On the Ground Conservation Practices in Beaufort County

NRCS and Beaufort Conservation District provided technical support to agricultural landowners in Beaufort County, approving \$337,700 and paying \$129,000 in cost share. EQIP, Environmental Quality Incentives Program, encourages Best Management Practices (BMP's) that help keep our water clean and make the land more sustainable by :

- Reducing sedimentation into nearby waters
- Offering protection for threatened and endangered species
- Fighting invasive species
- Keeping livestock out of area waters

Priority questions for cost share are discussed and approved by the Local Work Group, annually. The following BMP's were installed voluntarily by landowners through EQIP Cost share.

PRESCRIBED BURNING

Reduces Wildfires & Enhances
Wildlife Habitats



TREE SITE PREP

Prepare Land to Plant
Longleaf Pine



DRIP IRRIGATION

Conserves Water &
Reduces Energy Use



RICE TRUNK

Improves Wetland &
Wildlife Habitat



CROP ROTATION

Improves Soil Health &
Reduces Crop Diseases



SEASONAL HIGH TUNNEL

Extends the
Growing Season



USDA-NRCS Field Office—Serving Beaufort & Jasper Counties—Fred Tritapoe, District Conservationist
7554 W. Main Street, Room 128 Mailing: PO Box 190 Ridgeland, SC 29936
Phone 843-726-8148 Fax 843-726-5763

NRCS EWP Program and Hurricane Matthew

USDA-NRCS's EWP, Emergency Watershed Protection Program, obligated approximately \$2.1 million for Town of Hilton Head and Beaufort County to help pay for clean up of critical drainage areas after the massive debris from Hurricane Matthew in October 2016. This program was designed to provide relief after a natural disaster to reduce the threat of potential flooding and to protect infrastructure.



Diane Leone, retired NRCS District Conservationist, with husband Dick Yetter

After more than 10 years as the Beaufort & Jasper Counties District Conservationist, **Diane Leone** retired in April of 2017. The Districts hosted a drop-in at the Port Royal Sound Maritime Center with colleagues and landowners to celebrate Ms. Leone's accomplishments and wish her well in retirement. Ms. Leone still resides in the Beaufort area when not traveling.

Welcome to Acting District Conservationist, **Fred Tritapoe**. Mr. Tritapoe is the District Conservationist for Colleton County at the Walterboro NRCS Service Center. He has been working hard to cover all 3 counties. We appreciate his support and expertise!

On right, SC DNR outreach on problems with littered cigarette butts.

THE ENVIRONMENTAL IMPACT OF THE LITTERED CIGARETTE BUTT



SC Department of Natural Resources

Beaufort SWCD continues its strong partnership with the SC Department of Natural Resources to stay connected with the state wide activities & education events, SWCD laws & procedures, and staff training. DNR publications, fishing and hunting information and handouts are available at our office. <http://www.dnr.sc.gov/>



Ashley Shaw, SCDNR, shows the multiple rows of replacement teeth in a large shark jaw.

SCDNR ACE Basin National Estuarine Research Reserve (NERR) continues to provide support to Beaufort County. The ACE Basin NERR scientists and staff provide education reach and volunteer opportunities to area students and adults.

<http://www.dnr.sc.gov/marine/NERR/>

We especially appreciate our local DNR experts, especially Dr. Al Segars, who presents programs to both kids and adults and keep us informed on topics of marine mammals, alligators, and water quality issues.

Education: This past year Beaufort SWCD presented **280** classroom & festival outreach programs reaching over **7232** students and adults.

Festivals: Beaufort SWCD planned and presented Earth Day at the Port Royal Farmers Market. District staff works on the Kidfest planning committee as well as setting up an outreach booth and supply volunteer staff to help with the hospitality booth. Staff and educators also presented at the Soft Shell Crab Festival, Birthday for the Birds, & Outside Foundation's Clean Water Festival & Kayak Cleanups.

Special Presentations & Outreach: Commissioner Denise Parsick presented at the Environmental Education Association Of SC's annual meeting. She also has been active working to encourage people to choose reusable shopping bags and promoting a plastic bag ban in Beaufort. She also attends or watches the Stormwater Board meetings. Educators attended back to school expo events.



Above, Kristen Mattson with Lowcountry Institute talked about ponds & turned kids into critters at Eco Camp. Below, Lila Arnold with Lowcountry Raptors showed several fascinating birds of prey to the campers.

Beaufort SWCD presented their 28th Eco Camp, Nightly News, focusing on nocturnal animals and the night sky.

Right & upper right, Dr. George Rump presented a planetarium class, complete with information about the August 21st Solar Eclipse.



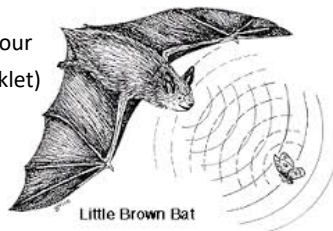
Left, Tony Mills with Coastal Kingdom shows baby alligators. Right, John O'Connell leads a program on earthworms.



Pam Floyd & Debby Way with the Marine Debris presentation at the Shelter Cove Clean Water Festival.

Insect eating bats use echolocation to find their food and fly around things.

(From our Bat Booklet)



Right, on Earth Day Denise Parsick escorts the "Bag Monster" to emphasize the overuse of plastic bags, which litter our roads and waterways.



Water Quality & Conservation Partnerships

Together for Beaufort Water Quality Coalition: As a member of the Beaufort County Human Services Alliance, Beaufort SWCD supports *Together for Beaufort* by leading the T4B Water Quality Coalition. Beaufort SWCD continues to strengthen this coalition that consists of agencies and organizations involved in promoting, educating, & enforcing clean water in Beaufort County. This year we had combined our meetings with **Lowcountry Stormwater Partners** since there are so many members belonging to both groups. Each meeting has a special presentation on a relevant topic.



Green Steps Schools: Our staff mentors Whale Branch Elementary School and work to recruit other local schools to participate in the Green Steps Schools programs. The program encourages students to participate in environmental science activities, to learn about conservation practices, as well as promoting team building and qualifying their school for project grants from the state. We are amazed at what these Green Steps Teams have accomplished. Check out programs and school websites at <http://greenstepschools.com/>

Other Education News: BSWCD provides judges for local Elementary and Middle School **Science Fairs** when possible. This past year Beaufort SWCD received a **Lowcountry RC& D Youth Education Grant** to provide 40 conservation programs that served approximately 800 youth at schools and special programs. Carol Murphy developed **resource booklets** to accompany Snakes, Bats, Spiders, Sharks, Cargo for Conservation and Arbor Day Programs. Educators have been partnering with the Outside Foundation to present the Enviroscape for **Kids in Kayaks** for Bluffton & Hilton Head Island 7th graders.

The **H.E. McCracken Memorial Scholarship** was established in honor of the late Emmitt McCracken in 1984 to benefit Clemson University students from Beaufort enrolled in Agriculture, Natural Resources or Biology studies.

Mail donations to:
Clemson University Foundation
P.O. Box 1889
Clemson, SC 29633
Include Reference # 539,
McCracken Scholarship Fund



Above, Pam Floyd, Claude McLeod, Denise Parsick, & Luke Inabinett receive the RC & D Grant Award. Left, Denise Parsick gives Debby Way her 10 year SC Conservation Districts Employee Association award.

Our Conservation Partnership Services are Available to All Citizens of Beaufort County

Technical Support to land owners, producers and government entities on BMPs through USDA-NRCS.

Educational Support and outreach programs to teachers, students, scouts, churches, camps & civic groups.

Coordinate partnerships with other agencies on variety of projects, programs, and festival outreach events.

Technical support for creation of trails, greenways, blueways, and outdoor learning centers.

Library of historic aerial photography from 1955, soil surveys, topography, and other conservation maps.

SPECIAL THANKS TO THE FOLLOWING PARTNERS WHO PROVIDE FUNDING, IN-KIND SERVICES, MATERIALS & OTHER TYPES OF SUPPORT:

ACE Basin NERR
Beaufort County Schools
Lowcountry Institute
Beaufort County Clemson Extension
Coastal Conservation League
Lowcountry Stormwater Partners

SC Sea Grant Consortium
Ms. Lorraine Robertson
Port Royal Sound Foundation
St. Peter's Catholic School
Friends of Hunting Island
Town of Port Royal

Lowcountry RC & D
Beaufort Kayak Tours
Dr. Al Segar
Dr. Tom Ogle
Mr. John O'Connell
BJWSA

Beaufort County Farm Bureau Women's Committee

Beaufort SWCD Affiliate Member Application

Supporting — \$35.00 Sustaining—\$50.00 Patron —\$100.00 Associate—\$100 +

Circle Level of support Total Enclosed: \$ _____

Please make checks Payable to: “Beaufort Conservation District”

Mail to: PO Box 70 Port Royal, SC 29935

Call : 843-255-7306 or Email: bswcd@islc.net

www.beaufortconservationdistrict.org

Name & or Company _____

Address _____

Phone _____ Email _____

Thank you for your support!

Please be an Affiliate Today & Help Educate Beaufort County about Conservation of our Natural Resources!
Donations directly fund local Environmental Science education programs for our area Students!

Affiliate Members

Beaufort County School District
WH McLeod & Sons, Inc.
Lowcountry RC & D
Unitarian Universal Fellowship of Beaufort

Ulmer Brothers, Inc.
Mr. & Mrs. William Murphy
Mr. & Mrs. Russell Berry
Beaufort County Farm Bureau Women’s Committee

Location: Crystal Lake Park, 124 Ladys Island Dr. Beaufort SC 29907

Come see us! New Office Hours: 9:00 am to 2:00 pm or call for an appointment.



Beaufort Soil & Water Conservation District
Location: Crystal Lake Park, 124 Ladys Island Dr.
Beaufort SC 29907
Mailing: PO Box 70
Port Royal, SC 29935



BEAUFORT COUNTY STORMWATER UTILITY
120 Shanklin Road
Beaufort, South Carolina 29906
Voice (843) 255-2805 Facsimile (843) 255-9436
wstormwater@bcgov.net



M E M O R A N D U M

TO: Natural Resources Committee
Stormwater Utility Board

FROM: Eric W. Larson, PE, AICP, CPSWQ, CFM

DATE: January 10, 2018

SUBJECT: Condemnation for easement – Goude tract @ Palmetto Ridge St.
Easement abandonment – Multiple tracts @ Bessies Ln. & Young Cir.
Cease easement acquisition – Multiple tracts @ Orange Grove Rd. @ Sam Doyle Rd.

The attached easement exhibits have been proposed by Staff, at the request of adjacent property owners and/or County Council members York Glover, Alice Howard, and Gerald Dawson. After multiple unsuccessful attempts of communication, negotiation and consultation with the respective Council member, it is now recommended to either begin formal condemnation procedures to acquire the easement, abandonment of existing easements, and/or seize easement acquisition.

Palmetto Ridge Street

The process to obtain the easements needed for this regionally significant ditch system formally began in December 2016. The single remaining tract, noted as 21F on the exhibit, has not granted an easement. Staff and County Council representative Alice Howard made 12 separate attempts to discuss the request with the owners, including 2 letters, 2 door hangers, and 3 personal visits. The owners have verbally denied the request. All of the other 16 property owners have signed easements; however, only one of those easements has been recorded pending this condemnation process. Staff is recommending condemnation on the Goude tract, R100-33A-21F.

Bessies Lane and Young Circle

The process to obtain the easements needed for this regionally significant ditch system formally began in March 2017, although conversations with one of the residents offering to assist in garnering community support began several years ago. Through past efforts, the County has recorded several easements. However, there are gaps in easement coverage to fully cover the system. While we have signed (unrecorded) easements on two tracts, we have numerous tracts still unsigned. All remaining property owners have been contacted by letter at least twice and have had multiple other attempts to communicate with them. Rev. Venice Young initially volunteered to assist us. We communicated with him 12 times, including 4 “no-show” meetings. Recently, one of the property owners, in which the County has a recorded easement, has stated verbally they desire to have the easement abandoned and do not want the County to continue to maintain the system. Due to lack of interest, Staff is recommending abandonment of all current recorded easements, ceasing further attempts to acquire easements, and ceasing future maintenance of this system. Abandonment would include easements on Tracts R100-16-199, R100-13-8A, & R100-13-17.

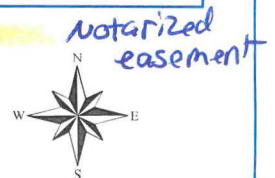
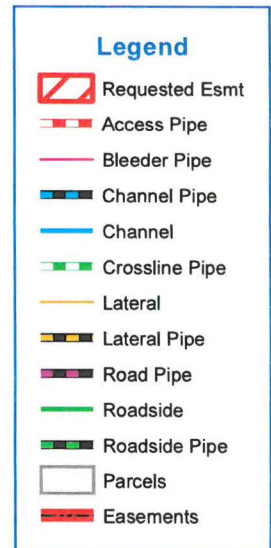
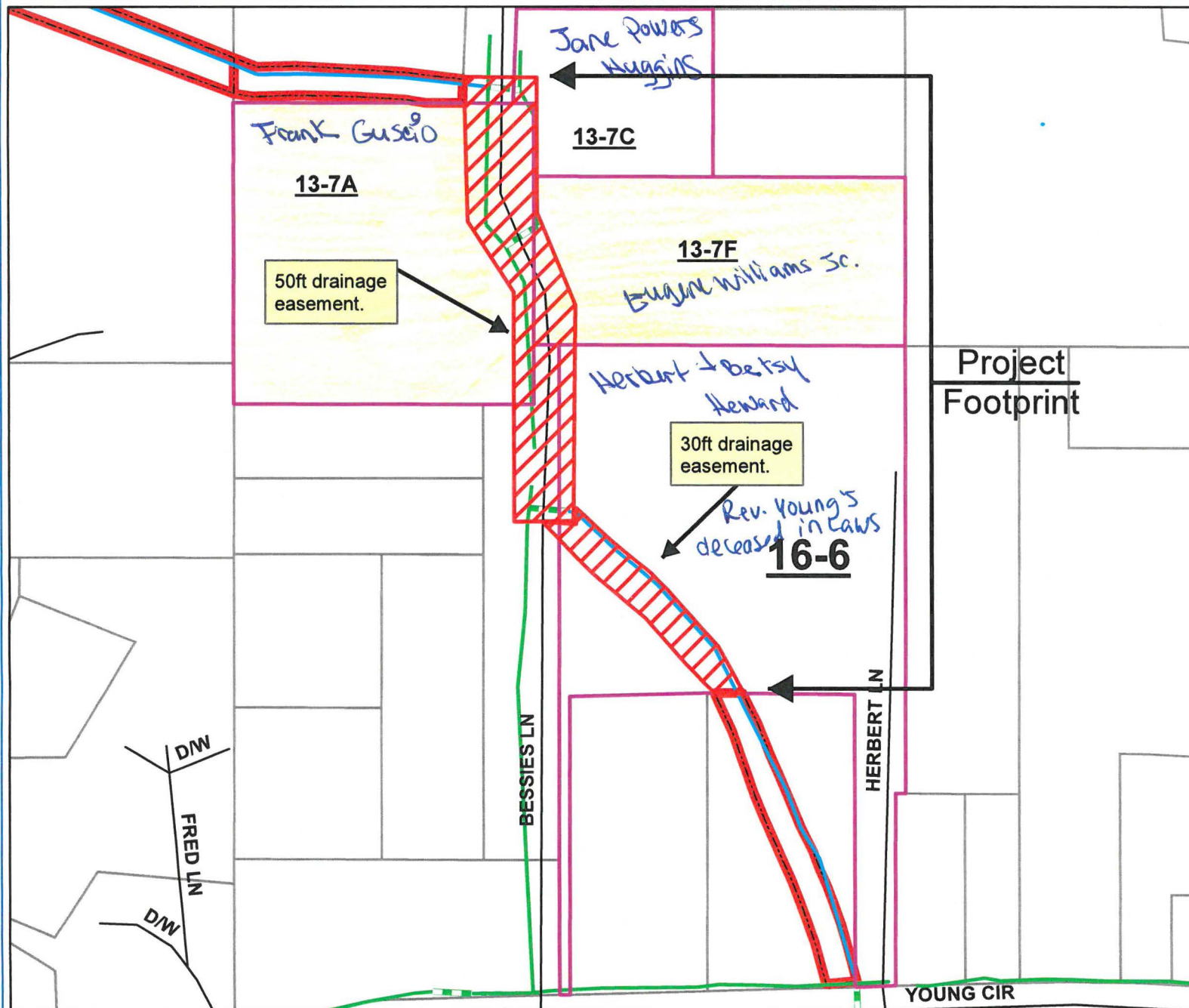
Orange Grove Road & Sam Doyle Drive

The process to obtain the easements needed for this regionally significant ditch system formally began in June 2017 and was prompted by complaints from one of the property owners in September 2016. Staff has sent a series of 2 letters, left door hangers, and made multiple attempts to communicate with property owners. The resident with the initial complaint has even refused to grant the needed easements. None of the 10 easements needed have been granted. Staff recommends ceasing all further attempts to acquire the easements and ceasing future maintenance of this system.

(Exhibit "A")
R100-16-6
Bessies Ln

Activity: Drainage
Easement Request

Township: Port
Royal Island



0 40 80 160 240 320
Feet

1 inch = 137 feet
















Prepared By: Beaufort Co, Stormwater Management Utility
Print Date: 2/28/17
File - C:\Seth\2017 easement\R100-16-6 Bessies Ln

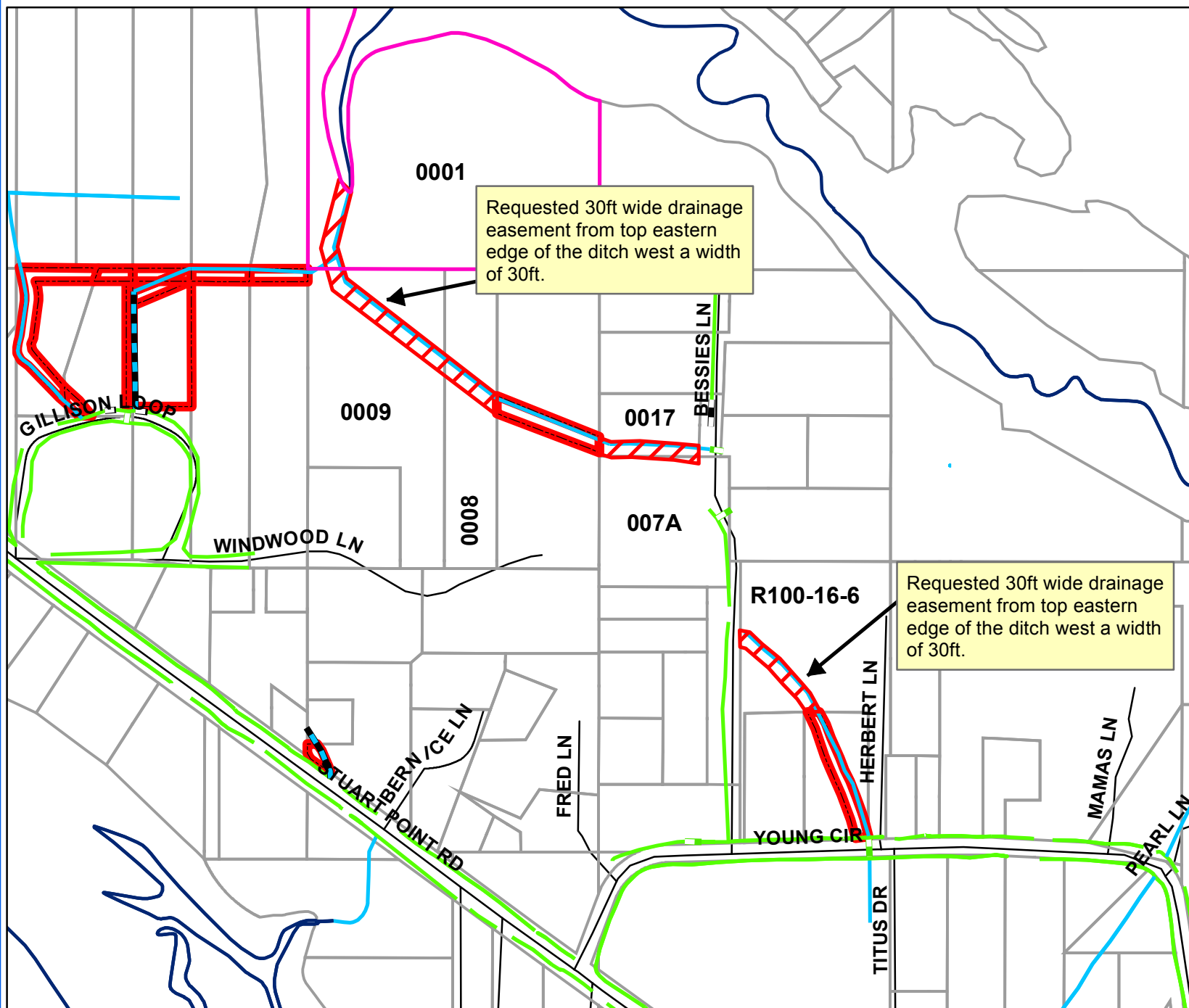
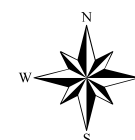
(Exhibit "A")
R100-13
Young Circle

Activity: Drainage
Easement Request

Township: Port
Royal Island

Legend

-  Requested Esmt
- Drainage**
-  River
-  Stream
-  Channel
-  Lateral
-  Lateral Pipe
-  Roadside
-  Roadside Pipe
-  Road Pipe
-  Crossline
-  DW
-  Access
-  Piped
-  Bleeder
-  Parcels



0 250 500
Feet

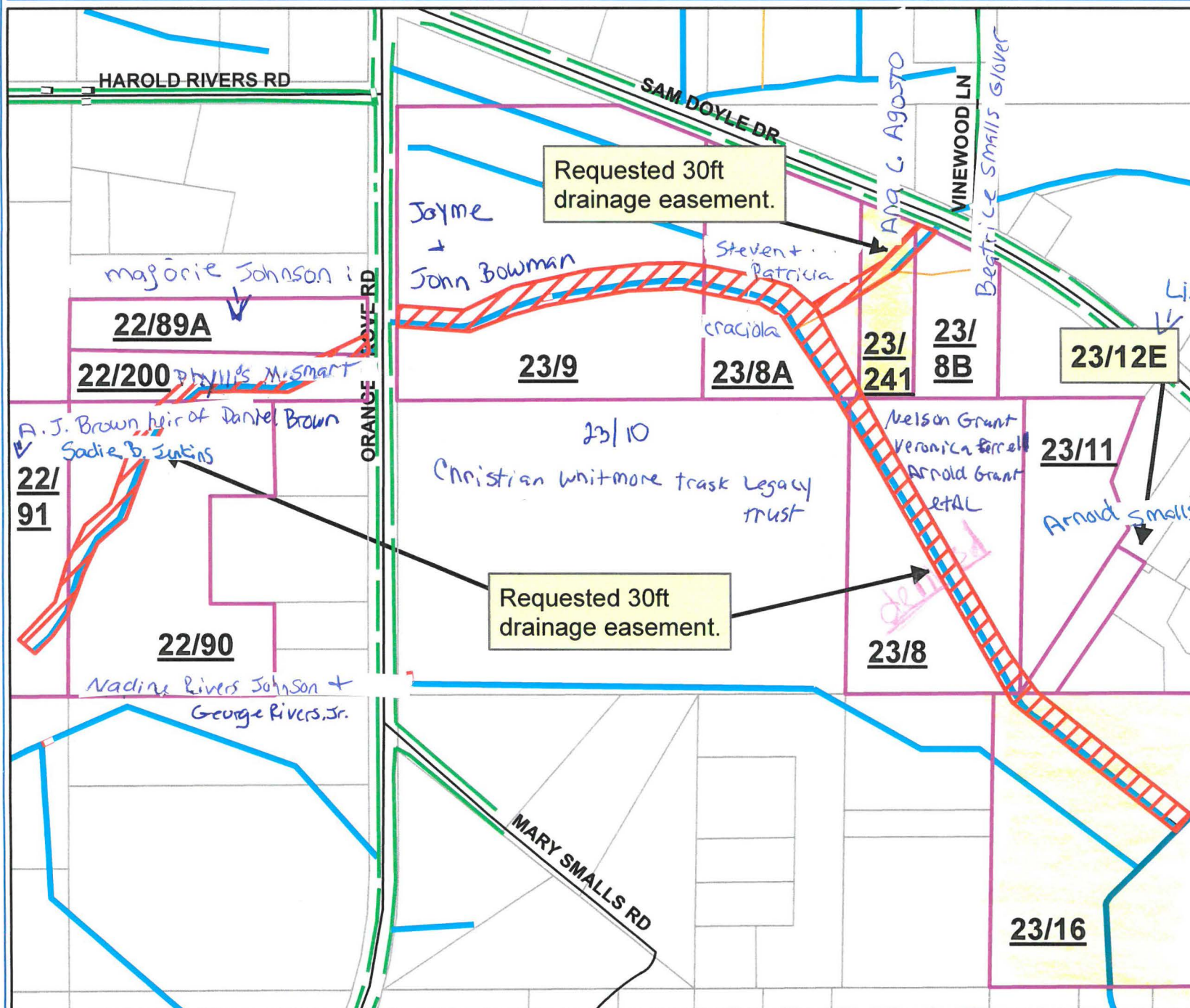
1 inch = 315 feet

Prepared By: Beaufort Co. Stormwater Management Utility
Print Date: 4/5/16
File - C:\sethdata\easement requests\2016\R100-13 Young Cir

(Exhibit "A")
R300
Orange Grove Rd

Activity: Drainage
Easement

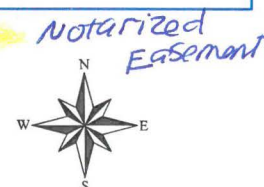
Township:
St. Helena



Legend

Drainage

- River
- Creek/Stream
- River/Creek/Marsh BANK
- Channel (fka Outfall)
- Channel Pipe
- Roadside
- Roadside Pipe
- Road Pipe
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- Access Pipe
- Bleeder Pipe



















1 inch = 311 feet

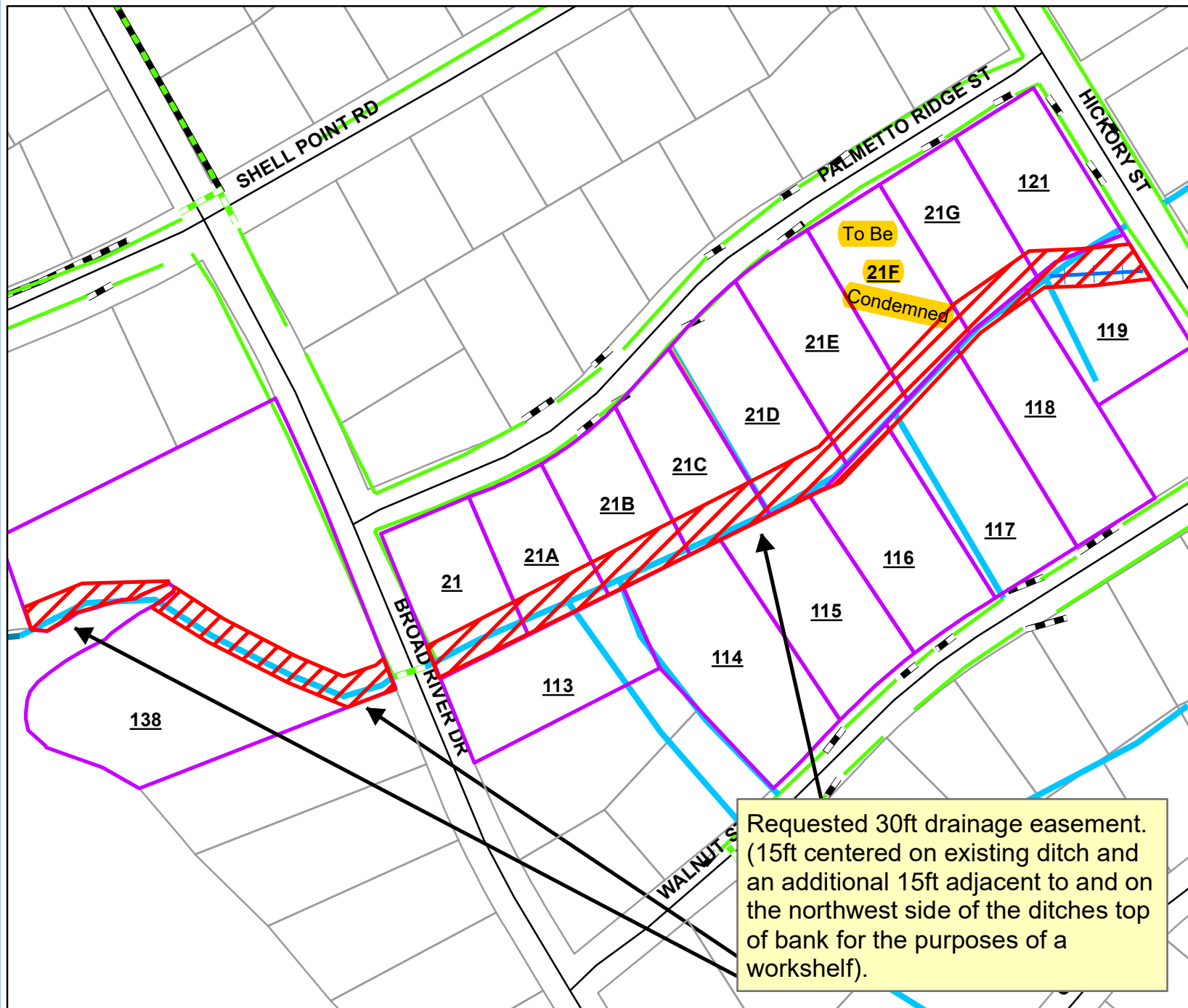
(Exhibit "A")
R100-33A
Hickory Street

Activity: Drainage
Easement Request

Township:
Port Royal Island

Legend

-  Requested Esmt
-  Ditch to be Created
- Drainage**
-  River
-  Creek/Stream
-  River/Creek/Marsh BANK
-  Channel (fka Outfall)
-  Channel Pipe
-  Roadside
-  Roadside Pipe
-  Road Pipe
-  Crossline Pipe
-  Driveway Pipe
-  Lateral
-  Lateral Pipe
-  Access Pipe
-  Bleeder Pipe



Requested 30ft drainage easement.
(15ft centered on existing ditch and
an additional 15ft adjacent to and on
the northwest side of the ditches top
of bank for the purposes of a
workshelf).



1 inch = 153 feet

November 14, 2017

To:
Shakhlan Garane
SC Department of Health and Environmental Control
2600 Bull Street
Columbia, SC 29201

From:
Paul Moore, P.E. – Ward Edwards Engineering

Re: 319 Progress Update for Annual Report
Okatie West Water Quality Retrofit
Project No. 090099B

Shakhlan,

To aid in your Annual Report to the EPA about the active 319 Grants, we are providing the following update on the Okatie West Water Quality Retrofit. The overall project goal was to design, permit and construct a regional water quality treatment pond in a 1,170 acre sub-watershed of the Okatie River headwaters. The BMP proposed for the project is a conventional stormwater detention pond to be located in a roughly 2 acre upland area that is in close proximity to the main Okatie West drainage channel. Access to the proposed pond site will be needed, so a road was designed into the property, avoiding the wetlands and cultural resource sites. The project site was previously approved for a mixed use development by the Town of Bluffton, but Beaufort County targeted it for purchase through its Rural and Critical Land Program. The County was able to purchase the property, closing on the property in early 2016 thus allowing it to be used for the regional stormwater quality project. After the property was purchased by the County, the design work on the project began, including tree-topographic-wetland surveying, geotechnical testing, and cultural resources evaluation. The background information on the wetlands and cultural resources were critical to the design of the proposed BMP, as impacts to wetlands and archaeological sites need to be minimized. The engineering is complete and a full set of design/construction plans are ready for bidding. The project permitting is nearing completion with a few final permits needed

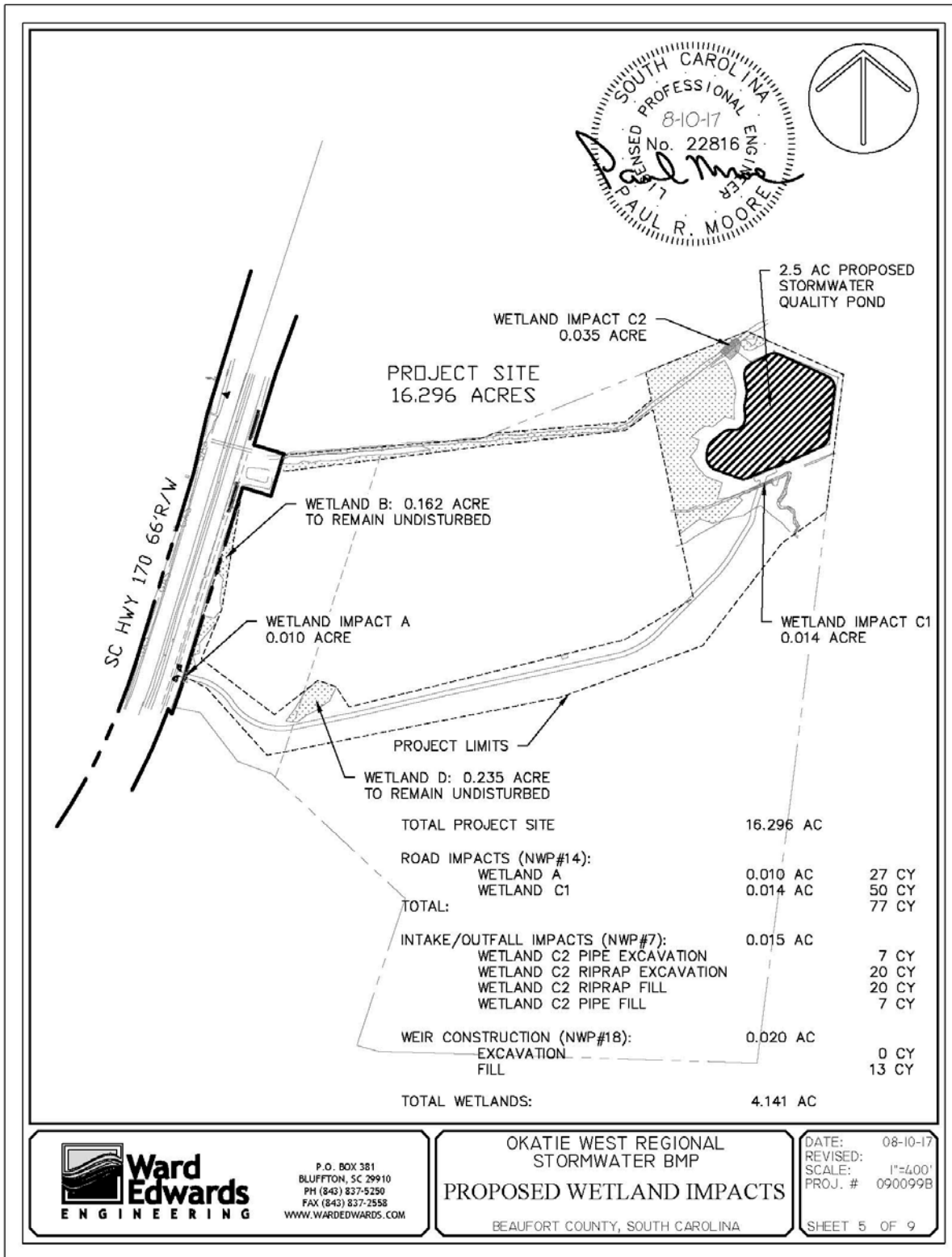


Figure 1 – Wetland Impact Plans

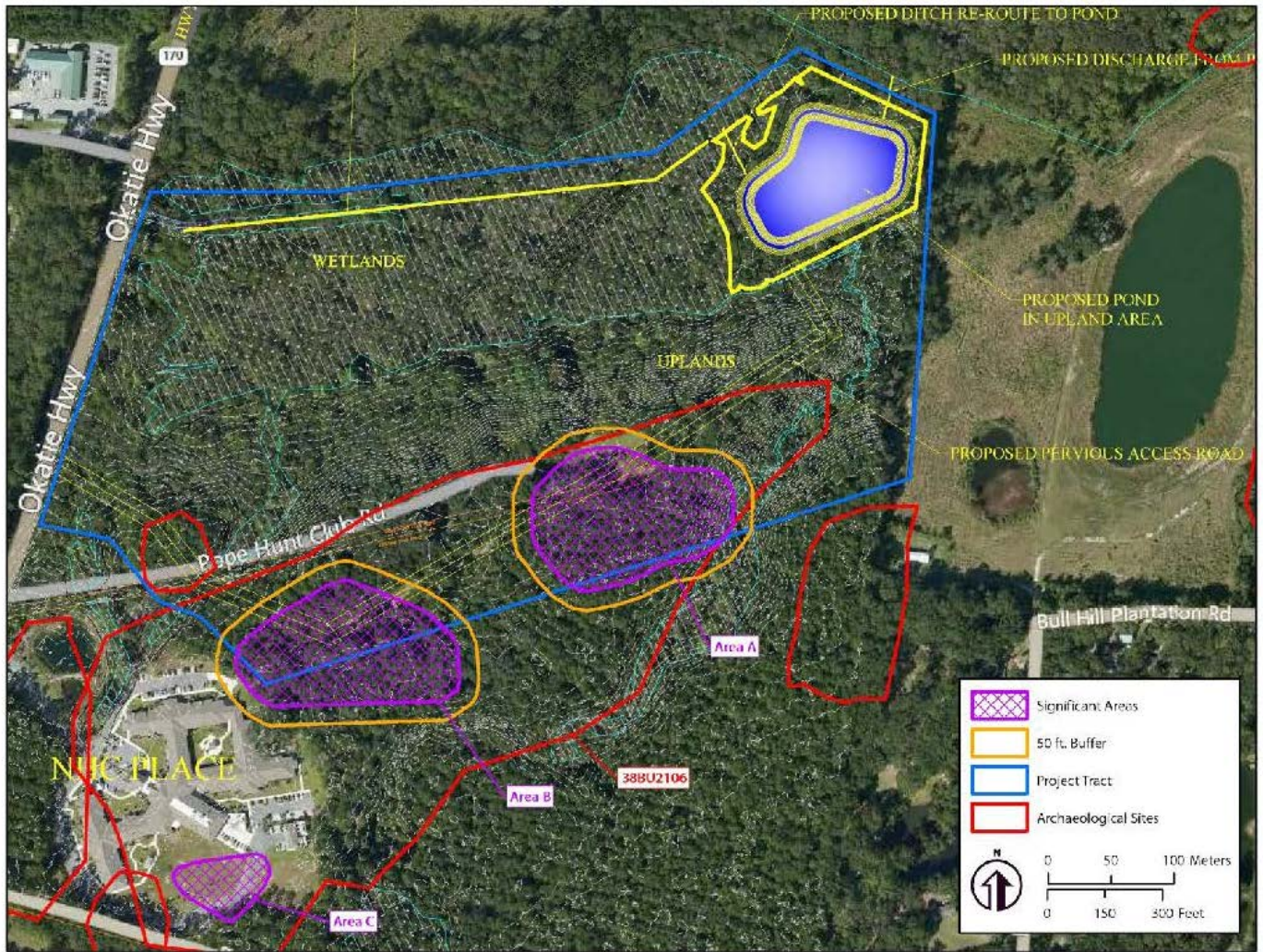


Figure 2 - Project Cultural Resources Site

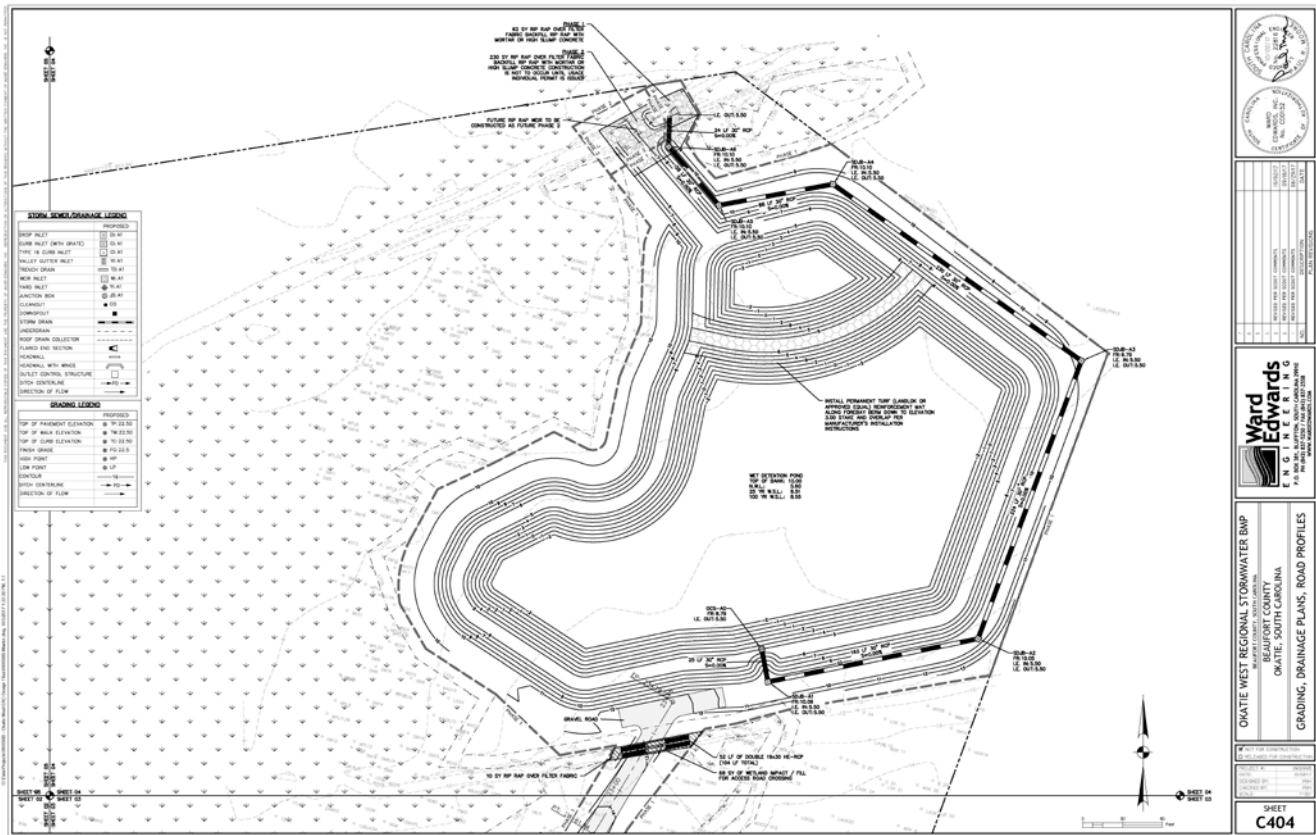


Figure 3 - Pond Grading & Drainage Construction Plan

The project permitting has been delayed by the required wetland impact permitting. The US Army Corps of Engineers has been reviewing the project and considering options for permitting the impacts under separate Nationwide Permits. It was initially thought that all impacts could be completed under three different Nationwide Permits, but it was later determined that the proposed diversion/outfall weir will require an Individual Permit. The USACE Project Manager visited the site in October 2017 to inspect the existing wetland channel that will be impacted by the diversion weir. The Manager ruled that the old constructed channel now functions as a tributary of the Okatie River, eliminating the possibility of Nationwide Permits for proposed impacts in the channel. The proposed road crossings are still being permitted as Nationwide Permits, but the other impacts have been pushed forward as an Individual Permit. The wetland permits are expected to be issued by the end of 2017, allowing the project to start construction in early 2018, for completion by summer 2018. The other State and Local permits are essentially complete, with approvals conditional on issuance of the Wetland Permits. This includes the SCDHEC-NPDES Permit, the SCDOT Encroachment Permit, and the Town of Bluffton Development Permit. There are a few “grand” tree removal issues to work out with the Town, but those will be resolved within a few weeks of this report.

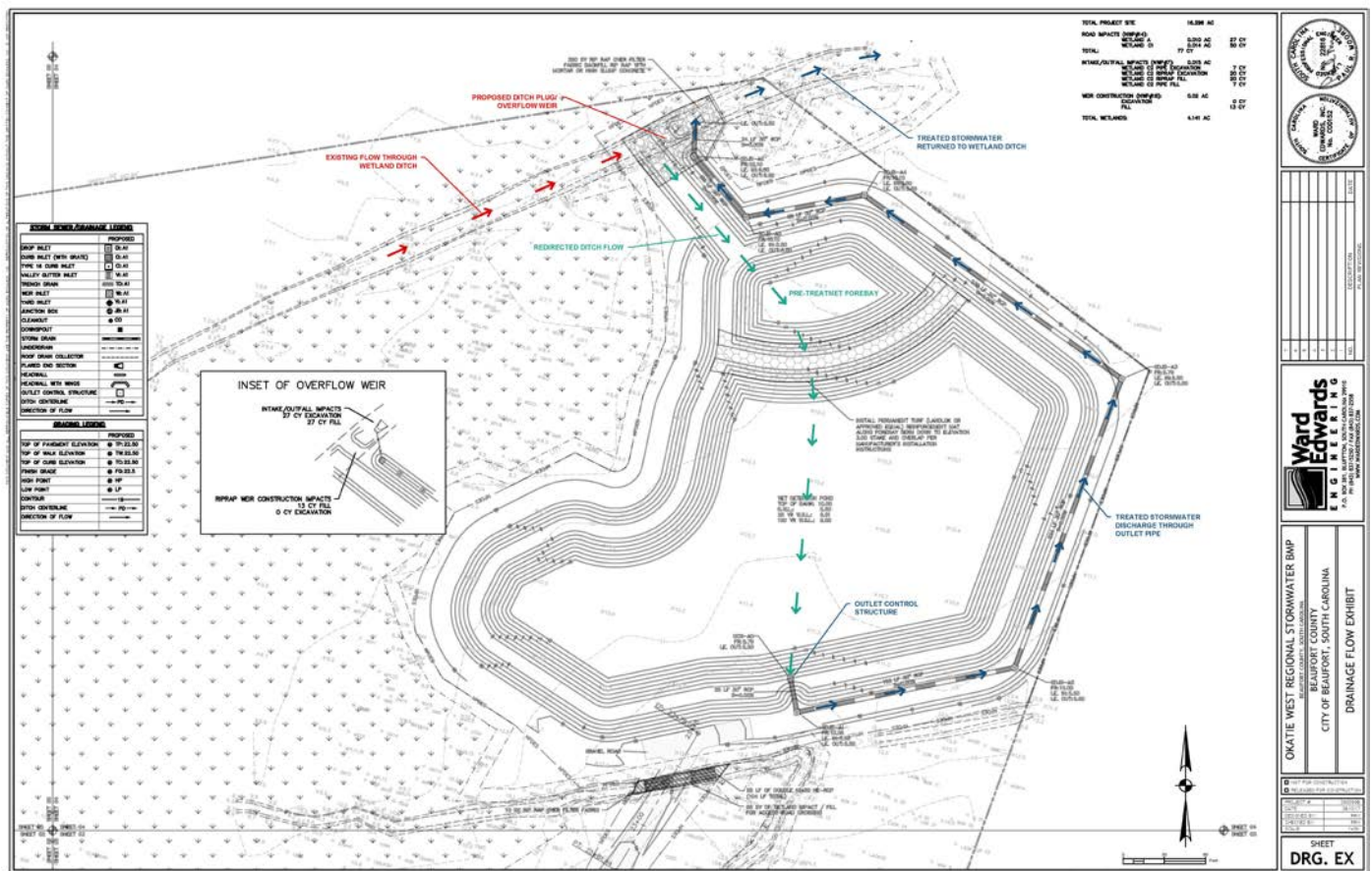


Figure 4 – Pond Function Exhibit used for Wetland Permitting

Allen, Melissa

From: Larson, Eric
Sent: Monday, January 08, 2018 4:03 PM
To: Allen, Melissa
Subject: FW: Stormwater's Okatie West CIP project contract Award in January

For the SWUB at the January 10, 2018 meeting. Please print this email for the packet.

Eric W Larson
Director, Environmental Engineering & Land Management
Director, Disaster Recovery Task Force
Manager, Stormwater Utility

-----Original Message-----

From: Flewelling, Brian
Sent: Thursday, December 14, 2017 6:48 PM
To: Larson, Eric <elarson@bcgov.net>; Vaux, Tabor <tvaux@bcgov.net>
Subject: Re: Stormwater's Okatie West CIP project contract Award in January

Eric,
I don't have any problem with that. Tabor, do you? Let me know and we'll talk it over. Otherwise Eric, plan to give us a briefing on the situation at the NRC on January 16.

Brian

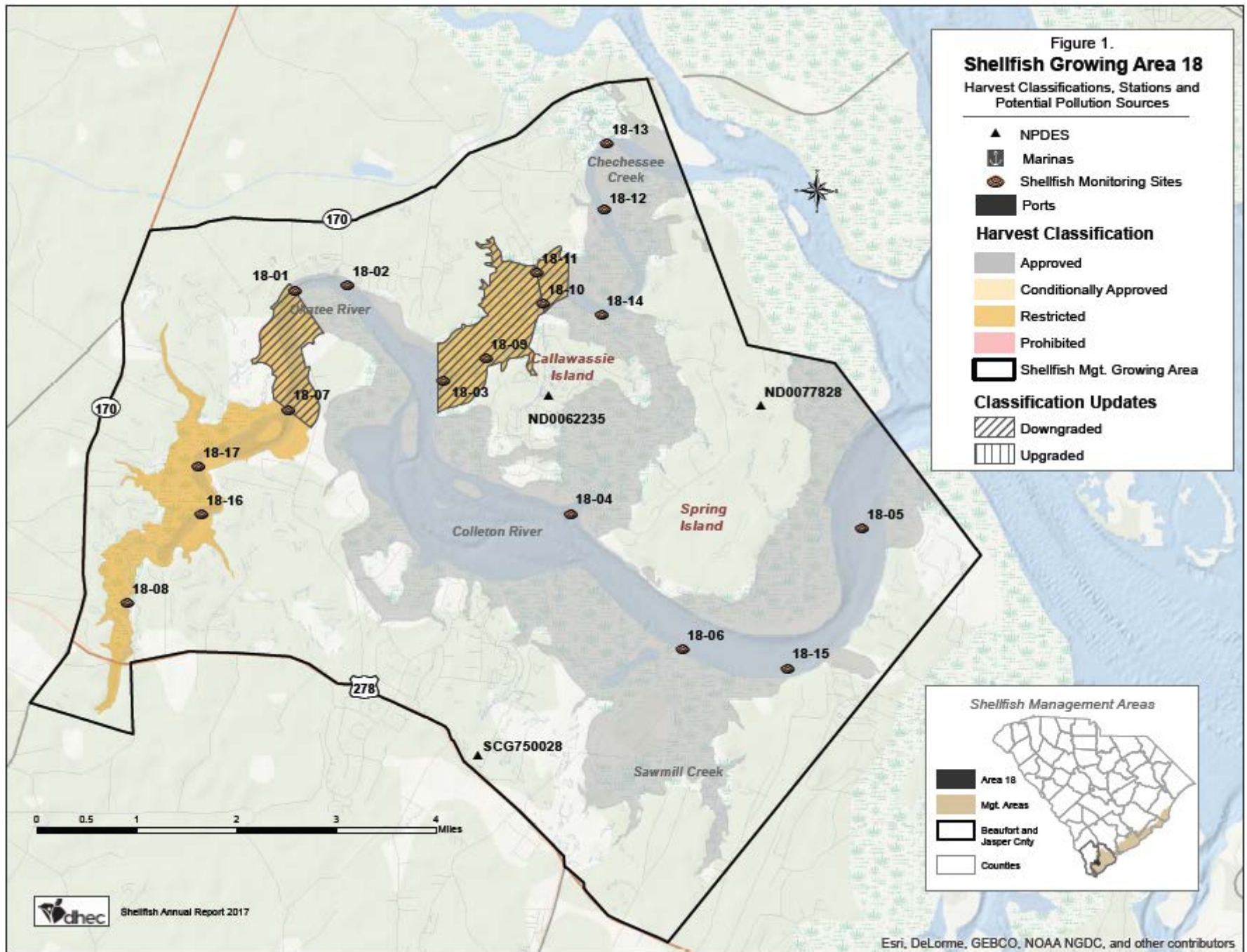
Sent from my iPhone

> On Dec 14, 2017, at 4:11 PM, Larson, Eric <elarson@bcgov.net> wrote:
>
> Brian,
>
> We began advertising for bids today on this project. We were looking to receive bids on January 16th. Here's the situation... SC-DHEC and EPA accelerated our project and are requiring us to be complete with the project by July 31, 2018. We have moved as fast as we can to get permitting complete and bids out ASAP. We anticipate a 120 day construction schedule. Looking at the calendar, missing the SWUB mtg. Jan 10, NRC Jan. 16, and CC mtg. Jan 22 means we would lose a very valuable month if we wait for Board-Committee-CC approval to award in February.
>
> Would you be willing to allow us to take bid award straight to CC on Jan 22?
>
> I plan on briefing SWUB on Jan 10 and could do the same Jan 16 at NRC, but I doubt I'd be ready to stand up and give a recommendation.
>
> Please let me know. Please call me if you wish to discuss further.
>
> Sent from my iPad
> Eric W. Larson
> 843-592-1252 (cell)
> Director, Stormwater Utility

Graphical Longitudinal Analysis of DHEC Shellfish Monitoring Stations 18-01, 18-02, 18-07, 18-08, 18-16 and 18-17

**D. Alan Warren, Danielle Mickel and Mike Monday
USCB Water Quality Laboratory
December 6, 2017**

Figure 1.
Shellfish Growing Area 18
 Harvest Classifications, Stations and
 Potential Pollution Sources



Monitoring Station Descriptions

Station	Description
---------	-------------

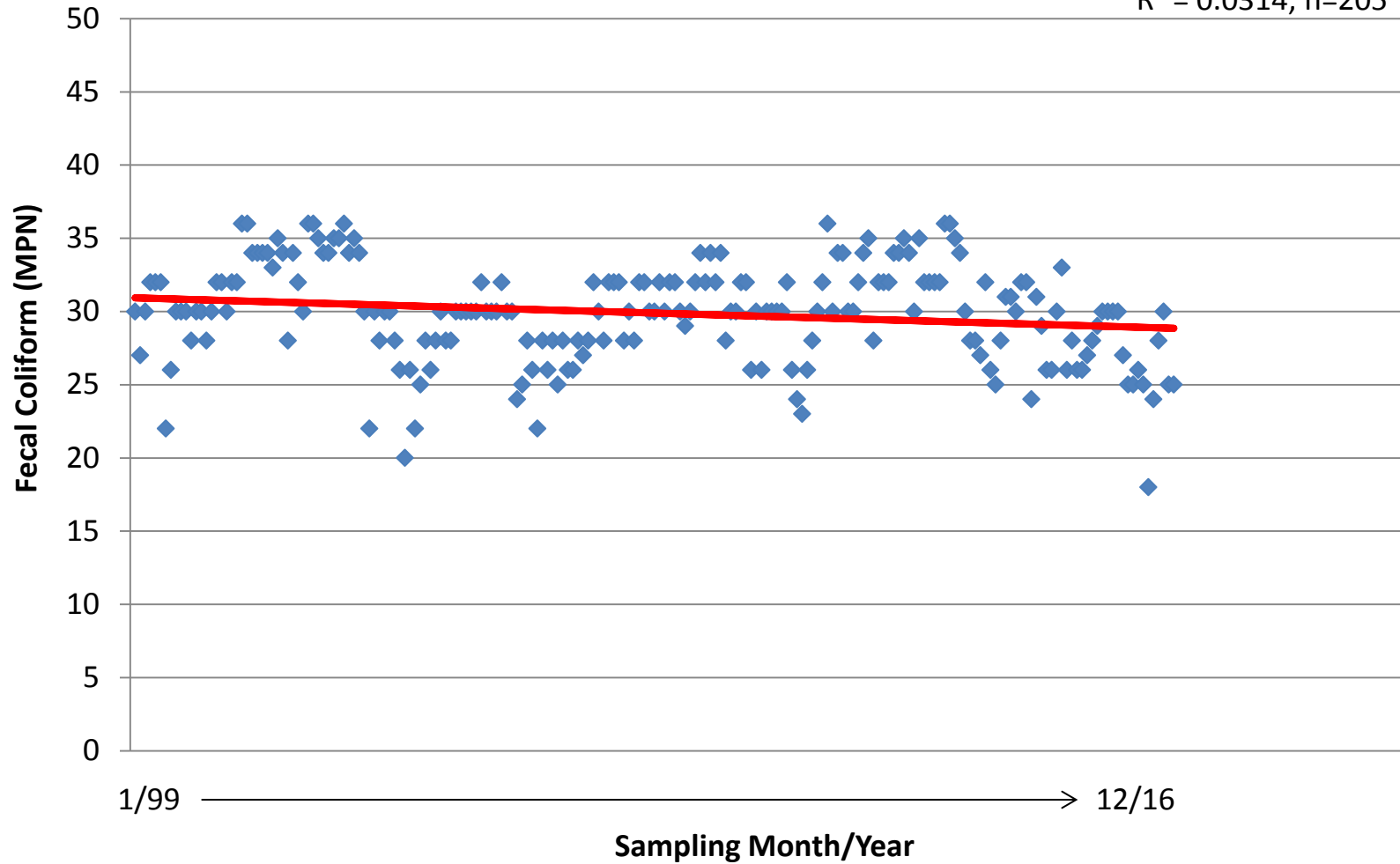
18-02.....	Okatie River Behind Bailey's Oyster Dock
18-01.....	Okatie River at Camp St. Mary's Dock
18-07.....	Okatie River at Indigo Plantation
18-17.....	Okatie River at Confluence of Cherry Point Tributary
18-16.....	Okatie River at Confluence of Pickney Colony Tributary
18-08.....	Okatie River at Dock without House



$$y = 0.029x + 6.5234$$
$$R^2 = 0.0139; n=204$$


Station 18-01

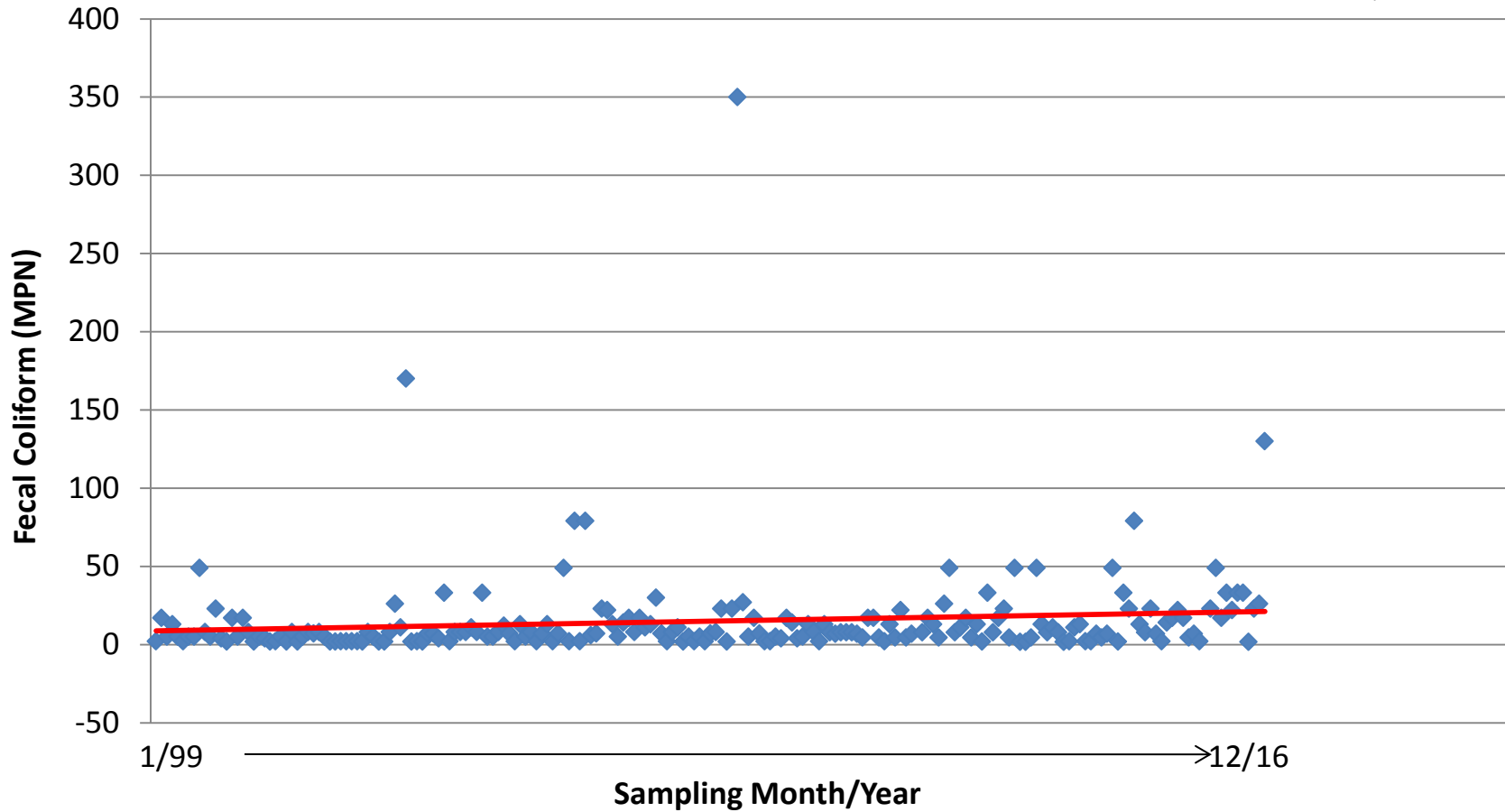
$$y = -0.0102x + 30.944$$
$$R^2 = 0.0314; n=205$$



Station 18-07

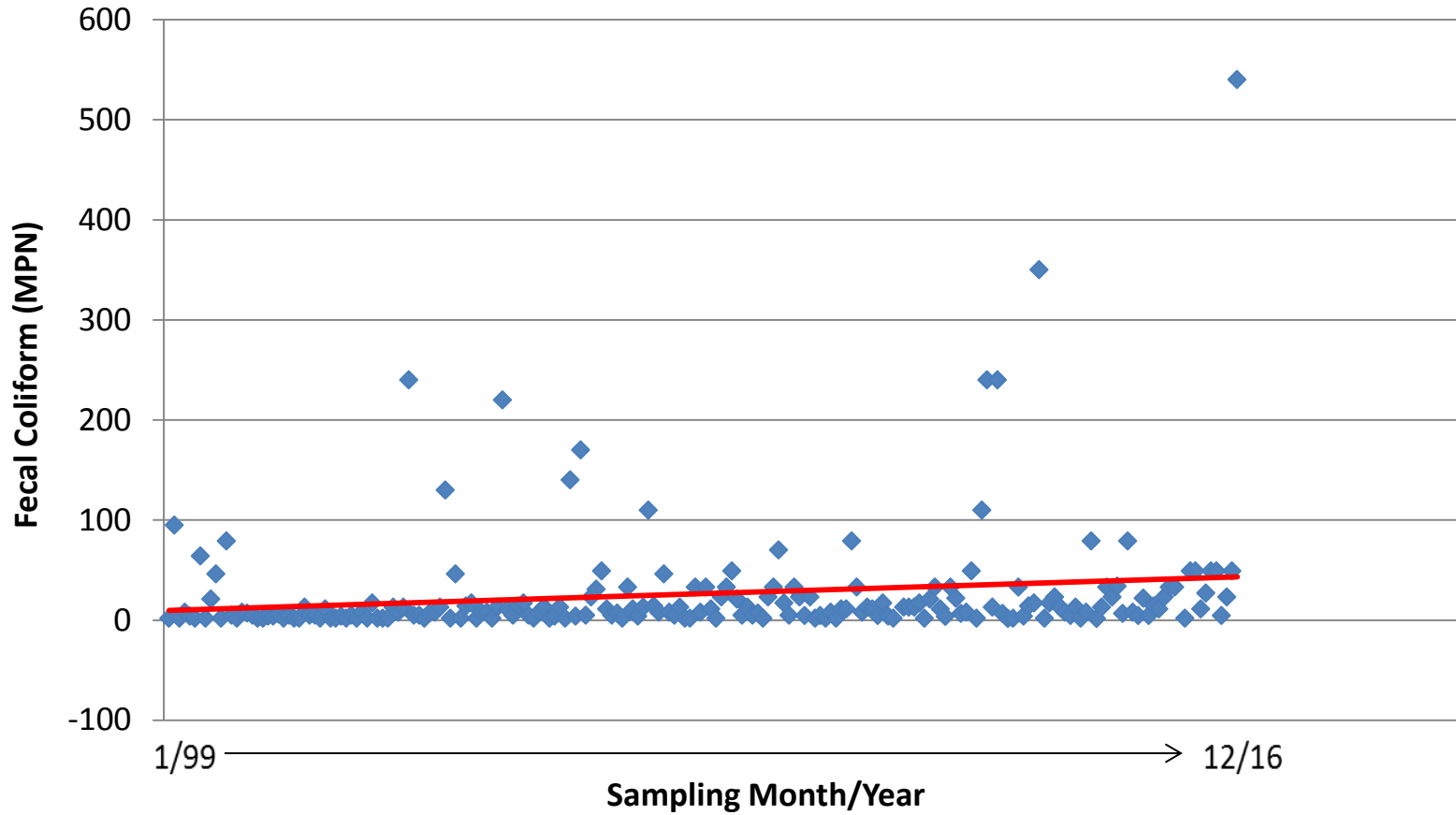
$$y = 0.0609x + 8.7286$$

$$R^2 = 0.014; n=202$$



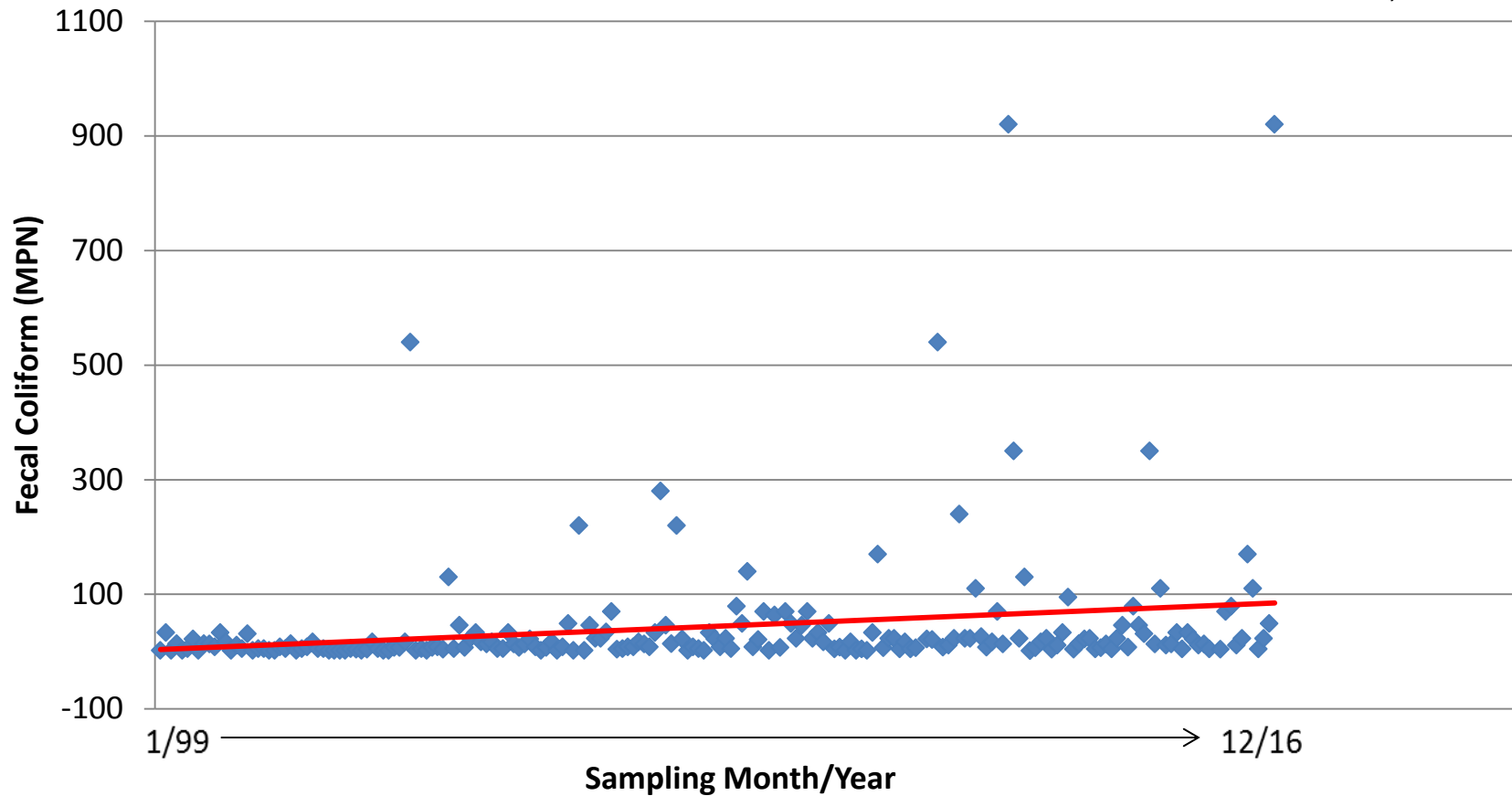
Station 18-17

$$y = 0.1624x + 9.7163$$
$$R^2 = 0.0276; n=203$$



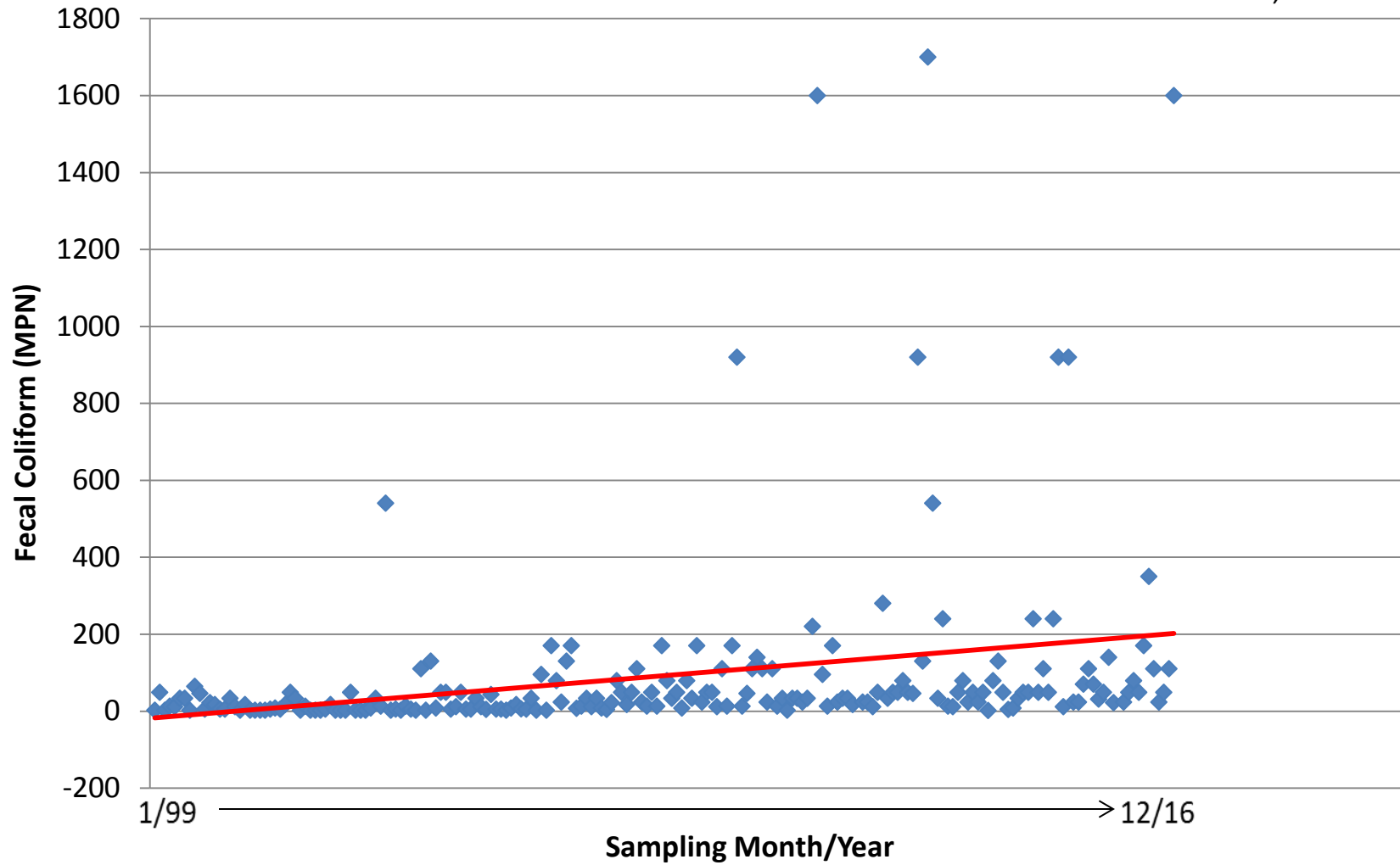
Station 18-16

$$y = 0.396x + 3.1825$$
$$R^2 = 0.0428; n=203$$



Station 18-08

$$y = 1.0813x - 18.279$$
$$R^2 = 0.072; n=203$$



Trendline Slopes and Summary

Station	Trendline Slope
18-02	+ 0.029
18-01	- 0.0102
18-07	+ 0.0609
18-17	+ 0.1624
18-16	+ 0.396
18-08	+ 1.0813

Summary: Based on linear trendlines of positive slope that were fitted to DHEC water quality data, five of the six monitoring stations saw increasing trends in fecal coliform concentration during the period 1/99 to 12/16. Of those stations showing trends of increasing concentration, the rate of increase was greatest at station 18-08, occurring at a rate 2.7- and 6.7- fold that of stations 18-16 and 18-17, respectively. Considerably more modest rates of increase were seen at stations 18-02 and 18-07, while a slightly decreasing concentration trend was observed at station 18-01. In general, the rate of increase in fecal coliform concentration is, at least in part, a function of where a particular monitoring station is located relative to the headwaters of the Okatie River (i.e., the rate of increase became greater as one moved further up river). In addition, the same pattern emerges when one examines the average concentration of fecal coliform bacteria at each monitoring station over the period from 1/99 to 12/16 (i.e., average fecal coliform concentrations were 9.5, 29.9, 15.0, 26.4, 43.9 and 91.9 MPN at monitoring stations 18-02, 18-01, 18-07, 18-17, 18-16 and 18-08, respectively). ¹⁰

Narrative Summary of the Analysis of DHEC Shellfish Monitoring Stations 18-01, 18-02, 18-07, 18-08, 18-16 and 18-17

Eric W. Larson
Beaufort County Stormwater Utility Manager
December 15, 2017

Narrative Summary

- The attached analysis consists of a series of graphics showing trends of fecal coliform concentrations, as reported by SC-DHEC, at six sampling stations within the Okatie River from 1999 to 2016. The sampling stations are shown on the accompanying map.
- In general, the concentration of bacteria increased as one traveled upriver toward the headwaters. The higher concentrations in the headwaters are believed to be a function of its relatively shallow depth and the fact that it doesn't "flush" well by comparison to downriver locations.
- Bacterial concentration trends over time were upward at five of the six sampling stations. In other words, bacterial concentrations generally increased over the 18-year period analyzed.
- Monitoring efforts have not included the measurement of surface runoff or overland flow within the Okatie River watershed. However, increased runoff volume and flow rate are suspected following rain events that have occurred over the period analyzed.
- The following milestones in Beaufort County's Stormwater Utility program are noteworthy:
 - 1) The Stormwater Utility was formed in 2001, and
 - 2) the Okatie River TMDL report is based on data through 2010.

What Does This Mean?

- The upward trend in fecal coliform concentration does not reflect a lack of concern by the County for the “health” of the Okatie River or development within its watershed.
- Though the watershed has seen some development, it has been relatively undeveloped over the time period analyzed, suggesting the predominant bacterial input has been from “natural” sources. Nonetheless, development without adequate BMPs has the potential to further increase runoff volume and flow rate, thereby amplifying the amount of bacteria entering the Okatie River via suspension and transport within channels.
- As the County finds the upward trend in bacterial concentration unacceptable, a more proactive approach to management of the Okatie River watershed is needed compared to years past. The Okatie East project completed in late 2014 was an initial step in the right direction. However, it must be viewed as the first of several such efforts to be implemented at strategic locations within the watershed.

Looking Ahead

- The County's goals are to be vigilant in its regulatory oversight, pursue land preservation, and construct new BMPs throughout the Okatie River watershed in an attempt to slow/stop the upward trend in bacterial concentration and ideally, reverse it.
- Given the “naturally occurring” bacterial sources and proposed development within the watershed, it is imperative that BMPs be well-designed, well-maintained, and well-functioning when development does occur.
- Comprehensive water quality monitoring plans are needed to identify priority areas within the watershed and determine the effectiveness of BMPs.
 - Such plans will inform the County and allow for early intervention and appropriate enforcement, thereby supporting the goal of natural resource preservation.

ORD. 2016-201 / 38 , 40 -24 -2016201

AN ORDINANCE TO AMEND THE STORMWATER MANAGEMENT UTILITY ORDINANCE 2016/26
38 AS ADOPTED SEPTEMBER 26 OCTOBER 24, 2016 TO PROVIDE FOR THE ADDITION OF
ARTICLES III, IV, V, AND VI RELATED TO ADOPTION OF STORMWATER MANAGEMENT
STANDARDS TO MEET MUNICIPAL SEPARATE STORMSEWER SYSTEM (MS4) PERMIT
REQUIREMENTS THE DEFINITION OF "DEVELOPMENT" AND EXEMPTIONS RELATED TO
COUNTY DIRT ROAD PAVING

WHEREAS, Act 283 of 1975, The Home Rule Act, vested Beaufort County Council with the independent authority to control all acts and powers of local governmental authority that are not expressly prohibited by South Carolina law; and

WHEREAS, Chapter 99, Article II, "Stormwater Management Utility" was adopted on August 27, 2001 and was modified by Ordinance on August 22, 2005, September 28, 2015, ~~and September 26, 2016, and October 24, 2016; and~~

WHEREAS, Stormwater Management Utility was established for the purpose of managing, acquiring, constructing, protecting, operating, maintaining, enhancing, controlling, and regulating the use of stormwater drainage systems in the county;

WHEREAS, to meet the increasing demands on the Stormwater Management Utility in the areas of federally mandated municipal Separate Stormsewer Systems (MS4) permitting, capital project needs, and cost of service of operations and maintenance, as well as an evolving understanding of the impacts of the urban environment on water quality, the Stormwater Management Utility finds it necessary to amend the structure in which rates are determined and adjust the rates charged to the citizens of Beaufort County to meet said demands in a fair and equitable manner; and

WHEREAS, the administrative structure of the Stormwater Management Utility needs to be amended to reflect the organization of the current administration; and

WHEREAS, further amendments are needed to make adjustments to the rate structure to address the differences in taxation and billing for condominiums and parcels affected by standing water or tidal impacts; and

WHEREAS, pursuant to the requirements mandated by the Municipal Separate Stormsewer System (MS4) permit issued by the South Carolina Department of Health and Environmental Control (DHEC) on December 1, 2015, Beaufort County is required to adopt standards related to stormwater management and create an regulatory framework to enforce the same; and

WHEREAS, the Beaufort County Stormwater Utility Board has amended the Manual for Stormwater Best Management and Design Practices (BMP Manual) as the source of the technical stormwater standards used in the development of Stormwater Plans and adopted the same on September 14, 2016; and

WHEREAS, the Stormwater Utility Board has determined that limited road improvement functions, specifically dirt road paving, should not be subject to certain stormwater requirements typically required for development; and,

WHEREAS, Beaufort County Council believes to best provide for the health, safety, and welfare of its citizens it is appropriate to amend Chapter 99 of the Beaufort County Code and to provide for additional terms to said Article; and

WHEREAS, text that is underscored shall be added text and text ~~lined through~~ shall be deleted text; and

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NOW, THEREFORE, BE IT ORDAINED BY BEAUFORT COUNTY COUNCIL, that Chapter 99 of the Beaufort County Code is hereby amended and replaced with the following:

Chapter 99 - STORMWATER MANAGEMENT

ARTICLE I. - IN GENERAL

Secs. 99-1—99-100. - Reserved.

ARTICLE II. - STORMWATER MANAGEMENT UTILITY

Sec. 99-106. - Definitions.

Unless the context specifically indicates otherwise, the meaning of words and terms used in this article shall be as set forth in S.C. Code § 48-14-20, and 26 S.C. Code Regulation 72-301, mutatis mutandis.

Developed land. Developed land shall mean property altered from its natural state by construction or installation of improvements such as buildings, structures, or other impervious surfaces, or by other alteration of the property that results in a meaningful change in the hydrology of the property during and following rainfall events. Existing County maintained dirt roads which are improved and or paved as part of Beaufort County's Dirt Road Paving Program as set forth in Beaufort County Policy Statement 15 and Policy Statement 17 and existing private dirt roads with adequate existing Stormwater conveyance systems which are improved or paved and where the project is not related to a pending or proposed development of adjacent land are deemed not to constitute "developed land".

Article III. – REGULATORY GENERAL PROVISIONS

Sec. 99-203. - Definitions

The following definitions shall apply in Articles III, IV, V, and VI this Ordinance. Any term not herein defined shall be given the definition, if any, as is found elsewhere in the Code of Ordinances of Beaufort County, including the Community Development Code (CDC) Ordinance.

Development. All project construction, modification, or use of any lot, parcel, building, or structure on land and on water. Existing dirt roads which are improved and or paved as part of Beaufort County's Dirt Road Paving Program as set forth in Beaufort County Policy Statement 15 and Policy Statement 17 and existing private dirt roads with adequate existing Stormwater conveyance systems which are improved or paved and where the project is not related to a pending or proposed development of adjacent land are deemed not to constitute "development".

Section 2

Stormwater Design Criteria

2.1 General Planning and Design Requirements

2.1.1 General Standards

General planning and design requirements for stormwater management are as follows:

1. All development that creates runoff and/or discharge may adversely impact water quality in county streams, lakes and tidal waterbodies. Therefore, all proposed development and redevelopment shall be required to submit a Drainage Plan to show compliance with the peak attenuation, water quality, volume and construction pollution control requirements in this manual, with the following exceptions:
 - a. Total disturbed area is under 5,000 square feet (sq ft). Disturbed area shall include all areas utilized for construction, access, and storage of materials that are disturbed.
 - b. Any maintenance, alteration, renewal use or improvement to an existing drainage structure as approved by the stormwater manager that does not create adverse environmental or water quality impacts and does not increase the temperature, rate, quality, volume or location of stormwater runoff discharge.
 - c. Site work on existing developed sites 1-acre or less, where impervious area is increased by less than 5,000 sq ft, and earthwork does not increase runoff and/or eliminate detention/retention facilities and/or stormwater storage or alter stormwater flow rates or discharge location(s).
 - d. Agricultural activity not involving relocation of drainage canals.
 - 2.e. Work by agencies or property owners required to mitigate emergency flooding conditions. If possible, emergency work should be approved by the duly appointed officials in charge of emergency preparedness or emergency relief. Property owners performing emergency work will be responsible for any damage or injury to persons or property caused by their unauthorized actions. Property owners will restore the site of the emergency work to its approximate pre-emergency condition within a period of 60 days following the end of the emergency period.
 - f. Golf courses are required to comply with all site runoff volume and water quality control and drainage planning and design requirements. However, both

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golf courses and private lagoons shall be exempt from the peak attenuation requirements.

g. The paving of dirt roads are deemed not to constitute "development" and shall be exempt from the standards of the County Code of Ordinance Chapter 99 (Stormwater Utility Ordinance), MS4 Program or this BMP Manual if the action meets one of the following conditions:

1. Existing County maintained dirt roads which are improved and/or paved as part of Beaufort County's Dirt Road Paving Program as set forth in Beaufort County Policy Statement 15 and Policy Statement 17;

2. Private dirt roads with adequate existing Stormwater conveyance systems where the project is not related to a pending or proposed development of adjacent land, and the proposed paving meets the Thoroughfare Construction Specifications in Section 2.9.80 of the Community Development Code. Private dirt roads without adequate existing Stormwater conveyance systems will be required to construct a conveyance system per this BMP Manual but will not be required to provide Water Quality Control, Volume Control, or Retention / Detention Facilities.

3.2 Compliance with this section shall be demonstrated by the submission of detailed plans and calculations showing compliance through the use of BMPs provided within this manual. Detailed hydraulic and hydrologic calculations will be provided in a written report showing methodology and inputs for required calculations. All calculations and plans must be signed and sealed by a qualified professional registered under the South Carolina Division of Professional and Occupational Licensing.

4.3 Priority wetlands or other significant wetlands identified on the official County conservation district maps, or the Federal National Wetlands Inventory should not be adversely impacted by the construction of BMP facilities in or near them, which deprives them of required runoff or lowers their normal water table elevations. Adjacent BMPs that benefit retention of normal wetland water table elevations are acceptable. If the BMP's proposed location is near a priority wetland, the applicant must provide data showing that impacts will not be detrimental to the wetland hydrology.

5.4 Measures used to collect and convey stormwater on any site ("stormwater management facilities") shall be designed to meet the following minimum performance standards:

- a. Prevent erosion damage and satisfactorily carry off or detain and control the rate of release of surface waters.
- b. Carry surface water to the nearest adequate street, storm drain, detention basin, natural watercourse, or drainage facility.
- c. Control/accommodate not only the anticipated peak discharge from the onsite disturbed area but also the existing runoff being contributed from all land at a higher elevation in the same watershed.

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- d. No stormwater runoff or natural drainage shall be so diverted as to overload existing drainage systems or create flooding or the need for additional drainage structures on other private properties or public lands. Please see Appendix G regarding the Common Enemy Law.
- e. All stormwater management facilities shall be designed to satisfy the following requirements:
 - i. They shall be capable of withstanding the discharge associated with the 100-year return rainfall event, without failing or resulting in damage to downstream areas. Some nondetention facilities may be designed to bypass stormwater discharges that are in excess of the appropriate design storm. In this case, conveyance must be provided to transport the 100-year surcharge flow to downstream facilities, a natural watercourse, or storm drainage system inlet.
 - ii. All infiltration devices shall be protected from sedimentation. Areas designated for recharge shall not receive runoff until the contributory drainage areas have achieved final stabilization.

~~6.5.~~ No new stormwater discharge shall be permitted onto any beaches/shorelines.

~~7.6.~~ Final landscape designs and plantings shall not adversely impact the stormwater runoff, volume and quality controls and drainage concepts approved as part of the development permit approval process. Landscape design and plantings should enhance opportunities for percolation, retention, detention, filtration and plant absorption of site-generated stormwater runoff.

~~8.7.~~ Irrigation systems used for complying with these stormwater requirements must use of all available surface runoff or other retained or detained stormwater as the water supply source. No groundwater wells or use of potable water for irrigation of any kind will be permitted in developments or redevelopments unless it can be demonstrated that alternative sources of irrigation water are required beyond the amount needed to meet volume control standards in this manual, or other extenuating circumstances apply. Any use of potable water sources must be approved by the stormwater manager. In addition, the design standards outlined in the Fact sheet for Irrigation (PTP-10) shall apply to all irrigation systems. In the case of extenuating circumstances, the designer may present alternate design standards. These must be approved by the stormwater manager prior and calculations and backup data must be presented for review.

~~9.8.~~ The developer shall provide adequate outfall ditches, pipes and easements downstream from the proposed discharge if adequate public or private drainage facilities do not exist to carry the proposed discharge. If the outfall ditches, pipes and easements required for adequate drainage are larger than those needed to carry the additional proposed discharge from the development sought by the applicant, the County may bear those incremental costs that are greater than those properly allocable to the development. The County shall have the authority, however, to condition use of such expanded system by

subsequent users on contributions by such users for allocable portions of the cost borne by the County.



MEMORANDUM

To: Natural Resources Committee of Beaufort County Council

From: Robert Merchant, Interim Community Development Director

Subject: Text Amendment to Beaufort County Community Development Code (CDC), Article 1, Section 1.3.50 (Exemptions) To Exempt Existing Dirt Roads Paved as Part of the County's Dirt Road Paving Program from the Standards of the CDC.

Date: December 28, 2017

PLANNING COMMISSION RECOMMENDATION from the excerpt of its December 4, 2017, draft minutes:

Mr. Robert Merchant briefed the Commissioners on the text amendment that was initiated by the County Engineering Department. The County's dirt road paving program has limited funding, and the County would not be able to pave as many roads as originally intended if the CDC standards were strictly applied regarding stormwater standards. In order to maximize the efficiency of the dirt road paving program which was intended to assist the rural areas, the staff is recommending exempting the roads that are funded by the county dirt road paving program. With each County road paving project, an engineer designs the roads. The Public Facilities Committee requested a formal text amendment occur. The Stormwater Board when reviewing the text amendment was concerned with equity issues on affected private property owners who wish to pave their own roads. Mr. Merchant explained the proposed text amendments in detail. He noted that there were safeguard in respect to private property owners paving their own roads.

Commission discussion included the road paving scheduling process (*Mr. Merchant indicated that there was a rating system that included the number of houses affected and the traffic volume of the road.*); the negative impacts of road paving (*Mr. Merchant explained the pros of paved roads to compacted dirt roads. He noted that most road projects are in rural areas*); concern with stormwater replacement/repair on paved roads (*Mr. Eric Larson addressed the concerns on stormwater runoff regarding roads scheduled for paving, especially not polluting the existing waterways by using grassed ditches*); concern that adequate drainage standards are met with the paved roads; and noting that roads that were paved prior to the year 2000 had no stormwater standards.

Public Comment: Ms. Juanita DeGregorio, a USC-B student, asked if the community would be affected and whether the community had a say on whether the road should be paved since some people like the rural setting with unpaved roads (*Mr. Merchant is unfamiliar with the program, but he believes that the residents usually petition for the paving and paving prioritization is dependent on number of homes and the traffic volume of the road. Mr. Hinchler indicated that he knew of a road on Lady's Island that the residents requested to be removed from the paving schedule.*)

Motion: Mr. Randolph Stewart made a motion, and Mr. Harold Mitchell seconded the motion, **to recommend approval to County Council on the Text Amendment to the Beaufort County Community Development Code (CDC), Section 1.3.50 Exemptions (to exempt existing dirt roads paved as a part of the County's Dirt Road Paving Program from the standards of the CDC).** The motion **carried** (FOR: Chmelik, Fermin, Hinchler, Mitchell, Pappas, Semmler, and Stewart; ABSENT: Hennelly; VACANCY: St. Helena Island representative).

STAFF REPORT:

A. BACKGROUND:

Case No.	ZTA 2017-16
Applicant:	Beaufort County Staff
Proposed Text Change:	Text Amendment to Beaufort County Community Development Code (CDC), Article 1, Section 1.3.50 (Exemptions) To Exempt Existing Dirt Roads Paved as Part of the County's Dirt Road Paving Program from the Standards of the CDC.

B. SUMMARY OF REQUEST:

Beaufort County Staff is requesting an amendment to Article 1, Section 1.3.50 of the Community Development Code (CDC) to make the paving of dirt roads exempt from the standards of the CDC. The aim of this amendment is maximize the fiscal efficiency of the County's dirt road paving program and assuring that a maximum amount of roads can be paved with the limited funds that are available, serving as many residents as possible.

This request was initiated with a memorandum from staff to the Public Facilities Committee of County Council (see attached) outlining the arguments for exempting County road projects not only from the standards of the CDC, but also NPDES (stormwater) permitting process and the County's Stormwater BMP manual. The Public Facilities Committee met on October 23, 2017. The Committee agreed with the memo and requested that staff initiate the necessary amendments to the CDC and stormwater ordinances to provide the exemption for dirt road paving.

Subsequently, the County's Stormwater Management Utility Board met on November 15 and reviewed the requested exemptions. The Board commented that they were not comfortable with having a different set of standards for road paving projects initiated by the County versus those undertaken by private property owners. Therefore the proposed amendment provides some exemptions for road paving projects for private roads undertaken and funded by the private sector.

C. ATTACHMENTS:

- Proposed changes to the CDC
- Memorandum to Public Facilities Committee

I.3.50 Exemptions

- A. The provisions of this Development Code shall not require formal subdivision of land as a result of actions taken by the State of South Carolina and its political subdivisions to acquire land or interests in land for public right-of-way and easements.
- B. County Council, public utilities, or County agencies may be exempt from the provisions of this Development Code when an emergency exists such that it is impossible to submit to the normal procedures and standards of this Development Code and quick and instant action is necessary to secure the public health, safety, or welfare. The County Council shall ratify such exemption after the fact at its next regularly scheduled meeting, and shall base its ratification on specified findings of fact related to the emergency involved.
- C. A public utility or public infrastructure installation (water, sewer, roads, gas, stormwater, telephone, cable, etc.) is exempt from the standards of this Development Code, except:
 - 1. Thoroughfare standards, in Division 2.9 (Thoroughfare Standards);
 - 2. Wetland standards, in Section 5.11.30 (Tidal Wetlands), and Section 5.11.40 (Non-Tidal Wetlands);
 - 3. River Buffer standards, in Section 5.11.60 (River Buffer);
 - 4. Tree Protection standards, in Section 5.11.90 (Tree Protection);
 - 5. Stormwater management standards, in Section 5.12.30 (Stormwater Standards);
 - 6. Utility standards, in Section 4.1.210 (Regional (Major) Utility);
 - 7. Wireless communication facilities standards, in Section 4.1.320 (Wireless Communications Facility).
 - 8. Historic Preservation standards, in Division 5.10 (Historic Preservation).
- D. The Department of Defense shall be exempt from the standards of this Development Code.
- E. The paving of dirt roads are deemed not to constitute "development" and shall be exempt from the standards of this Development Code if the action meets one of the following conditions:
 - 1. Existing County maintained dirt roads which are improved and/or paved as part of Beaufort County's Dirt Road Paving Program as set forth in Beaufort County Policy Statement 15 and Policy Statement 17;
 - 2. Private dirt roads with adequate existing Stormwater conveyance systems where the project is not related to a pending or proposed development of adjacent land, and the proposed paving meets the Thoroughfare Construction Specifications in Section 2.9.80



COUNTY COUNCIL OF BEAUFORT COUNTY
Community Development Department
Beaufort County Government Robert Smalls Complex
Administration Building, 100 Ribaut Road
Post Office Drawer 1228, Beaufort, South Carolina 29901-1228

TO: Natural Resources Committee of Beaufort County Council
FROM: Anthony Criscitiello, Beaufort County Planning Director
DATE: December 28, 2017
SUBJECT: Lady's Island Zoning Map Amendment for R200 019 000 013A 0000 (0.21 Acres at 391 Sea Island Parkway) from T2-RN (Rural Neighborhood) to T2-RC (Rural Center)

PLANNING COMMISSION RECOMMENDATION from the excerpt of its December 4, 2017, draft minutes:

Mr. Merchant briefed the Commission that the property was mistakenly zoned T2-Rural Neighborhood (T2-RN) in 2014 when the County adopted the Community Development Code. The property is located in the Eustis community (between the Lady's Island airport and Chowan Creek bridge) on Lady's Island at the corner of Sea Island Parkway and Hudson Drive. The property was part of the Rural Business Zoning that was created in 2004-2005. He showed a map that indicated the Rural Business Zoning that included the property. There is a 1500-square foot commercial building on the property since 1980. The T2-Rural Center zoning is analogous with the Rural Business zoning, and the property was inadvertently left out of the T2-RC zoning. Staff looked at several strategies including a scrivener's error, but Legal stated that a rezoning was required.

Mr. Semmler noted an error in the staff report where the property should be shown as T2-RN to T2-RC.

Public Comment: None were received.

Motion: Ms. Diane Chmelik made a motion, and Dr. Caroline Fermin seconded the motion, to recommend approval to County Council on the Lady's Island Zoning Map Amendment / Rezoning Request for R200 019 000 013A 0000 (0.21 acres at 391 Sea Island Parkway) from T2-RN (Rural Neighborhood) to T2-RC (Rural Center) to correct a mapping error. The motion carried (FOR: Chmelik, Fermin, Hincer, Mitchell, Pappas, Semmler, and Stewart; ABSENT: Hennelly and Vacancy (St. Helena Island representative)).

STAFF REPORT:

A. BACKGROUND:

Case No.	ZMA-2017-15
Owner/Applicant:	CAVU Holdings, LLC/ Applicant - Staff
Property Location:	Located in the Eustis Community on Lady's Island on the north side of Sea Island Parkway at the corner of Hudson Drive

District/Map/Parcel:	R200 010 000 0022 0000
Property Size:	0.21 acres
Future Land Use:	Neighborhood/Mixed-Use
Current Zoning District:	T2 Rural Neighborhood
Proposed Zoning District:	T2 Rural Center

The Community Development Department is requesting the correction of an error in the official zoning map. The subject property is located at 391 Sea Island Parkway (R200 019 000 013A 0000) on Lady's Island. The Department believes that the property was intended to be zoned T2 Rural Center, but the Community Development Code zoning map indicates it as being zoned T2 Rural.

The parcel is 0.21 acres and was formerly the home of Broad Marsh Animal Hospital, and before that Sea Island Tile and Marble. The 1,500 square foot commercial building on the property was constructed in 1980. Under the Zoning and Development Standards Ordinance (ZDSO), the property was zoned Rural Business specifically because it contained a commercial use located in a non-residential building. The purpose of the Rural Business district was to recognize existing concentrations of non-residential uses within small rural communities and allow for small-scale commercial and light industrial uses that serve the surrounding rural region. When Beaufort County adopted the Community Development Code in 2014, the County intended that all parcels that were originally zoned Rural Business under the ZDSO would be mapped T2 Rural Center in the CDC. This intent is clearly stated in the CDC under Article 1, Section 1.6.20, Table 1.6.20.A.

Attached are the zoning maps for this property under the ZDSO and the CDC. Also attached is the provision in Article 1 of the CDC that state the County's intent to transition properties zoned Rural Business.

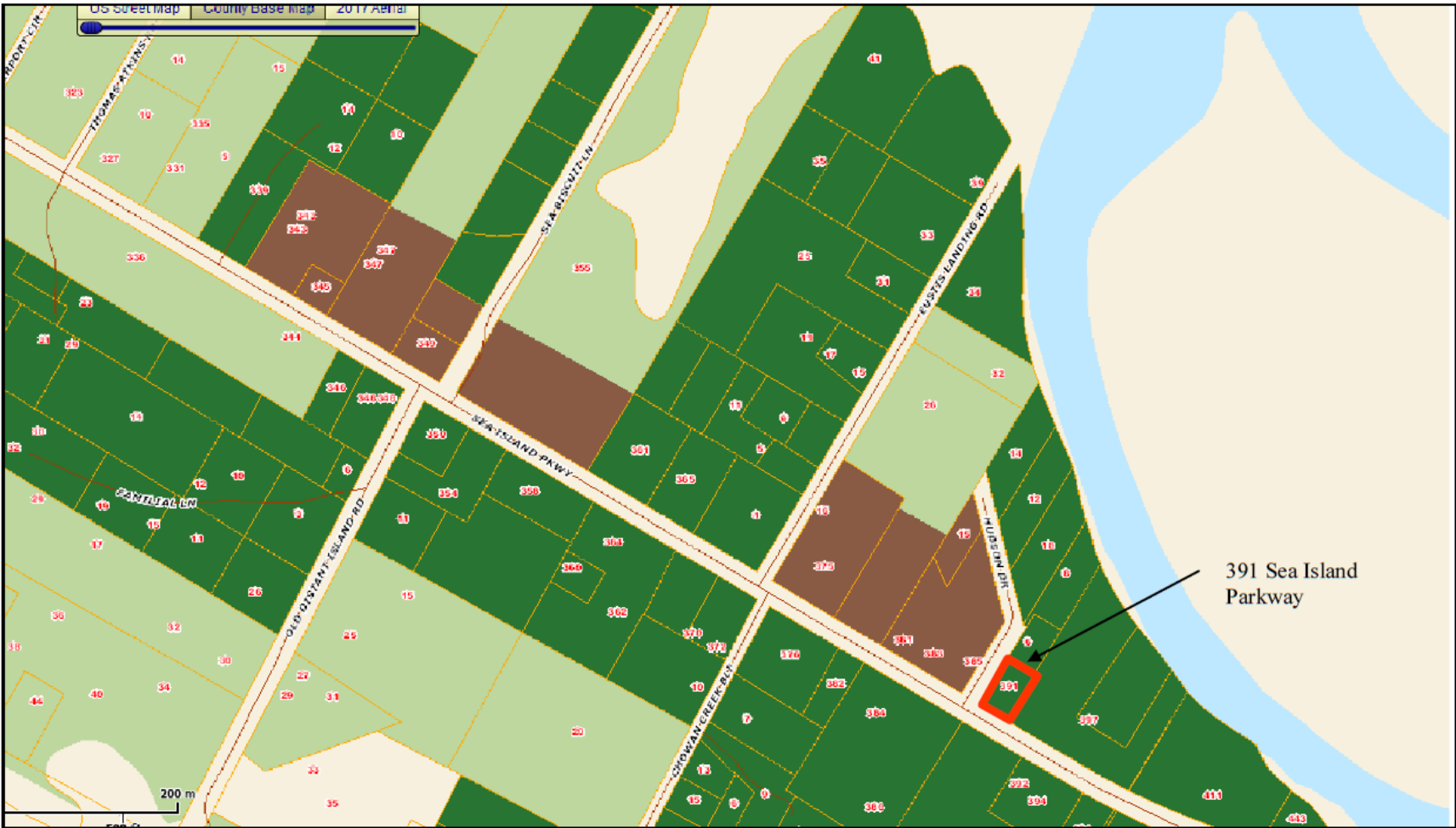
B. METROPOLITAN PLANNING COMMISSION RECOMMENDATION: On November 20, 2017, the Metropolitan Planning Commission reviewed the proposed amendment. Tim Rentz, Bill Harris, Joe DeVito, Judy Alling, Caroline Fermin, and Robert Semmler were in attendance. Mr. Robert Merchant, Beaufort County Long-range Planner, gave the project background. Mr. Rentz motioned and Mr. Semmler seconded to recommend to the County Planning Commission approval of the proposed amendment. The motion passed unanimously.

ATTACHMENTS

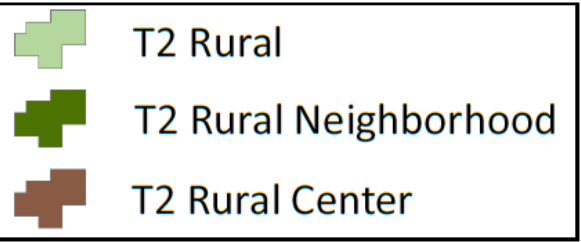
- A. Zoning Map under Zoning and Development Standards Ordinance (ZDSO)
- B. Zoning Map under Community Development Code (CDC)
- C. Article 1, Section 1.6.20 of the Community Development Code



Attachment A: Zoning of 391 Sea Island Parkway under the Zoning and Development Standards Ordinance



391 Sea Island
Parkway



Attachment B: Zoning of 391 Sea Island Parkway under
the Community Development Code

Attachment C: Article 1, Section 1.6.20 of the Community Development Code

I.6.20 Transition to New Zones

- A. On December 8, 2014, land zoned with a zone classification from the previous *Beaufort County Zoning and Development Standards Ordinance* shall be translated to one or more of the zone classifications in this Development Code as set forth in Article 3 (Specific to Zones). Table 1.6.20.A (Zone Transition Table) summarizes the translation of the zones used in the previous ordinance to the zones used in this Development Code. Zones have been transitioned to transect zones where physical characteristics encourage rural and/or walkable environments. Zones have been transitioned to conventional (non-transect) zones where physical characteristics maintain auto-oriented environments, and the transition to walkable environments will be more gradual. In some cases, former zones have transitioned to multiple zones.

Table 1.6.20.A: Zone Transition Table	
Zone In Former Code	Zone in Community Development Code
Transitions to Transect Zones	
RC Resource Conservation	T1 Natural Preserve
R Rural/R-TO Rural with Transitional Overlay	T2 Rural, T2 Rural-Low, T2 Rural Neighborhood Open
RR Rural Residential/RR-TO Rural Residential with Transitional Overlay	T2 Rural, T2 Rural Neighborhood, T2 Rural Center, T3 Edge
RB Rural Business	T2 Rural Center
CP Community Preservation	See Table 1.6.20.B
U Urban	C3 Neighborhood Mixed-Use, T3 Hamlet Neighborhood, T3 Neighborhood, T4 Hamlet Center, T4 Neighborhood Center
RD Research and Development	T4 Hamlet Center Open

ADD-ONS

The document(s) herein were provided to Council for information and/or discussion after release of the official agenda and backup items.

Topic:	Subcontractor Bid List
Date Submitted:	January 16, 2018
Submitted By:	Dave Thomas
Venue:	Natural Resources Committee

SUBCONTRACTOR BID LIST

**Please note the yellow highlighted subcontractors below are the companies C. Merrill Construction, LLC. plans to use if awarded the project.*

Business Name	Firm Type	City	State	Telephone	Point of Contact	Trade/Commodity	Quote Amount
Preferred Site Construction		Statesboro	GA	912-663-3312	Matt Hilton	Sitework	
Bremer Construction Management, Inc.	Small	Savannah	GA	912-313-6334	Billy Bremer	Sitework	
J. H. Hiers Construction		Beaufort	SC	843-379-3262	Joey Hiers	Sitework	57,415.00
Southern Palmetto Landscapes, Inc.		Ridgeland	SC	843-305-1704	Eric Knapp	Landscaping	
The Greenery Inc.	WBE	HHI	SC	843-686-9037	Mellisa Brock	Landscaping	\$24,761.00
Olive Branch	Small	Statesboro	GA	912-687-0323	Mike Williams	Landscaping	
Rain-N-Shine Irrigation	Small	Clyo	GA	912-213-0069	Clay Morgan	Landscaping	
Bremer Construction Management, Inc.	Small	Savannah	GA	912-313-6334	Billy Bremer	Concrete	\$23,368.00
Perkins Concrete Finishing	Small Minority	Statesboro	GA	912-601-2004	Jermaine Perkins	Concrete	\$31,600.00
First Choice Concrete, LLC.	Small	Richmond Hill	GA	912-445-0310	Thomas Banks	Concrete	
Wiggins Concrete Construction	Small Minority	Estill	SC	803-625-2288	Buster Wiggins	Concrete	
Bremer Construction Management, Inc.	Small	Savannah	GA	912-313-6334	Billy Bremer	Masonry	
PDW Masonry Company		Oakwood	GA	678-971-1290	Carl Miller	Masonry	
Savannah Hardscapes		Hardeeville	SC	843-812-0836	Adam Kaylor	Masonry	
Davis Construction	Small	Statesboro	GA	912-690-3434	Clint Davis	Carpentry	\$60,000.00
South Georgia Framers		Statesboro	GA	912-852-2301	Kelly Lanier	Carpentry	
Bay Hill Construction		Ridgeland	SC	843-540-4308	Travis Hames	Carpentry	
Upright Builders, Inc.		Bluffton	SC	843-837-8009	Donald Stephens	Carpentry	
RWP, Inc.		Jesup	GA	912-427-4499	Roy Pattie	Cabinets	
Bridges Wood Products	Small Minority	Savannah	GA	912-897-2694	Carolyn Hawkins	Cabinets	\$5,700.00
Auman Brothers		Norcross	GA	404-558-1666	Beth Richardson	Cabinets	
Custom Cabinets		Savannah	GA	912-429-0186	Thomas Lamb	Cabinets	
Energy One America		Bluffton	SC	843-388-6260	Dan Poe	Insulation	
EnviroFoam Technologies, Inc.		Pooler	GA	912-687-0072	Barry Cowart	Insulation	
USI Southern Foam		Claxton	GA	912-618-0355	Wayne Bradley	Insulation	\$17,000.00
Performance Insulation	Small	Statesboro	GA	912-334-0457	Adam Blocker	Insulation	
Loveday & Company	Small	Statesboro	GA	912-682-2387	Keith Loveday	Insulation	
Delta Metals, Inc.	Minority	Savannah	GA	912-234-8201	Jim Shinn	Roofing	
Chandler Roofing	Small	Statesboro	GA	912-682-6697	Clay Chandler	Roofing	\$49,950.00
Metalcrafts, Inc.		Savannah	GA	912-236-0615	Cory Reed	Roofing	
Southern Roof & Woodcare Corporation		Hardeeville	SC	843-422-5801	Donny Coleman	Roofing	
Southeast Roofing Solutions		Statesboro	GA	764-6595	Mike Mullins	Roofing	
Summers Roofing		Alpharetta	GA	678-247-4739	Larry Miller	Roofing	
Watts & Associates		Columbia	GA	803-786-4610	Rick O'Connor	Roofing	
Purvis Exteriors, LLC.	Small	Statesboro	GA	912-243-4602	Chris Purvis	Cement Siding	\$27,300.00
Premier Exteriors, LLC.		Ridgeland	SC	843-645-6920	David Winters	Cement Siding	

Topic: Subcontractor Bid List
Date Submitted: January 16, 2018
Submitted By: Dave Thomas
Venue: Natural Resources Committee

SUBCONTRACTOR BID LIST

**Please note the yellow highlighted subcontractors below are the companies C. Merrill Construction, LLC. plans to use if awarded the project.*

Business Name	Firm Type	City	State	Telephone	Point of Contact	Trade/Commodity	Quote Amount
Chandler Roofing	Small	Statesboro	GA	912-682-6697	Clay Chandler	Cement Siding	
Miles Drywall		Bluffton	SC	843-247-2804	Martin Miles	Drywall/ACT	
Chase Drywall & Metal Studs	Small	Brooklet	GA	912-655-2327	Robby Chase	Drywall/ACT	\$8,600.00
FCO Drywall		Bluffton	SC	843-247-6334	Francisco Sanchez	Drywall/ACT	
Island Interior Contractors, Inc.		Bluffton	SC	843-683-0839	David Windsor	Drywall/ACT	
Coastal Interior Construction		Savannah	GA	912-200-4444	Carl Hatloge	Drywall/ACT	
Lucas Designs, Inc.		Bluffton	SC	843-757-5497	Debbie Lucas	Painting	\$23,165.00
Southeast Painting Group	Small	Swainsboro	GA	478-494-5923	Franz Thigpen	Painting	
Quality Painting of Statesboro	Small	Statesboro	GA	912-314-4467	Durand Bonner	Painting	
Pender Brothers Inc.		Port Royal	SC	843-525-1703	Johnny Pender	Plumbing	\$46,800.00
H.A. Sack Company, Inc.		Statesboro	GA	912-871-8771	Rex Durden	Plumbing	
Henry Plumbing		Savannah	GA	912-352-9827	Todd Reed	Plumbing	
Oates Plumbing		Register	GA	912-488-2447	Lawton Sack	Plumbing	
Starling Plumbing & Electrical	Small	Statesboro	GA	912-764-5112	Micky Starling	Plumbing	
Jake Patrick & Son Plumbing, Inc.	Small	Guyton	GA	912-667-5930	Jake Patrick	Plumbing	
Pender Brothers Inc.		Port Royal	SC	843-525-1703	Johnny Pender	HVAC	
All Season's Comfort, Inc.		Savannah	GA	912-544-1798	Alison Haynes	HVAC	\$52,370.00
Coastal Air Technologies		Beaufort	SC	843-987-3566	Ronnie Mullins	HVAC	
Davis Heating & Air		Metter	GA	912-685-9490	Kevin Davis	HVAC	
Kennedy's Heating & Air, Inc.		Statesboro	GA	912-536-0111	Frankie Kennedy	HVAC	
Air Therm Co.		Savannah	GA	912-234-7268	Bill Efird	HVAC	
Ocean Light Corporation		Beaufort	SC	843-524-4003	Charles Steinmeyer	Electrical	
Mock Electric, Inc.		Ridgeland	SC	843-717-2688	Dustin Mock	Electrical	\$92,600.00
Powell Electric		Beaufort	SC	843-524-4891	Bill O'Donnell	Electrical	
Proctor Electric	Small	Statesboro	GA	912-690-3336	Johnathan Proctor	Electrical	
Simoneaux Electric, Inc.		Bluffton	SC	843-368-7051	Stephen Rebert	Electrical	
William Ryan Company		Bluffton	SC	843-247-1444	Matt Yocco	Electrical	

Topic:	Bid Tabulation - Fort Fremont
Date Submitted:	January 16, 2018
Submitted By:	Dave Thomas
Venue:	Natural Resources Committee

PRELIMINARY BID TABULATION

PURCHASING DEPARTMENT



Project Name:	Ft Fremont Construction & Landscaping
Project Number:	IFB 101917
Project Budget:	
Bid Opening Date:	10/19/2017
Time:	3:00
Location:	Finance Conference Room
Bid Administrator:	Marlene Myers
Bid Recorder:	Marlene Myers

The following bids were received for the above referenced project:

BIDDER	BID FORM	BID BOND	ALL ADDENDA	SCH OF VALUES	SUB LISTING	SMBE DOCS	Grand Total Price
C. Merrill Construction, LLC							\$1,000,980
Savannah Construction & Preservation							\$1,029,756.31
Beaufort County posts PRELIMINARY bid tabulation information within 2 business days of the advertised bid opening. Information on the PRELIMINARY bid tabulation is posted as it was read during the bid opening. Beaufort County makes no guarantees as to the accuracy of any information on the PRELIMINARY tabulation. The bid results indicated here do not necessarily represent the final compliance review by Beaufort County and are subject to change. After the review, the final award will be made by Beaufort County Council and a certified bid tab will be posted online.							

Topic: Bid Tabulation - Fort Fremont

Date Submitted: January 16, 2018

Submitted By: Dave Thomas

Venue: Natural Resources Committee

Bid Recorder

IFB 101917 Ft Fremont Construction & Landscaping BID FORM

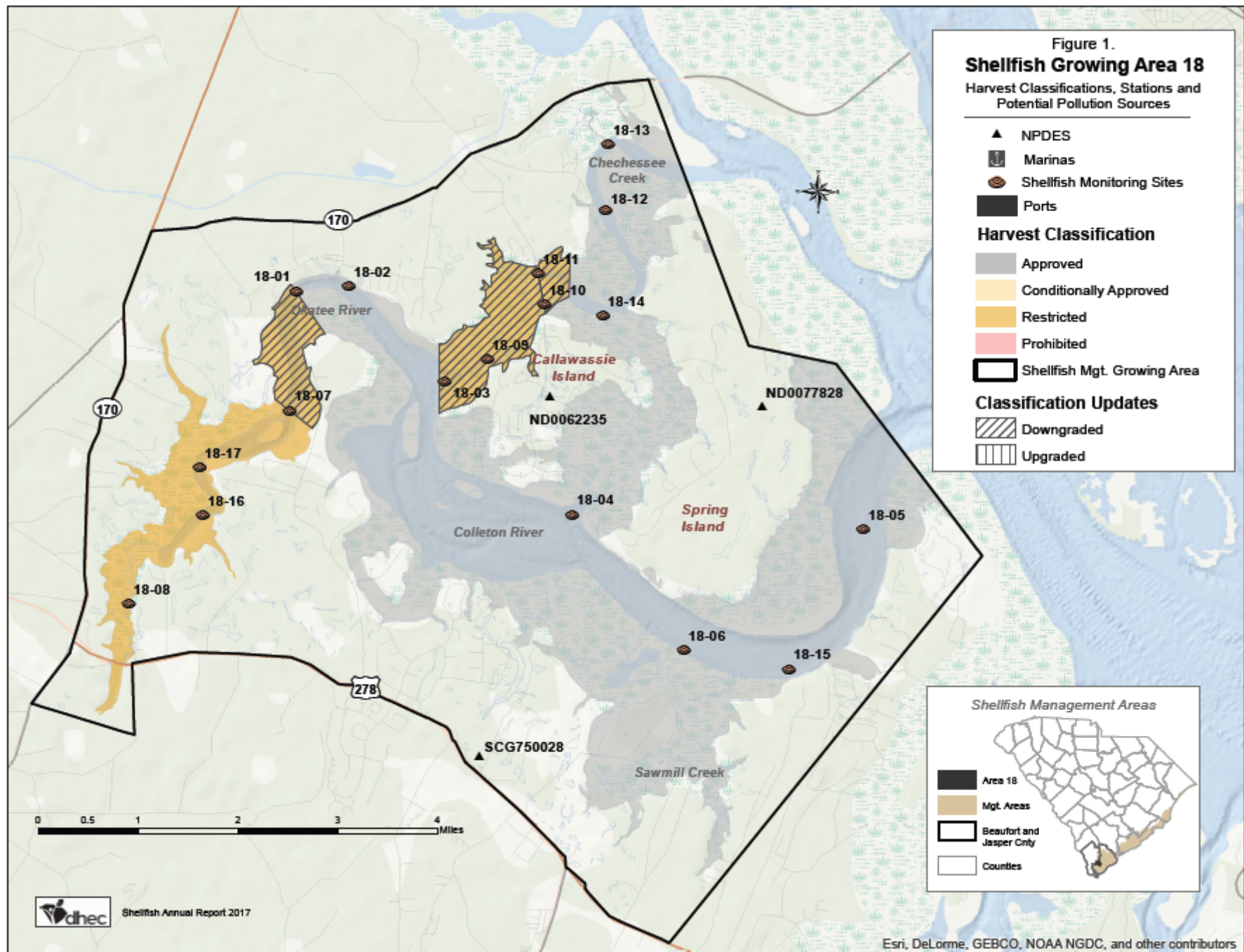
<u>Project Number</u>	<u>Location</u>	<u>Name of Company</u>	<u>Number of Days to Complete Project</u>	<u>Base \$</u>	<u>Alternate 1 \$</u>	<u>Alternate 2 \$</u>	<u>Alternate 3 \$</u>	<u>Alternate 4 \$</u>	
1	Ft Fremont Construction & Landscaping IFB 101917	C. Merrill Construction, LLC	216	\$941,550.00	\$5,635.00	\$12,650.00	\$27,000.00	\$14,145.00	\$1,000,980
		Savannah Construction & Preservation	360	\$969,215.42	\$5,687.25	\$12,852.57	\$27,607.03	\$14,394.04	\$1,029,756

Topic:	Presentation - Salinity vs. Time
Date Submitted:	January 16, 2018
Submitted By:	Eric Larson
Venue:	Natural Resources Committee

Salinity vs. Time at DHEC Shellfish Monitoring Stations 18-01, 18-02, 18-07, 18-08, 18-16 and 18-17

**D. Alan Warren, Danielle Mickel and Mike Monday
USCB Water Quality Laboratory
December 6, 2017**

Topic: Presentation - Salinity vs. Time
Date Submitted: January 16, 2018
Submitted By: Eric Larson
Venue: Natural Resources Committee



Monitoring Station Descriptions

Station	Description
---------	-------------

18-02.....	Okatie River Behind Bailey's Oyster Dock
18-01.....	Okatie River at Camp St. Mary's Dock
18-07.....	Okatie River at Indigo Plantation
18-17.....	Okatie River at Confluence of Cherry Point Tributary
18-16.....	Okatie River at Confluence of Pickney Colony Tributary
18-08.....	Okatie River at Dock without House



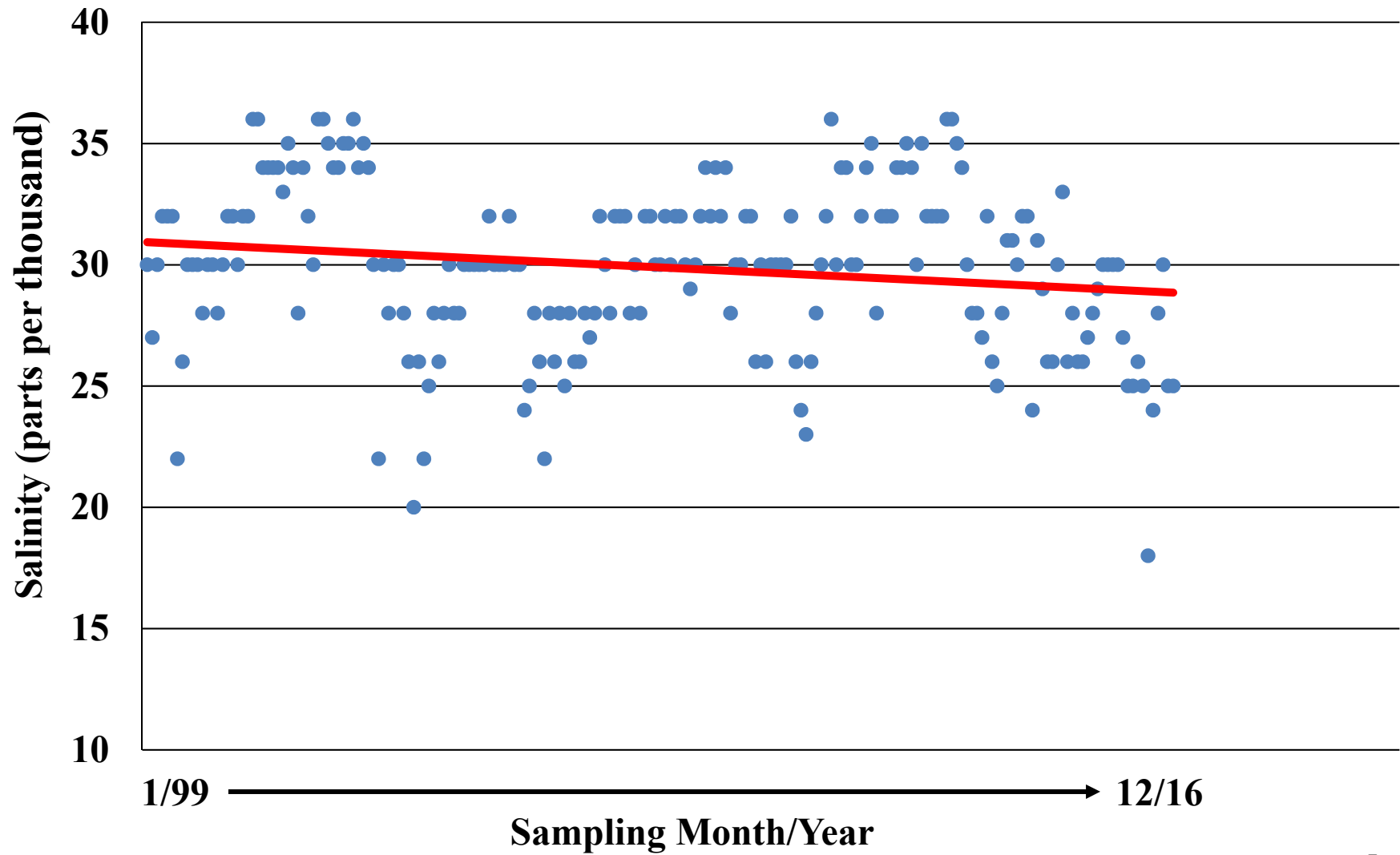
UPRIVER

Station 18-02

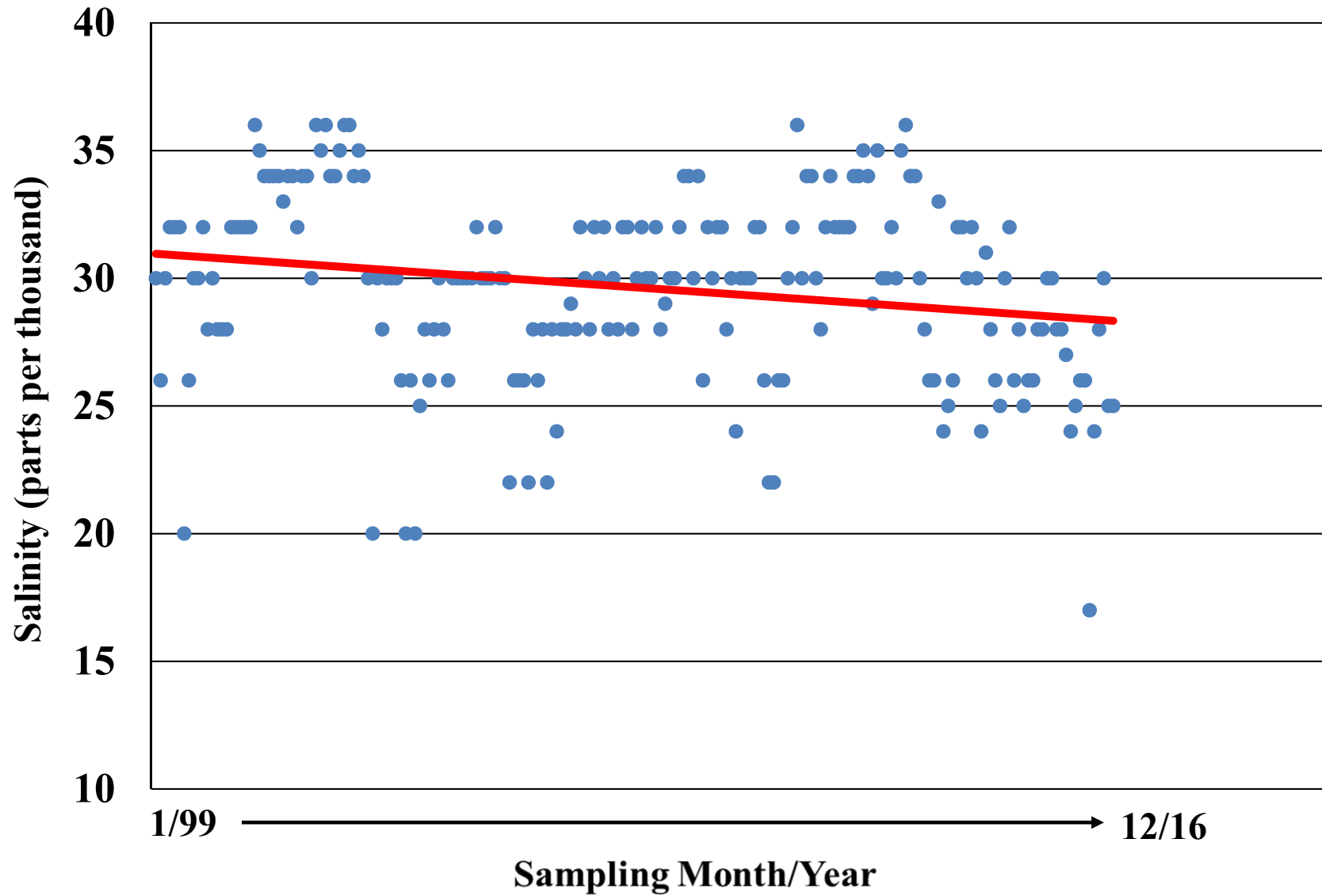


$$y = -0.0102x + 30.944; n=205$$

Station 18-01

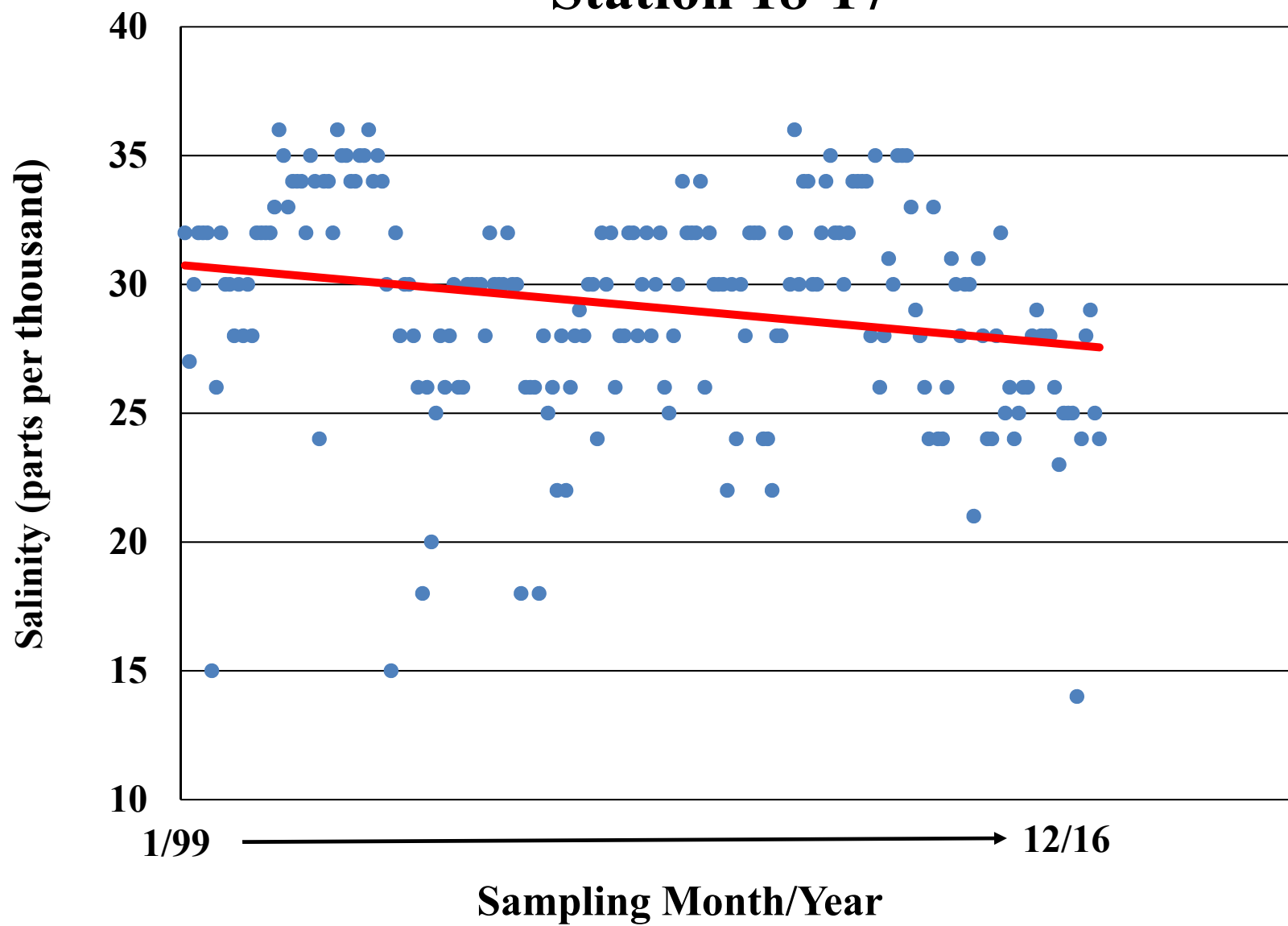


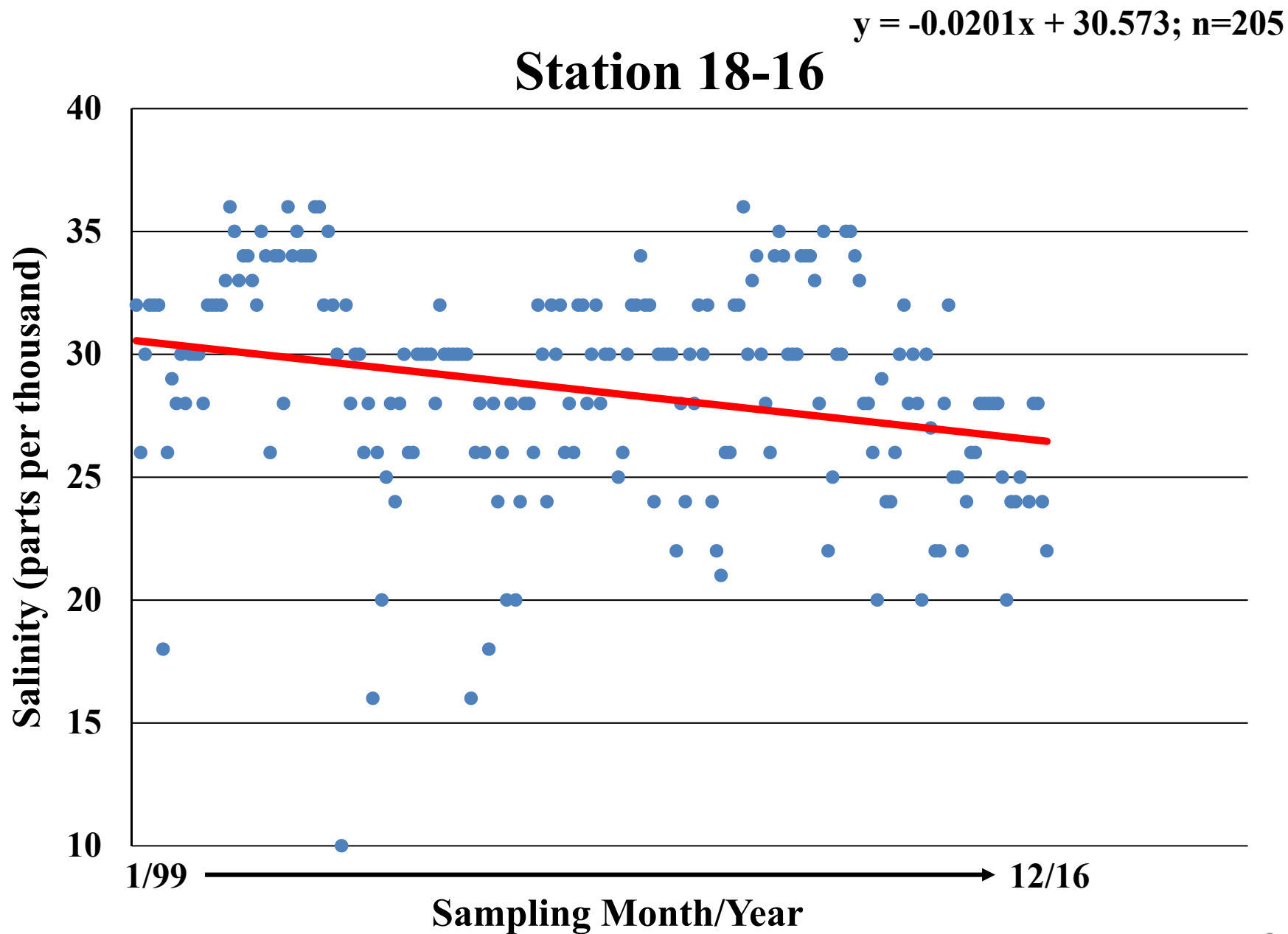
Station 18-07

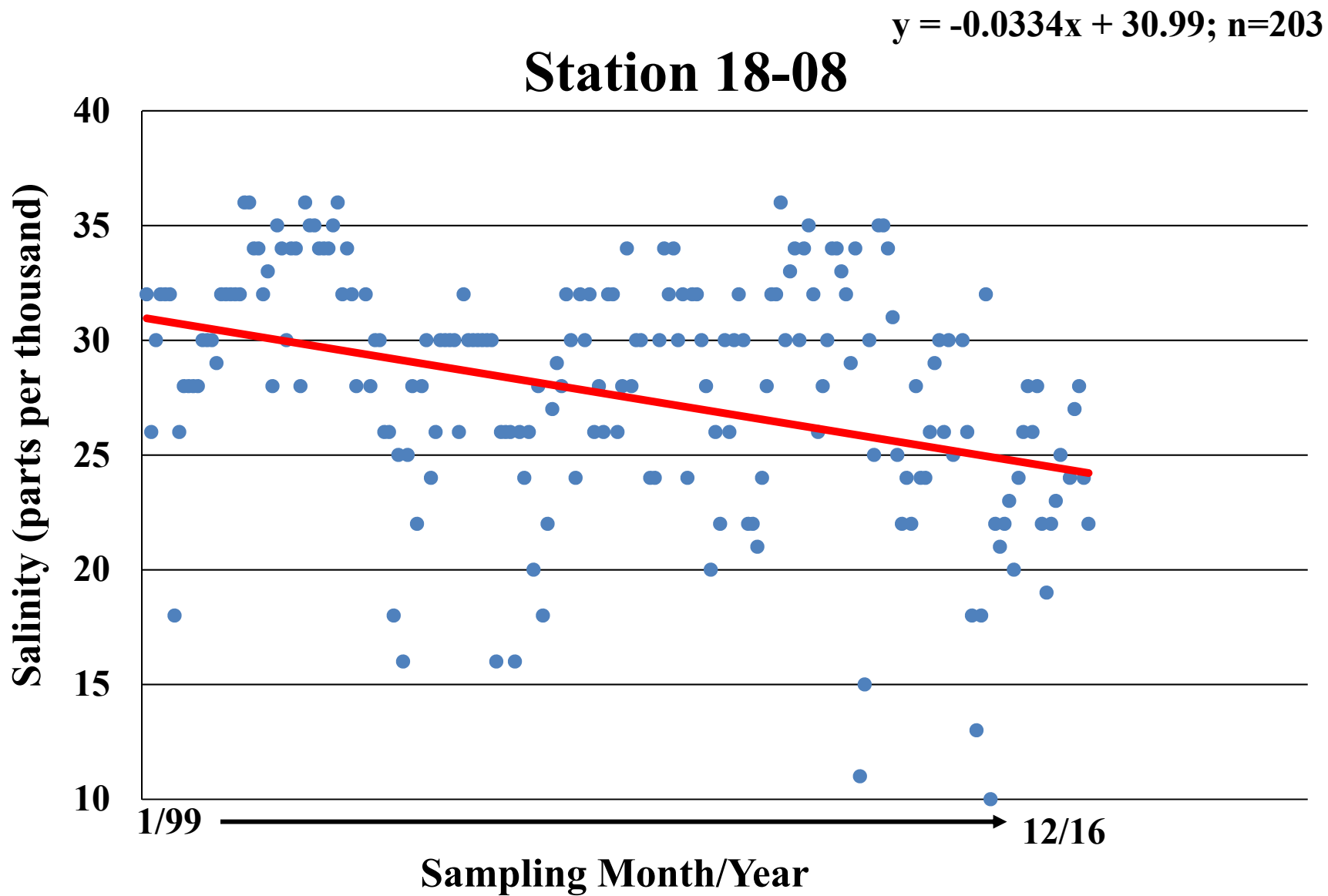


$$y = -0.0156x + 30.753; n=205$$

Station 18-17







Trendline Slopes and Summary

Station	Fecal Slope	Salinity Slope
18-02	+ 0.029	-0.0103
18-01	- 0.0102	-0.0102
18-07	+ 0.0609	-0.0129
18-17	+ 0.1624	-0.0156
18-16	+ 0.396	-0.0201
18-08	+ 1.0813	-0.0334

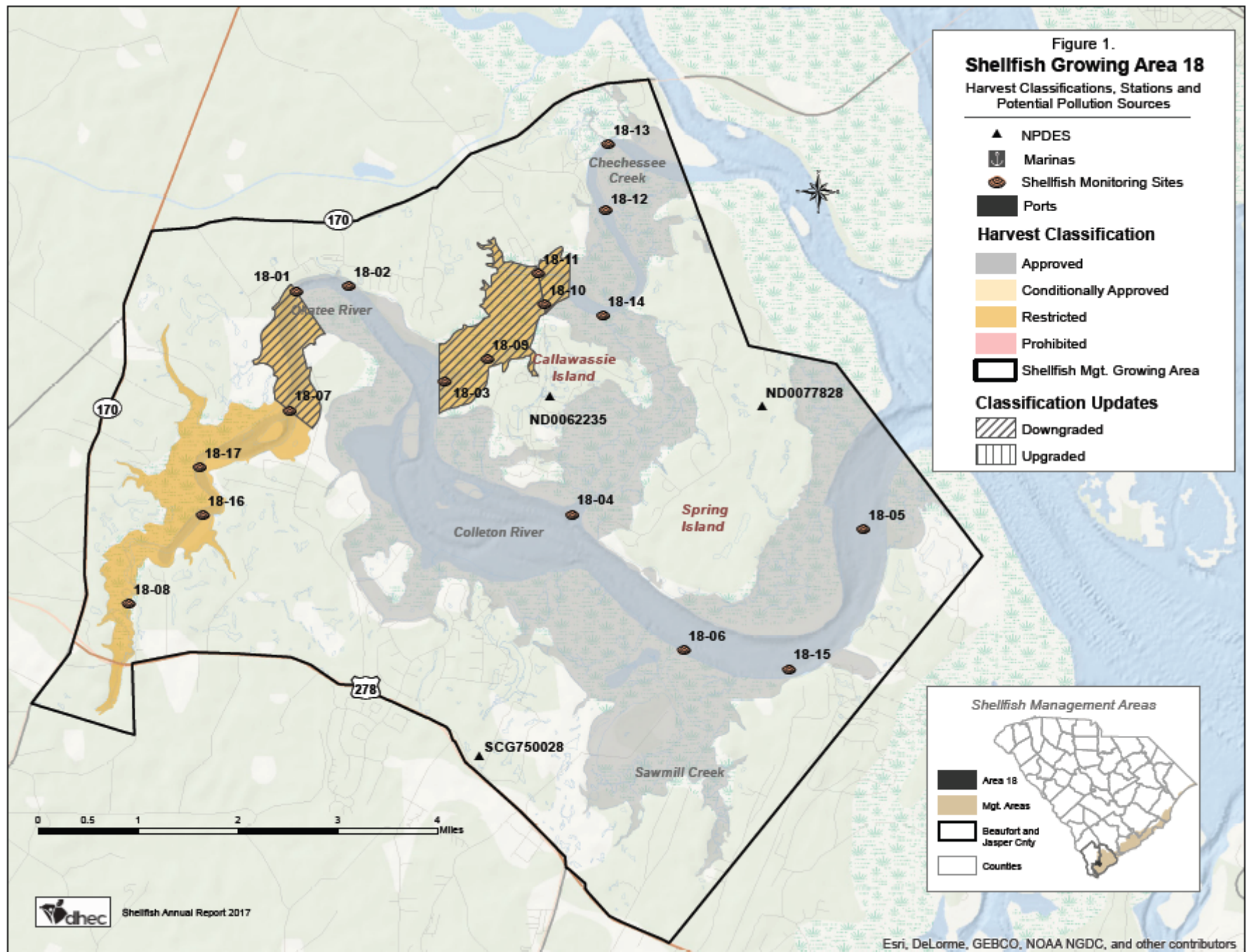
Summary: In a previous analysis, five of six monitoring stations examined saw increasing trends in fecal coliform concentration during the period 1/99 to 12/16. In general, the rate of increase in fecal coliform concentration was, at least in part, a function of where a particular monitoring station was located relative to the headwaters of the Okatie River (i.e., the rate of increase became greater as one moved further upriver). In addition, the same pattern emerged when one examined the average concentration of fecal coliform bacteria at each monitoring station over the period from 1/99 to 12/16 (i.e., average fecal coliform concentrations were 9.5, 29.9, 15.0, 26.4, 43.9 and 91.9 MPN at monitoring stations 18-02, 18-01, 18-07, 18-17, 18-16 and 18-08, respectively). We now report the results of a second analysis, this one examining salinity changes (often considered a surrogate measure of stormwater volume) at these same monitoring stations over the same time period. As might be predicted based on fecal coliform concentration trends, salinity decreased at all six monitoring stations during the period 1/99 to 12/16, with the rate of decrease being greater as one moved further upriver. These results suggest an increase in stormwater volume into the Okatie River over time, with a concomitant increase in bacterial loading.

Topic:	Presentation - Fecal Counts Over Time
Date Submitted:	January 16, 2018
Submitted By:	Eric Larson
Venue:	Natural Resources Committee

Graphical Longitudinal Analysis of DHEC Shellfish Monitoring Stations 18-01, 18-02, 18-07, 18-08, 18-16 and 18-17

**D. Alan Warren, Danielle Mickel and Mike Monday
USCB Water Quality Laboratory
December 6, 2017**

Topic: Presentation - Fecal Counts Over Time
Date Submitted: January 16, 2018
Submitted By: Eric Larson
Venue: Natural Resources Committee



Monitoring Station Descriptions

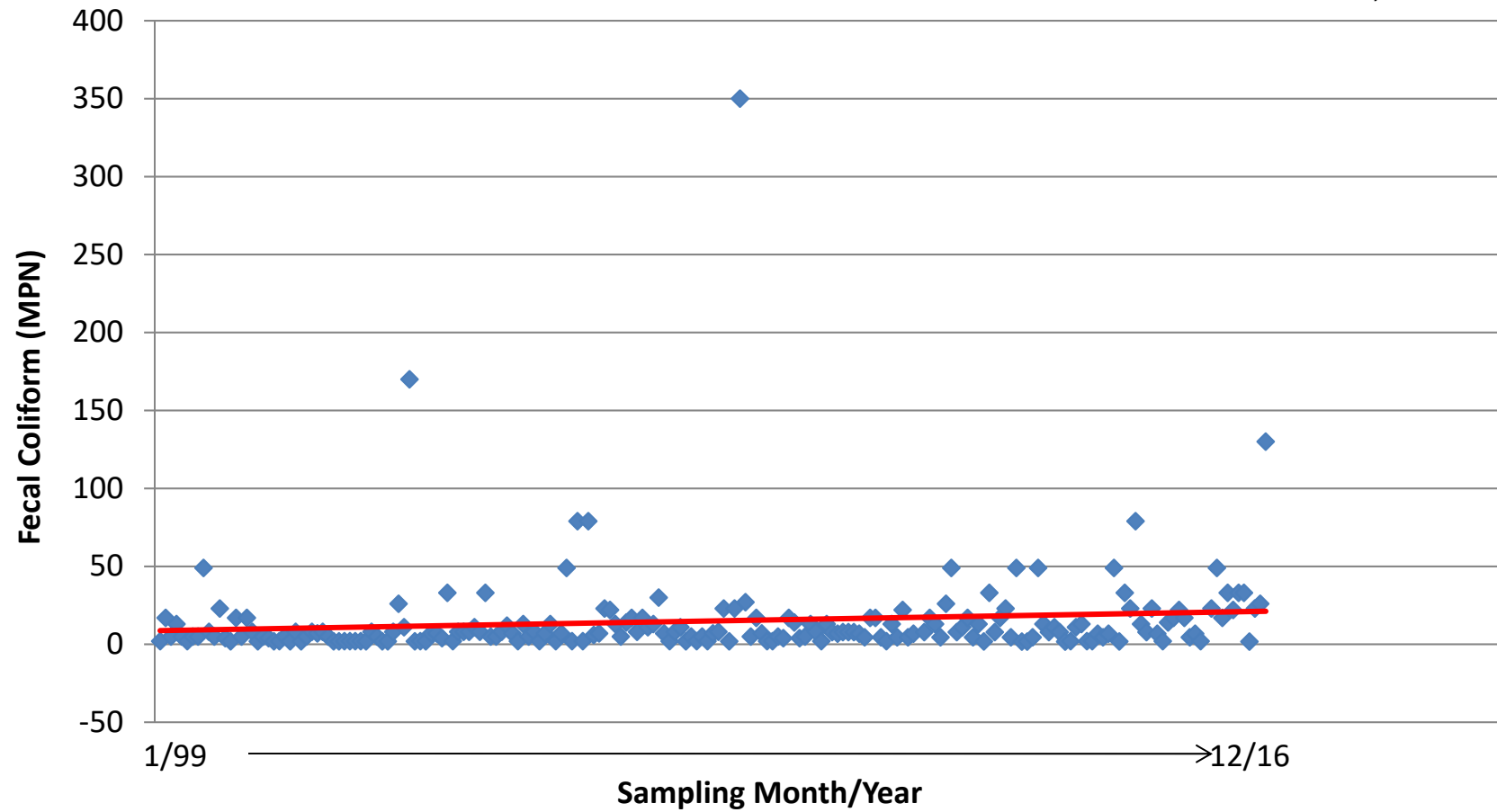
Station	Description
18-02.....	Okatie River Behind Bailey's Oyster Dock
18-01.....	Okatie River at Camp St. Mary's Dock
18-07.....	Okatie River at Indigo Plantation
18-17.....	Okatie River at Confluence of Cherry Point Tributary
18-16.....	Okatie River at Confluence of Pickney Colony Tributary
18-08.....	Okatie River at Dock without House



$$y = 0.029x + 6.5234$$
$$R^2 = 0.0139; n=204$$

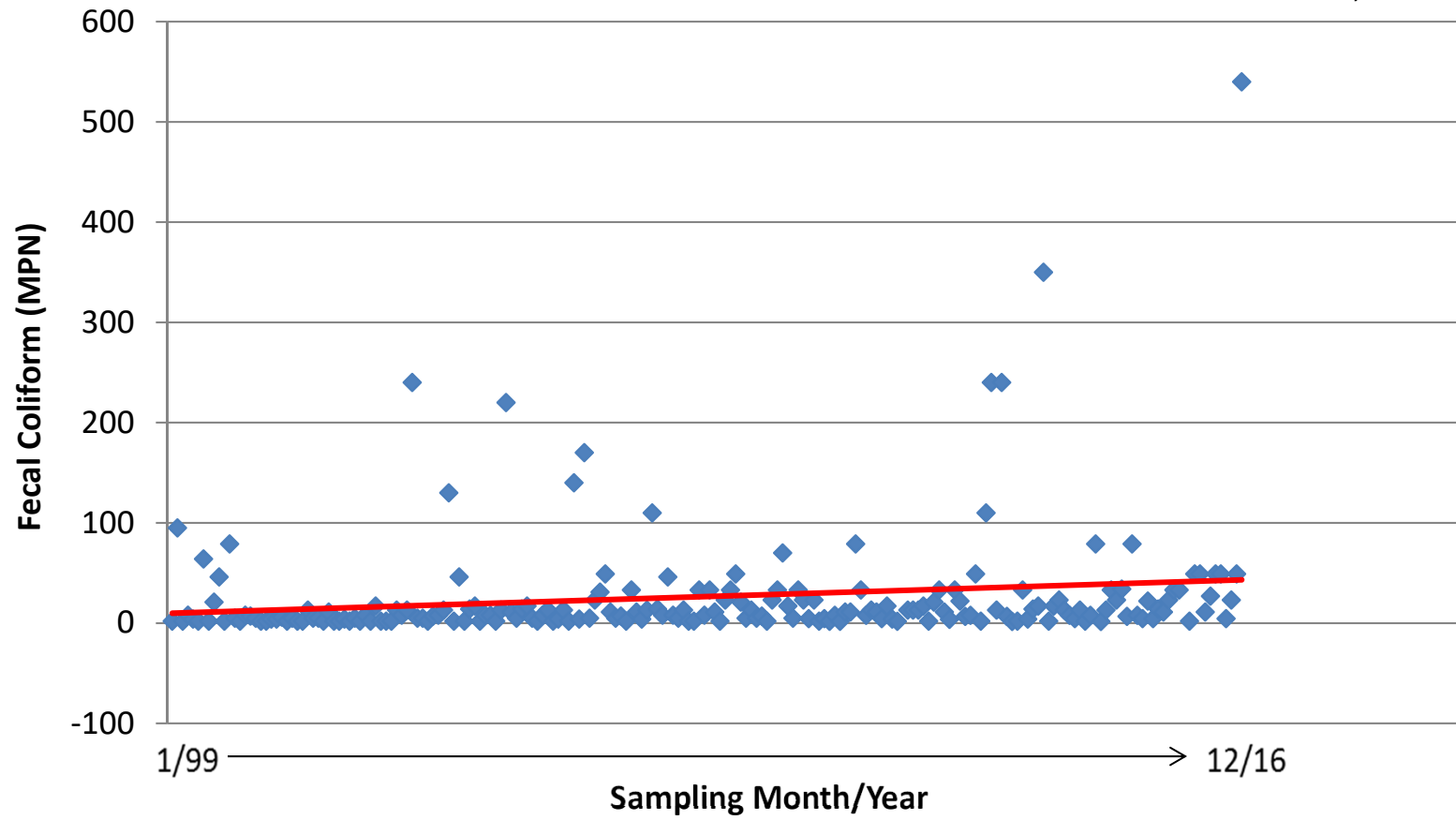

Station 18-07

$$y = 0.0609x + 8.7286$$
$$R^2 = 0.014; n=202$$



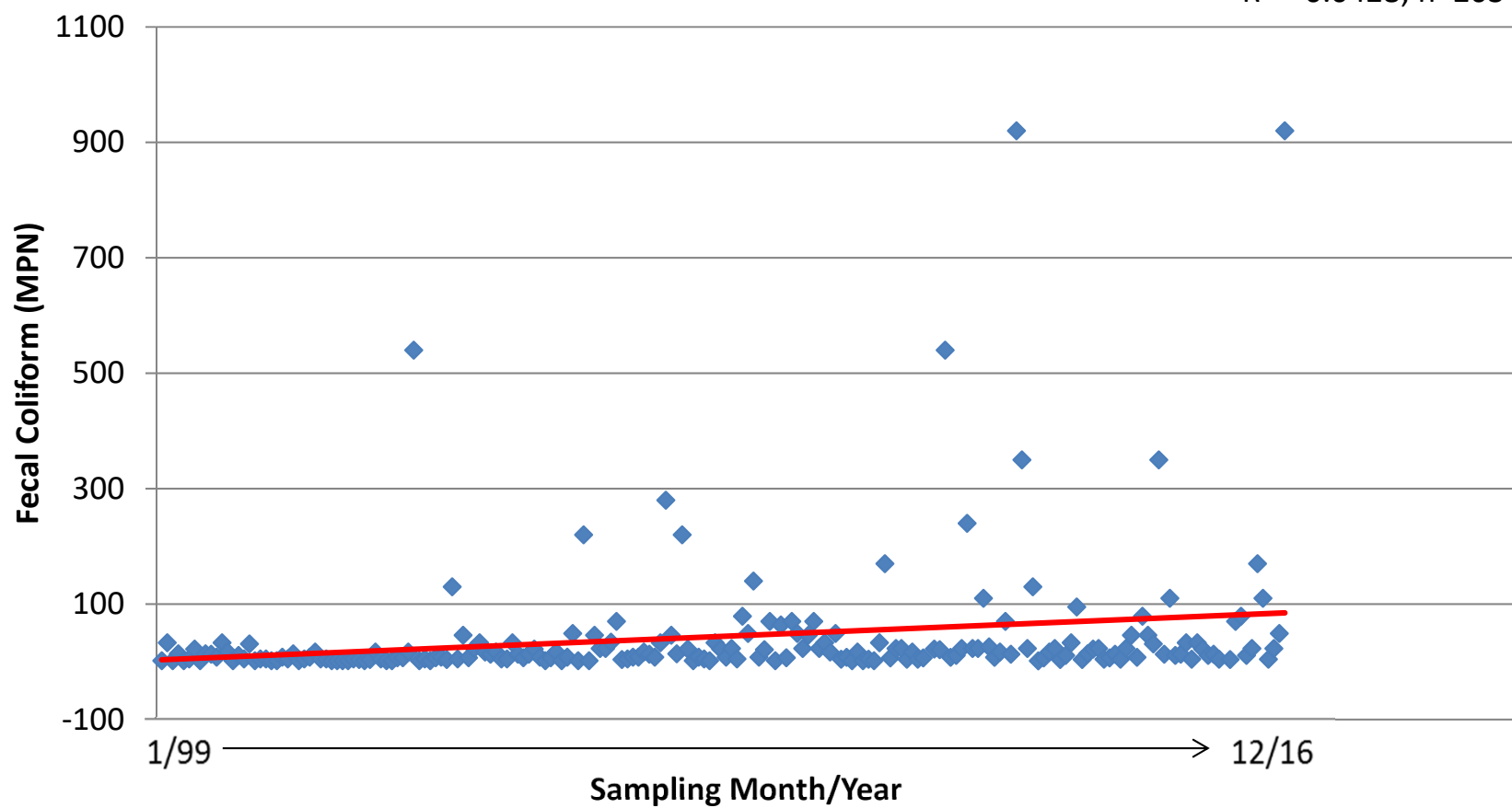
Station 18-17

$$y = 0.1624x + 9.7163$$
$$R^2 = 0.0276; n=203$$



Station 18-16

$$y = 0.396x + 3.1825$$
$$R^2 = 0.0428; n=203$$



$$y = 1.0813x - 18.279$$
$$R^2 = 0.072; n=203$$


Trendline Slopes and Summary

Station	Trendline Slope
18-02	+ 0.029
18-01	- 0.0102
18-07	+ 0.0609
18-17	+ 0.1624
18-16	+ 0.396
18-08	+ 1.0813

Summary: Based on linear trendlines of positive slope that were fitted to DHEC water quality data, five of the six monitoring stations saw increasing trends in fecal coliform concentration during the period 1/99 to 12/16. Of those stations showing trends of increasing concentration, the rate of increase was greatest at station 18-08, occurring at a rate 2.7- and 6.7- fold that of stations 18-16 and 18-17, respectively. Considerably more modest rates of increase were seen at stations 18-02 and 18-07, while a slightly decreasing concentration trend was observed at station 18-01. In general, the rate of increase in fecal coliform concentration is, at least in part, a function of where a particular monitoring station is located relative to the headwaters of the Okatie River (i.e., the rate of increase became greater as one moved further up river). In addition, the same pattern emerges when one examines the average concentration of fecal coliform bacteria at each monitoring station over the period from 1/99 to 12/16 (i.e., average fecal coliform concentrations were 9.5, 29.9, 15.0, 26.4, 43.9 and 91.9 MPN at monitoring stations 18-02, 18-01, 18-07, 18-17, 18-16 and 18-08, respectively). ¹⁰

Narrative Summary of the Analysis of DHEC Shellfish Monitoring Stations 18-01, 18-02, 18-07, 18-08, 18-16 and 18-17

Eric W. Larson
Beaufort County Stormwater Utility Manager
December 15, 2017

Narrative Summary

- The attached analysis consists of a series of graphics showing trends of fecal coliform concentrations, as reported by SC-DHEC, at six sampling stations within the Okatie River from 1999 to 2016. The sampling stations are shown on the accompanying map.
- In general, the concentration of bacteria increased as one traveled upriver toward the headwaters. The higher concentrations in the headwaters are believed to be a function of its relatively shallow depth and the fact that it doesn't "flush" well by comparison to downriver locations.
- Bacterial concentration trends over time were upward at five of the six sampling stations. In other words, bacterial concentrations generally increased over the 18-year period analyzed.
- Monitoring efforts have not included the measurement of surface runoff or overland flow within the Okatie River watershed. However, increased runoff volume and flow rate are suspected following rain events that have occurred over the period analyzed.
- The following milestones in Beaufort County's Stormwater Utility program are noteworthy:
 - 1) The Stormwater Utility was formed in 2001, and
 - 2) the Okatie River TMDL report is based on data through 2010.

What Does This Mean?

- The upward trend in fecal coliform concentration does not reflect a lack of concern by the County for the “health” of the Okatie River or development within its watershed.
- Though the watershed has seen some development, it has been relatively undeveloped over the time period analyzed, suggesting the predominant bacterial input has been from “natural” sources. Nonetheless, development without adequate BMPs has the potential to further increase runoff volume and flow rate, thereby amplifying the amount of bacteria entering the Okatie River via suspension and transport within channels.
- As the County finds the upward trend in bacterial concentration unacceptable, a more proactive approach to management of the Okatie River watershed is needed compared to years past. The Okatie East project completed in late 2014 was an initial step in the right direction. However, it must be viewed as the first of several such efforts to be implemented at strategic locations within the watershed.

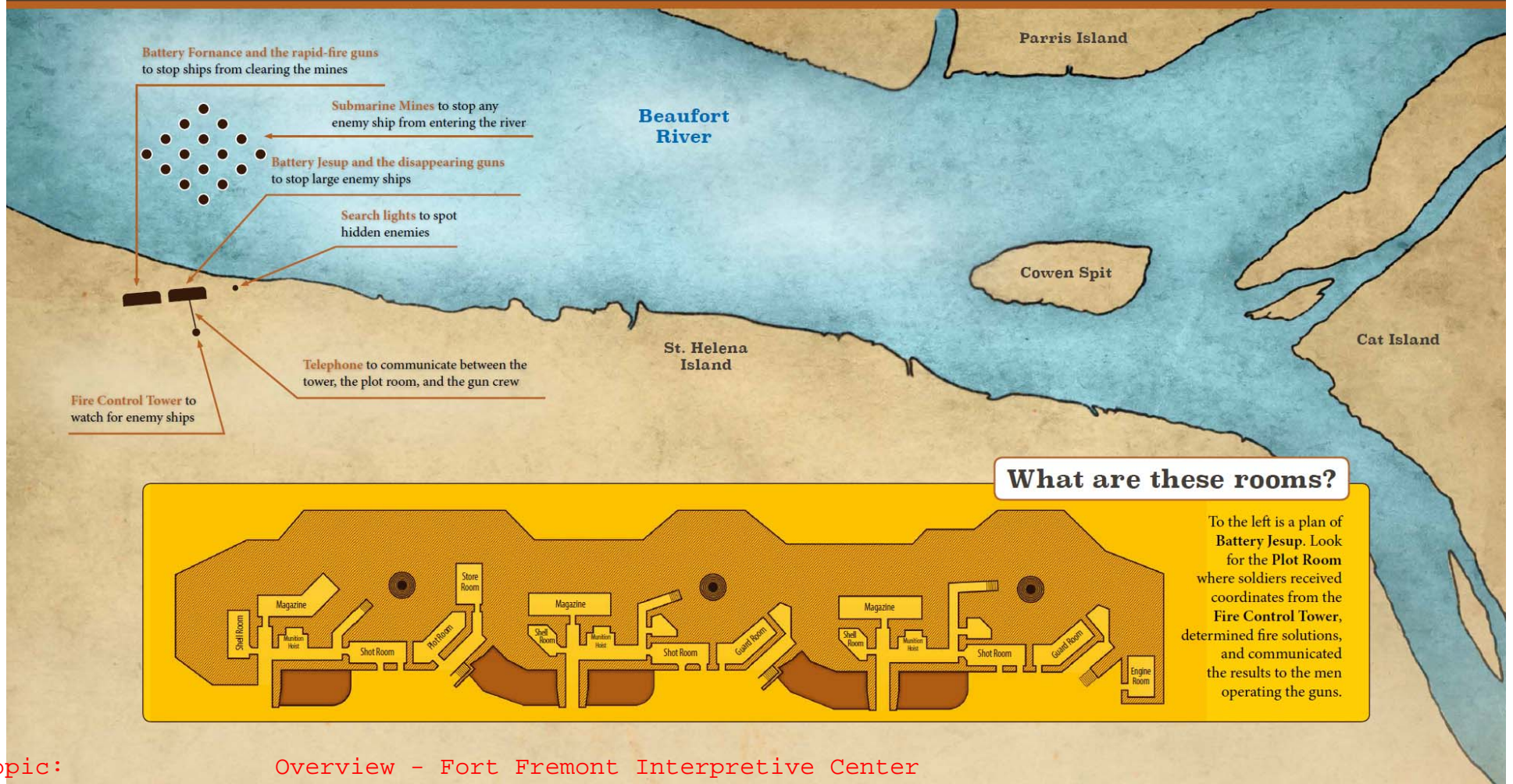
Looking Ahead

- The County's goals are to be vigilant in its regulatory oversight, pursue land preservation, and construct new BMPs throughout the Okatie River watershed in an attempt to slow/stop the upward trend in bacterial concentration and ideally, reverse it.
- Given the “naturally occurring” bacterial sources and proposed development within the watershed, it is imperative that BMPs be well-designed, well-maintained, and well-functioning when development does occur.
- Comprehensive water quality monitoring plans are needed to identify priority areas within the watershed and determine the effectiveness of BMPs.
 - Such plans will inform the County and allow for early intervention and appropriate enforcement, thereby supporting the goal of natural resource preservation.

Topic:	Overview - Fort Fremont Interpretive Center
Date Submitted:	January 16, 2018
Submitted By:	Rob Merchant
Venue:	Natural Resources Committee

Fort Fremont

Fort Fremont's cutting edge military technology was ready to defend against steam-powered, steel-clad battleships and cruisers aiming heavy, long-range guns.



Topic: Overview - Fort Fremont Interpretive Center

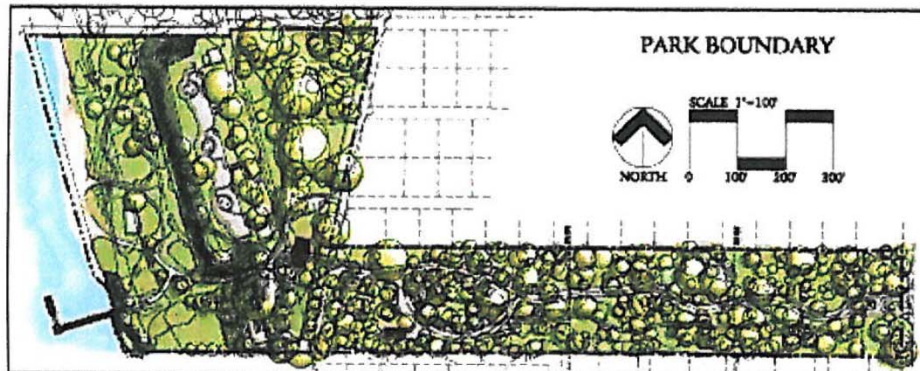
Date Submitted: January 16, 2018

Submitted By: Rob Merchant

Venue: Natural Resources Committee







FORT FREMONT

Conceptual Master Plan

PREPARED FOR:
Beaufort County
and
The Trust for Public Land

August 4, 2005

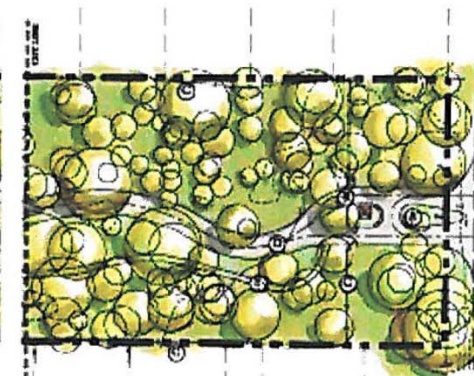


PREPARED BY:
J. K. TILLER ASSOCIATES, INC.
1111 N. ALSTON ST. SUITE 200
MEMPHIS, TN 38103-1000
901.521.1000



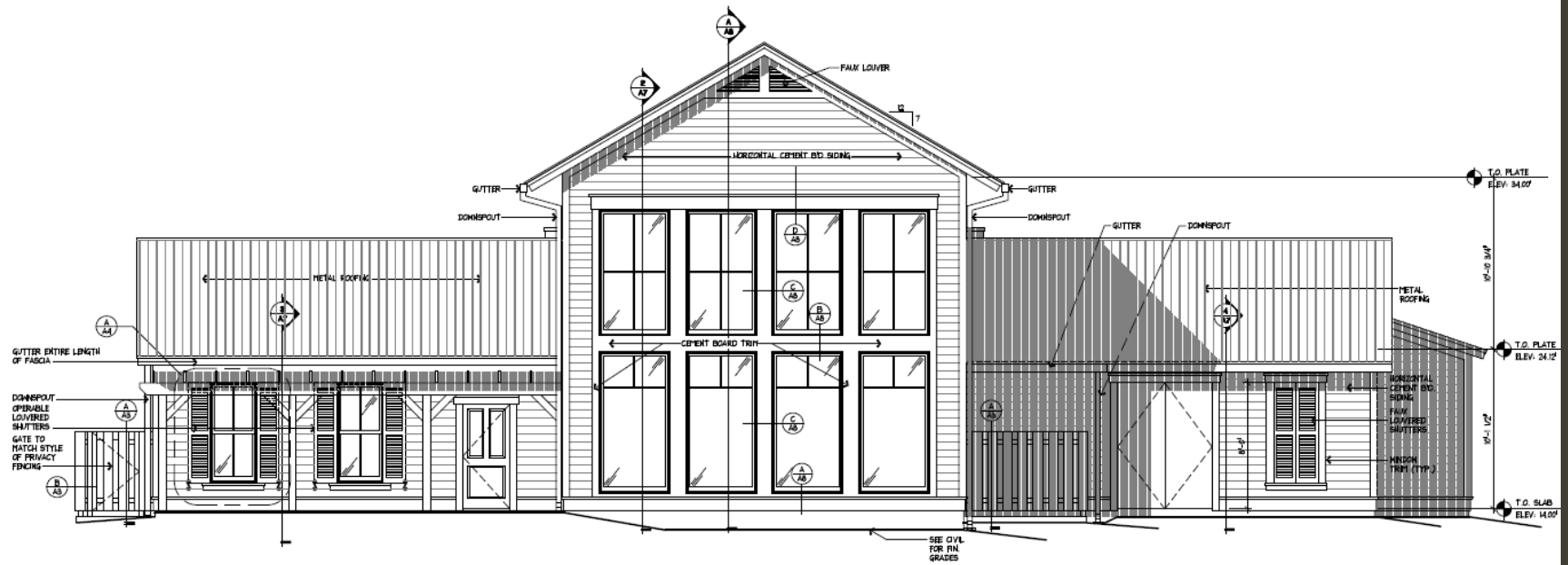
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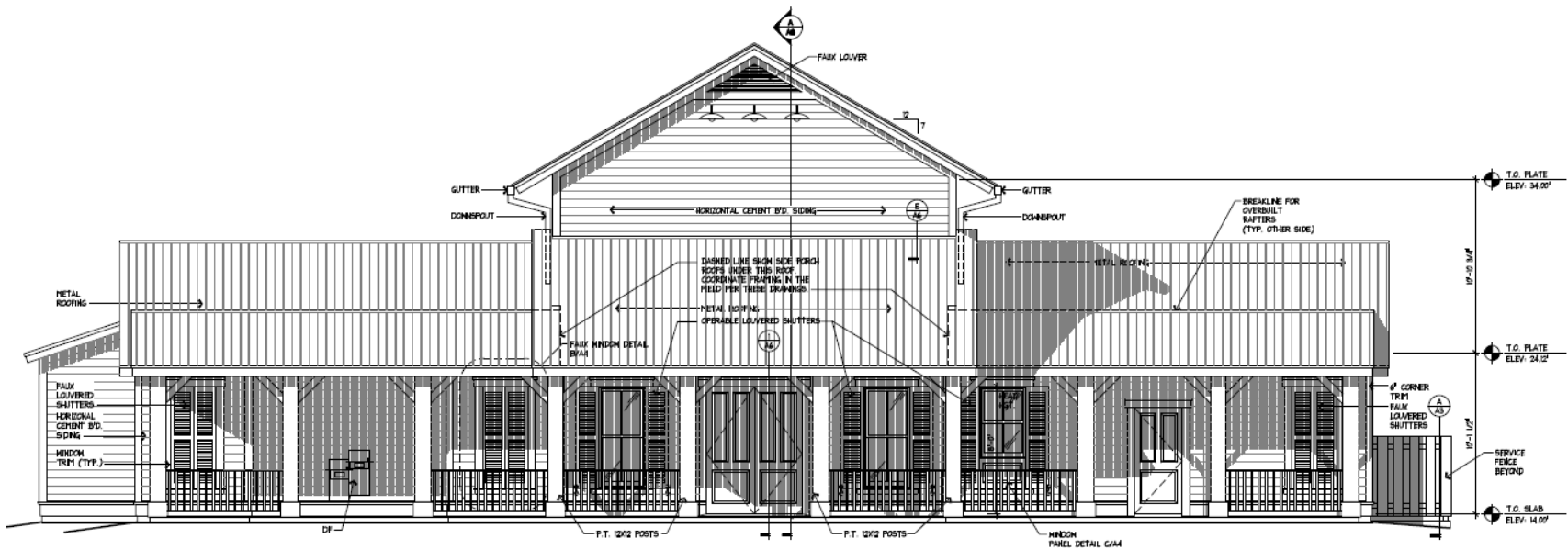


Interpretive Center and Pavilion

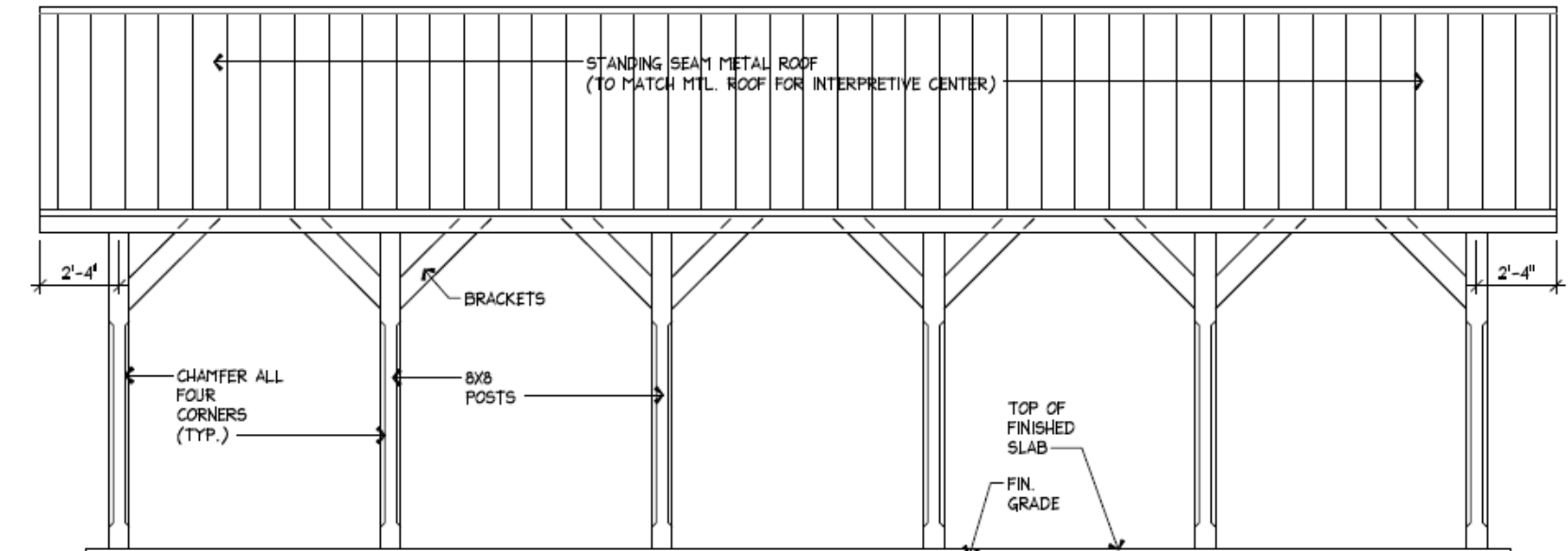
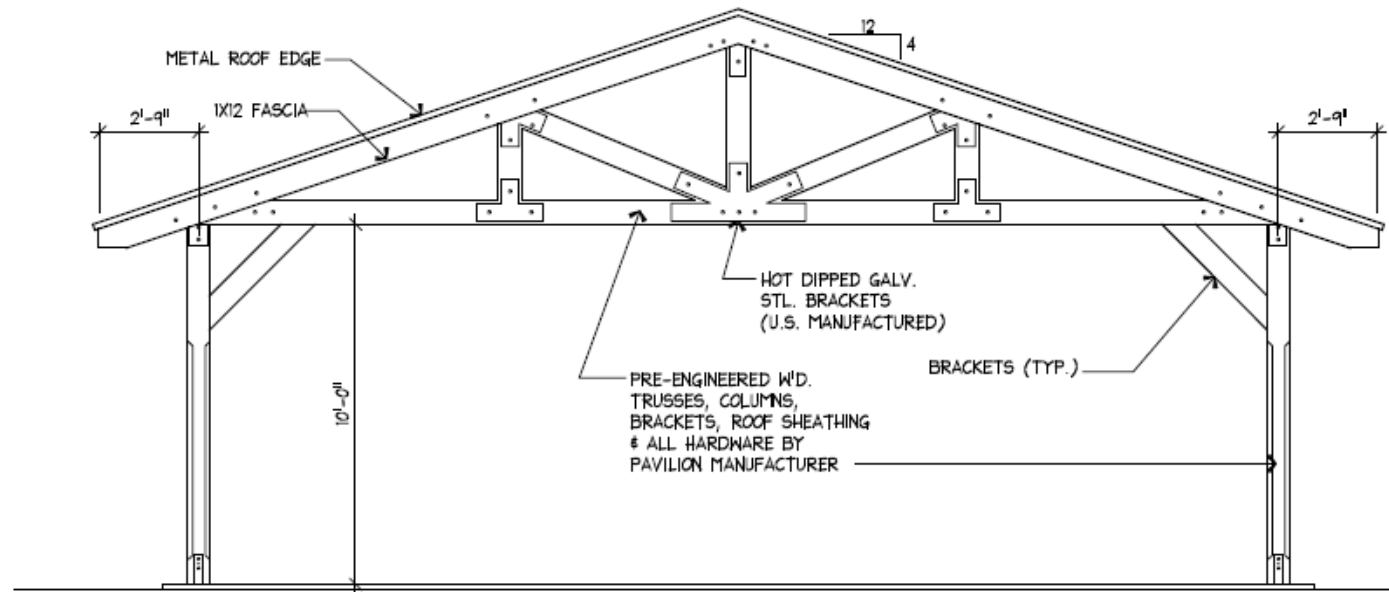
- Interpretive Center (2,564 heated s.f.)
 - Exhibit Space
 - Meeting Room
 - Restrooms (exterior access)
- Open Air Pavilion (1,344 s.f.)

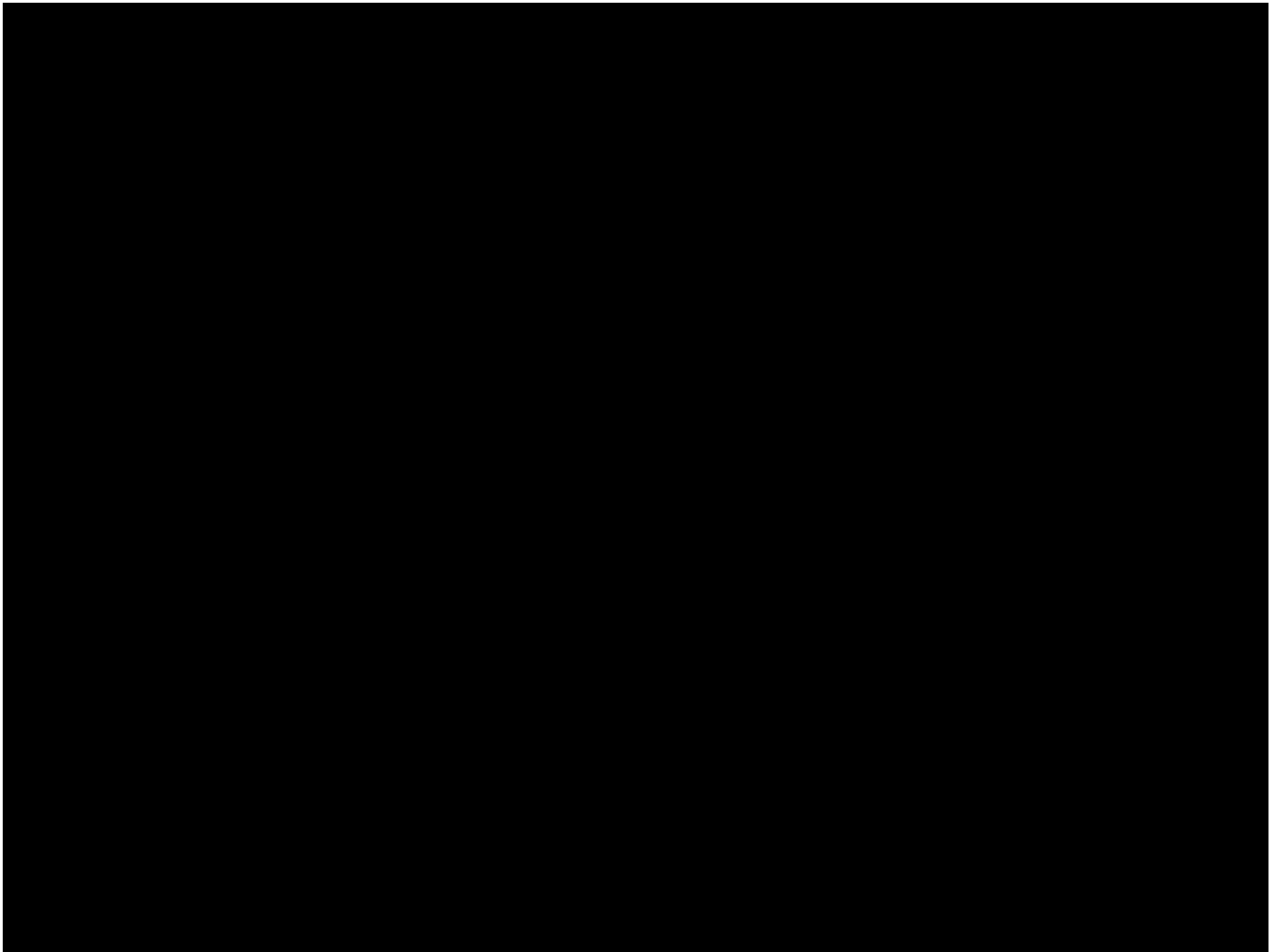


REAR ELEVATION - WEST
1/4"=1'-0"



FRONT ELEVATION - EAST
1/4"=1'-0"





Interpretive Center (IC) Operations

County Operating Revenue

- Facilities Rental
- For Profit Tour Charges
- Admission Donations

FFF Operating Support

- Volunteer Labor –
(volunteers manning the IC
5 days a week)
- Grants & Fund Raisers to
Continue to Promote and
Enhance the Visitor
Experience
- Grounds Maintenance

FFF Contributions to the Interpretive Center and Fort

- Dioramas (valued at \$70 k)
- Interpretive Signs
- Artifacts
- Docent Program
- Video
- Foliage Signage
- Website, Facebook & TripAdvisor Page Development
- Post Hurricane Clearing
- Advisory Council
- Exhibit Materials
- Organizing Scout Projects
- Wrote Grant for the IC Grand Opening
- Self Guided Tour App
- Maintenance of Grounds
- \$35 k in Grants
- 30,000 + Volunteer Hours

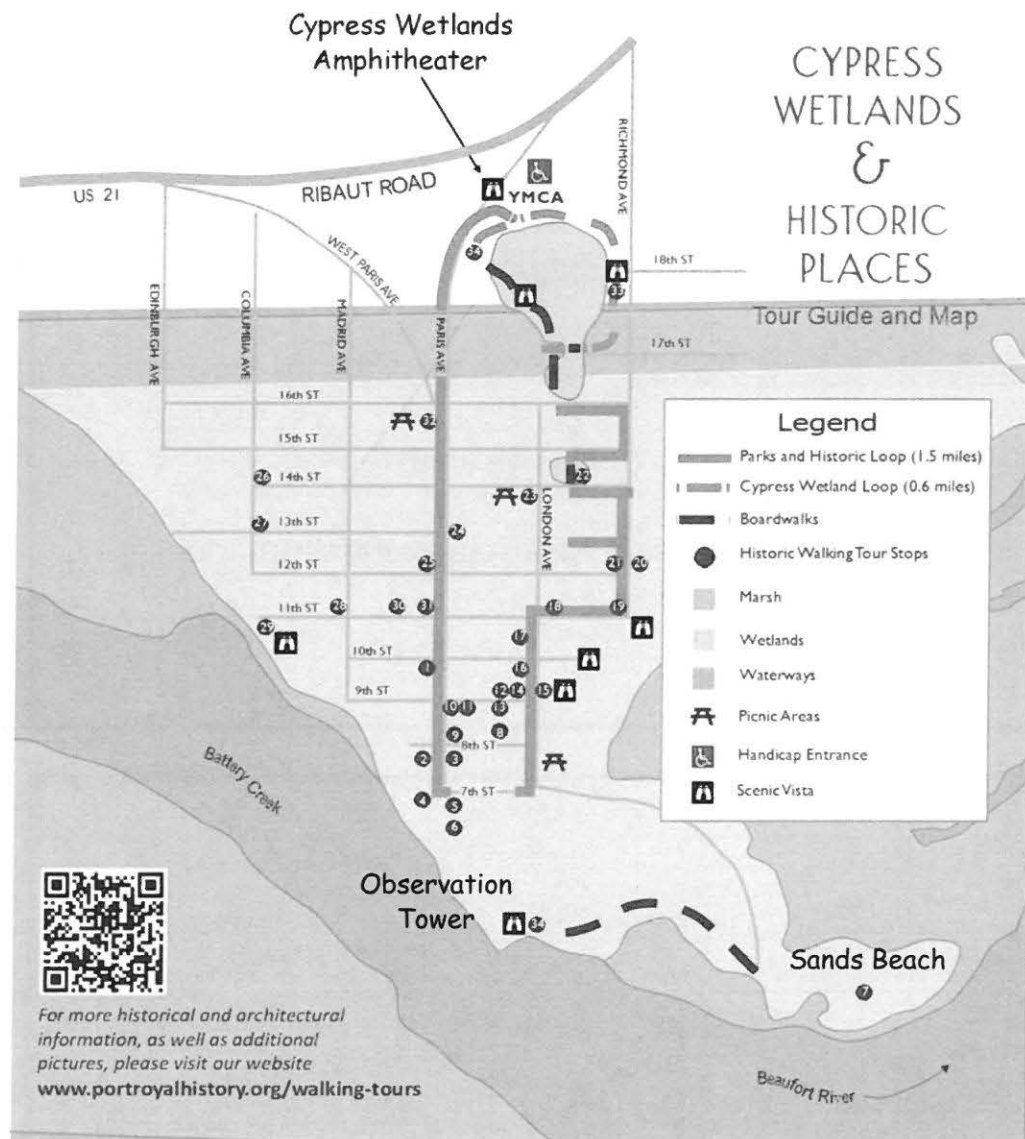
Topic:	Beaufort Soil & Water Conservation District
Date Submitted:	January 16, 2018
Submitted By:	Denise Parsick
Venue:	Natural Resources Committee

Topic: Beaufort Soil & Water Conservation District
 Date Submitted: January 16, 2018
 Submitted By: Denise Parslow
 Venue: Natural Resources Committee



<http://www.portroyal.org/>

Enjoy visiting the Cypress Wetlands, the Sands Beach, and other locations in historic Port Royal.



Created by Beaufort Soil & Water Conservation District.
 Provided by a Youth Grant from Lowcountry RC & D.

Thank You for your expertise and assistance:

Chris Marsh,
 Lowcountry Institute

Al Segars, SCDNR

Fripp Island Audubon Club

Laura Lee Rose,
 Clemson Extension

Jane Abrams, Bird Photography



Cypress Wetlands

Activity Book

Exploring Wildlife Habitats of the Port Royal Cypress Wetlands



Mailing: PO Box 70, Port Royal, SC 29935
 Located at 817 Paris Avenue (843) 522-8100
www.beaufortconservationdistrict.org



Beaufort Soil & Water Conservation District works closely with
 USDA (US Department of Agriculture) Natural Resources
 Conservation Service (NRCS) and
 SC Department of Natural Resources (SCDNR).
Natural Resources Conservation Service



Learn how to be a Habitat Hero!
 by Beaufort Soil & Water Conservation District

*This activity booklet was made possible by a
 Youth Environmental Education grant from the
 Lowcountry Resource Conservation & Development (RC & D)*

Amphibian—a cold-blooded animal that breathes through gills when young and later lives on land like frogs and salamanders

Brackish – water that is part salty and fresh

Ecosystem – all of the plants, animals, land, and climate of an area and how they interact
Wetlands are a kind of ecosystem.

Erosion— when soil washes or blows away. Oyster beds hold soils in place and prevent shoreline erosion.

Estuary – area where saltwater mixes with fresh water in a river

Habitat – a home that an animal lives in, like a rookery

Insect – a six legged bug that includes butterflies, mosquitoes, roaches, ant, etc.

Migration – birds and other animals that travel from one area to another with the seasons of the year
Some birds and butterflies travel several thousand miles.

Nocturnal—word that describes animals that are active at night like owls and raccoons

Nonpoint source pollution - oil, litter, lawn chemicals, pet waste and other pollutants that are washed off of streets, lawns, and surrounding land that washes into surrounding water ways by rain

Point source pollution— pollution that is known to come from a factory or industry that can be “pointed to”

Pollutants - oil, litter, lawn chemicals, pet waste, factory discharges, and other chemicals

Prey - an animal that is a meal for another animal
Animals usually prey on animals smaller than themselves.

Raptor – bird of prey that has talons or claws to catch and tear up small animals

Reptile – type of cold-blooded animal that includes snakes, turtles, lizards, and alligators

Rookery – home where birds live, nest, and raise their young

Stormwater – rain that washes off into waterways

Species— a type of an animal, such as a Great Horned Owl is a certain species or type of owl

Swamp – a fresh water wetland

Tannins – decomposing leaves put tannins into a swamp making the water black

Wetlands – ecosystems that soak up stormwater runoff, filter pollutants, and provide habitats for many species of animals

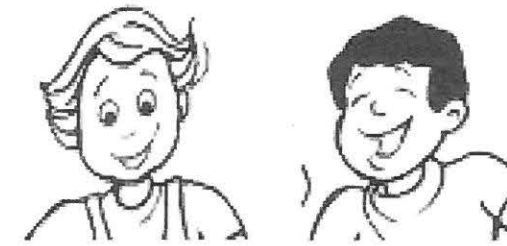
Our Wonderful Wetlands

Provide:

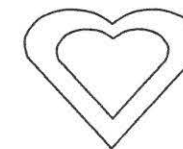
animal & plant
habitats

a great place for people to
hike, bird watch, fish,
crab, or just relax

a place for birds
to nest called a
rookery



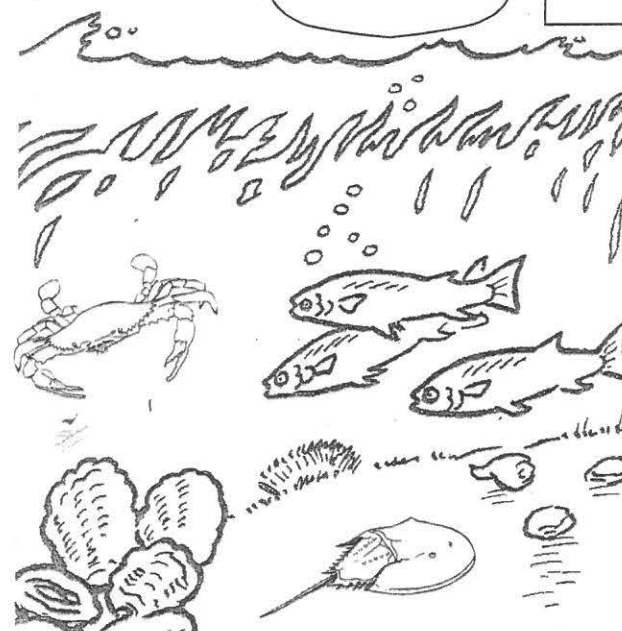
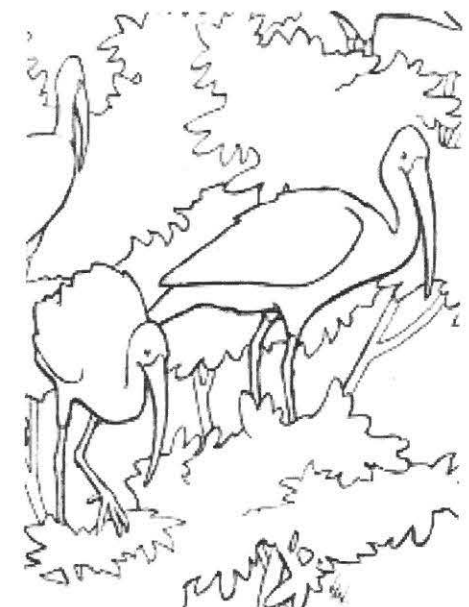
Habitat Heroes



Wetlands!

a nursery for
saltwater fish, shrimp
and other
marine animals

a place for our
stormwater to go
Wetlands soak it up!



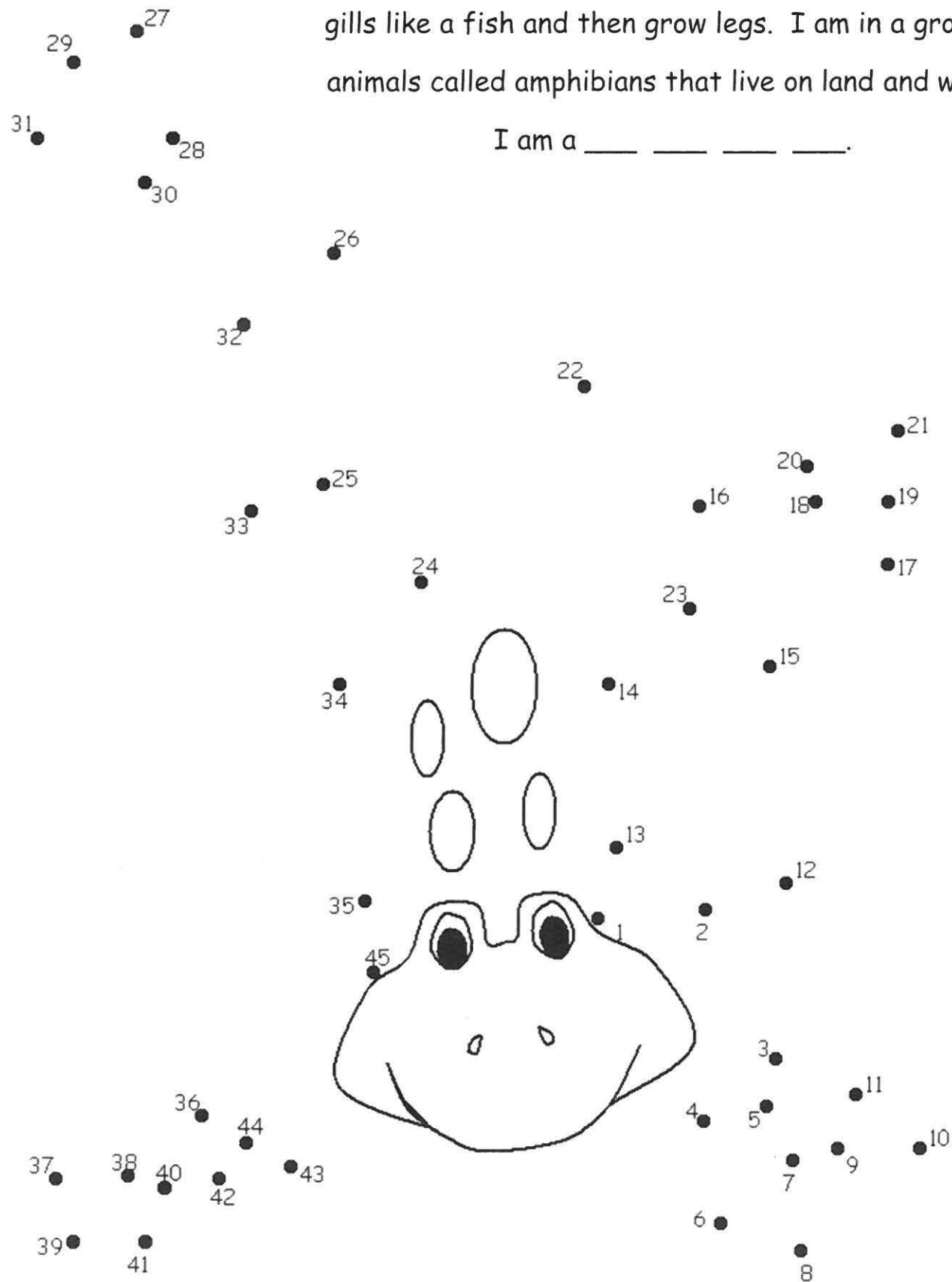
Both estuaries
and fresh water
swamps help
filter non-point
source pollution
that rainwater
washes from our
homes and roads.



Who am I?

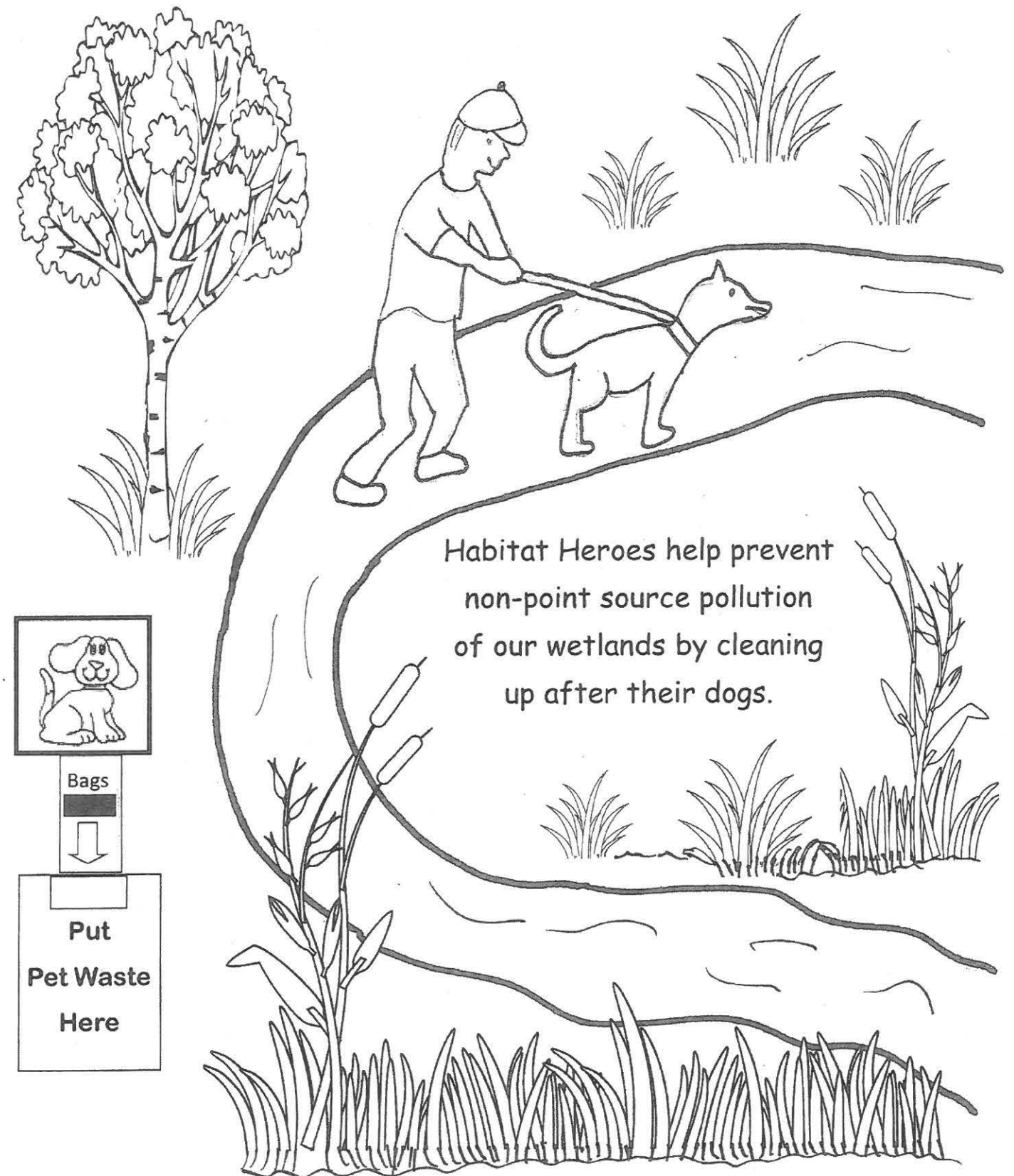
I begin life as an egg and I grow into a tadpole. I grow gills like a fish and then grow legs. I am in a group of animals called amphibians that live on land and water.

I am a ____ _ _ _ _ .



Habitat Heroes keep their dogs on a leash.

They don't let them bark and scare away the birds and animals.

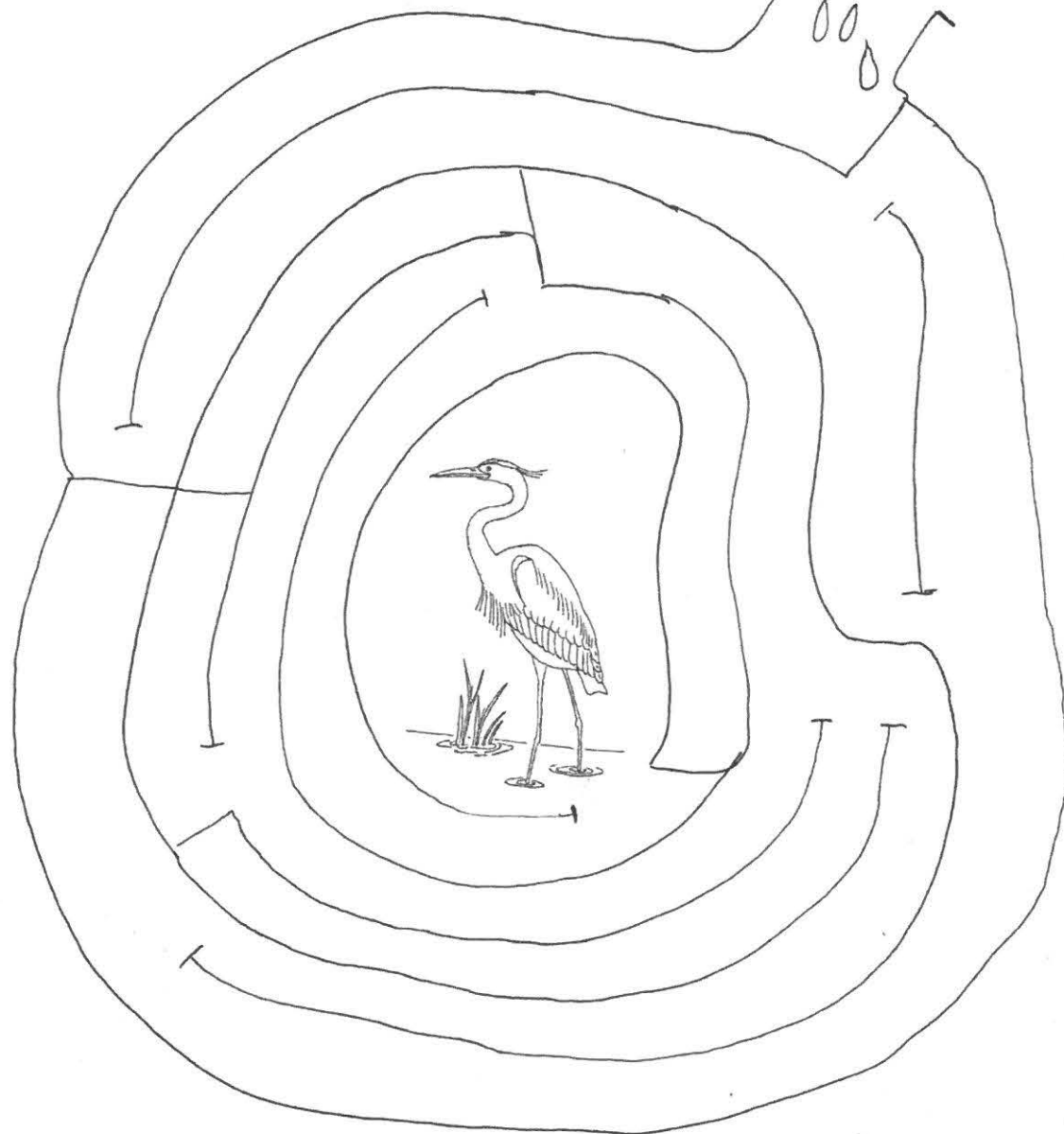


Help the rain drops find their way to the Cypress Wetlands.

Rain washes pollutants from our houses, yards,
driveways, and roads.

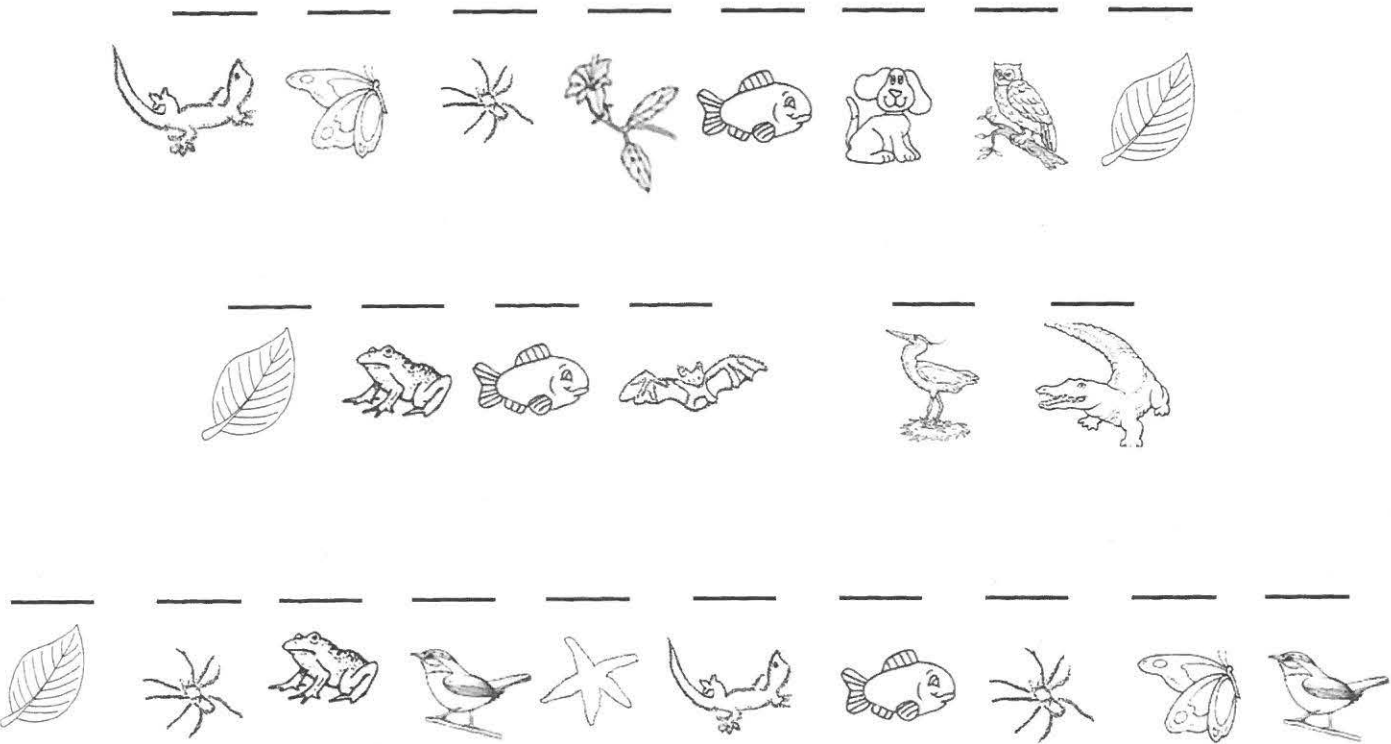
Wetlands slow the stormwater so nonpoint
source pollutants do not go directly
into our waterways.









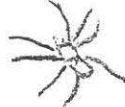



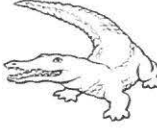

Follow the maze to the wetlands.



In wetland swamps bald cypress tree roots stick out of the water and are
called "knees". See the picture of the leaves and cones in the box above.

Secret Ecosystem Code

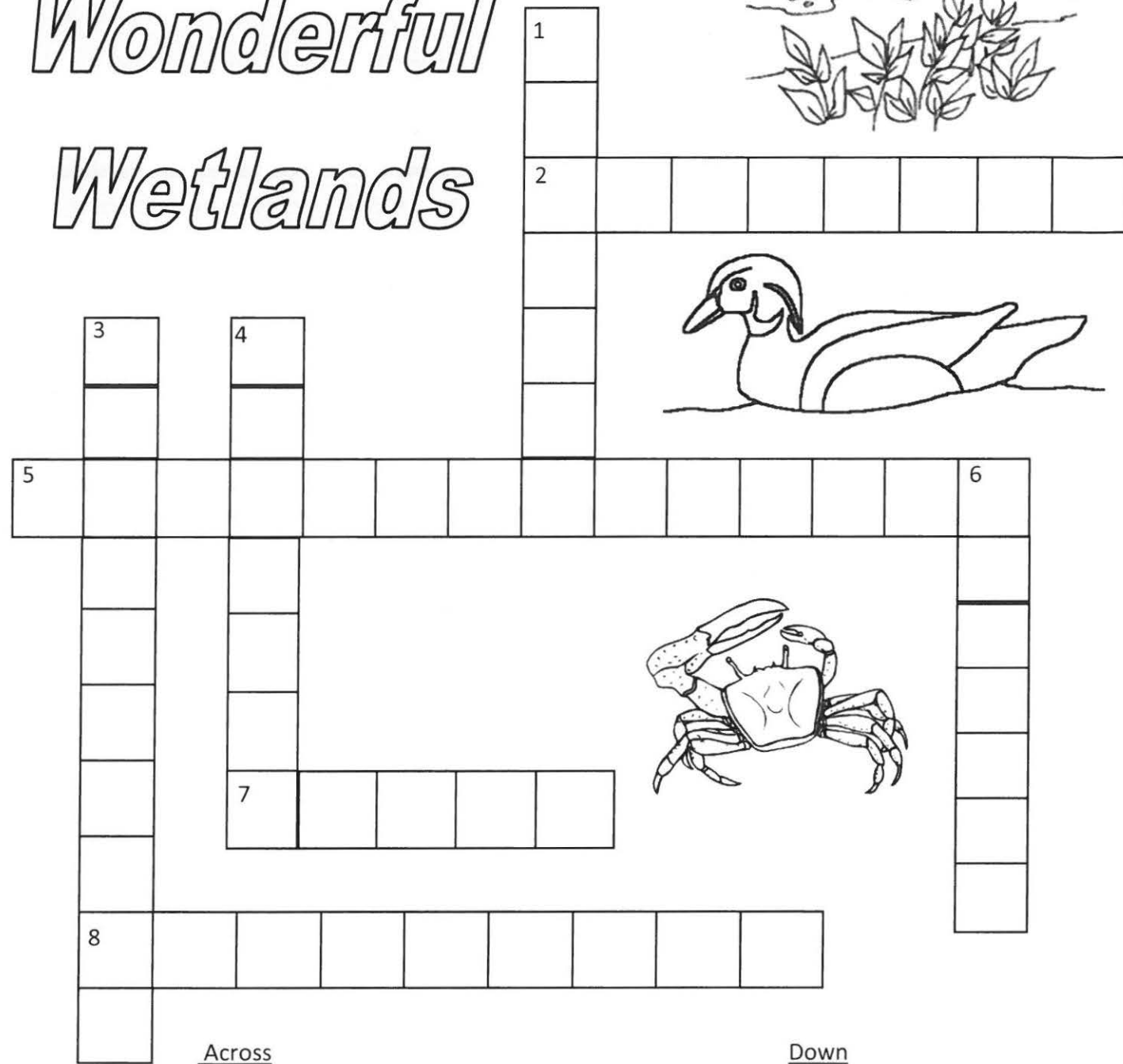
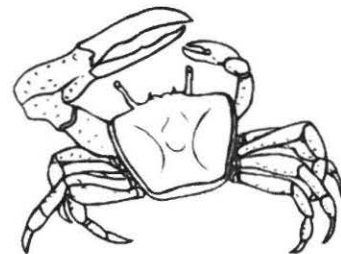


- | | | |
|--|--|--|
| A—  | L—  | R—  |
| D—  | M—  | S—  |
| E—  | N—  | T—  |
| K—  | O—  | U—  |
| | P—  | W—  |



Wetlands are home to many different kinds of animals.
Cypress Wetlands are a bird habitat or rookery.
A rookery is a great place for birds to nest, find food, and raise their young.
Find the flying Great Egret, the swimming Wood Duck, the Spanish moss
hanging from the bald cypress tree, the green tree frog hiding on a branch,
and the black rat snake by the tree.

Wonderful Wetlands



Across

Down

2. Water that is part fresh and part salty

5. Pollution that comes from oils, lawn chemicals, pet droppings, and other waste

7. Freshwater wetland with large trees growing in the dark water

8. An entire community of plants and animals and how they interact and survive with each other, the land, and climate

1. Any home where an animal lives

3. Rain that washes off our streets and land into nearby creeks, ponds, and rivers

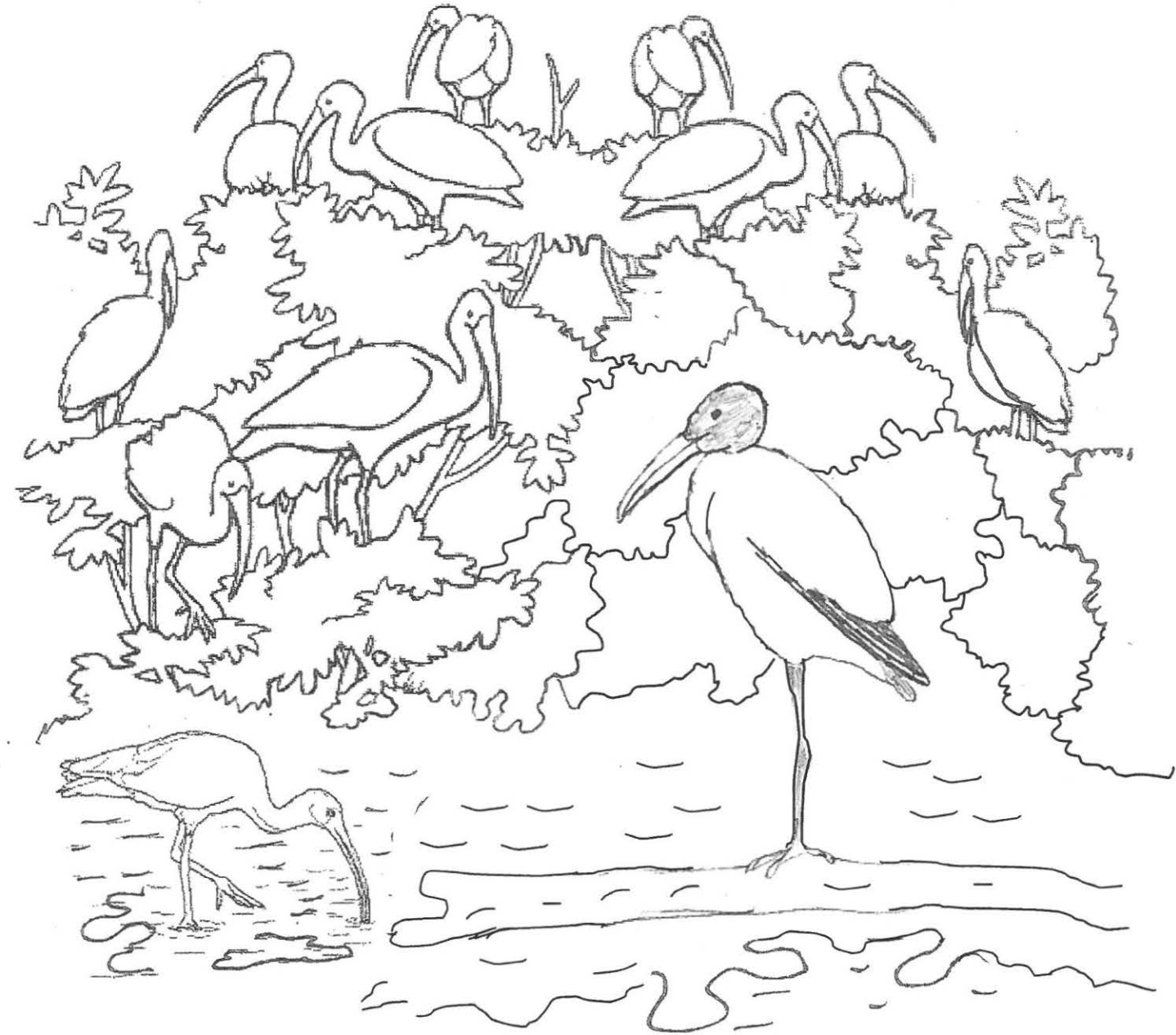
4. Type of tree with knees that is found in a swamp.

6. A tidal wetland that is known for being a nursery to raise many of our coastal species such as shrimp and fish

Word Bank

brackish * cypress * ecosystem * estuary * habitat * nonpoint source * stormwater * swamp

The White Ibis is one of many kinds of white wading birds that you will see nesting at the Cypress Wetlands and around estuaries and ponds in Beaufort County. They have long, curved orange bills with orange legs and feet.



The Wood Stork is another white wading bird, but larger than the Ibis. It has a bald head that looks black, with black legs, orange feet and a thick dark beak. Both the Ibis & Wood Stork have black on their wings.

The Sands of Port Royal

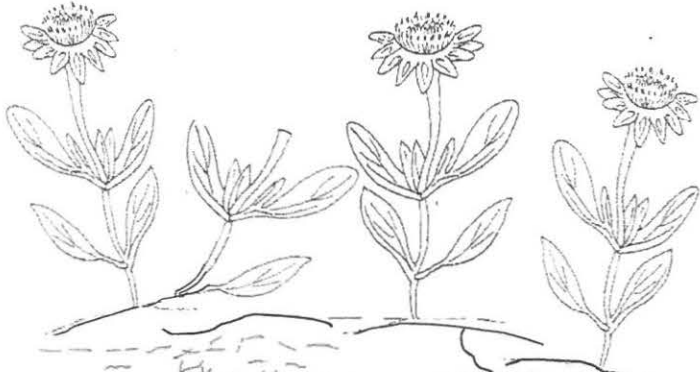
The muddy, grassy area that is not beach is a marsh or estuary where salty water meets fresh water.

The water is called brackish or part salt and part fresh water.

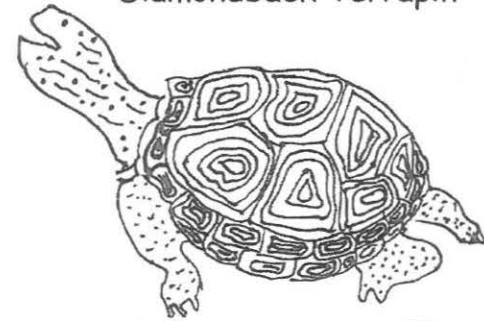
The estuary ecosystem provides habitat for many animals.

The diamondback turtle is the only turtle living in the estuary habitat. Periwinkles live on the Spartina or cordgrass by moving up and down, eating food that collects on the stems and leaves.

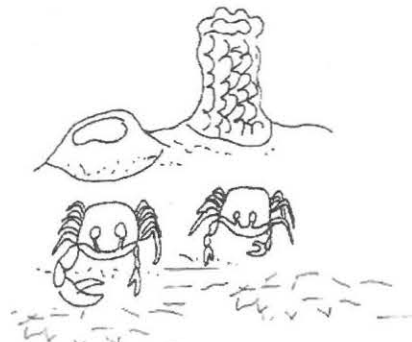
Sea Oxeye Daisy



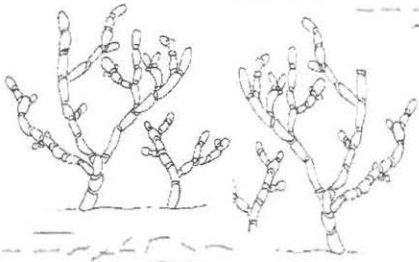
Diamondback Terrapin



Many Fiddler Crabs live at the Sands. The Fiddler Crab with the large claw is a male.



Glasswort or Pickle Weed



Hermit Crab



Spartina grass with periwinkles



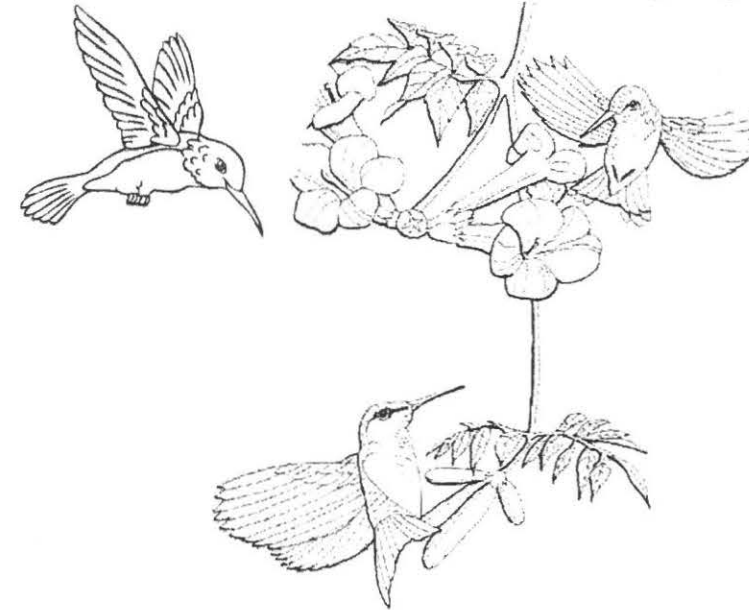
Estuaries are where many young fish, shrimp, and other saltwater animals are born and grow up. They live in the estuaries until they are big enough to move out to larger rivers and to the ocean.

Many people call estuaries nurseries.

Song Birds

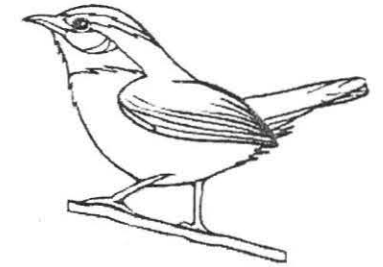
Many song birds can be seen at the Cypress Wetlands.

Hummingbirds like to sip nectar from the orange trumpet creeper or cross vine shown below. They are very small and the size of a big bug.



Red winged black birds can be seen perching on twigs and snags. A snag is a dead tree. You can see a patch of red on their wings when they fly.

Go to: <http://www.allaboutbirds.org/guide/search.aspx> to learn more about these birds.



The Carolina Wren, above, is the South Carolina state bird.



The Yellow Bellied Sap Sucker leaves rows of holes in trees while drilling for sap.