



**ENGINEERING  
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June 14, 2019

Mr. Borja Crane-Amores  
Florida Department of Environmental Protection  
Mail Station 2500  
2600 Blair Stone Road  
Tallahassee, Florida 32399-24002

**Subject: FDOT District One – Sarasota County Phase I NPDES MS4 Annual Report  
Cycle 4 – Year 5  
Permit Number FLS000004-004  
E Sciences Project No. 1-1999-029**

Dear Mr. Crane-Amores:

On behalf of the Florida Department of Transportation (FDOT) District One, attached is the annual report form for the Sarasota County Phase I NPDES Municipal Separate Storm Sewer System (MS4) Permit, Permit Number FLS000004. The form is for annual report Cycle 4 – Year 5, a reporting time period of January 1, 2018 through December 31, 2018.

If you need any other information, please do not hesitate to contact us.

Sincerely,  
**E SCIENCES, INCORPORATED**

A handwritten signature in blue ink that reads 'Leilani Farrell'.

Leilani Farrell  
Project Scientist

A handwritten signature in blue ink that appears to read 'Robert Potts'.

Robert Potts  
Project Manager

Attachment

cc: Borja Crane-Amores  
Steven Kelly, FDOT  
File

# Sarasota County NPDES Phase I MS4 Annual Report

Cycle 4 – Year 5

Permit No. FLS000004-004

June 2019



Prepared for:

Florida Department of Transportation - District One  
801 North Broadway Avenue  
Bartow, Florida 33831

**INSTRUCTIONS – DEP FORM 62-624.600(2)**  
**ANNUAL REPORT FORM FOR INDIVIDUAL NPDES PERMITS FOR**  
**MUNICIPAL SEPARATE STORM SEWER SYSTEMS**

**Who Must Submit This Annual Report Form?**

Operators of municipal separate storm sewer systems (MS4s) that are covered by an individual NPDES stormwater permit pursuant to Rule 62-624, F.A.C. must submit this form. Each permitted operator must individually complete and submit this form, even if the operator is covered under a permit with multiple co-permittees or has established an interlocal agreement with one or more co-permittees.

**When to Submit This Annual Report Form?**

This form must be fully completed and submitted for each year of coverage under the NPDES stormwater permit term. The Year 1 Annual Report must cover the twelve-month period beginning on the effective date of the permit and is due six months after the first anniversary of the date of permit issuance. All subsequent annual reports are due six months after the anniversary of the effective date of the permit.

**Where To Submit This Annual Report Form?**

This form and any REQUIRED attachments must be sent by email to the NPDES Stormwater Program Administrator or to the MS4 coordinator. Their names and email addresses are available at: <http://www.dep.state.fl.us/water/stormwater/npdes/contacts.htm>. If files are larger than 10mb, materials may be placed on the NPDES Stormwater ftp site at: [ftp://ftp.dep.state.fl.us/pub/NPDES\\_Stormwater/](ftp://ftp.dep.state.fl.us/pub/NPDES_Stormwater/). After uploading the ANNUAL REPORT files, an email must be sent to the MS4 coordinator or the NPDES program administrator notifying them the report is ready for downloading. Do not submit any materials not specifically required to be submitted as per Section V of this form.

**Section I: BACKGROUND INFORMATION**

Row A — Provide the name of the governmental entity submitting this form. For example, "City of Lauderhill."

Row B — Provide the name of the permit as it appears on the first page of your permit. For example, "Broward County MS4." The permit name will not necessarily be the same name provided in Row A if the permit covers multiple co-permittees. If the name of the permit is the same name provided in Row A, repeat the name in Row B – do not leave the row blank.

Row C — Provide the last two digits of your permit number as it appears on the first page of your permit.

Row D — Indicate which permit year the annual report covers. If the permit year is beyond Year 5, check the last box and provide the appropriate permit year number.

Row E — Indicate the twelve-month period the annual report covers. Provide the month and year for the beginning of the period and the month and year for the end of the period. For example, "March/2003 through February/2004." Do not provide the day.

Row F — Provide contact information for your Responsible Authority. The definition of a Responsible Authority can be found at Rule 62-620.305, F.A.C.

Row G — Provide contact information for the Designated Stormwater Management Program Contact if it isn't the same person as the Responsible Authority identified in Row F, otherwise leave this section blank. The Stormwater Management Program Contact is the technical person that oversees the stormwater program and is the primary contact for when the Department has questions about the annual report, is scheduling an annual inspection, or needs to discuss miscellaneous issues concerning implementation of the permit.

**Section II: MS4 MAJOR OUTFALL INVENTORY**

- This section is required to be completed in all permit years EXCEPT Year 1. In Year 1, you are required to provide an inventory and a map of all known major outfalls, in accordance with Rule 62-624.600(2)(a), F.A.C. In all subsequent permit years, you need to only provide any updates to the inventory by completing this section.
- The definition of a "major" outfall can be found at Rule 62-624.200(5), F.A.C.
- Row A — This row contains two separate questions. First, provide the number of outfalls ADDED to the outfall inventory in the current reporting year. If no outfalls were added, insert a "0" – do not leave it blank. Second, indicate whether the number of outfalls added includes any "non-major" outfalls by checking one of the following:
  - "Yes" if the number includes non-major outfalls
  - "No" if the number does not include non-major outfalls, or
  - "Not Applicable" if no new outfalls were added to the inventory.

- **Row B** — Provide the number of outfalls REMOVED from the outfall inventory in the current reporting year. If no outfalls were removed, insert “0” – do not leave it blank. Then indicate whether the number of outfalls removed includes any “non-major” outfalls by checking one of the following:
  - “Yes” if the number includes non-major outfalls
  - “No” if the number does not include non-major outfalls, or
  - “Not Applicable” if no outfalls were removed from the inventory.
- **Row C** — Indicate whether the change in the total number of outfalls in the inventory is due to land being either annexed or vacated during the reporting year by checking one of the following:
  - “Yes” if the change is due to lands annexed, lands vacated, or lands both annexed and vacated.
  - “No” if the change is not due to lands annexed or vacated, or
  - “Not Applicable” if no outfalls were reported in Rows A or B as added or removed from the outfall inventory.

### **Section III: MONITORING PROGRAM**

**This is the ONLY section of this form that you may reference another permittee’s annual report to partially satisfy your reporting requirements**, but only if that permittee is fully reporting on the monitoring program as required by this form. In you choose to reference another permittee’s annual report, you must include the name of the permittee in Row A – do not leave this section blank.

**Row A** — Provide a brief summary of the status of monitoring plan implementation, including any problems encountered; or, if applicable, include the name of the permittee whose annual report you are referencing for the necessary monitoring information.

**Row B** — Each permittee must discuss the monitoring results as it relates to the implementation and effectiveness of their SWMP.

**Row C** — Attach to the form a summary of the monitoring data as required under Rule 62-624.600(2)(c), F.A.C. Do not provide the monitoring raw data.

### **Section IV: FISCAL ANALYSIS**

**Row A** — Provide a single figure that most accurately represents the total expenditures for the NPDES stormwater management program (SWMP) for the current reporting year. Be sure to include the costs of all departments involved (SWMP-related activities only) and of any contracts or interlocal agreements.

**Row B** — Provide a single figure that most accurately represents the total budget for the NPDES stormwater management program for the subsequent reporting year. Be sure to include the budgets of all the departments involved (SWMP-related activities only) and of any contracts or interlocal agreements.

### **Section V: MATERIALS TO BE SUBMITTED WITH THIS ANNUAL REPORT FORM**

Use the checklist in this section to determine what is required to be attached to this form. Do not submit any materials not required, such as records or logs of SWMP activities, monitoring raw data, public outreach materials, or pesticide and herbicide applicator certifications.

- For each item listed in the checklist, indicate whether it is “Attached” or “N/A” (Not Applicable). Do not leave any item unchecked.
- For the first item listed, carefully read Part III.A of your permit. In this section of your permit, certain annual reporting requirements are specified. The requirements include submitting certain quantifiable data (which are to be included in Section VII of this form) and may also include submitting non-quantifiable information, such as a copy of any stormwater-related updates to your local codes/ordinances.
- For the second item listed, indicate whether you attached the monitoring data summary requested in Section III.C of the form. If you referenced a co-permittee’s annual report for the monitoring information required in Section III, check the “N/A” box.
- For the third item listed, indicate whether you attached the major outfall inventory and a map of the major outfall locations in accordance with Rule 62-624.600(2)(a), F.A.C. This item is only applicable in Year 1. For all other reporting years, check the “N/A” box.
- For the fourth item listed, indicate whether you attached the estimates of pollutant loadings and event mean concentrations as required under Part V.A of your permit and in accordance with Rule 62-624.600(2)(b), F.A.C. This item is only applicable in Year 3. For all other reporting years, check the “N/A” box.

- For the fifth item listed, indicated whether you attached your permit re-application in accordance with the re-application requirements in Rule 62-624.420(2), F.A.C. This item is only applicable in Year 4. For all other reporting years, check the "N/A" box.

## **Section VI: CERTIFICATION STATEMENT AND SIGNATURE**

The Responsible Authority listed in Section I.F of this form must sign the certification statement provided in this section, in accordance with Rule 62-620.305, F.A.C. The annual report form will be returned to the permittee if the required signature is not included. If you choose to submit the annual report and attachments electronically, a signed paper copy of this section must also be submitted.

## **Section VII: STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE**

Column A — Columns B through F must be completed for each SWMP element indicated by the permit citation in Column A. No information is to be inserted by the permittee in this column.

Column B — Provide a summary of the permit requirements in Part III.A of your permit for each SWMP element and, underneath the summary, list the quantifiable SWMP activities related to the requirements. The particular quantifiable SWMP activities are specific to each permittee, but must include, at a minimum, the quantifiable activities that are required by the permit to be reported.

Column C — Provide a number representing the activities performed in the current reporting year for each of the quantifiable SWMP activities you listed in Column B. This column may not be left blank for any of the quantifiable SWMP activities listed in Column B.

Column D — Provide a title or description of the record that documents each number you provided in Column C. For example, "Daily Work Orders," "Illicit Complaint/Investigation Forms and Log," or "Construction Inspection Checklists and Log." If the activity is recorded entirely in an electronic database system, you may provide the name of the system, such as the "Hansen Model." This column may not be left blank for any of the numbers provided in Column C.

Column E — Provide the name of your department/division that is responsible for performing each of the SWMP activities listed in Column B, or provide the name of the co-permittee, private contractor, or other entity that is performing the activities on your behalf. Try to be as specific as possible by including, for example, the name of the employee responsible for a particular SWMP activity if only that employee can answer any questions concerning the activity. This column may not be left blank for any of the SWMP activities listed in Column B.

Column F — This column allows for any brief comments you determine are necessary to explain the information you provided in Columns C, D, and E.

## **Section VIII: EVALUATION OF THE STORMWATER MANAGEMENT PROGRAM**

For each section of your permit, discuss the strengths, weaknesses, and needed SWMP revisions to maximize the effectiveness of your SWMP in reducing stormwater pollutant loadings.

## **Section IX: CHANGES TO STORMWATER MANAGEMENT PROGRAM (SWMP) ACTIVITIES**

This section is to be completed, as applicable, in all permit years EXCEPT Year 4. In Year 4, any desired changes to your SWMP activities should be included in your permit re-application that is to be attached to the Year 4 Annual Report Form.

Row A — If applicable, include in this row any requested changes to your SWMP activities that are established as specific requirements under Part III.A of your permit. Provide the permit citation/SWMP element that corresponds to the

SWMP activity you want changed, describe the requested change, and provide a rationale for the change. Such changes cannot be implemented without prior approval from the Department and may require a permit revision in accordance with Rule 62-620.325, F.A.C.

Row B — If applicable, include in this row any changes to your SWMP activities that are NOT established as specific requirements under Part III.A of your permit but rather are activities at the discretion of the permittee. Provide the permit citation/SWMP element that corresponds to the SWMP activity you have changed, describe the change, and provide a rationale for the change.

**Checklist A: ATTACHMENTS TO BE SUBMITTED WITH ANNUAL REPORTS**

This checklist is provided to make it easier to remember what attachments must be submitted with each Annual Report. For each line, please check the appropriate box and insert the Attachment Number and Attachment Title in the appropriate boxes.

**Checklist B: REQUIRED ANNUAL REVIEW OF WRITTEN SOPs AND PLANS**

For each line, please check the appropriate boxes. If revisions are made to the Proactive Illicit Discharge Plan or the Construction Inspection Plan, please submit these with your Annual Report for review and approval by the Department.

**REMINDER LIST OF TMDL REPORTS TO BE SUBMITTED SEPARATELY FROM AN ANNUAL REPORT**

Please remember to submit the various reports required by Part VIII.B. for water bodies that have adopted TMDLs by their respective due dates.

**BASIN MANAGEMENT ACTION PLAN (BMAP) REPORTING**

If you have water bodies with adopted TMDLs and BMAPs that your MS4 discharges, please enter the title(s) of the applicable BMAP(s) and the date on which the last Annual Progress report was submitted to the Department's Watershed Planning and Coordination Section.



# ANNUAL REPORT FORM FOR INDIVIDUAL NPDES PERMITS FOR MUNICIPAL SEPARATE STORM SEWER SYSTEMS (RULE 62-624.600(2), F.A.C.)

- This Annual Report Form must be completed and submitted to the Department to satisfy the annual reporting requirements established in Rule 62-621.600, F.A.C.
- Submit this fully completed and signed form and any REQUIRED attachments by email to the NPDES Stormwater Program Administrator or to the MS4 coordinator. Their names and email addresses are available at: <http://www.dep.state.fl.us/water/stormwater/npdes/contacts.htm>. If files are larger than 10mb, materials may be placed on the NPDES Stormwater ftp site at: [ftp://ftp.dep.state.fl.us/pub/NPDES\\_Stormwater/](ftp://ftp.dep.state.fl.us/pub/NPDES_Stormwater/). After uploading the ANNUAL REPORT files, an email must be sent to the MS4 coordinator or the NPDES program administrator notifying them the report is ready for downloading
- Refer to the Form Instructions for guidance on completing each section.
- **Please print or type information in the appropriate areas below**

SECTION I. BACKGROUND INFORMATION			
<b>A.</b>	Permittee Name: FDOT District One		
<b>B.</b>	Permit Name: Sarasota County Municipal Separate Storm Sewer System		
<b>C.</b>	Permit Number: FLS000004-004 (Cycle 4)		
<b>D.</b>	Annual Report Year: <input type="checkbox"/> Year 1 <input type="checkbox"/> Year 2 <input type="checkbox"/> Year 3 <input type="checkbox"/> Year 4 <input checked="" type="checkbox"/> Year 5 <input type="checkbox"/> Other, specify Year:		
<b>E.</b>	Reporting Time Period (month/year): January 1, 2018 through December 31, 2018		
<b>F.</b>	<div>Name of the Responsible Authority: Sharon L. Harris</div> <div>Title: District Maintenance Administrator</div> <div>Mailing Address: 801 N. Broadway Ave., MS 1-7</div> <div> <div>City: Bartow</div> <div>Zip Code: 33830</div> <div>County: Polk</div> </div> <div> <div>Telephone Number: (863) 519-2314</div> <div>Fax Number: (863) 534-7045</div> </div> <div>E-mail Address: <a href="mailto:Sharon.Hedrickharris@dot.state.fl.us">Sharon.Hedrickharris@dot.state.fl.us</a></div>		
<b>G.</b>	<div>Name of the Designated Stormwater Management Program Contact (if different from Section I.F above): Steven Kelly</div> <div>Title: District Maintenance Environmental Specialist</div> <div>Department: Maintenance</div> <div>Mailing Address: 801 N. Broadway Ave., MS 1-7</div> <div> <div>City: Bartow</div> <div>Zip Code: 33831</div> <div>County: Polk</div> </div> <div> <div>Telephone Number: (863) 519-2762</div> <div>Fax Number: (863) 534-7045</div> </div> <div>E-mail Address: <a href="mailto:Steven.Kelly@dot.state.fl.us">Steven.Kelly@dot.state.fl.us</a></div>		

SECTION II. MS4 MAJOR OUTFALL INVENTORY (Not Applicable In Year 1)	
<b>A.</b>	Number of outfalls ADDED to the outfall inventory in the current reporting year (insert "0" if none): 0 (Does this number include non-major outfalls? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable)
<b>B.</b>	Number of outfalls REMOVED from the outfall inventory in the current reporting year (insert "0" if none): 0 (Does this number include non-major outfalls? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable)
<b>C.</b>	Is the change in the total number of outfalls due to lands annexed or vacated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable

### SECTION III. MONITORING PROGRAM

	Provide a brief statement as to the status of monitoring plan implementation:
A.	<p>The monitoring plan has been developed and implemented by Sarasota County on behalf of the co-permittees. The County's monitoring program is available for review on the Sarasota Water Atlas website: <a href="http://www.sarasota.wateratlas.usf.edu/coastal/conditions-overview.aspx">http://www.sarasota.wateratlas.usf.edu/coastal/conditions-overview.aspx</a></p>
	Provide a brief discussion of the monitoring results to date:
	<p>FDOT District One's monitoring plan is carried out through an inter-local agreement with Sarasota County. The County's monitoring program includes analysis of seventeen (17) tributaries and six (6) coastal bays. The health of the bays is being used as the overall indicator of the success of the water quality and stormwater management programs being implemented throughout the County by the Sarasota County MS4 co-permittees, including FDOT. Below is a summary of the bay conditions analysis for Chlorophyll a, Total Nitrogen, and Total Phosphorous.</p> <p>The 6 bays (Sarasota Bay, Roberts Bay, Little Sarasota Bay, Blackburn Bay, Dona-Roberts Bay, and Upper Lemon Bay) were in the Caution category of the Bay Conditions Index. All three indicators must be rated as pass for the bay to be in pass category. The following is the summary for each parameter:</p> <p><b>Chlorophyll a Summary:</b> Six (6) bays received a caution rating.</p> <p><b>Total Nitrogen Summary:</b> Four (4) bays received a good to excellent rating. Two (2) bays received a caution rating.</p> <p><b>Total Phosphorous Summary:</b> All six (6) bays received an excellent rating.</p>
B.	<p>FDOT uses the pollutant load analysis of the major outfalls in FDOT's MS4 as its primary assessment tool for evaluating effectiveness of its SWMP. The pollutant load analysis also takes into account the various structural and non-structural best management practices being used by FDOT in each outfall drainage area. The estimated pollutant load reductions from FDOT District One's MS4 to receiving waters in Sarasota County are summarized below.</p> <p><b>Total Nitrogen:</b> The BMP pollutant load reduction is 993 lb/yr; resulting in an overall 28% reduction.</p> <p><b>Total Phosphorus:</b> The BMP pollutant load reduction is 254 lb/yr; resulting in an overall 54% reduction.</p> <p><b>Biological Organic Demand:</b> The BMP pollutant load reduction is 4990 lb/yr; resulting in an overall 41% reduction.</p> <p><b>Total Suspended Solids:</b> The BMP pollutant load reduction is 49,296 lb/yr; resulting in an overall 60% reduction.</p> <p><b>Total Copper:</b> The BMP pollutant load reduction is 24 lb/yr; resulting in an overall 45% reduction.</p> <p><b>Total Zinc:</b> The BMP pollutant load reduction is 144 lb/yr; resulting in an overall 59% reduction.</p> <p><i>DEP Note: See Part V of the permit for the monitoring requirements. Each permittee must discuss the monitoring results as it relates to the implementation and effectiveness of their SWMP.</i></p>
C.	Attach a monitoring data summary, as required by the permit. The monitoring data is attached in Supplement 1.

### SECTION IV. FISCAL ANALYSIS

A.	Total expenditures for the NPDES stormwater management program for the current reporting year: \$1,344,667.00 FY18 <i>DEP Note: If program resources have decreased from the previous year, attach a discussion of the impacts on the implementation of the SWMP as per Part II.F of the permit.</i>
B.	Total budget for the NPDES stormwater management program for the subsequent reporting year: \$2,138,000.00 FY19



## SECTION V. MATERIALS TO BE SUBMITTED WITH THIS ANNUAL REPORT FORM

Only the following materials are to be submitted to the Department along with this fully completed and signed Annual Report Form (check the appropriate box to indicate whether the item is attached or is not applicable):

Attached

☐

N/A

☒

**\*\*\*DEP Note: Please complete Checklists A & B at the end of the tailored form.\*\*\***

Any additional information required to be submitted in this current annual reporting year in accordance with Part III.A of your permit that is not otherwise included in Section VII below.

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A monitoring data summary as directed in Section III.C above and in accordance with Rule 62-624.600(2)(c), F.A.C.

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Year 1 ONLY: An inventory of all known major outfalls and a map depicting the location of the major outfalls (hard copy or CD-ROM) in accordance with Rule 62-624.600(2)(a), F.A.C.

☐☒

Year 3 ONLY: The estimates of pollutant loadings and event mean concentrations for each major outfall or each major watershed in accordance with Rule 62-624.600(2)(b), F.A.C.

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Year 4 ONLY: Permit re-application information in accordance with Rule 62-624.420(2), F.A.C.

### DO NOT SUBMIT ANY OTHER MATERIALS

(such as records and logs of activities, monitoring raw data, public outreach materials, etc.)

## SECTION VI. CERTIFICATION STATEMENT AND SIGNATURE

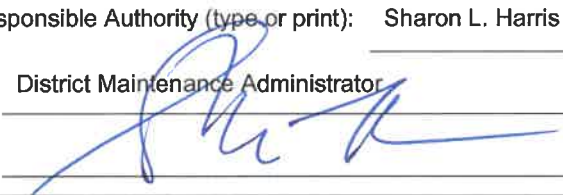
The Responsible Authority listed in Section I.F above must sign the following certification statement, as per Rule 62-620.305, F.A.C:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name of Responsible Authority (type or print): Sharon L. Harris

Title: District Maintenance Administrator

Signature:



Date:

6/7/19

**SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE**

A.	B.		C.	D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity		Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
Part III.A.1	<b>Structural Controls and Stormwater Collection Systems Operation</b>					
	<p>Maintain an up-to-date inventory of the structural controls and roadway stormwater collection structures operated by the permittee, including, at a minimum, all of the types of control structures listed in Table II.A.1.a of the permit. Report the current known inventory.</p> <p><i>DEP Note: The permittee needs to “customize” this section by adding any structural controls to the list below that are part of the permittee’s MS4 currently or are planned for the future. The permittee may remove any structural controls listed that it does not have currently or will likely not have during this permit cycle. Please see the attached description of each type of structure. In addition, the permittee may choose its own unit of measurement for each structural control to be consistent with the unit of measurement in the documentation. Unit options include: miles, linear feet, acres, etc.</i></p> <p>Provide an inventory of all known major outfalls covered by the permit and a map depicting the location of the major outfalls (hard copy or CD-ROM). Provide the outfall inventory and map with the Year 1 Annual Report.</p> <p>Report the number of inspection and maintenance activities conducted for each type of structure included in Table II.A.1.a, and the percentage of the total inventory of each type of structure inspected and maintained. If the minimum inspection frequencies set forth in Table II.A.1.a or the revised and approved FDOT Statewide Stormwater Management Program (SSWMP) that specifies minimum inspection frequencies were not met, provide as an attachment an explanation of why they were not and a description of the actions that will be taken to ensure that they will be met.</p> <p><i>DEP Note: If the minimum inspection frequencies set forth in Table II.A.1.a, or the revised and approved SSWMP, were not met for one or more type of structure, the permittee must provide as an attachment an explanation of why they were not and a description of the actions that will be taken to ensure that they will be met. Please provide the title of the attached explanation in Column D and the name of the entity who finalized the explanation in Column E.</i></p>					

**SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE**

A.	B.						C.	D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity						Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	Type of Structure		Number of Activities Performed					Documentation / Record	Entity Performing the Activity	Comments
		Total Number of Structures	Number of Inspections	Percentage Inspected	Number of Maintenance Activities Based on Inspections	Number of Routine Maintenance Activities	Percentage Maintained			
	Dry retention systems	59	21	36%	3	0	100%	NPDES Database	Consultant and FDOT Personnel	FDOT follows the inspection and maintenance schedules in the approved 2012 Statewide Stormwater Management Plan. Stormwater treatment facility inspection frequencies are based on Southwest Florida Water Management District ERP criteria. The number of routine maintenance activities are not tracked by structure type; therefore, they are reported as zero. However 100% are routinely maintained through the MMS program.
	Grass treatment swales	6	5	83%	0	0	100%		Consultant and FDOT Personnel	
	Dry detention systems	6	1	17%	0	0	100%		Consultant and FDOT Personnel	
	Wet detention systems	85	55	65%	27	0	100%			
	Ditch block systems	10	3	30%	0	0	100%		Consultant and FDOT Personnel	

**SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE**

A.	B.					C.		D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity					Number of Activities Performed		Documentation / Record	Entity Performing the Activity	Comments
	Major stormwater outfalls	24	0	0%	0	48,850 linear feet	UND*	Sarasota County Major Outfalls spreadsheet and MMS 464.	Consultant and FDOT Personnel	Major outfalls are inspected once per permit cycle, consistent with District One's Standard Operating Procedures (SOPs). Major outfall inspections started in 2015 (5 inspections) and were completed in January 2016 (19 inspections). Routine maintenance is performed through MMS. The percentage of maintenance completed for major stormwater outfalls cannot be determined as the inventory is reported as per unit items and maintenance is reported as linear feet. Per FDEP's request, we are using "Undetermined" as the reporting value for the percentage. * Undetermined

**SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE**

A.	B.					C.		D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity					Number of Activities Performed		Documentation / Record	Entity Performing the Activity	Comments
	Weirs or other control structures	0	NA	NA	NA	NA	NA	NPDES Database	Consultant and FDOT Personnel	There are no stand-alone weirs and other control structures in FDOT's stormwater facility inventory in Sarasota County. Inspection and Maintenance categories are denoted with a "NA" for Not Applicable.

**SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE**

A.	B.					C.		D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity					Number of Activities Performed		Documentation / Record	Entity Performing the Activity	Comments
	MS4 pipes / culverts (linear feet)	46,106	26,889	58%	0	14,826	58%	RCI Feature 241 and MMS 451	FDOT Personnel	When maintenance activities are performed on MS4 pipes / culverts, the pipe is also inspected by video for structural and functional integrity. Maintenance activities for pipe cleaning and inlets/catch basins/grates are grouped together in MMS (Activity 451).
	Inlets / catch basins / grates	3,642	24	1%	0	14,826 linear feet	UND*	RCI Feature 242, Maintenance Rating Program, and MMS 451	FDOT Personnel	The inspections of collection and conveyance structures are addressed through the FDOT MRP. A maintenance percentage for inlets/catch basins/grates cannot be determined as the inventory is reported as per unit items and maintenance is reported as linear feet. Maintenance activities of inlets/catch basins/grates and pipe cleaning are

**SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE**

A.	B.					C.		D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity					Number of Activities Performed		Documentation / Record	Entity Performing the Activity	Comments
										grouped together in MMS (Activity 451). Per FDEP's request, we are using "Undetermined" as the reporting value for the percentage. * Undetermined
	Ditches / conveyance swales (miles)	261.17	41 each	UND*	0	58.49	UND*	RCI Feature 245 and 421, Maintenance Rating Program, and MMS 461 and 464.	FDOT Personnel	The inspections of collection and conveyance structures are addressed through the FDOT MRP. A percentage of inspections for ditches / conveyance swales cannot be determined as the inventory is reported in miles and the inspections in MRP are reported as unit items. Per FDEP's request, we are using "Undetermined" as the reporting value for the percentage. * Undetermined
	ATTACH explanation if any of the minimum inspection frequencies in Table II.A.1.a, or in the revised and approved SSWMP, were <u>not</u> met							Not applicable.		

**SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE**

A.	B.		C.	D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity		Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	Year 1 ONLY: Attach a map of all known major outfalls					
Part III.A.2	Areas of New Development and Significant Redevelopment					
	Continue to employ the FDOT Drainage Connection Permit (DCP) to ensure that appropriate stormwater treatment and permitting occurs prior to discharge into the FDOT system. FDOT shall refer connecting entities failing to meet the DCP requirements or maintain the discharge of acceptable water quality, after sufficient warning by FDOT to DEP and/or the South Florida Water Management District, as appropriate, to regulate the stormwater quality through local or State rules, ordinances, and codes. Report the number of enforcement referrals completed.					
	Number of enforcement referrals		0	4/11/2019 Email from Francisco Walle, FDOT Field Operations Manager	FDOT Personnel	No enforcement referrals occurred during the reporting period.
Part III.A.3	Roadways					
	Annually review (and revise, as needed) and implement the permittee's written procedures for the litter control program(s) for public streets, roads, and highways, including rights-of-way, employed within the permittee's jurisdictional area and properly dispose of collected material. Implement the program on a monthly, or on an as needed, basis. Report on the litter control program, including the frequency of litter collection, an estimate of the total number of road miles cleaned or amount of area covered by the activities, and an estimate of the quantity of litter collected. <i>DEP Note: Please provide an explanation in Column F for any "0" reported in Column C. In addition, the permittee may choose its own units of measurement for the reporting items. Unit options for the amount of litter include: bags, cubic yards, pounds, tons. Unit options for the amount of area covered by the activity include: square feet, linear feet, yards, miles, acres. If all litter collection is performed by staff or by contractors, but not by both, please remove the non-applicable reporting items.</i>					
	PERMITTEE Litter Control Program: Frequency of litter collection		0	4/11/2019 Email from Francisco Walle, FDOT Field Operations Manager		Litter collection is only performed by Contractors. In Sarasota County, FDOT staff no longer performs in-house litter collection.
	PERMITTEE Litter Control Program: Estimated amount of area maintained (linear feet)		0			
	PERMITTEE Litter Control Program: Estimated amount of litter collected (pounds)		0			



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Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity		Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	CONTRACTOR Litter Control Program: Frequency of litter collection (DBI – Performance Pond- Sarasota)		12 / year	2018 FDOT Contracts Data spreadsheet (DBI – Performance Pond, Northport Mowing Stemwinder)	FDOT Maintenance Contractors	The total Contract and MOA acres of litter maintained is 4,239. The total estimated amount of litter collected is 386,666 pounds.
	CONTRACTOR Litter Control Program: Estimated amount of area maintained (acres) (DBI – Performance Pond- Sarasota)		872			
	CONTRACTOR Litter Control Program: Estimated amount of litter collected (pounds) (DBI – Performance Pond- Sarasota)		3,915			
	CONTRACTOR Litter Control Program: Frequency of litter collection (Northport Mowing Stemwinder)		10/ year	2018 FDOT Contracts Data spreadsheet (DBI – Performance Pond, Northport Mowing Stemwinder)	FDOT Maintenance Contractors	
	CONTRACTOR Litter Control Program: Estimated amount of area maintained (acres) (Northport Mowing Stemwinder)		265			
	CONTRACTOR Litter Control Program: Estimated amount of litter collected (pounds) (Northport Mowing Stemwinder)		500			
	CONTRACTOR Litter Control Program: Frequency of litter collection (Sarasota County MOA BE092)		12/ year	2018 FDOT Contracts Data spreadsheet (DBI – Performance Pond, Northport Mowing Stemwinder)	FDOT Maintenance Contractors	
	CONTRACTOR Litter Control Program: Estimated amount of area maintained (acres) (Sarasota County MOA BE092)		1,966			
	CONTRACTOR Litter Control Program: Estimated amount of litter collected (pounds) (Sarasota County MOA BE092)		8,251			
	CONTRACTOR Litter Control Program: Frequency of litter collection (DBI Services)		daily	4/30/2019 Email from Samantha Manning, DBI Services	FDOT Maintenance Contractors	
	CONTRACTOR Litter Control Program: Estimated amount of area maintained (acres) ((DBI Services)		1,106			
	CONTRACTOR Litter Control Program: Estimated amount of litter collected (pounds) (DBI Services)		376,000			
If an Adopt-A-Road or similar program is implemented, report the total number of road miles cleaned and an estimate of the quantity of litter collected. <i>DEP Note: The permittee may choose its own unit of measurement for the amount of litter collected. Unit options include: bags, cubic yards, pounds, tons. If an Adopt-A-Road or similar program is not implemented by the permittee, please note that in Column F but do <u>not</u> remove the Adopt-A-Road Program reporting items.</i>						
Adopt-A-Road Program: Total miles cleaned			1.5	Sarasota County Adopt-A-Highway Reports, Neal Barber, Contracts Coordinator, FDOT Manatee OPS	Volunteer Groups	
Adopt-A-Road Program: Estimated amount of litter collected (pounds)			55			

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A.	B.		C.	D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity		Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	Keep Sarasota Beautiful: Total miles cleaned		48	4/12/19 Email, Wendi Crisp, Program Coordinator for Keep Sarasota Beautiful, City of Sarasota and Sarasota County annual report forms	Volunteer Groups	
	Keep Sarasota Beautiful: Estimated amount of litter collected (pounds)		6002.50			
	Report on the street sweeping program, including the frequency of the sweeping, total miles swept, an estimate of the quantity of sweepings collected, and the total nitrogen (TN) and total phosphorus (TP) loadings that were removed by the collection of sweepings. If no street sweeping program is implemented, provide the explanation of why not in the Year 1 Annual Report. <i>DEP Note: Please provide an explanation in Column F for any "0" reported in Column C. Also, the permittee may choose its own unit of measurement for the amount of sweeping material collected. Unit options include: cubic yards, pounds, tons.</i> <i>DEP Note: If the permittee has curbs and gutters but no street sweeping program is implemented, the permittee must provide an explanation of why not in the Year 1 Annual Report. Refer to Part III.A.3 of the permit for the information that must be included in the explanation (including the alternate BMPs used or planned in lieu of street sweeping). Please provide the title of the attached explanation in Column D and the name of the entity who finalized the explanation in Column E.</i>					
	Frequency of street sweeping (USA Services Sweeping – Sarasota)		9/ year	2018 FDOT Contracts Data spreadsheet (USA Sweeping – Sarasota)	FDOT Maintenance Contractors	The total Contractor street sweeping miles swept is 2,293. The total estimated amount of street sweeping material collected is 386,830 pounds.
	Total miles swept (per year) (USA Services Sweeping – Sarasota)		2,481			
	Estimated quantity of sweeping material collected (pounds) (USA Services Sweeping – Sarasota)		162,830			
	Frequency of street sweeping (DBI Services)		weekly	4/30/2019 Email from Samantha Manning, DBI Services	FDOT Maintenance Contractors	
	Total miles swept (per year) (DBI Services)		442			
	Estimated quantity of sweeping material collected (pounds) (DBI Services)		224,000			
	Total nitrogen loadings removed (pounds)		218	FSA MS4 Load Reduction Toolkit for Sarasota County Street Sweeping Data	FDOT Consultants	The Total Nitrogen and Total Phosphorus Loadings removed are a summation of all contractor street

**SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE**

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Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity		Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	<b>Total phosphorus loadings removed (pounds)</b>		140			sweeping contracts
	<b>Year 1 ONLY: If have curbs and gutters, attach explanation of why no street sweeping program and the alternate BMPs used or planned</b>			Not applicable		
	Annually review (and revise, as needed) and implement the permittee's written standard practices to reduce the pollutants in stormwater runoff from areas associated with road repair and maintenance, and from permittee-owned or operated equipment yards and maintenance shops that support road maintenance activities. Report the number of applicable facilities and the number of inspections conducted for each facility. <i>DEP Note: The permittee needs to "customize" this section by listing the names of the applicable facilities in Column B and the number of inspections of each facility in Column C. Add more rows if necessary. If "0" is reported in Column C for the number of inspections conducted and the permittee has one or more applicable facilities, please provide an explanation in Column F for why no inspections were conducted. In addition, if the same facility is applicable under both Parts III.A.3 and III.A.5 of the permit, the same site inspection can count towards both inspection requirements as long as it covers the applicable waste area(s). Be sure to report the site inspection under both Parts III.A.3 and III.A.5.</i>					
			<b>Number of Inspections</b>			
	<b>Name of facility #1: Manatee Operations Center</b>		1	Manatee OPS HazMat Inspection Report April 2018	The District Hazardous Material Team	
<b>Part III.A.4</b>	<b>Flood Control Projects</b>					
	Report the total number of flood control projects that were constructed by the permittee during the reporting period and the number of those projects that did NOT include stormwater treatment. The permittee shall provide a list of the projects where stormwater treatment was not included with an explanation for each of why it was not. Report on any stormwater retrofit planning activities and the associated implementation of retrofitting projects to reduce stormwater pollutant loads from existing drainage systems that do not have treatment BMPs. <i>DEP Note: A "stormwater retrofit project" is one implemented primarily to provide stormwater treatment for areas currently without treatment.</i> <i>DEP Note: The status of the flood control and retrofit projects should be reported as of the last day of the applicable reporting period. Therefore, there should be no duplication for those reported as planned, for those reported as under construction and for those reported as completed.</i> <i>DEP Note: If applicable, please provide the title of the attached list of flood control projects that did not include stormwater treatment in Column D and the name of the entity who finalized the list in Column E.</i>					
	<b>Flood control projects completed during the reporting period</b>		0	FDOT's Adopted Five Year Work Program (July 1, 2018 thru June 30, 2023)	FDOT Personnel	FDOT does not construct flood control or stormwater retrofit projects. FDOT adheres to water quality and attenuation criteria based on ERP requirements for new roadway and widening projects.
	<b>Flood control projects completed during the reporting period that did <u>not</u> include stormwater treatment</b>		0			
	<b>ATTACH a list of the flood control projects that did <u>not</u> include stormwater treatment and an explanation for each of why it was not</b>					
	<b>Stormwater retrofit projects planned</b>		0			
	<b>Stormwater retrofit projects under construction during the reporting period</b>		0			
	<b>Stormwater retrofit projects completed during the reporting period</b>		0			

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Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity		Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
<b>Part III.A.5</b>	<b>Municipal Waste Treatment, Storage, and Disposal Facilities Not Covered by an NPDES Stormwater Permit</b>					
	<p>Annually review (and revise, as needed) and implement written procedures for inspections and the implementation of measures to control discharges from the following facilities that are not otherwise covered by an NPDES stormwater permit:</p> <ul style="list-style-type: none"> <li>• FDOT waste transfer stations;</li> <li>• FDOT waste fleet maintenance facilities; and</li> <li>• Any other FDOT waste treatment, waste storage, and waste disposal facilities.</li> </ul> <p>Report the number of applicable facilities and the number of the inspections conducted for each facility.</p> <p><i>DEP Note: The permittee needs to "customize" this section by listing the names of the applicable facilities in Column B and the number of inspections of each facility in Column C. Add more rows if necessary. If "0" is reported in Column C for the number of inspections conducted and the permittee has one or more applicable facilities, please provide an explanation in Column F for why no inspections were conducted. <b>An applicable facility under Part III.A.5 includes, but is not limited to, those facilities/yards where street sweeping material and/or yard waste are temporary stockpiled.</b> In addition, if the same facility is applicable under both Parts III.A.3 and III.A.5 of the permit, the same site inspection can count towards both inspection requirements as long as it covers the applicable waste area(s). Be sure to report the site inspection under both Parts III.A.3 and III.A.5.</i></p>					
		<b>Number of Inspections</b>				
	<b>FDOT Waste Treatment, Waste Storage and Waste Disposal (TSD) – N/A</b>		0	4/11/2019 Email from Francisco Walle, FDOT Field Operations Manager		There are no FDOT TSD facilities in Sarasota County which meet these criteria.
<b>Part III.A.6</b>	<b>Pesticides, Herbicides, and Fertilizer Application</b>					
	<p>Continue to require proper certification and licensing by the Florida Department of Agriculture and Consumer Services (FDACS) for all applicators contracted to apply pesticides, herbicides, or fertilizers on permittee-owned property, as well as any permittee personnel employed in the application of these products. Report the number of permittee personnel applicators and contracted commercial applicators of pesticides and herbicides who are FDACS certified / licensed. Report the number of permittee personnel and contractors who have been trained through the Green Industry BMP Program, and the number of contracted commercial applicators of fertilizer who are FDACS certified / licensed.</p> <p><i>DEP Note: If "0" is reported in Column C for any of the reporting items, please include in Column F an explanation of why training was not provided to / obtained by personnel and contractors during the applicable reporting year, the most recent year that training / certification was previously provided / obtained, and the names of the personnel and contractors previously trained / certified.</i></p>					
	<b>PERSONNEL: Florida Department of Agriculture and Consumer Services (FDACS) certified applicators of pesticides and herbicides</b>		2	Florida Department of Agriculture and Consumer Services Pesticide Certification Office Commercial Applicator	FDOT Personnel	

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Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity		Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
				License # PB8859, PB11511		
	CONTRACTORS: FDACS certified / licensed applicators of pesticides and herbicides		3	Florida Department of Agriculture and Consumer Services Pesticide Certification Office Commercial Applicator License # CM25783, CM16988, CM21132	FDOT Contractors	
	CONTRACTORS: FDACS certified / licensed applicators of fertilizer		0	4/11/2019 Email from Francisco Walle, FDOT Manatee Operations	FDOT Contractors	FDOT does not have any fertilizer contracts. No fertilizer was applied during the reporting period. No certifications are required.
	PERSONNEL: Green Industry BMP Program training completed		7	FDEP Certificate # GV31240-1, GV30229-1, GV403033-1, GV30212-1, GV31246-1, GV30234-1 and GV31904-1	FDOT Personnel	
	CONTRACTORS: Green Industry BMP Program training completed		1	FDEP Certificate # GV403088-1	FDOT Contractors	

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Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity		Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
Part III.A.7.a	Illicit Discharges and Improper Disposal — Inspections, Ordinances, and Enforcement Measures					
	{Not Applicable to FDOT}					
Part III.A.7.c	Illicit Discharges and Improper Disposal — Investigation of Suspected Illicit Discharges and/or Improper Disposal					
	<p>During Year 1 of the permit, develop and implement a written proactive inspection program plan for identifying and eliminating sources of illicit discharges, illicit connections, or dumping to the MS4. Beginning with the Year 2 Annual Report, report on the proactive inspection program, including the number of inspections conducted, the number of illicit activities found, and the number of referrals completed.</p> <p><u>DEP Note:</u> If "0" is reported in Column C for the first reporting item, please include an explanation in Column F for why no proactive inspections were performed.</p> <p><u>DEP Note:</u> Refer to Part III.A.7.c of the permit for what must be included in the written proactive inspection program plan. Please provide the title of the attached plan in Column D and the name of the entity who finalized the plan in Column E.</p> <p><u>DEP Note:</u> Sarasota County is to report the proactive inspections it performed in the unincorporated areas <u>separately</u> from the proactive inspections it performed in the co-permittees' jurisdictions. Each co-permittee is to report the Lee County proactive inspections in their jurisdiction separately from the proactive inspections that the co-permittee performs itself.</p>					
	Proactive inspections performed by Sarasota County on behalf of a co-permittee for suspected illicit discharges / connections / dumping		0			There were no proactive inspections performed by Sarasota County on behalf of FDOT.
	Proactive inspections performed by the permittee for suspected illicit discharges / connections / dumping		296	Daily Crew Work Report and NPDES database	FDOT Personnel	There were no illicit discharges / connections / dumping found during a proactive inspection and therefore no enforcements referrals were required.
	Illicit discharges / connections / dumping found during a proactive inspection		0	NPDES database		
	Number of enforcement referrals		0			
	Year 1 ONLY: Attach the written proactive inspection program plan					
	Annually review (and revise, as needed) and implement the permittee's written procedures to conduct reactive investigations to identify and eliminate the source(s) of illicit discharges, illicit connections or improper disposal to the FDOT MS4 within the FDOT right-of-way, based on reports received from permittee personnel, contractors, citizens, or other entities regarding suspected illicit activity. Report on the reactive investigation program as it relates to responding to reports of suspected illicit discharges, including the number of investigations conducted, the number of illicit activities found, and the number of enforcement referrals completed. If a permittee relies on Lee County to conduct these activities on its behalf, the permittee shall obtain (and, upon request, Lee County shall make available) the necessary annual report information from the County					

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Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity		Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	Reports of suspected illicit connections / discharges / dumping received		2	Illicit Discharge (Reactive) Inspection Reports	FDOT Personnel	There were 2 reports of suspected illicit connections/ discharges/ dumping received. There was one illicit discharge found and resolved by FDOT. There were no enforcements referrals.
	Reactive investigations of reports of suspected illicit discharges/ connections / dumping		2			
	Illicit discharges / connections / dumping found during a reactive investigation		1			
	Number of enforcement referrals		0			
	During Year 1 of the permit, develop and implement a written plan for the training of all appropriate permittee personnel (including field crews, fleet maintenance staff, and inspectors) <u>and contractors</u> to identify and report conditions in the stormwater facilities that may indicate the presence of illicit discharges / connections / dumping to the MS4. Refresher training shall be provided annually. Report the type of training activities, and the number of permittee personnel and contractors trained (both in-house and outside training). <i>DEP Note: If "0" is reported for either reporting item, please include in Column F an explanation of why training was not provided to / obtained by personnel and contractors during the applicable reporting year, the most recent year that training was previously provided / obtained, and the names of the personnel and contractors previously trained.</i>					
		Initial Training	Refresher Training			
	Personnel trained	0	32	1	Manatee OPS IDDE Refresher Training 10-25-18 Sign-in Sheets	FDOT Personnel
	Contractors trained	0	6	1	E Sciences IDDE and Spill Refresher Training 7-26-18	FDOT Contractors
	FDOT provides annual illicit discharge training.					
Part III.A.7.d	Illicit Discharges and Improper Disposal — Spill Prevention and Response					
	Annually review (and revise, as needed) and implement the permittee's written spill-prevention/spill-response plan and procedures to prevent, contain, and respond to spills that discharge into the MS4. Report on the spill prevention and response activities, including the number of spills addressed. If a permittee relies on a Sarasota					

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Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity		Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments	
	County Fire District to conduct these activities on its behalf, the permittee shall obtain (and, upon request, Sarasota County Fire District shall make available) the necessary annual report information from the County. <i>DEP Note: The permittee may report the number of hazardous material spills separately from the number of non-hazardous material spills, <u>or</u> report one combined number, to more accurately reflect its tracking of these spills.</i>						
	Hazardous and non-hazardous material spills responded to		1	FDOT One Stop Permitting Database	FDOT Personnel and Contractors		
	During Year 1 of the permit, develop and implement a written plan for the training of all appropriate permittee personnel (including field crews, firefighters, fleet maintenance staff and inspectors) <u>and contractors</u> on proper spill prevention, containment, and response techniques and procedures. Refresher training shall be provided annually. Report the type of training activities, and the number of permittee personnel and contractors trained (both in-house and outside training). <i>DEP Note: If "0" is reported for either reporting item, please include in Column F an explanation of why training was not provided to / obtained by personnel and contractors during the applicable reporting year, the most recent year that training was previously provided / obtained, and the names of the personnel and contractors previously trained.</i>						
		Initial Training	Refresher Training				
	Personnel trained	0	37	2	Manatee OPS IDDE Refresher Training 10-25-18 Sign-in Sheets; AST Compliance Guidelines Training December 2018 - Manatee & Sarasota Counties	FDOT Personnel	FDOT provides annual spill response training to FDOT Personnel and Contractors
	Contractors trained	0	6	1	E Sciences IDDE and Spill Refresher Training 7-26-18	FDOT Contractors	
Part III.A.7.e	Illicit Discharges and Improper Disposal — Public Reporting						
	{Not Applicable to FDOT}						
Part III.A.7.f	Illicit Discharges and Improper Disposal — Oils, Toxics, and Household Hazardous Waste Control						
	Continue to include a notice with each FDOT Drainage Connection Permit with information on used oil recycling, proper hazardous waste disposal, stormwater regulations, and spill reporting. Report the number of notices distributed. <i>DEP Note: If "0" is reported in Column C, please include in Column F an explanation for why no notices were distributed. If the number of notices distributed is different than the number of DCPs issued, please include in Column F an explanation for this difference.</i>						



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Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity		Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	Number of notices distributed		14	FDOT One-Stop Permitting (OSP) database	FDOT Personnel	NPDES Flyers are distributed with approved Drainage Connection Permits.
Part III.A.7.g	Illicit Discharges and Improper Disposal — Limitation of Sanitary Sewer Seepage					
	Advise the appropriate utility owner of a violation if constituents common to wastewater contamination are discovered in FDOT’s MS4. Report the number of violations referred to the appropriate utility owner and the name of the utility owner.					
	Number of violations referred to the appropriate utility owner		0	4/11/2019 Email from Francisco Walle, FDOT Field Operations Manager	FDOT Personnel	No SSOs or sanitary seepage incidents were observed or discovered.
	Name of owner of the sanitary sewer system	Not applicable				
Part III.A.8.a	Industrial and High-Risk Runoff — Identification of Priorities and Procedures for Inspections					
	Continue to maintain an up-to-date inventory of all existing high risk facilities discharging into the permittee’s MS4. The inventory shall identify the outfall and surface water body into which each high risk facility discharges. For the purposes of this permit, high risk facilities include:					
	<ul style="list-style-type: none"><li>• Operating municipal landfills;</li><li>• Hazardous waste treatment, storage, disposal and recovery facilities;</li><li>• Facilities that are subject to EPCRA Title III, Section 313 (also known as the Toxics Release Inventory (TRI) maintained by the U.S. EPA); and</li><li>• Any other industrial or commercial discharge that the permittee determines is contributing a substantial pollutant loading to the permittee’s MS4. This could include facilities identified through the proactive inspection program as per Part III.A.7.c of the permit.</li></ul>					
	Report on the high risk facilities inventory, including the type and total number of high risk facilities and the number of facilities newly added each year. If a permittee relies on Sarasota County to conduct these activities on its behalf, the permittee shall obtain (and, upon request, Sarasota County shall make available) the necessary annual report information from the County.					
	<p><i>DEP Note: The TRI is updated every spring / summer by the U.S. EPA at <a href="http://www.epa.gov/triexplorer">www.epa.gov/triexplorer</a>. Select “Facility” on the left, chose your Geographic Location, and then select “Generate Report.” Please indicate in Column F when (month / year) you last checked EPA’s TRI for applicable facilities.</i></p> <p><i>DEP Note: The total number of high risk facilities reported needs to equal the sum of the numbers of the four types of applicable facilities.</i></p> <p>During Year 1 of the permit, develop and implement a written plan for conducting inspections of high risk facility outfalls to the FDOT/Florida Turnpike Enterprise MS4 to determine compliance with all appropriate aspects of the stormwater program. While the permittee may determine the order and frequency of the inspections, the permittee shall inspect each identified facility’s outfall(s) at least once during the permit term; however, facilities identified as high risk due to the findings of the proactive inspection program as per Part III.A.7.c of the permit shall be inspected annually. Report on the high risk facility inspection program, including the number of outfall inspections conducted and the number of enforcement referrals completed. If a permittee relies on Sarasota County or other permittee to conduct these activities on its behalf, the permittee shall obtain (and, upon request, Sarasota County or the other Permittee shall make available) the necessary annual report information from them.</p> <p><i>DEP Note: If “0” is reported for the number of outfall inspections conducted and the permittee has one or more high risk facilities, please provide an explanation in Column F for why no inspections were conducted.</i></p>					

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Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity			Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
		Number of Facilities	Number of Inspections	Number of Enforcement Referrals	EPA Toxic Release Inventory (TRI) 2017 and One Stop Permitting database	FDOT Personnel	27 Approved DCPs were screened. 2 potential High-Risk facilities were identified during the screening process. FDOT will inspect these facilities in the next permit cycle.
	Total high risk facilities	0	0	0			
	New high risk facilities added to the inventory during the current reporting period	0	0	0			
	Operating municipal landfills	0	0	0			
	Hazardous waste treatment, storage, disposal and recovery (HWTSDR) facilities	0	0	0			
	EPCRA Title III, Section 313 facilities (that are not landfills or HWTSDR facilities)	0	0	0			
	Facilities determined as high risk by the permittee through the proactive inspections as per Part III.A.7.c	0	0	0			
	Other facilities determined as high risk by the permittee (that are <u>not</u> facilities identified through the proactive inspections)	2	0	0			
Part III.A.8.b	Industrial and High-Risk Runoff — Monitoring for High Risk Industries						
	{Not Applicable to FDOT}						
Part III.A.9.a	Construction Site Runoff — Site Planning and Non-Structural and Structural Best Management Practices						
	Employ FDOT Drainage Connection Permit (DCP) conditions that include the use of stormwater, erosion, and sedimentation control BMPs during construction to reduce pollutants to the MS4 and receiving waters. Report the number of permits issued.						
	Number of DCPs/Special Permits issued			14	FDOT One Stop Permitting Database	FDOT Personnel	
Part III.A.9.b	Construction Site Runoff — Inspection and Enforcement						
	<p>As an attachment to the Year 1 Annual Report, the permittee shall submit a written plan that details the standard operating procedures for implementation of the stormwater, erosion and sedimentation inspection program for construction sites discharging stormwater to the MS4. The permittee shall implement the plan for inspecting construction sites <u>immediately upon written approval by the Department</u>. Prior to Department approval, the permittee shall continue to perform inspections in accordance with its previously developed construction site inspection procedures. Report on the inspection program for privately-operated and permittee-operated construction sites, including the number of active construction sites during the reporting year, the number of inspections of active construction sites, the percentage of active construction sites inspected, and the number and type of enforcement actions / referrals taken.</p> <p><u>DEP Note:</u> For FDOT, privately-operated sites are those sites within FDOT's right-of-way that were issued a DCP and the inspections are outfall inspections, not site inspections. In addition, FDOT should re-word the "Corrective action notices issued" reporting item to more accurately reflect its particular initial action taken when violations are found at FDOT-operated construction sites, if necessary.</p> <p><u>DEP Note:</u> If "0" is reported in Column C for the number of inspections conducted, please provide an explanation in Column F of why no inspections were conducted. If the number of inspections reported is equal to or less than the number of active construction sites, or the percentage inspected is less than 100%, please provide an explanation in Column F.</p>						

**SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE**

A.	B.		C.	D.	E.	F.	
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity		Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments	
	DEP Note: Refer to Part III.A.9.b of the permit for what must be included in the construction site inspection program plan. Please provide the title of the attached plan in Column D and the name of the entity who finalized the plan in Column E.						
	PERMITTEE SITES: Active construction sites  PERMITTEE SITES: Inspections of active construction sites for proper stormwater, erosion and sedimentation BMPs  PERMITTEE SITES: Percentage of active construction sites inspected		7	NPDES SWPPP Status spreadsheets and Contract Information Monitoring (CIM)	FDOT Personnel	Construction inspections are conducted based on FDOT D1's Standard Operating Procedures.	
			6				
			85.71				
	PERMITTEE SITES: Corrective action notices issued		2	Deficiency Letter / Warnings Detail Report spreadsheet			2 Verbal Warning (VW) was issued to contractors.
	PRIVATE SITES: Active construction sites issued a DCP PRIVATE SITES: Inspections of active outfall connections to FDOT's MS4  PRIVATE SITES: Percentage of outfall connections to FDOT's MS4 inspected		14	5/21/19 email and data from Curtis Vilt, FDOT Maintenance Manager Permits			
			14				
			100%				
	PRIVATE SITES: Number of enforcement referrals		0	4/11/2019 Email from Francisco Walle, FDOT Field Operations Manager	FDOT Personnel		

**SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE**

A.	B.		C.	D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity		Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	Year 1 ONLY: Attach the written construction site inspection program plan					

**SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE**

A.	B.			C.	D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity			Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
Part III.A.9.c	<b>Construction Site Runoff — Site Operator Training</b>						
	<p>During Year 1 of the permit, develop and implement a written plan for stormwater training / outreach for construction site plan reviewers, site inspectors and site operators. Provide training for permittee personnel (employed by or under contract with the permittee) involved in the site plan review, inspection or construction of stormwater management, erosion, and sedimentation controls. Also provide training for private construction site operators that perform work for the permittee. All permittee inspectors (employed by or under contract with the permittee) of construction sites shall be certified through the Florida Stormwater, Erosion and Sedimentation Control Inspector Training program, or an equivalent program approved by the Department. Refresher training shall be provided annually. Report the type of training activities, the number of inspectors, site plan reviewers and site operators trained (both in-house and outside training), and the number of private construction site operators trained by the permittee.</p> <p><i>DEP Note: If "0" is reported for any of these reporting items, please include in Column F an explanation of why training was not provided to / obtained by the permittee's staff and private construction site operators during the applicable reporting year.</i></p> <p><i>DEP Note: The permittee should report only the number of staff and private construction site operators trained / certified during the applicable reporting year, and then note in Column F the number of staff who were previously trained / certified. Private site operator training can include pre-construction meetings.</i></p>						
		<b>Certification Training</b>	<b>Initial Training (non-certification)</b>	<b>Refresher Training</b>			
	<b>Permittee construction site inspectors / site plan reviewers and site operators training</b>	0	0	13			
	<b>Private construction site operators</b>	0	0	31	(1) 2/25/19 email Steven Kelly, FDOT Maintenance Environmental Specialist; (2) Pre-construction Sign-in Sheets	FDOT Personnel and Contractors	FDOT continues to promote staff and contractor construction training for erosion and sediment controls. FDOT District One provides Sediment and Erosion Control Training as needed, which is typically once every 2 years. There was no FDEP Sediment and Erosion Control Training in the reporting period. There were 44 personnel trained at FDOT pre-construction meetings.

## SECTION VIII. EVALUATION OF THE STORMWATER MANAGEMENT PROGRAM (SWMP)

	Permit Citation/ SWMP Element	SWMP EVALUATION
A.	<b>Part II.A.1 Structural control inspection and maintenance</b>	Strengths: FDOT District One has a comprehensive inspection and maintenance program for stormwater treatment and conveyance structures. FDOT District One implements a routine stormwater treatment facility inspection program, consistent with WMD ERP inspection criteria. Stormwater conveyance structures are inspected and maintained consistent with the Department's Maintenance Rating Program (MRP) as detailed in the approved 2012 FDOT Statewide Stormwater Management Plan. FDOT District One's inspection and maintenance program is designed to be proactive at identifying and correcting deficiencies to ensure treatment and conveyance systems continue to function as designed and permitted in order to reduce pollutant loading to waters of the state.
		Weaknesses: None noted at this time.
		SWMP Revisions to address deficiencies: None noted at this time.
	<b>Part II.A.2 Significant redevelopment</b>	Strengths: FDOT District One continues to implement Chapter 14-86 FAC to ensure off-site facilities connecting to FDOT's right-of-way through Drainage Connection Permits (DCPs) meet existing water quality standards.
		Weaknesses: None noted at this time.
		SWMP Revisions to address deficiencies: None noted at this time.
	<b>Part II.A.3 Roadways</b>	Strengths: FDOT District One maintains an active roadway management program. This program includes: litter pick-up, Adopt-A-Highway, street sweeping and annual inspections of its maintenance yards. The roadway management program ensures litter and potential pollutants are removed from the MS4 minimizing impacts to waters of the state.
		Weaknesses: None noted at this time.
		SWMP Revisions to address deficiencies: None noted at this time.
	<b>Part II.A.4 Flood control</b>	Strengths: FDOT District One does not construct flood control or stormwater retrofit projects. FDOT District One continues to adhere to state water quality and attenuation criteria for new roadway and road widening projects based on ERP requirements.
		Weaknesses: None noted at this time.
		SWMP Revisions to address deficiencies: None noted at this time.
	<b>Part II.A.5 Waste TSD Facilities</b>	Strengths: There are no applicable FDOT facilities in Sarasota County which meet the criteria listed. Currently, FDOT does not temporarily stockpile street sweeping material and/or yard waste at its maintenance yards.
		Weaknesses: None noted at this time.
		SWMP Revisions to address deficiencies: None noted at this time.
	<b>Part II.A.6 Pesticide, herbicide, fertilizer application</b>	Strengths: FDOT District One requires personnel to be knowledgeable and able to implement a safe and effective chemical weed and grass control program. FDOT requires proper certification and licensing from Florida Department of Agriculture and Consumer Services (FDACS) for all personnel and contractors applying pesticides or herbicides on FDOT property or rights-of-way. It is FDOT's intention to reduce the amount of fertilizer used. FDOT required all necessary FDOT personnel and contractors to complete the FDOT Green Industry BMP Program by January 2014, pursuant to the permit and the approved 2012 Statewide Stormwater Management Plan.
		Weaknesses: None noted at this time.
		SWMP Revisions to address deficiencies: None noted at this time.

**SECTION VIII. EVALUATION OF THE STORMWATER MANAGEMENT PROGRAM (SWMP)**

	<b>Part II.A.7 Illicit Discharge Detection and Elimination</b>	Strengths: FDOT District One implements its Maintenance Rating Program (MRP) / (Maintenance Management System) MMS program, which provides significant coverage of the FDOT MS4 for inspection and maintenance. As such, the fundamental component of a proactive illicit discharge program, that is, inspectors visiting all areas of the MS4, is achieved through the MRP/MMS program. FDOT staff are trained annually regarding illicit discharges and connections, the proper reporting procedure and spill prevention and response. At a minimum, one trained FDOT field staff is in the field each day to be observant for illicit discharges and/or spills.
		Weaknesses: None noted at this time
		SWMP Revisions to address deficiencies: None noted at this time
	<b>Part II.A.8 High Risk Industry Runoff</b>	Strengths: FDOT District One screens all approved Drainage Connection Permits (DCP) against the most recent EPA Toxic Release Inventory (TRI). Any facility that has an approved DCP and also listed on EPA's TRI list is added to FDOT's high risk inventory and is then inspected for any potential illicit discharges or connections. In addition, non-high risk facilities found to be discharging non-stormwater to FDOT District One's MS4 are also added to the high risk inventory and will be inspected in subsequent permit years.
		Weaknesses: None noted at this time.
		SWMP Revisions to address deficiencies: None noted at this time.
	<b>Part II.A.9 Construction Site Runoff</b>	Strengths: FDOT has a standard operating procedure in place to ensure that FDOT construction sites are being inspected on a routine basis. All FDOT construction projects that require NPDES CGP coverage will be prioritized and the inspection frequency will be associated with its priority level. The intent of this procedure is to ensure that construction activities are not negatively impacting adjacent properties, receiving waters or sensitive areas. The drainage connection permit requires that all construction projects draining to the Department's MS4 meet water quality treatment criteria. FDOT inspects the proposed outfall / drainage connection during construction. Any observed water quality violations will be reported to the appropriate agency or local municipality.
		Weaknesses: None noted at this time.
		SWMP Revisions to address deficiencies: None noted at this time.

**SECTION IX. CHANGES TO THE STORMWATER MANAGEMENT PROGRAM (SWMP) ACTIVITIES (Not Applicable In Year 4)**

<b>A.</b>	<b>Permit Citation/ SWMP Element</b>	<b>Proposed Changes to the Stormwater Management Program Activities Established as Specific Requirements Under Part III.A of the Permit (Including the Rationale for the Change) — REQUIRES DEP APPROVAL PRIOR TO CHANGE IF PROPOSING TO REPLACE OR DELETE AN ACTIVITY.</b> <i>DEP Note: There may be changes deemed necessary after developing / reviewing your plans and SOPs as per Part III.A of the permit, after completing your SWMP evaluation as per Part VI.B.2 of the permit, or due to a TMDL / BMAP as per Part VIII.B of the permit.</i>
		None.
<b>B.</b>	<b>Permit Citation/ SWMP Element</b>	<b>Changes to the Stormwater Management Program Activities NOT Established as Specific Requirements Under Part III.A of the Permit (Including the Rationale for the Change)</b> <i>DEP Note: There may be changes deemed necessary after developing / reviewing your plans and SOPs as per Part III.A of the permit, after completing your SWMP evaluation as per Part VI.B.2 of the permit, or due to a TMDL / BMAP as per Part VIII.B of the permit.</i>
		None.



## CHECKLIST A: ATTACHMENTS TO BE SUBMITTED WITH THE ANNUAL REPORTS

Below is a list of items required by the permit that may need to be attached to the annual report. Please check the appropriate box to indicate whether the item is attached or is not applicable for the current reporting period. Please provide the number and the title of the attachments in the blanks provided.

Attached	N/A	Rule / Permit Citation	Required Attachment	Attachment Number	Attachment Title
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Part II.F	<b>EACH ANNUAL REPORT:</b> If program resources have decreased from the previous year, a discussion of the impacts on the implementation of the SWMP.		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Part III.A.1	<b>EACH ANNUAL REPORT:</b> An explanation of why the minimum inspection frequency in Table II.A.1.a or in a revised/approved FDOT SSWMP, was not met, if applicable.		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Part III.A.4	<b>EACH ANNUAL REPORT:</b> A list of the flood control projects that did <u>not</u> include stormwater treatment and an explanation for each of why it did not, if applicable.		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part V.B.9	<b>EACH ANNUAL REPORT:</b> Reporting and assessment of monitoring results. <b>[Also addressed in Section III of the Annual Report Form]</b>	1	Supplement 1 – Monitoring Program Analysis
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part VI.B.2	<b>EACH ANNUAL REPORT:</b> An evaluation of the effectiveness of the SWMP in reducing pollutant loads discharged from the MS4 that, <u>at a minimum</u> , must include responses to the questions listed in the permit.		See Section VIII of the annual report form
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Part VIII.B.3.e	<b>EACH ANNUAL REPORT:</b> A status report on the implementation of the requirements in this section of the permit and on the estimated load reductions that have occurred for the pollutant(s) of concern.		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Part VIII.B.4.f	<b>EACH ANNUAL REPORT after approval of the BPCP:</b> The status of the implementation of the Bacterial Pollution Control Plan (BPCP).		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Part III.A.1	<b>YEAR 1:</b> An inventory of all known major outfalls and a map depicting the location of the major outfalls (hard copy or CD-ROM).		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Part III.A.3	<b>YEAR 1:</b> If have curbs and gutters but no street sweeping program, an explanation of why no street sweeping program and the alternate BMPs used or planned.		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Part III.A.7.c	<b>YEAR 1:</b> A proactive illicit discharge / connection / dumping inspection program plan.		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Part III.A.9.b	<b>YEAR 1:</b> A construction site inspection program plan. <b>[For approval by DEP]</b>		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Part V.A.2	<b>YEAR 3:</b> Estimates of annual pollutant loadings and EMCs, and a table comparing the current calculated loadings with those from the previous two Year 3 ARs.		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Part V.A.3	<b>YEAR 4:</b> If the total annual pollutant loadings have not decreased over the past two permit cycles, revisions to the SWMP, as appropriate.		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Part V.B.3	<b>YEAR 4:</b> The monitoring plan (with revisions, if applicable).		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Part VII.C	<b>YEAR 4:</b> An application to renew the permit.		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Part VIII.B.3.d	<b>YEAR 4:</b> A TMDL Implementation Plan / Supplemental SWMP.		

## CHECKLIST B: THE REQUIRED ANNUAL REVIEWS OF WRITTEN STANDARD OPERATING PROCEDURES (SOPs) & PLANS

The permit requires annual review, and revision if needed, of written Standard Operating Procedures (SOPs) and plans (e.g., public education and outreach, training, inspections). Please indicate your review status below. **If you have made revisions that need DEP approval, you must complete Section VIII.A of the annual report.**

Did not complete review of existing SOP / Plan	Developed <u>new</u> written SOP / Plan	Reviewed & <u>no revision needed</u> to existing SOP / Plan	Reviewed & <u>revised</u> existing SOP / Plan	Permit Citation	Description of Required SOPs / Plans
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.1	SOP and/or schedule of inspections and maintenance activities of the structural controls and roadway stormwater collection system.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.3	SOP for the litter control program.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.3	SOP for the street sweeping program.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.3	SOP for inspections of equipment yards and maintenance shops that support road maintenance activities.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.5	SOP for inspections of waste treatment, storage, and disposal facilities not covered by an NPDES stormwater permit.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Part III.A.7.c</b>	<b>Plan for proactive illicit discharge / connections / dumping inspections.*</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.7.c	SOP for reactive illicit discharge / connections / dumping investigations.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.7.c	Plan for illicit discharge training.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.7.d	SOP for spill prevention and response efforts.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.7.d	Plan for spill prevention and response training.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.8	SOP for inspections of high risk industrial facility outfalls.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Part III.A.9.b</b>	<b>Plan for inspections of construction sites.*</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.9.c	Plan for stormwater, erosion and sedimentation BMPs training.

\* Revisions to these plans require DEP approval – please complete Section VIII.A of the annual report.

**REMINDER LIST OF THE TMDL / BMAP REPORTS TO BE SUBMITTED SEPARATELY FROM AN ANNUAL REPORT**

<b>Rule / Permit Citation</b>	<b>Report Title</b>	<b>Due Date</b>
Part VIII.B.3.a	<b>6 MONTHS from effective date of permit:</b> TMDL Prioritization Report.	6/1/2013
Part VIII.B.3.b	<b>12 MONTHS from effective date of permit:</b> TMDL Monitoring and Assessment Plan.	11/4/2015
Part VIII.B.3.c	<b>6 MONTHS from receiving analyses from the lab:</b> TMDL Monitoring Report.	7/30/2017
Part VIII.B.4	<b>30 MONTHS from start date per TMDL Prioritization Report:</b> A Bacterial Pollution Control Plan (BPCP).	2/12/2015

## **BMAP Reporting**

MS4 permittees are NOT required to submit the annual report required by any BMAP that applies to them since the NPDES Stormwater Staff can obtain them from the department's Watershed Planning and Coordination staff. However, to assure that the stormwater staff are aware of which BMAPs apply to the MS4 permittees and when the latest BMAP annual report was submitted, please complete the information below, if applicable:

<b>Rule/Permit Citation</b>	<b>BMAP Title</b>	<b>Date BMAP Annual Report Submitted to DEP</b>
Part VIII.B.2	There are no active BMAPs in Sarasota County at this time.	NA
Part VIII.B.2		
Part VIII.B.2		
Part VIII.B.2		

**END OF REVISED TAILORED MS4 AR FORM – CYCLE 3 PERMIT**

**LIST OF SUPPLEMENTS**

- 1 Analysis of the Monitoring Program (Part V.B.)

**SUPPLEMENT 1**

**Analysis of the Monitoring Program  
(Permit Section III.A and B)**

- **Analysis of the Monitoring Program Summary Table**
- **FDOT District One Sarasota County Water Quality Monitoring Program Summary**
- **FDOT Sarasota County Total Pollutant Loading Summary**
- **Water Quality Analysis – Sarasota County NPDES MS4 2018 Annual Report Monitoring Data Summaries**

***Analysis of the Monitoring Program***  
***(Permit Section III.A and B)***

<b>Item</b>	<b>Documentation/Record</b>
Monitoring Program	FDOT District One Sarasota County Water Quality Monitoring Program Summary; Sarasota County Total Pollutant Loading Summary
Water Quality Analysis	Sarasota County NPDES MS4 2018 Annual Report Monitoring Data Summaries

## FDOT District One Sarasota County Water Quality Monitoring Program Summary

FDOT District One's monitoring plan is carried out through an inter-local agreement with Sarasota County. The County's monitoring program includes analysis of seventeen (17) tributaries and six (6) coastal bays. The health of the bays is being used as the overall indicator of the success of the water quality and stormwater management programs being implemented throughout the County by the Sarasota County MS4 co-permittees, including FDOT. The FDOT outfalls in Sarasota County and the correlating coastal bay segments are listed below:

FDOT District One Major Outfalls in Sarasota County	Sarasota County Bay Segments	Bay Condition Index	Total Nitrogen Index	Total Phosphorus Index	Chlorophyll a Index
OF17040-3508-01	Sarasota Bay	Caution	Excellent	Excellent	Caution
OF-SA-02-01826					
OF-SA-23-01104					
Sarasota5					
OF-SA-23-01092					
OF17020-3572-02	Roberts Bay	Caution	Good	Excellent	Caution
Sarasota1					
OF17040-3516-04					
OF17040-3518-01					
OF17040-3518-02					
OF17070-3525-02	Little Sarasota Bay	Caution	Good	Excellent	Caution
OF17070-3525-05					
OF-SC-24-01734	Blackburn Bay	Caution	Good	Excellent	Caution
Sarasota2	Dona-Roberts Bay	Caution	Caution	Excellent	Caution
Sarasota3					
Sarasota4					
OF17010-3533-01					
OF17010-3533-02					
OF17010-3528-01	Upper Lemon Bay	Caution	Caution	Excellent	Caution
OF17010-3528-02					
OF17050-3511-01					
OF17050-3511-04					
OF17050-3511-05					
OF17050-3505-06					

FDOT uses the pollutant load analysis of the major outfalls in FDOT's MS4 as its primary assessment tool for evaluating effectiveness. The pollutant load analysis also takes into account the various structural and non-structural best management practices (stormwater treatment facilities, fertilizer reduction, street sweeping, education, and illicit discharge programs) being used by FDOT in each outfall drainage area. The estimated pollutant load reductions from FDOT District One's MS4 to receiving waters in Sarasota County in Cycle 4 is summarized below.

**Total Nitrogen:** The BMP pollutant load reduction is 993 lb/yr; resulting in an overall 28% reduction.

**Total Phosphorus:** The BMP pollutant load reduction is 254 lb/yr; resulting in an overall 54% reduction.

**Biological Organic Demand:** The BMP pollutant load reduction is 4990 lb/yr; resulting in an overall 41% reduction.

**Total Suspended Solids:** The BMP pollutant load reduction is 49,296 lb/yr; resulting in an overall 60% reduction.

**Total Copper:** The BMP pollutant load reduction is 24 lb/yr; resulting in an overall 45% reduction.

**Total Zinc:** The BMP pollutant load reduction is 144 lb/yr; resulting in an overall 59% reduction.



Sarasota County Total Estimated Pollutant Loading to Water Bodies									
Outfall ID	State Road	County	Receiving Waterbody	TN (lb/yr)	TP (lb/yr)	BOD <sub>5</sub> (lb/yr)	TSS (lb/yr)	Total Cu (lb/yr)	Total Zn (lb/yr)
OF17050-3511-01	SR 776	SARASOTA	Wetlands to Godfrey Creek	151.8	7.3	250.9	504.4	0.8	1.3
OF17050-3511-04	SR 776	SARASOTA	Canal to Forked Creek	104.0	4.5	174.2	363.7	0.7	1.1
OF17050-3511-05	SR 776	SARASOTA	Forked Creek	70.3	3.7	145.0	299.0	0.6	0.9
OF17050-3505-06	SR 776	SARASOTA	Alligator Creek	100.5	5.6	205.5	426.2	0.8	1.3
OF17010-3528-01	SR 45	SARASOTA	Alligator Creek	191.8	10.9	404.2	838.6	1.6	2.6
OF17010-3528-02	SR 45	SARASOTA	Alligator Creek	231.7	13.1	508.0	1,038.5	1.9	3.1
OF17010-3533-01	SR 45	SARASOTA	Intracoastal Waterway	110.0	13.5	393.1	2,725.7	1.9	8.4
OF17010-3533-02	SR 45	SARASOTA	Intracoastal Waterway	118.0	16.9	555.2	3,474.2	0.8	7.6
Sarasota3	SR 45A	SARASOTA	Canal	50.7	6.2	202.1	721.5	1.3	2.4
Sarasota2	SR 45A	SARASOTA	Hatchett Creek	111.2	14.0	421.4	2,835.3	1.7	8.3
Sarasota4	SR 45	SARASOTA	Sarasota Bay	84.4	11.1	407.0	2,510.5	0.5	5.8
OF-SC-24-01734	SR 45	SARASOTA	Blackburn Bay	250.6	32.4	825.0	5,850.3	4.8	19.3
OF17020-3572-02	SR 45	SARASOTA	Phillippi Bayou	73.2	6.8	250.8	1,188.3	1.6	5.9
OF17070-3525-02	SR 72	SARASOTA	Canal to Little Sarasota Bay	195.6	12.0	402.3	822.1	1.6	2.5
OF17070-3525-05	SR 72	SARASOTA	Lake Clark	120.6	7.4	263.8	545.4	1.1	1.7
Sarasota1	SR 758	SARASOTA	County Drainage System	193.8	22.1	706.5	4,815.8	3.4	14.8
Sarasota5	SR 789	SARASOTA	Sarasota Bay	32.7	3.8	112.7	792.6	0.6	2.6
OF-SA-02-01826	SR 45	SARASOTA	Hudson Bayou	46.7	5.0	160.8	1,139.4	0.9	3.8
OF-SA-23-01104	SR 45	SARASOTA	Sarasota Bay	6.9	0.7	23.4	167.6	0.1	0.6
OF-SA-23-01092	SR 45	SARASOTA	Sarasota Bay	22.0	2.4	79.6	555.2	0.4	1.7
OF17040-3508-01	SR 780	SARASOTA	Canal	40.8	2.6	89.5	180.1	0.3	0.6
OF17040-3516-04	SR 780	SARASOTA	Philippi Creek Trib.	54.9	3.2	116.4	246.0	0.5	0.8
OF17040-3518-01	SR 780	SARASOTA	Wetland to Philippi Creek Trib.	67.9	3.8	137.9	289.5	0.6	0.9
OF17040-3518-02	SR 780	SARASOTA	Canal	107.4	6.3	237.7	495.6	1.0	1.6
<b>Totals:</b>				<b>2,537.4</b>	<b>215.0</b>	<b>7,073.1</b>	<b>32,825.6</b>	<b>29.4</b>	<b>99.4</b>

Wet Season Total Pollutant Load (June - Sept., 60%)					
<b>1,522.5</b>	<b>129.0</b>	<b>4,243.9</b>	<b>19,695.4</b>	<b>17.6</b>	<b>59.6</b>

Dry Season Total Pollutant Load (Oct. - May, 40%)					
<b>1,015.0</b>	<b>86.0</b>	<b>2,829.3</b>	<b>13,130.3</b>	<b>11.7</b>	<b>39.8</b>

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# APPENDIX B

## SECTION III: MONITORING SUMMARY

1. Ambient Water Quality of Bays
2. Ambient Water Quality of Watersheds
3. Biological Monitoring – Oysters
4. Biological Monitoring – Seagrass
5. Biological Monitoring – Scallops
6. Rainfall Monitoring

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1. Ambient Water Quality of Bays

## Ambient Water Quality of Bays

### Reporting and Assessment of Monitoring Results

Healthy bays have intrinsic value to the Sarasota's economy, to quality of life and to marine life. As a monitoring tool, bay water quality integrates the cumulative effects of watershed management. Stormwater management, along with wastewater, septic systems and air pollution influence the status and trends of bay water quality.

#### Summary of Monitoring Data from 2018 Reporting Year

In 2018, ambient monthly water quality monitoring was completed for all bays. The Sarasota Water Atlas website presents the results as bay conditions, water quality trends and raw data that is available for downloading by interested persons.

- Bay Conditions: [www.sarasota.wateratlas.usf.edu/bay-conditions](http://www.sarasota.wateratlas.usf.edu/bay-conditions)
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- Data Download: [www.sarasota.wateratlas.usf.edu/datadownload](http://www.sarasota.wateratlas.usf.edu/datadownload)

#### Long Term Assessment

The Bay Conditions Index gives a quick assessment of the water quality in each bay during a year by evaluating three important indicators of nutrient pollution: chlorophyll *a*, nitrogen and phosphorus. The rating system was developed by a team of local water professionals and incorporates Florida's numeric nutrient standards. Each bay receives either a pass or caution rating. A bay receives a pass rating only if all three indicators are below the thresholds; otherwise, the bay receives a caution rating.

In 2018, all 6 bays received a caution rating because they were above thresholds for chlorophyll and/or nitrogen. All bays were below thresholds for phosphorus. Table 1 below provides a color-coded depiction of Bay Conditions from 2010 to 2018.

Bay Conditions	Sarasota Bay	Roberts Bay	Little Sarasota Bay	Blackburn Bay	Dona / Roberts Bay	Lemon Bay
2010	Pass	Caution	Caution	Pass	Caution	Caution
2011	Pass	Pass	Pass	Pass	Caution	Pass
2012	Pass	Pass	Pass	Pass	Caution	Caution
2013	Pass	Pass	Pass	Pass	Caution	Caution
2014	Pass	Pass	Pass	Pass	Caution	Caution
2015	Pass	Caution	Caution	Pass	Caution	Caution
2016	Caution	Caution	Caution	Caution	Caution	Caution
2017	Pass	Caution	Caution	Pass	Caution	Caution
2018	Caution	Caution	Caution	Caution	Caution	Caution
Chlorophyll	Sarasota Bay	Roberts Bay	Little Sarasota Bay	Blackburn Bay	Dona / Roberts Bay	Lemon Bay
2010	Pass	Caution	Caution	Pass	Caution	Caution
2011	Pass	Pass	Pass	Pass	Caution	Pass
2012	Pass	Pass	Pass	Pass	Pass	Caution
2013	Pass	Pass	Pass	Pass	Caution	Caution
2014	Pass	Pass	Pass	Pass	Caution	Pass
2015	Pass	Caution	Caution	Pass	Caution	Caution
2016	Caution	Caution	Caution	Caution	Caution	Caution
2017	Pass	Caution	Caution	Pass	Caution	Caution
2018	Caution	Caution	Caution	Caution	Caution	Caution
Nitrogen	Sarasota Bay	Roberts Bay	Little Sarasota Bay	Blackburn Bay	Dona / Roberts Bay	Lemon Bay
2010	Pass	Pass	Pass	Pass	Caution	Caution
2011	Pass	Pass	Pass	Pass	Caution	Pass
2012	Pass	Pass	Pass	Pass	Caution	Caution
2013	Pass	Pass	Pass	Pass	Caution	Caution
2014	Pass	Pass	Pass	Pass	Caution	Caution
2015	Pass	Pass	Pass	Pass	Caution	Caution
2016	Pass	Caution	Pass	Pass	Caution	Caution
2017	Pass	Pass	Pass	Pass	Caution	Caution
2018	Pass	Pass	Pass	Pass	Caution	Caution
Phosphorus	Sarasota Bay	Roberts Bay	Little Sarasota Bay	Blackburn Bay	Dona / Roberts Bay	Lemon Bay
2010	Pass	Pass	Pass	Pass	Pass	Pass
2011	Pass	Pass	Pass	Pass	Pass	Pass
2012	Pass	Pass	Pass	Pass	Pass	Pass
2013	Pass	Pass	Pass	Pass	Pass	Pass
2014	Pass	Pass	Pass	Pass	Pass	Pass
2015	Pass	Pass	Pass	Pass	Pass	Pass
2016	Pass	Pass	Pass	Pass	Pass	Pass
2017	Pass	Pass	Pass	Pass	Pass	Pass
2018	Pass	Pass	Pass	Pass	Pass	Pass

Table 1. Bay Conditions 2010 to 2018.

The Bay Conditions pages also present results for other measures of bay health including dissolved oxygen, color, biochemical oxygen demand, light attenuation, ammonia, total Kjeldahl nitrogen, nitrate/nitrite, pH, salinity, temperature and turbidity. Other important qualities that are depicted include, rainfall, seagrass, impervious surface in watersheds, and land use.

Statistically significant water quality trends are depicted on the Sarasota Water Atlas for each monitoring station over a 10 year period and period of record for BOD, chlorophyll, color, conductance, DO, fecal coliform, total nitrogen, ammonia, nitrate/nitrite, total phosphorous, ortho-phosphate, pH, temperature, TKN, TSS and turbidity.

A color-coded presentation of 10-year trends for total nitrogen, chlorophyll and total phosphorus is presented below. Degrading trends (in red) were found for nitrogen and chlorophyll especially in middle and southern bays.

Waterbody	Station ID	Nitrogen	Chlorophyll	Phosphorus
Sarasota Bay	US-1	No Trend	No Trend	
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	US-3	No Trend	No Trend	
	US-4	No Trend	No Trend	
	US-5	No Trend	No Trend	
	10-1	No Trend	No Trend	
	10-2	No Trend	Increasing	
	10-3	No Trend	No Trend	
	10-4	No Trend	Increasing	
	10-5	No Trend	Increasing	
	11-1	No Trend	No Trend	
	11-2	No Trend	No Trend	
	11-3	No Trend	No Trend	No Trend
	11-4	Increasing	Increasing	
	11-5	No Trend	Increasing	No Trend
Roberts Bay	13-1	Increasing	No Trend	
	13-2	No Trend	Increasing	
	13-3	No Trend	No Trend	
	13-4	Increasing	No Trend	
	13-5	Increasing	No Trend	
Little Sarasota Bay	14-1	Increasing	No Trend	
	14-2	Increasing	No Trend	
	14-3	Increasing	No Trend	
	14-4	Increasing	No Trend	
	14-5	No Trend	No Trend	
Blackburn Bay	16-1	Increasing	No Trend	
	16-2	Increasing	Increasing	
	16-3	Increasing	Increasing	
	16-4	Increasing	Increasing	No Trend
	16-5	No Trend	No Trend	
Dona/Roberts Bays	DR-1	Increasing	Increasing	No Trend
	DR-2	No Trend	Increasing	No Trend
	DR-3	Increasing	Increasing	
	DR-4	Increasing	Increasing	
	DR-5	Increasing	Increasing	No Trend
Lemon Bay	LB-1	Increasing	Increasing	No Trend
	LB-2	Increasing	Increasing	Decreasing
	LB-3	Increasing	No Trend	No Trend
	LB-4	Increasing	No Trend	No Trend
	LB-5	Increasing	No Trend	

Table 2. Bay 10-year water quality trends.

## Relationship of Data to Stormwater Management Plan (SWMP)

The results of ambient water quality monitoring of bays provides a factual foundation for watershed and stormwater decision making. Although significant improvements related to water quality have been accomplished, the data tell us that increasing nutrient pollution remains a challenge. and provides a focus on the middle and southern bays as a higher priority. Bays are strongly influenced by the circulation of water moving in and out of the passes. Areas more distant from passes are less influenced by the Gulf of Mexico and more influenced by flows from the land.

Water quality improvement projects include the Dona Bay project, the Phillippi Creek septic system replacement program, the fertilizer ordinance, the Celery Fields regional stormwater treatment facility, the Briarwood stormwater treatment facility, Environmentally Sensitive Lands protection sites, the Catfish Creek regional stormwater facility and numerous Neighborhood Environmental Stewardship Team (NEST) projects.

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2. Ambient Water Quality of Watersheds



## Ambient Water Quality of Bays

### Reporting and Assessment of Monitoring Results

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2014	Pass	Pass	Pass	Pass	Caution	Caution
2015	Pass	Caution	Caution	Pass	Caution	Caution
2016	Caution	Caution	Caution	Caution	Caution	Caution
2017	Pass	Caution	Caution	Pass	Caution	Caution
2018	Caution	Caution	Caution	Caution	Caution	Caution
Chlorophyll	Sarasota Bay	Roberts Bay	Little Sarasota Bay	Blackburn Bay	Dona / Roberts Bay	Lemon Bay
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2011	Pass	Pass	Pass	Pass	Caution	Pass
2012	Pass	Pass	Pass	Pass	Pass	Caution
2013	Pass	Pass	Pass	Pass	Caution	Caution
2014	Pass	Pass	Pass	Pass	Caution	Pass
2015	Pass	Caution	Caution	Pass	Caution	Caution
2016	Caution	Caution	Caution	Caution	Caution	Caution
2017	Pass	Caution	Caution	Pass	Caution	Caution
2018	Caution	Caution	Caution	Caution	Caution	Caution
Nitrogen	Sarasota Bay	Roberts Bay	Little Sarasota Bay	Blackburn Bay	Dona / Roberts Bay	Lemon Bay
2010	Pass	Pass	Pass	Pass	Caution	Caution
2011	Pass	Pass	Pass	Pass	Caution	Pass
2012	Pass	Pass	Pass	Pass	Caution	Caution
2013	Pass	Pass	Pass	Pass	Caution	Caution
2014	Pass	Pass	Pass	Pass	Caution	Caution
2015	Pass	Pass	Pass	Pass	Caution	Caution
2016	Pass	Caution	Pass	Pass	Caution	Caution
2017	Pass	Pass	Pass	Pass	Caution	Caution
2018	Pass	Pass	Pass	Pass	Caution	Caution
Phosphorus	Sarasota Bay	Roberts Bay	Little Sarasota Bay	Blackburn Bay	Dona / Roberts Bay	Lemon Bay
2010	Pass	Pass	Pass	Pass	Pass	Pass
2011	Pass	Pass	Pass	Pass	Pass	Pass
2012	Pass	Pass	Pass	Pass	Pass	Pass
2013	Pass	Pass	Pass	Pass	Pass	Pass
2014	Pass	Pass	Pass	Pass	Pass	Pass
2015	Pass	Pass	Pass	Pass	Pass	Pass
2016	Pass	Pass	Pass	Pass	Pass	Pass
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	13-4	Increasing	No Trend	
	13-5	Increasing	No Trend	
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	14-5	No Trend	No Trend	
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	16-4	Increasing	Increasing	No Trend
	16-5	No Trend	No Trend	
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	DR-2	No Trend	Increasing	No Trend
	DR-3	Increasing	Increasing	
	DR-4	Increasing	Increasing	
	DR-5	Increasing	Increasing	No Trend
Lemon Bay	LB-1	Increasing	Increasing	No Trend
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3. Biological Monitoring - Oysters

## **2018 Biological Monitoring –**

### **Oyster Monitoring Reporting and Assessment of Monitoring Results**

Oysters have long been recognized as key bio-indicators of the ecological health of marine and estuarine ecosystems. Changes in oyster health can provide an early warning of potential adverse impacts associated with hydrological alterations occurring throughout the watershed.

Monitoring the changes in percent live oyster coverage is a simple, cost-effective tool to document changes and allow watershed managers to minimize impacts.

### **Summary of Monitoring Data from 2018 Reporting Year**

Oyster monitoring was not conducted at all stations in 2018 due to staff concerns of potential health effects of a serious prolonged Red Tide outbreak. The table below contains the 2018 data that was collected. Overall during the collection period, the percent of live oysters were typical of previous years.

#### **Percent Live Oysters by Year**

Excellent (>75%), Good (50-75%), Caution (<50%)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Alligator Creek (AL1)					63	68	61	62	69		43	49	65	81	77	No Data
Alligator Creek (AL2)					78	84	66	69	80		21	49	73	49	47	No Data
Ainger Creek (ANG1)					75	75	46	80	79		75	74	72	80	87	No Data
Ainger Creek (ANG2)					85	72	55	80	72		52	85	73	76	70	No Data
Catfish Creek (CAT1)				76	88	94	70	2	0		0					No Data
Curry Creek (CC1)	0	41	59	59	71	80	68	76	71	61	61	68	45	53	52	80
Curry Creek (CC2)			13	51	74	91	47	59	77	55	21	33	38	35	23	64
Dona Bay (DB1)	22	58	76	64	73	77	67	84	82	74	77	71	79	70	80	86
Forked Creek (FRK1)					64	50	36	48	33		0	84	81	82		No Data
Forked Creek (FRK1A)											44					No Data
Forked Creek (FRK2)					77	79	69	73	85		72	86	85	87	74	No Data
Gottfried Creek (GOT1)					72	75	68	84	84		80	72	86	80	80	No Data
Gottfried Creek (GOT2)					79	70	63	70	76		46	79	75	78	58	No Data

Gottfried Creek (GOT3)					81	55	55	64	60		69	75	55	64	55	No Data
Hudson Bayou (HUD1)				78	75	77	71	79	87		59	85	87	88	86	No Data
Hudson Bayou (HUD2)				54	66	63	67	67	70		68	71	63	70	69	No Data
Lyons Bay (LYB1)	80	79	80	77	63	71	78	74	73	75	68	83	84	77	88	82
North Creek (NC1)				82	76	69	77	77	85		82					84
North Creek (NC2)				0	85	47	59	50	0		0					No Data
North Creek (NC2A)											72					No Data
North Creek (NO1)												86	85	81		No Data
Phillippi Creek (PH1)				56	76	54	77	78	77		72	56	79	85	80	79
Phillippi Creek (PH2)				60	81	75	72	78	80		67	64	83	88	80	71
Phillippi Creek (PH3)				21	84	75	66	70	46		23	68	67	55	48	51
Roberts Bay (RB1)	79	78	73	73	76	79	80	83	89	87	80	86	77	74	86	82
South Creek (SC1)				57	54	62	64	78	80		69	56	67	82	78	61
South Creek (SC2)	0			58	85	78	68	73	80		66	75	62	69	68	68
Shakett Creek (SKC1)	8	79	89	72	86	82	82				86	78	88	83	62	86
Shakett Creek (SKC2)		76	55	56	80	81	81	84	81	78	62	87	65	74	49	91
Shakett Creek (SKC3)			36	37	16											
Shakett Creek (SKC4)					79	87	73	84	83	61	32	55	35	22	10	64

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4. Biological Monitoring - Seagrass



## Biological Monitoring – Sarasota County Seagrass Monitoring Report and Assessment of Monitoring Results

Seagrasses are marine, photosynthetic plants that provide many ecological goods and services to the surrounding area. These habitats are critical nursery and forage areas for many commercial and recreationally important species. However, they are sensitive to reductions in water clarity and water quality because they require abundant light for photosynthesis. The SWFWMD Sarasota Bay Surface Water Improvement and Management Plan established a negative correlation between nitrogen and seagrass biomass in Sarasota Bay (Figure 2; Tomasko et al., 1992). Therefore, seagrass habitats have been highlighted as an indicator species and response variable for nutrient management.

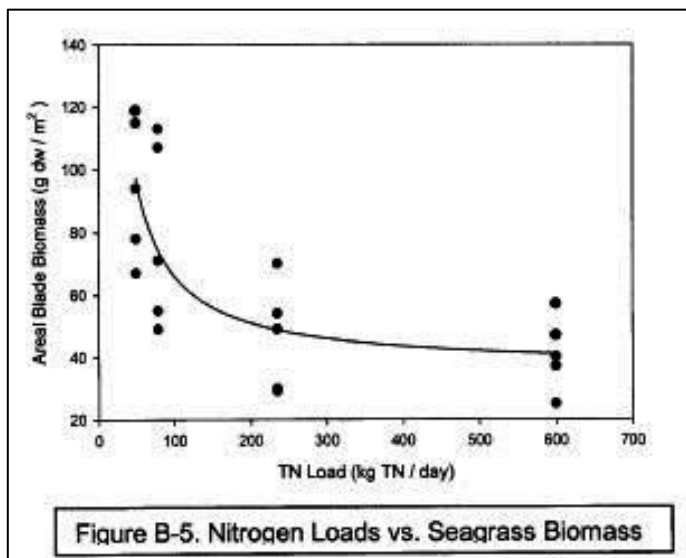


Figure 1. Response of seagrass areal blade biomass (gdw/m<sup>2</sup>) when exposed to elevated nitrogen loads (kg TN/day). Data was collected in Sarasota Bay, Florida (Tomasko et al, 1992).

The Southwest Florida Water Management District (SWFWMD) conducts joint aerial photography and seagrass mapping biannually. The most recent 2018 maps have not been released, however, results from 2016 show an increase in seagrass acreage throughout Sarasota County (Figure 1). Seagrass acreage increased in Sarasota, Roberts and Dona/Roberts Bays and decreased in Little Sarasota, Blackburn and Lemon Bays (Figure 1). This data is for Sarasota County only and does not include the portions of Sarasota and Lemon Bay that extend beyond County borders. Seagrass acreage targets set forth by the Sarasota Bay Estuary Program have been met in Sarasota, Roberts, Little Sarasota and Lemon Bays (Figure 1). However, acreage in Blackburn and Dona/Roberts Bays are slightly under the target threshold (Figure 1). Overall, Sarasota County has far exceeded seagrass acreage targets (Figure 1).

<i>Year</i>	<i>Sarasota County</i>	<i>Sarasota Bay</i>	<i>Roberts Bay</i>	<i>Little Sarasota Bay</i>	<i>Blackburn Bay</i>	<i>Dona Roberts Bay</i>	<i>Lemon Bay</i>
2014	6,598	3,479	321	884	461	99	1,354
2016	6,705	3,719	356	772	415	107	1,0336
Target	4,640	2,022	348	702	447	112	1,009
Target Success	45% Above	84% Above	2% Above	10% Above	7% Below	4% Below	32% Above

Figure 2. SWFWMD 2016 seagrass acreage data for Sarasota County, Florida. Acreage assessed in Tampa, Florida through aerial photography taken during December-February 2016.

### Summary of Sarasota County Monitoring Data from 2018 Reporting Year

Sarasota County's Seagrass Monitoring Program began in 2006 and has played an important role in characterizing the quality of seagrass habitat and overall health of the bays. Annual monitoring informs about the density, diversity, and stability of Sarasota County seagrass meadows and captures growth trends. Healthy seagrass beds tend to be dense, diverse, and have long blades. However, when large amounts of nutrients are present from stormwater runoff algae flourish. Excess drift and epiphytic algae limit light penetration and reduce seagrass health.

During annual winter sampling, Sarasota County surveyed 160 sites. Data regarding species diversity, percent cover, blade length, quantity of drift algae, diversity of drift algae, epiphytic growth accumulation, and many other biotic and abiotic site characteristic were collected. Water quality and Bay health was assessed based on county seagrass surveys, SWFWMD seagrass acreage maps, and county water quality data.

*Thalassia testudinum* and *Syringodium filiforme* are extremely sensitive to salinity fluctuations, while, *Halodule wrightii* is considered a pioneer species and is less sensitive to these shifts. Therefore, a dense *Thalassia sp.* and *Syringodium sp.* meadow indicates tidal flushing and limited nutrient rich stormwater runoff. Below are two examples of how species shift due to the exposure of freshwater and nutrient rich stormwater runoff. The first data set from Sarasota Bay reflects extensive flushing, whereas, the subsequent Dona Bay data echoes the impacts of increased nutrients and freshwater can have on a system.

## Sarasota Bay- Longboat and Lido Key- Big Sarasota Pass and New Pass

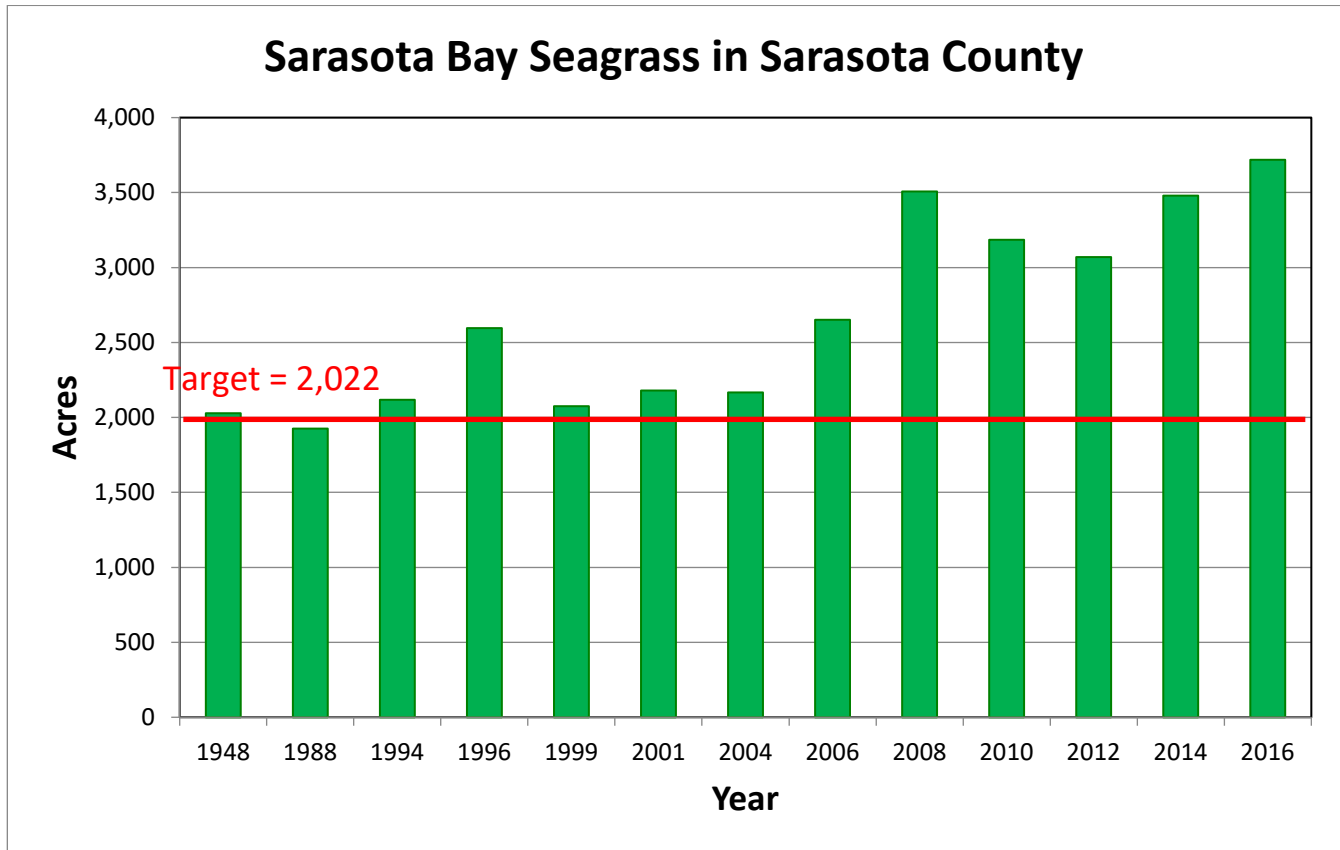


Figure 3. SWFWMD mapping results from 1948-2016 in Sarasota Bay, Florida. The red line indicates the target acreage set forth by Sarasota Bay Estuary Program.

Sarasota County implemented several improvements in stormwater management beginning in 1990 and have continued to highlight it as a priority. The combination of improvements to stormwater management and connectivity to the Gulf of Mexico through New Pass limit nutrient rich, stormwater runoff and allow significant tidal flushing within Sarasota Bay. Therefore, the seagrass meadows have rebounded and well surpassed the target acreage goal (Figure 3). The seagrass meadow is extremely dense and has significant amounts of *Thalassia testudinum*, *Syringodium filiforme*, and *Halodule wrightii* (Figure 4). The high diversity creates a textured mosaic which will attract and support many species.

In response to improvements in nutrient and stormwater management, there is limited drift algae (Figure 6.) despite the moderate density of epiphytes, which may be a response to coastal development, blades of *Syringodium sp.* and *Thalassia sp.* are long (Figure 5,6). Overall, the seagrass habitat in Sarasota Bay is lush, stable, and will provide habitat and foraging grounds for many of commercially and recreationally important species in Sarasota County.

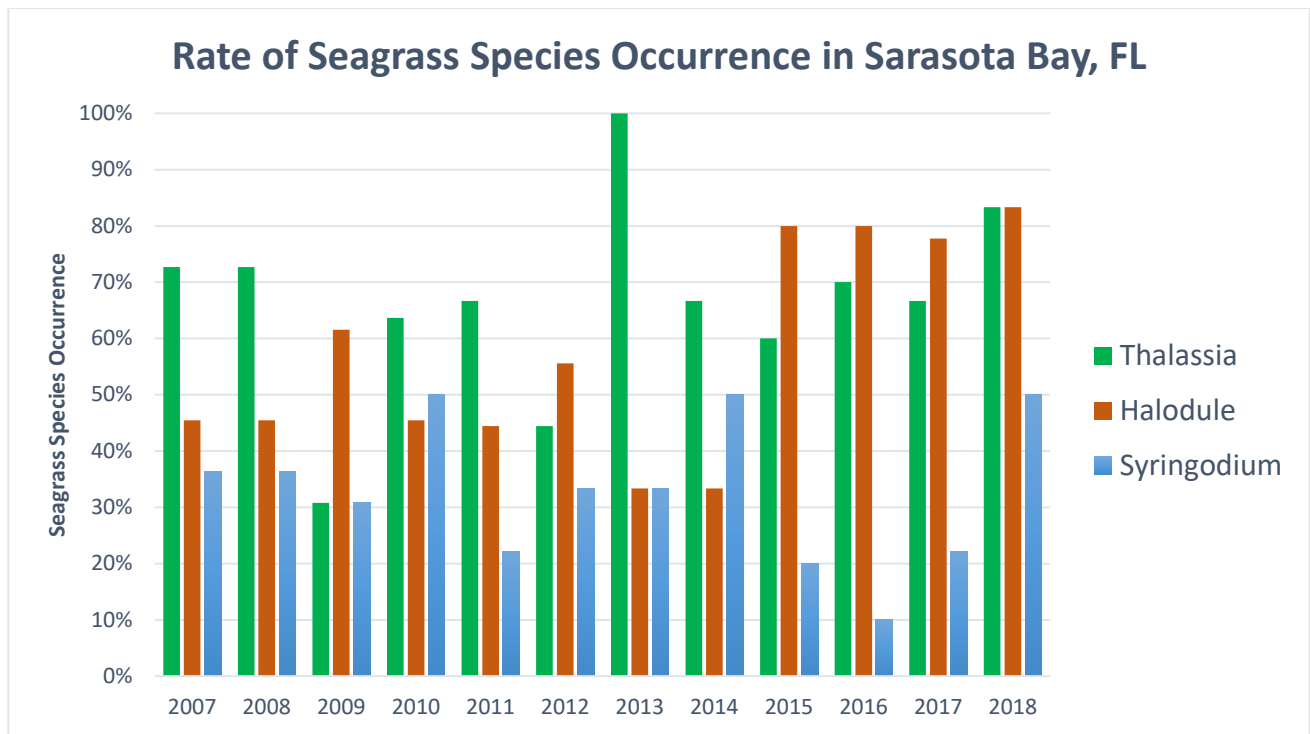


Figure 4. When seagrass was present, this graph displays the rate of three seagrass species (*Thalassia testudinum*, *Halodule wrightii*, and *Syringodium filiforme*) from 2009-2018 in Sarasota Bay, Florida.

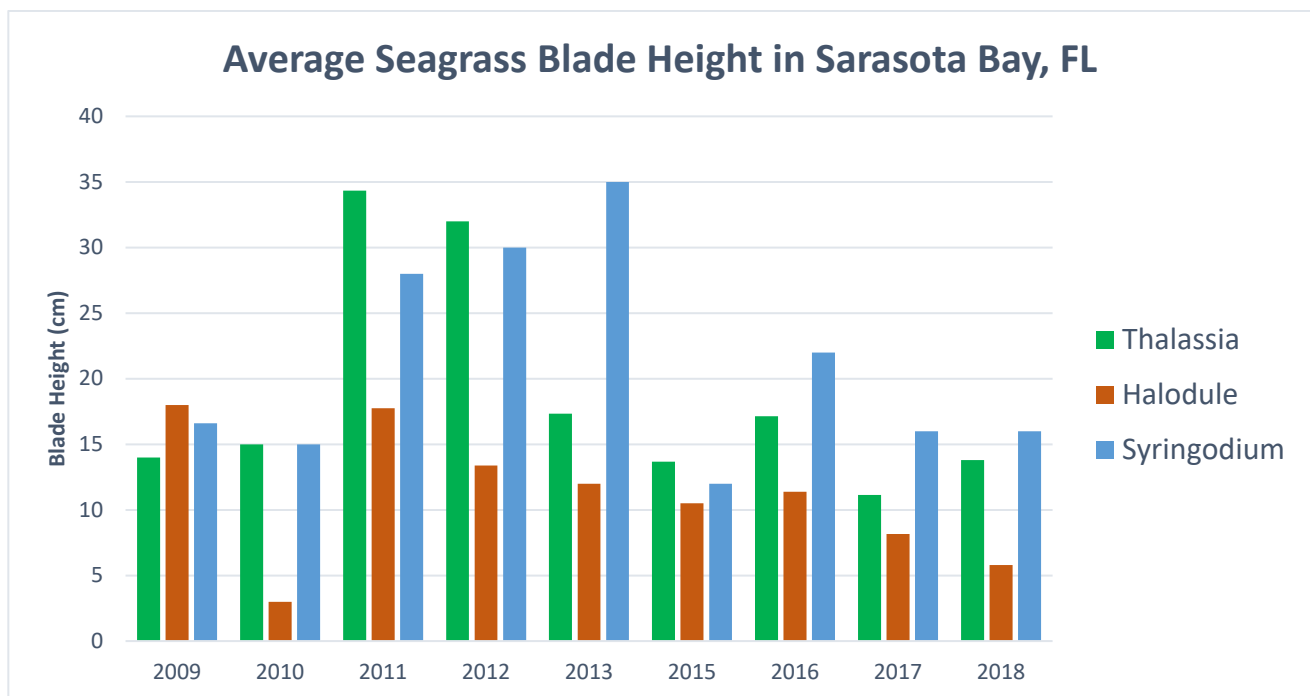


Figure 5. The average blade height in cm of three seagrass species (*Thalassia testudinum*, *Halodule wrightii*, and *Syringodium filiforme*) from 2009-2018 in Sarasota Bay, Florida.

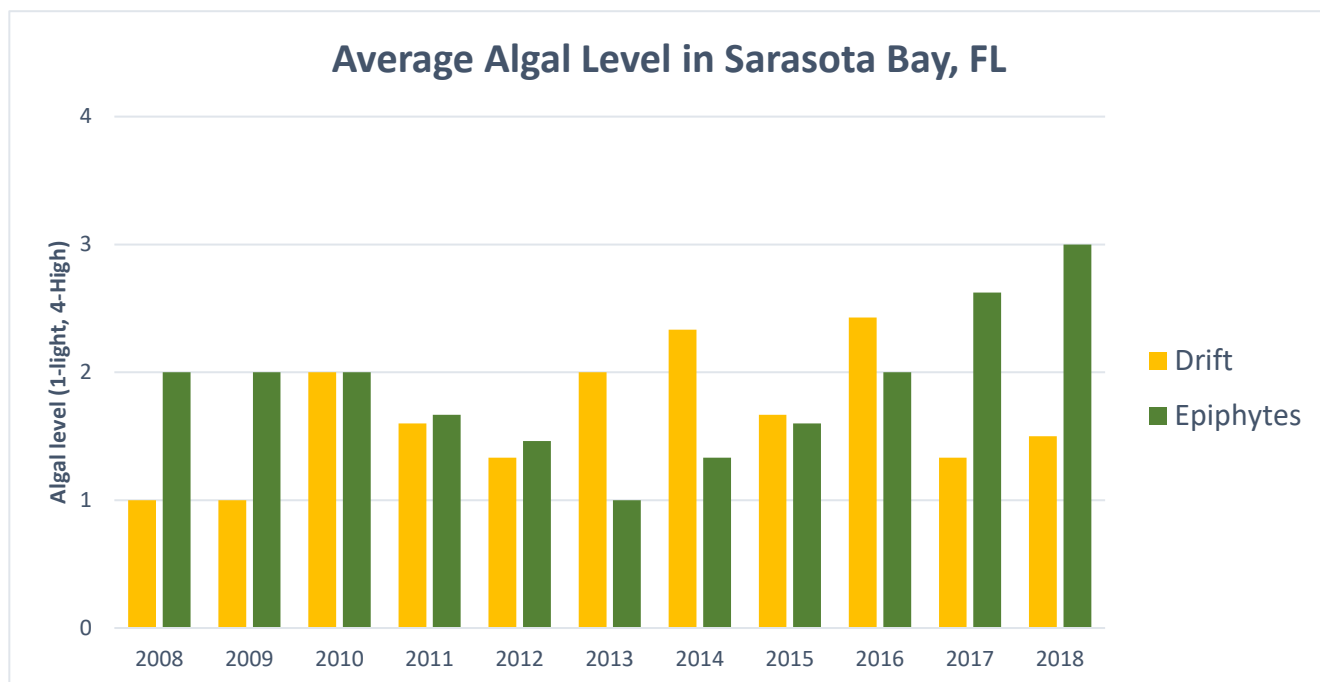


Figure 6. The level of epiphytic and drift algae coverage for Sarasota Bay, Florida from 2008-2018. The levels represent percentage bins (0: totally clean; 1=1-25%; 2: 26-50%; 3: 51-75%; 4: 76-100%).

### Dona Bay-Roberts Bay South-Venice Inlet Cow Pen Slough, Shakett, Fox, Salt and Curry Creeks

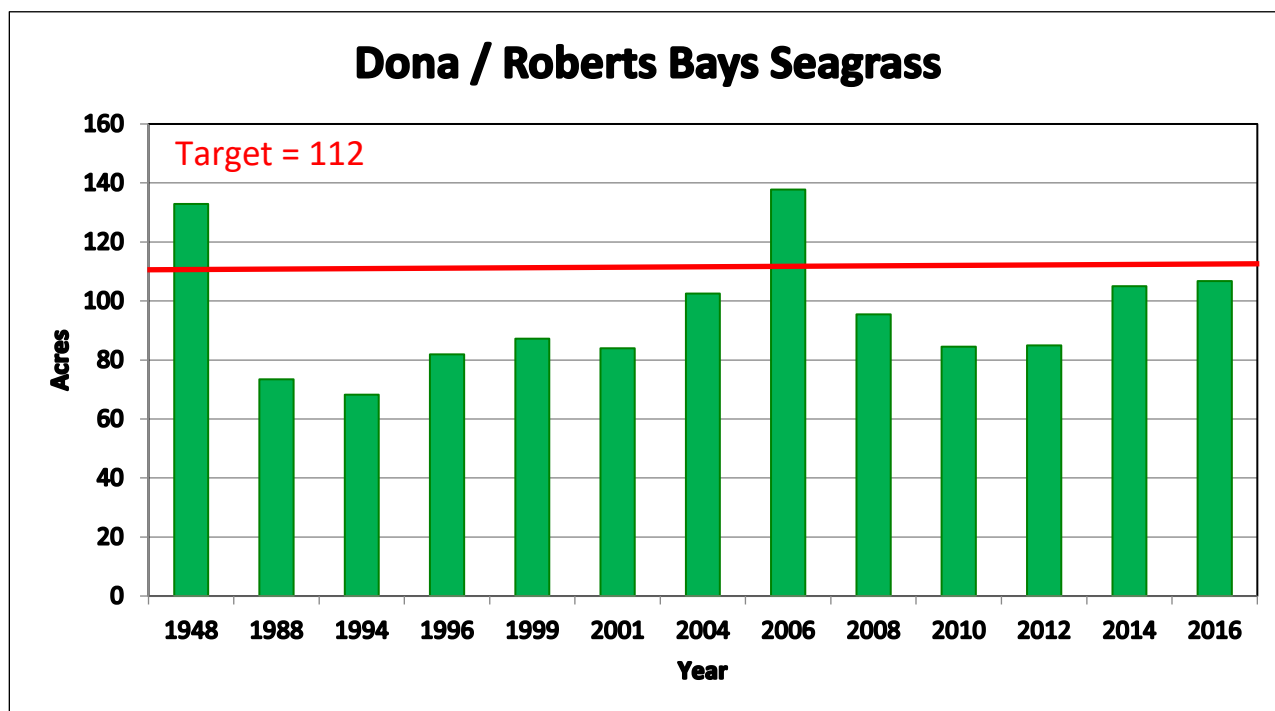


Figure 7. SWFWMD mapping results from 1948-2016 in Sarasota Bay, Florida. The red line indicates the target acreage set forth by Sarasota Bay Estuary Program.

Dona Bay/Roberts Bay is connected to the Gulf of Mexico through Venice Jetty Inlet, and therefore experiences some tidal exchange. However, due to land use alterations, the Bay receives significant amounts of freshwater through several creeks including Cow Pen Slough. Cow Pen Slough is a man-made canal that diverts water from the Myakka River into Shakett Creek and Dona Bay. Freshwater from over 74 square miles now flows directly into Dona Bay. This massive increase in freshwater flow has drastically altered water conditions and seagrass beds in the area.

To reduce freshwater and nutrient pulses in Dona Bay, Sarasota County has developed the Dona Bay Water Retention Facility. The project, which was completed in 2017, is expected to reduce freshwater, nutrients, and color being discharged into Dona Bay. Ideally, these improvements will improve water quality provide suitable habitat for seagrass recovery. In 2016, the seagrass Dona/Roberts Bay almost meets target acreage (Figure 7).

Seagrass meadows in Dona/ Roberts Bay displayed a slight species shift with a reduction in *Halodule wrightii*, a pioneer and more stress-tolerant species, and an increase in *Thalassia testudinum* (Figure 8). As explained earlier, *Thalassia sp.* requires adequate tidal flushing and is sensitive to freshwater impulses. There was also a significant reduction in both drift and epiphytic algae observed in the bay (Figure 10). Algae is associated with excess nutrients, primarily from leaky septic systems and stormwater runoff. A significant reduction in algal growth displays improved water quality in the Bay. These shifts may be a response to the completion of the Dona Bay Watershed Restoration Program, however, further monitoring is needed to confirm. Historically there has been a decreasing trend of species occurrence and blade height (Figure 8 and 9). There is often a lag time in seagrass recovery, therefore, we may expect to see a shallower trend line slope future as the system recovers.

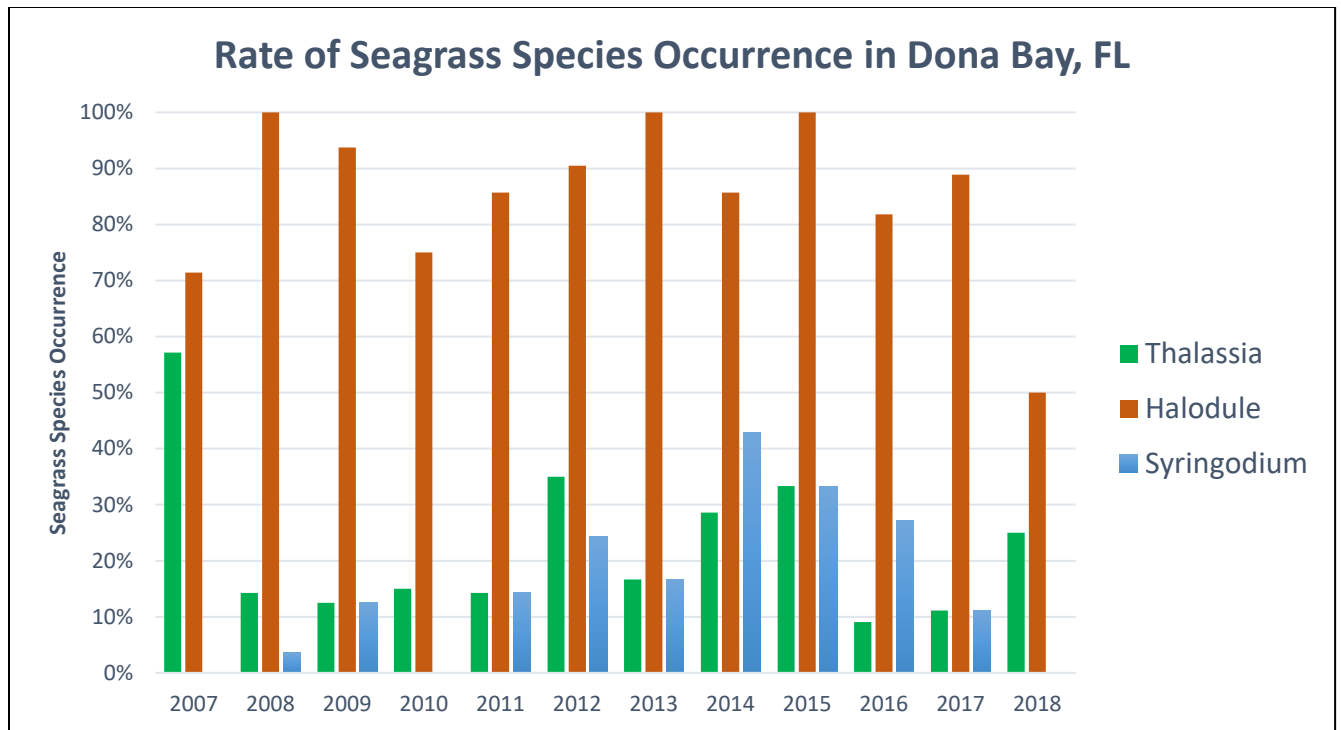


Figure 8. When seagrass was present, this graph displays the rate of three seagrass species (*Thalassia testudinum*, *Halodule wrightii*, and *Syringodium filiforme*) from 2009-2018 in Dona/Roberts Bay, Florida.

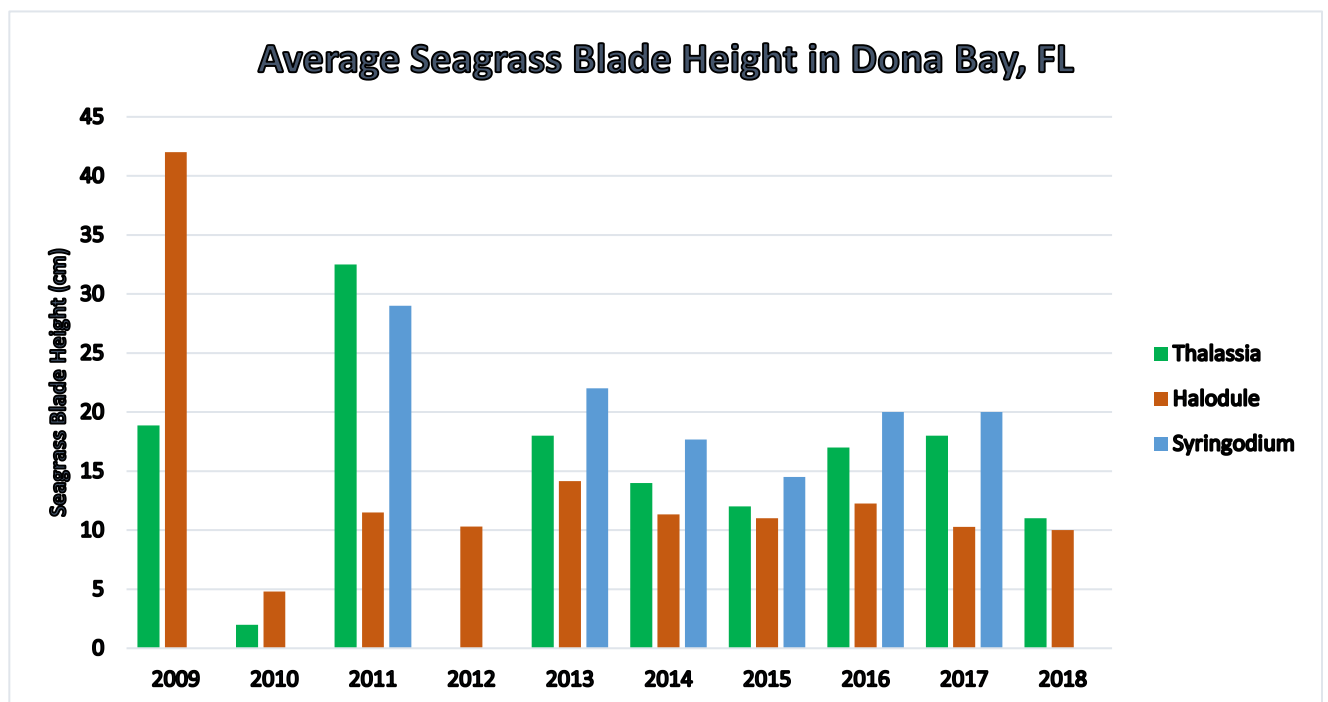


Figure 9. The average blade height in cm of three seagrass species (*Thalassia testudinum*, *Halodule wrightii*, and *Syringodium filiforme*) from 2009-2018 in Dona/Roberts Bay, Florida.

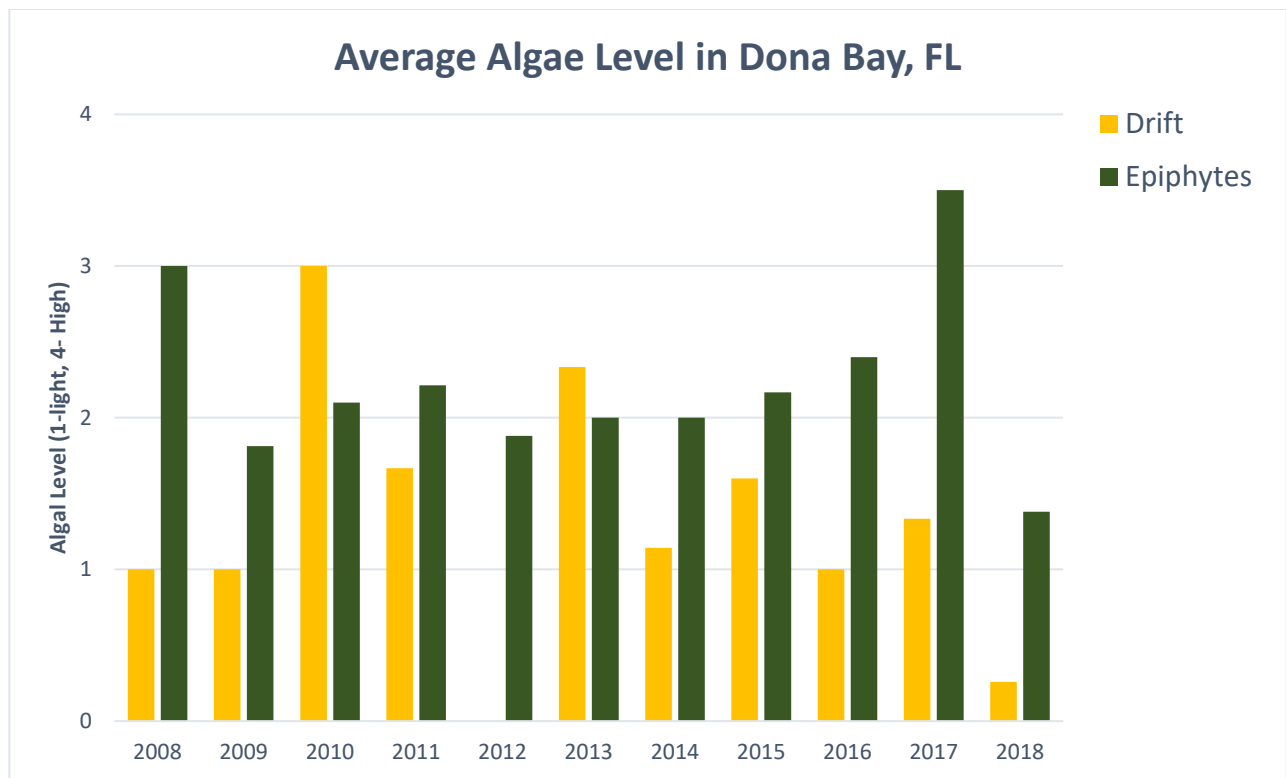


Figure 10. The level of epiphytic and drift algae coverage for Sarasota Bay, Florida from 2008-2018. The levels represent percentage bins (0: totally clean; 1=1-25%; 2: 26-50%; 3: 51-75%; 4: 76-100%).

### Relationship of Data to Stormwater Management Plan (SWMP)

The County Seagrass Monitoring Program characterizes the seagrass quality and Bay health. As an indicator species of proper nutrient management, monitoring seagrass trends provides the unique opportunity to guide stormwater alterations and improvements. Furthermore, healthy seagrass meadows are biological engineers which transform the surrounding environment. They further improve water quality by stabilizing loose sediments and remove metals and toxins from the water column. Therefore, restoring seagrass habitats through best stormwater practices is critical to water quality management throughout Sarasota County.



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5. Biological Monitoring - Scallops

## Scallop Monitoring Program Reporting and Assessment of Monitoring Results

Since 2008, Sarasota County has been monitoring the scallop populations of our bays. The Scallop Program is part of a monitoring plan to help measure the effectiveness of the County's Stormwater Management Plan on our watersheds. The bay scallop (*Argopecten irradians*) is an indicator species that is particularly sensitive to freshwater influences and poor water quality. The county scallop monitoring program includes spat collection, adult surveys and survival rates of caged adults. These efforts are in partnership with the Florida Fish and Wildlife Research Institute (FWRI), Mote Marine Laboratory, and Sarasota Bay Watch.

### Summary of Monitoring Data from 2018 Reporting Year

#### **A. SPAT MONITORING**

Figure 1: Monthly Scallop Spat Landings Per Bay

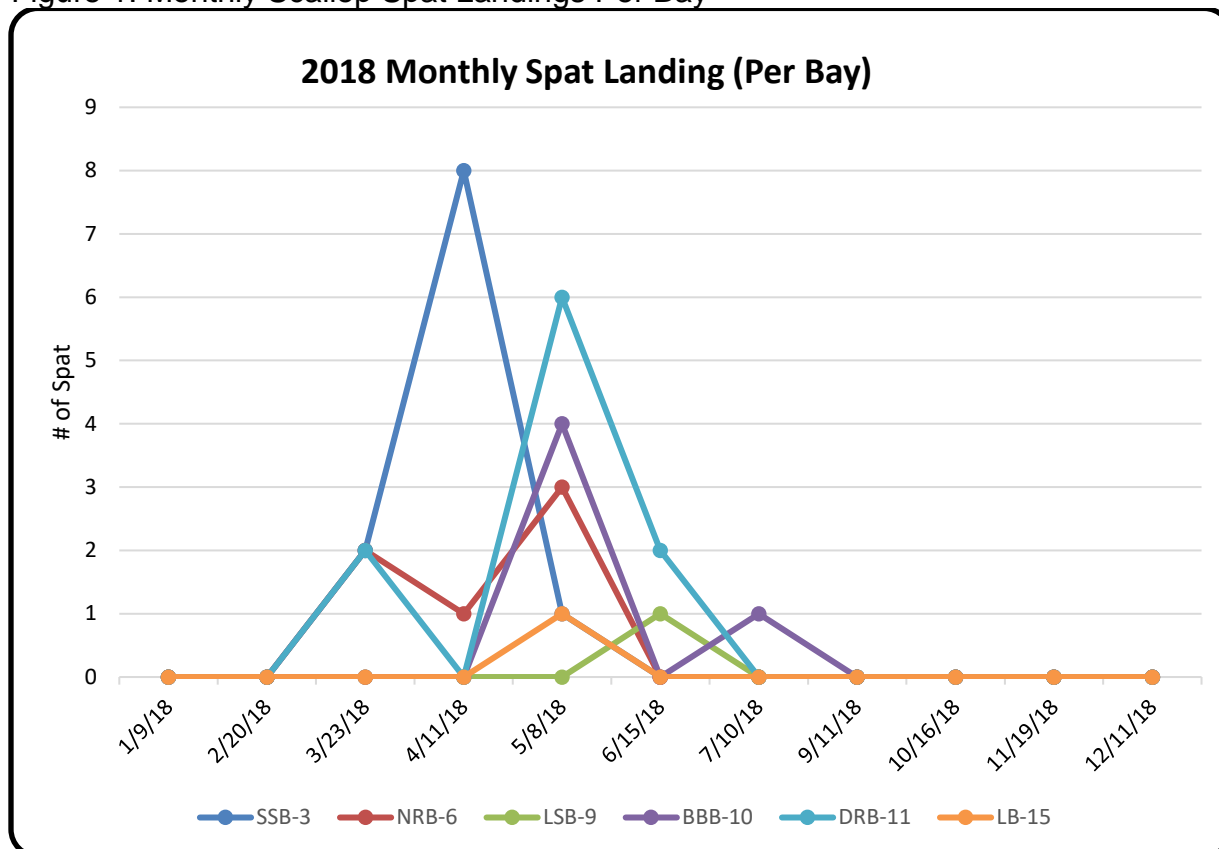
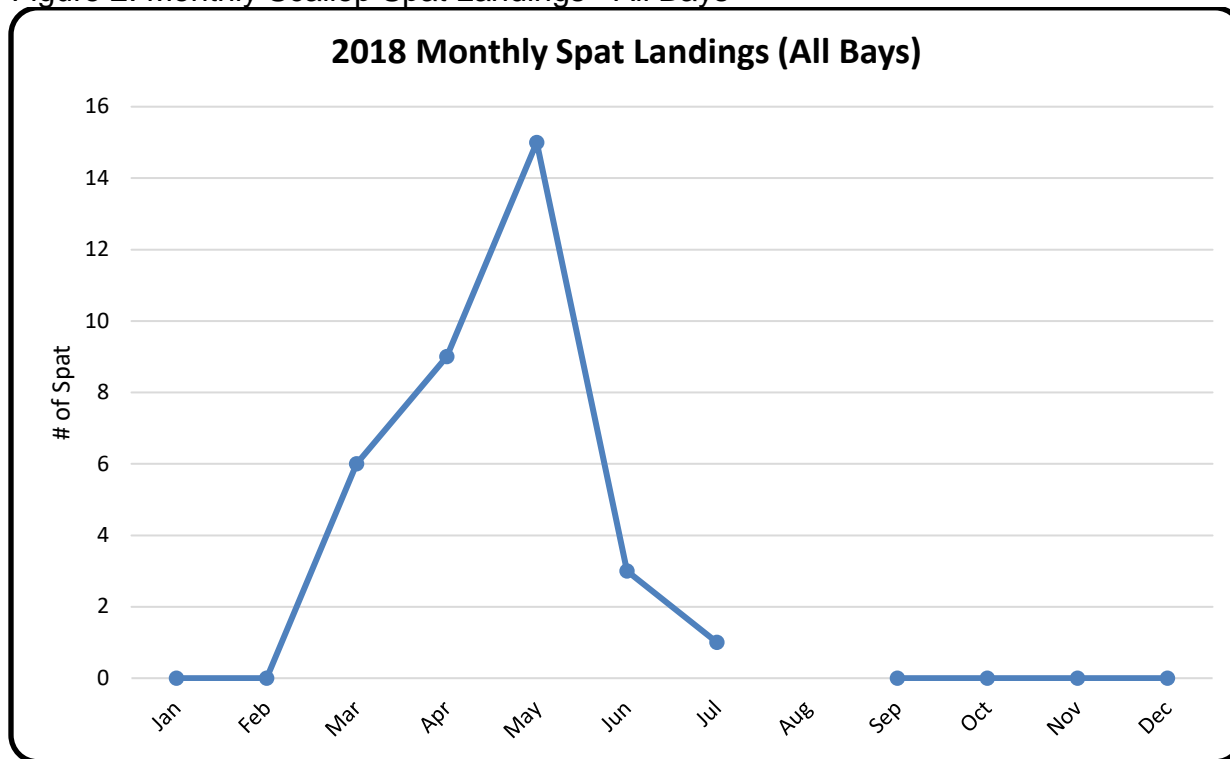


Figure 2: Monthly Scallop Spat Landings - All Bays



Our historical pattern of spat landings have consistently shown elevated numbers from March through May with a peak occurring in April. This pattern remained intact in 2018, with total spat landings improving dramatically from 2017. The monitoring data showed a significant increase in spat landings from 5 in 2017 (figure 6) to 34 in 2018. Generally, our two most productive bays are Sarasota Bay and Blackburn Bay. While Sarasota Bay remains the most productive, the Venice Inlet station showed increased activity this year. The combined total for these two bays accounted for 21 of the total 34 spat counted which is almost 62% of annual landings. Lemon Bay's spat population continues to struggle despite the overall 2018 increase, with the last spat landing occurring in April of 2016.

## B. ADULT SCALLOP TRANSECT SURVEY SITES

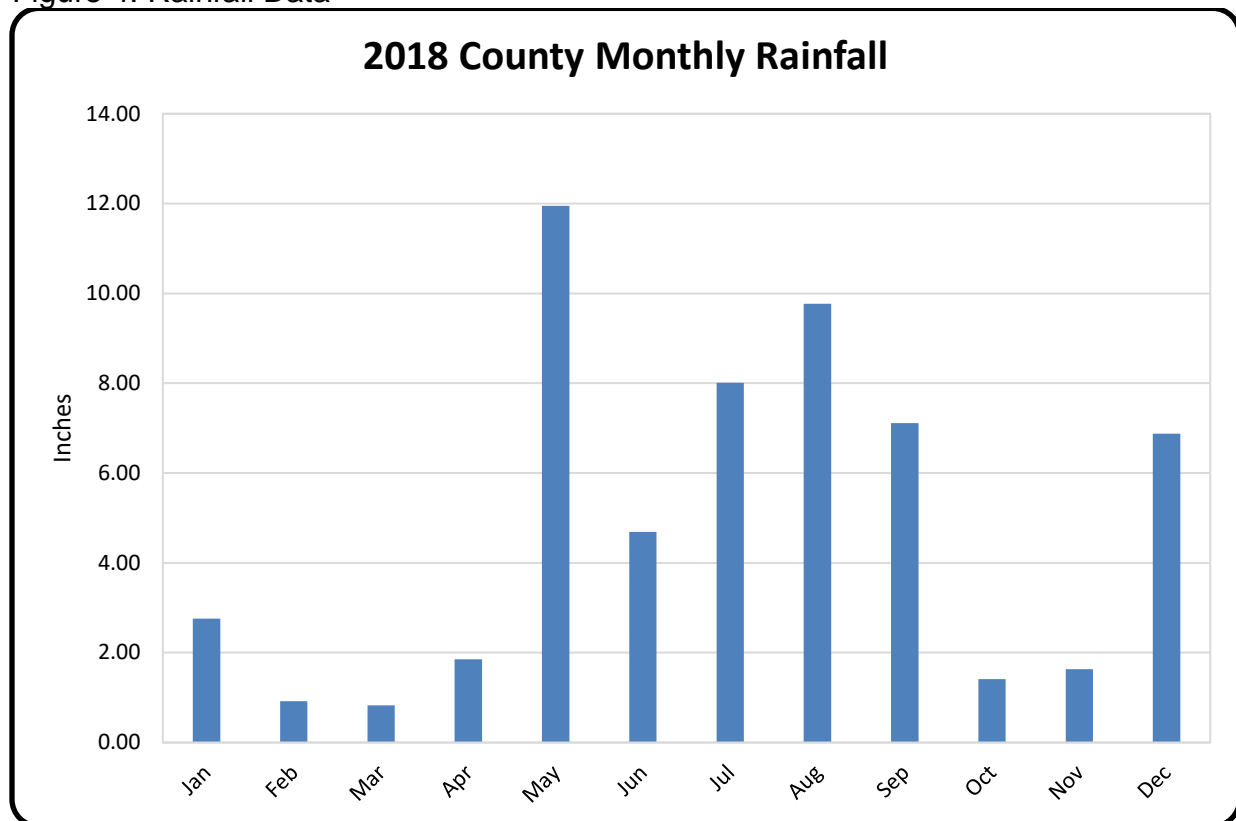
Adult scallop transect survey are traditionally conducted during August. A highly concentrated and persistent red tide bloom developed throughout Sarasota County in June and continued through the end of the year. For health and safety reasons, both staff and volunteer searches were cancelled for 2018.

## C. CAGE PROGRAM

No adult scallops were available in 2018 to support the cage program.

## D. RAINFALL

Figure 4: Rainfall Data

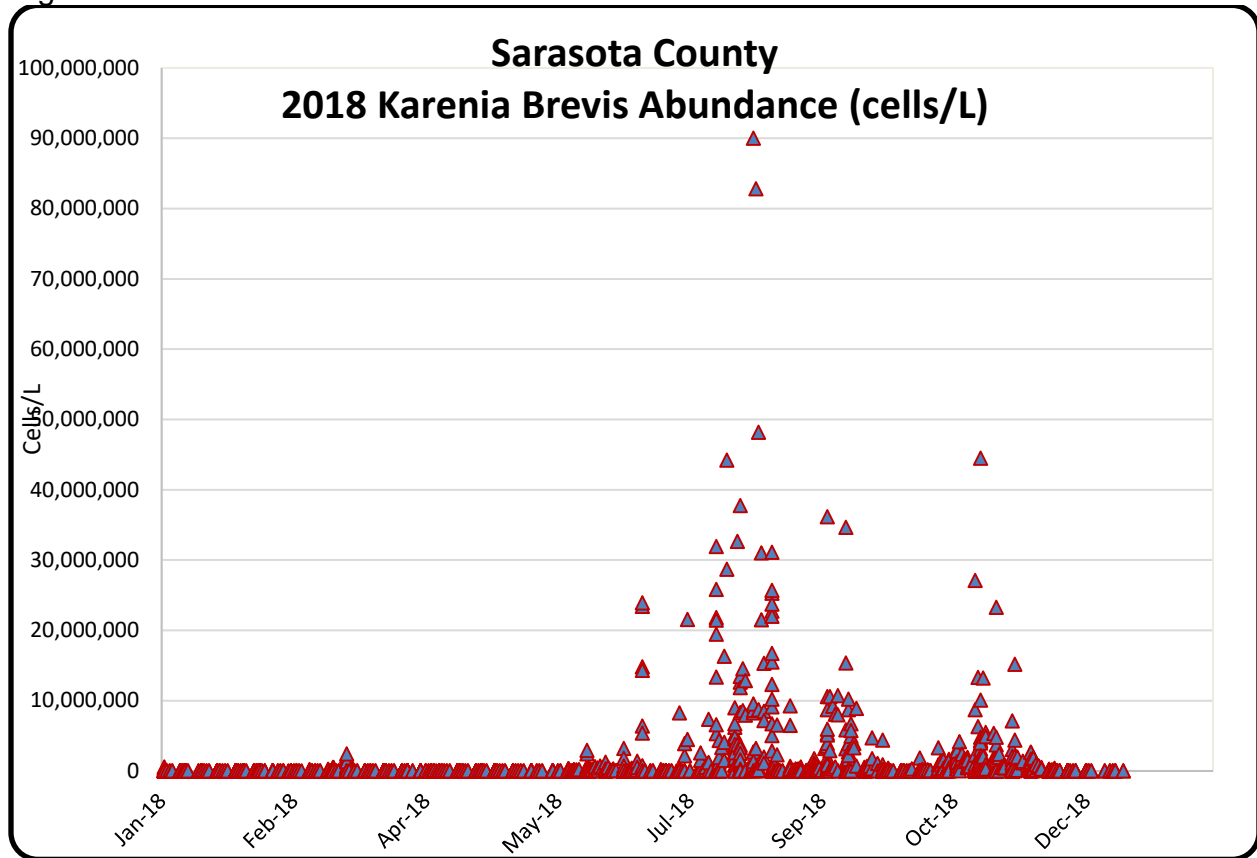


Data provided by the Southwest Florida Water Management District

As in previous years, the data shows a correlation between the typical peak of spat landings (figure 2) and the decrease of rainfall leading into April. In contrast, there is a notable drop in spat landing from May to June as rainfall significantly increases. The monthly rainfall for April was 1.85 inches, increasing to 11.95 inches in May, an 84.6% monthly increase.

## E. RED TIDE

Figure 5: Red Tide Abundance



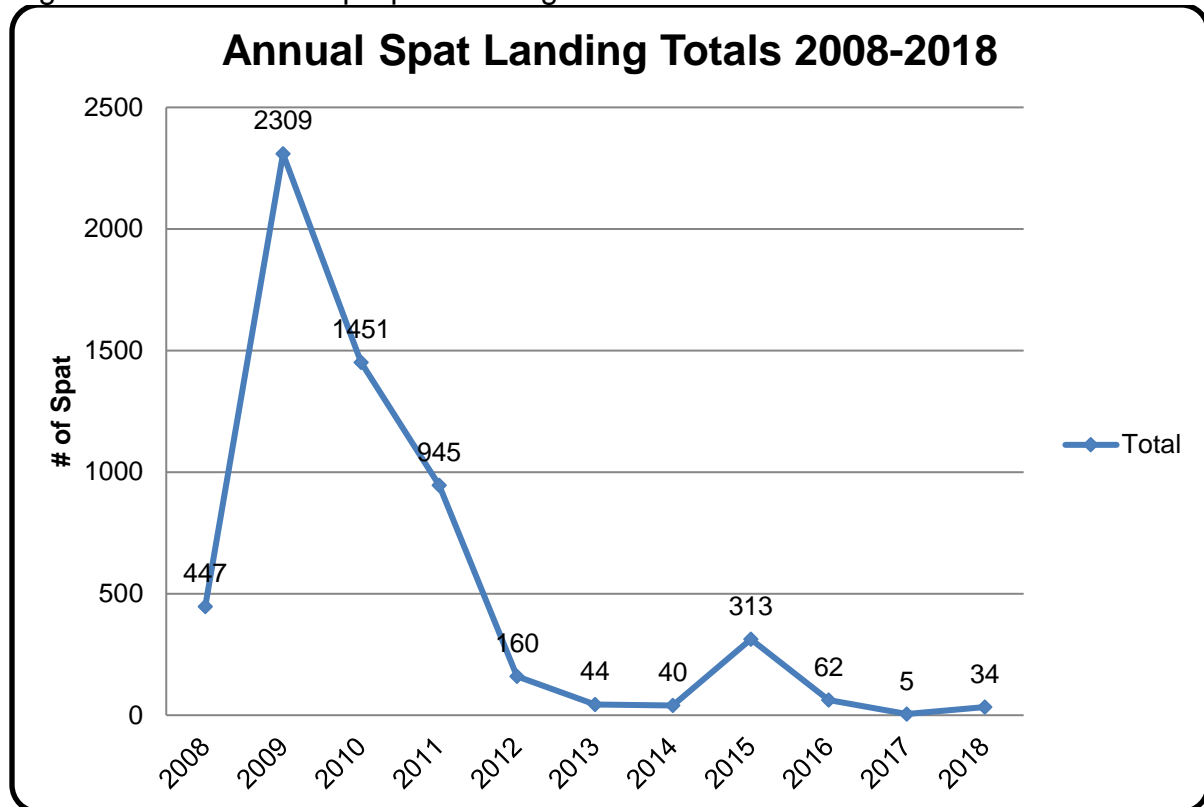
Data provided by FWRI

The 2018 Florida Fish & Wildlife Commission (FWC) red tide cell count data shows the bloom started in June. The persistent and concentrated bloom continued through the end of 2018. Red tide cell counts more than 1 million cells per liter (cells/L) are in the high range according the FWRI concentration scale. During this period there were roughly 242 samples that exceeded the 1 million cells/L threshold. A single sample contained as much as 90 million cells/L.

In County bays significant rainfall events can negatively affect scallop populations, as shown in historic data. In addition, scallops are susceptible to red tide which can exacerbate this negative trend. We typically do not see spat landing late in the year and did not conduct adult transect surveys to corroborate the data.

## F. ANNUAL SPAT LANDINGS TREND DATA

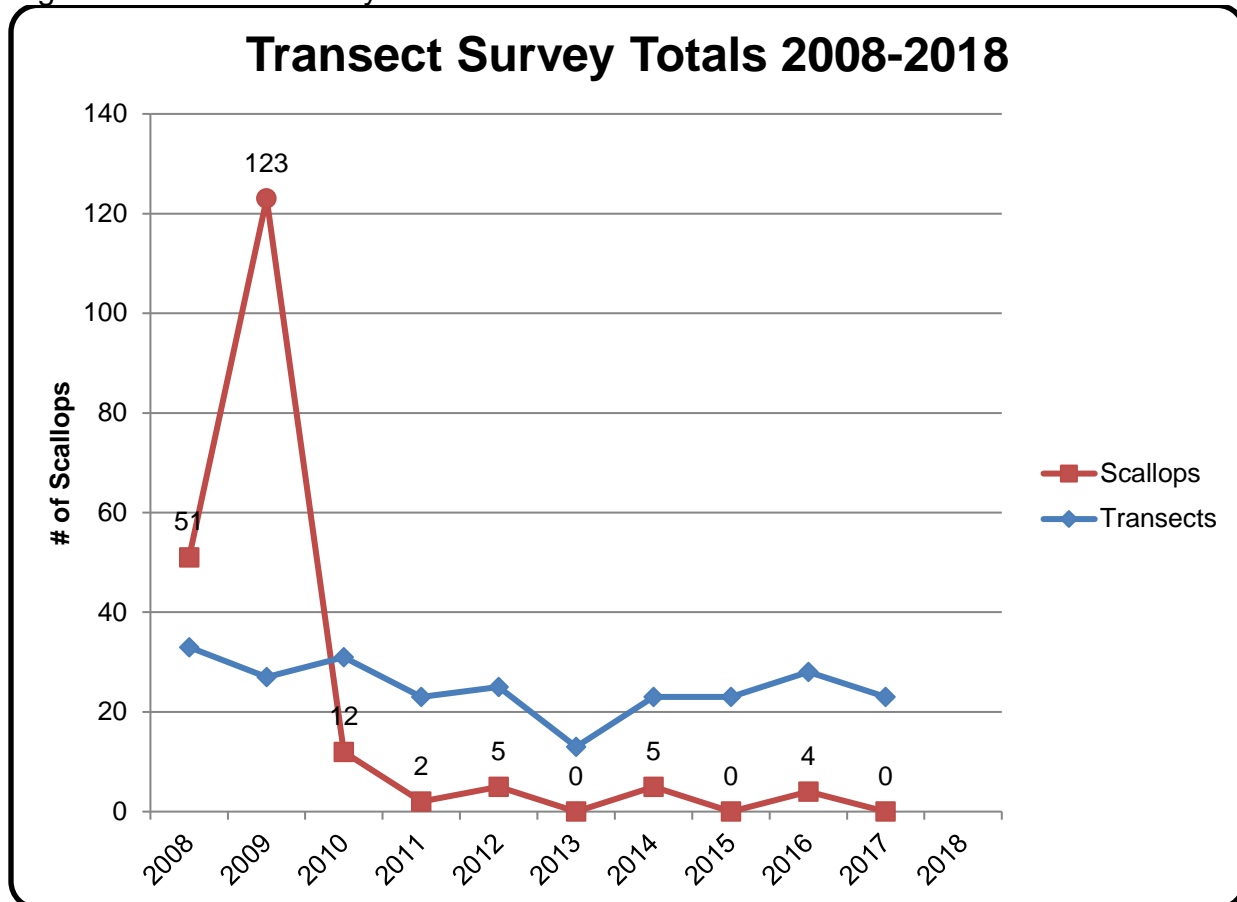
Figure 6: Annual Scallop Spat Landings



The spat monitoring program started with 15 monitoring sites throughout the county bays. In 2012, Mote Marine Laboratory collaborated with county and the monitoring sites were reduced to 10, then further reduced to 6 in 2013. Figure 7 shows spat landings increased 85.3%, from 5 in 2017 to 34 in 2018.

## G. TRANSECT SURVEY TREND DATA

Figure 7: Transect Survey Totals



No transect surveys were conducted in 2018 due to a significant red tide bloom. For the 2019 survey, the search method will change to a rapid assessment method. This method, currently used in our Seagrass Monitoring Program, will allow us to search significantly more locations and a larger overall area.

### Relationship of Data to Stormwater Management Plan (SWMP)

The 2018 spat monitoring data shows a modest increase in landings county-wide during our peak period around April. However, significant rainfall events combined with persistent red tide blooms may have hampered this resurgence at the end of the year. The lack of adult scallop transects further complicates this year's overall assessment.

Sarasota County continues to support watershed management projects that have a positive impact on the conditions of our bays. These structural controls remove pollutants before they reach the bay, thereby protecting water quality. County bays continue to experience increasing seagrass acreage throughout our bays. Increased habitat for scallops is one part of complex environmental factors needed to support sustainable scallop populations.

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6. Rainfall Monitoring



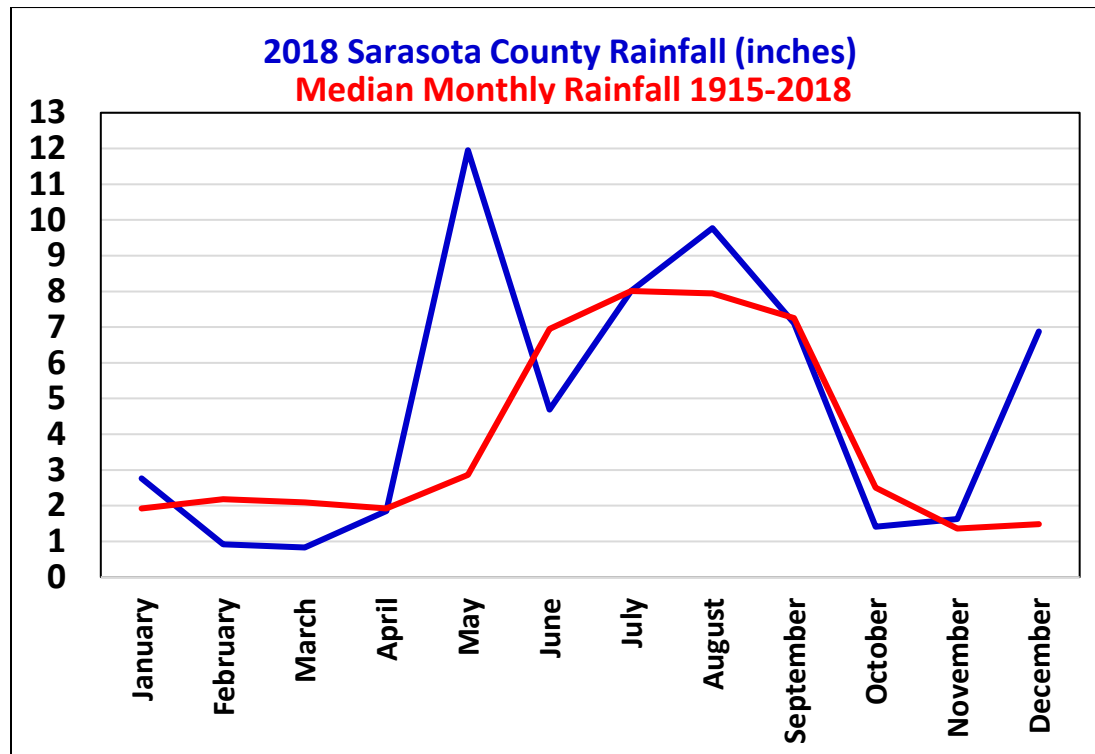
## Rainfall Monitoring

### Reporting and Assessment of Monitoring Results

Rainfall is the driving factor of stormwater. Where there is more rainfall there is more stormwater and more stormwater pollution. Rainfall plays an important role in all types of stormwater pollution. Thus, it is important to observe, measure and monitor rainfall, and compare the patterns with trends in stormwater pollution. Over the past 10 years, rainfall has varied widely in Sarasota County.

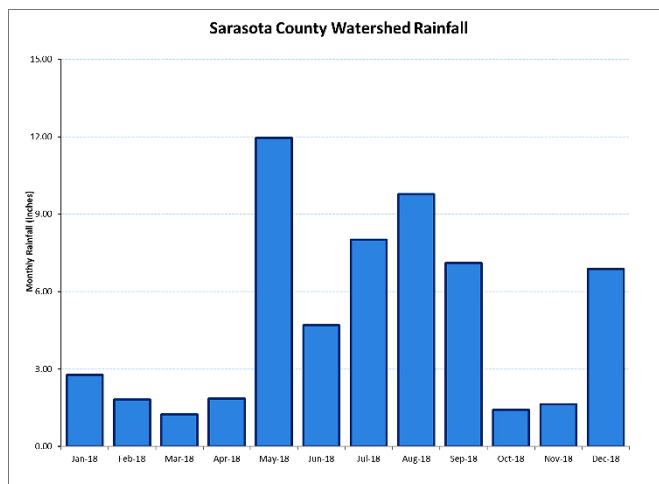
### Summary of Monitoring Data from the 2018 Reporting Year

- 1) Sarasota County Automated Rainfall Monitoring System (ARMS) consists of monitoring stations located throughout the county. A link to more information about ARMS can be found here: <http://www.sarasota.wateratlas.usf.edu/rainfall/latest>.
- 2) The SW Florida Water Management District (SWFWMD) NexRAD system provides high resolution estimates of rainfall distribution based on data from multiple weather radar towers located throughout the region. A link to more information about SWFWMD NexRAD products can be found here: <http://www.sarasota.wateratlas.usf.edu/rainfall/>.
- 3) SWFWMD Rainfall Summary Data by Region found at <https://www.swfwmd.state.fl.us/resources/data-maps/rainfall-summary-data-region>



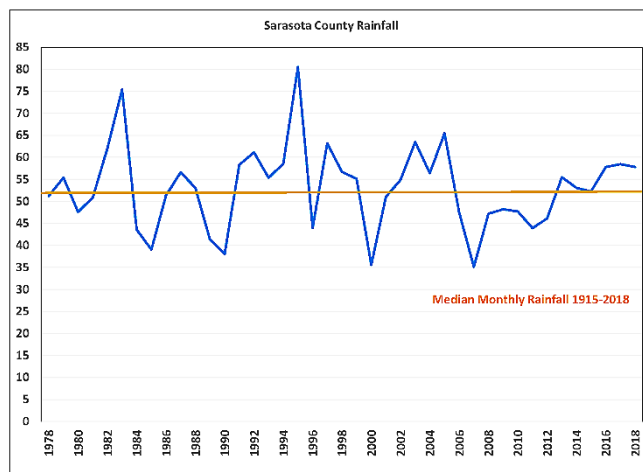
## Annual Variability

According to the SWFWMD, 57 inches of rain fell on Sarasota County in 2018, which is above the long-term average of 52 inches. The 2018 tropical wet season started in May with a record amount of accumulated precipitation associated with Tropical Storm Alberto. It rained almost 12 inches breaking the previous record of 10 inches. June was below average, and the other wet season months were slightly below average with only 1 other tropical system (Gordon) affecting precipitation. A strong front in December brought extreme rainfall to Sarasota in mid-December, with almost 7 inches. This was the second wettest December on record.



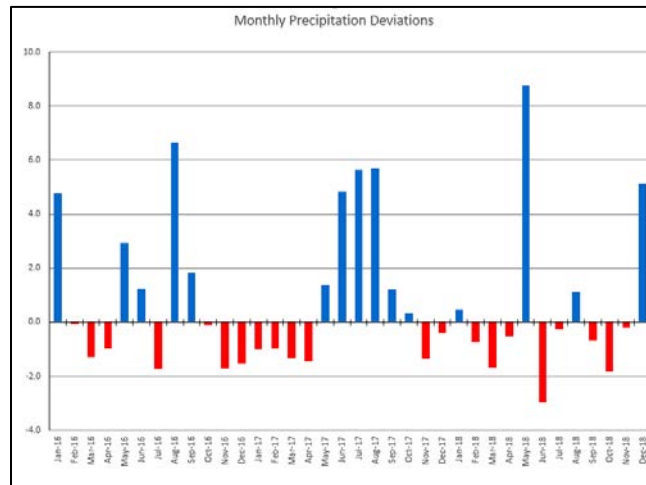
## Long Term Assessment

SWFWMD observations show that average rainfall in Sarasota is 52.8 inches per year. The following figure shows the accumulated measured rainfall (using the data sources above) for each year over the past 40 years. Total annual (water year) rainfall varies widely between 35 and almost over 80 inches per year. There was less rainfall and thus less stormwater runoff from 2007-2011.



## Observable Trends

The figure below shows the deviations of 2016, 2017 and 2018 monthly rainfall from historical monthly averages. The trend over the past three years are wetter wet seasons, primarily due to increased tropical activity, and drier dry seasons, due to drier winter storm fronts.



## Relationship of Data to Stormwater Management Plan (SWMP)

Monthly rain data relates well to monthly monitoring of water quality. Area-specific rain data provides a relationship between creeks, basins, bays and projects. Rain is the dominant factor in stormwater pollution so having temporal and spatial rain data is valuable to identifying and managing pollution sources and crafting remedies.

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# APPENDIX C

## SECTION VIII: TMDL STATUS REPORTS

1. TMDL Status Report
2. Gottfried Creek TMDL Status Report
3. Phillippi Creek BPCP Status Report
4. Alligator Creek TMDL Status Report

## TMDL Status Report

### Sarasota County NPDES MS4 Annual Report for 2018 (Year Five)

The Permit requires progress toward TMDL wasteload allocations by implementing activities and best management practices through Supplemental Stormwater Management Plans or Bacterial Pollution Control Plans. Annual reports shall include a TMDL Status Report.

There are 16 TMDLs established in Sarasota County. Work is actively being conducted on three of them: Gottfried Creek, Phillippi Creek and Alligator Creek. The following table lists the TMDLs.

	Waterbody	Pollutant of Concern	TMDL Pollutant Load Reduction
1	Phillippi Creek	Total Nitrogen	70%
		Total Phosphorus	70%
		Biochemical Oxygen Demand	70%
		Fecal Coliform	98%
2	Clark Lake (Phillippi Creek Basin)	Total Nitrogen	21%
		Total Phosphorus	80%
3	Clower Creek	Fecal Coliform	76%
4	Elligraw Bayou	Total Nitrogen	29%
		Biochemical Oxygen Demand	71%
		Fecal Coliform	70%
5	Catfish Creek	Total Nitrogen	51%
6	North Creek	Total Nitrogen	47%
7	South Creek	Total Nitrogen	48%
8	Curry Creek	Total Nitrogen	63%
9	Alligator Creek	Total Nitrogen	28%
10	Woodmere Creek	Total Nitrogen	55%
11	Forked Creek	Total Nitrogen	20%
12	Gottfried Creek	Total Nitrogen	2%
		Fecal Coliform	74%
		Biochemical Oxygen Demand	16%
13	Big Slough	Fecal Coliform	26%
14	Mud Lake Slough	Fecal Coliform	93%
15	Myakka River (between Upper and Lower Lakes)	Total Nitrogen	4%
		Total Phosphorus	12%
		Biochemical Oxygen Demand	11%
16	Myakka River (Big Slough confluence)	Total Nitrogen	56%
		Total Phosphorus	67%

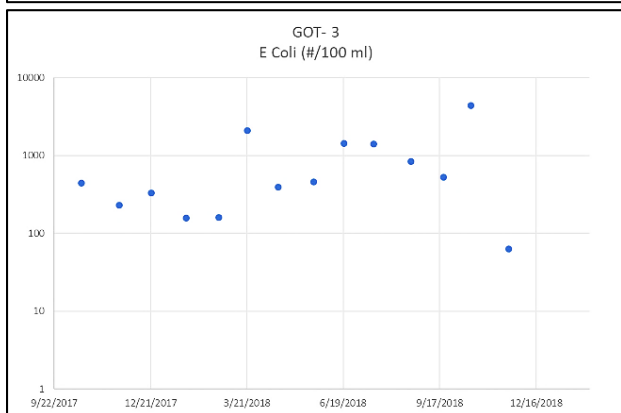
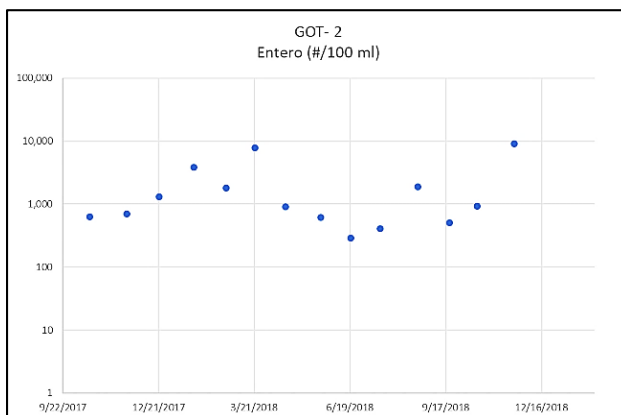
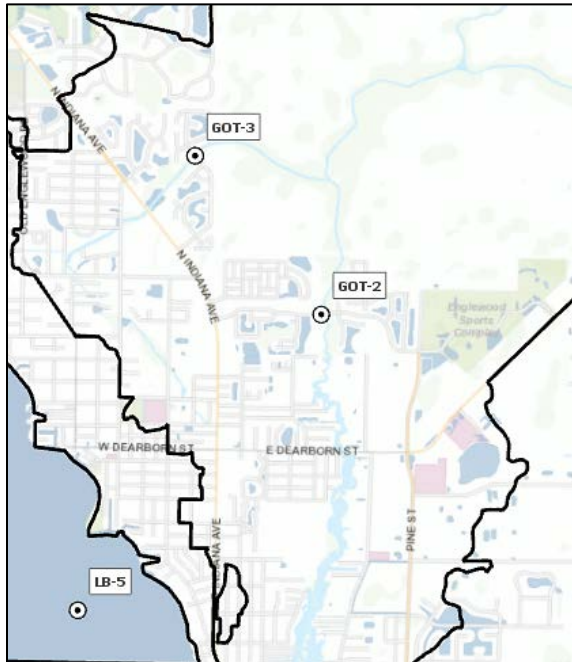
Sarasota County has made significant progress in reducing pollutants in TMDL waterbodies, but additional work will be needed to achieve designated uses.

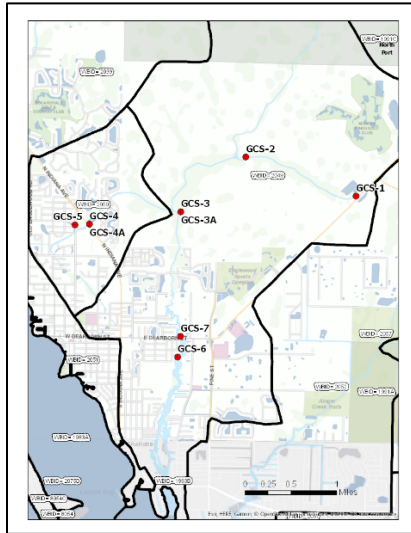
#### Gottfried Creek

In 2010, a TMDL for fecal coliform bacteria in Gottfried Creek (WBID 2049) allocated a 74% fecal coliform load reduction. In response, Sarasota County conducted a proactive Walk the WBID (WTW) exercise, and in 2016, the FDEP approved the final report. The report includes 17 Future Proactive Prevention Actions that involve monitoring, wastewater, stormwater, outreach and regulation.

In 2018, ambient monitoring was conducted at two locations in Gottfried Creek and results indicate chronic exceedances of Enterococci and E. coli at both stations.

Sarasota County conducted a sanitary survey and conducted supplemental monitoring. There was evidence of wild hogs adjacent to the creek. Station GCS-7 as found to be elevated and is in an area not served by sanitary sewer so may be influenced by septic systems. No sources were identified that could be readily fixed to reduce bacterial pollution.





Site	Latitude (DD)	Longitude (DD)	Coliform Fecal (cfu)	Escherichia coli (cfu)	Enterococci (cfu)
GCS-1	26.98456	-82.31144	10	74	-
GCS-2	26.99071	-82.33096	110	132	-
GCS-3	26.982	-82.34244	1900	3873	-
GCS-3A	26.982	-82.34244	5400	5475	-
GCS-4	26.98002	-82.35859	40	52	-
GCS-4A	26.98002	-82.35859	10 U	199	-
GCS-5	26.97989	-82.36115	130	218	-
GCS-6	26.95902	-82.34293	250	-	1000
GCS-7	26.9623	-82.34243	160	-	2200

No sewage spills were reported in the basin. One reclaimed water spill occurred but it is not a source of bacteria because reclaimed water is disinfected. The stormwater system was inspected and maintained. Outreach efforts were improved by the development and distribution of informational materials related to septic system and wastewater system best management practices.



## References:

Gottfried TMDL:

[https://floridadep.gov/sites/default/files/fecaltmdl\\_gottfried.pdf](https://floridadep.gov/sites/default/files/fecaltmdl_gottfried.pdf)

WTW Report:

<http://www.sarasota.wateratlas.usf.edu/upload/documents/Gottfried-Creek-Walk-the-Watershed-Oct2015-mainreport.pdf>

## Phillippi Creek

In 2010, EPA established a TMDL for Phillippi Creek WBID 1937 that allocated a 98% reduction in fecal coliform bacteria. Sarasota County proposed it as a TMDL priority, a Walk the WBID exercise was conducted, and FDEP approved a Bacterial Pollution Control Plan. The plan includes a Strategy for Bacteria Reduction with 11 elements

related to wastewater treatment, septic systems, spill response, monitoring, microbial source tracking, investigation and outreach.

Ambient monitoring was conducted at 13 stations in the basin for fecal coliform, E. coli and enterococci. The median value for each station exceeded Florida water quality standards 65% of the time.

Sample Station Name	Median Fecal coliform	Median E. coli	Median Enterococci
<b>Standard</b>	<b>800</b>	<b>410</b>	<b>130</b>
Lateral AB at Webber	2,300	2,993	
Lateral AA at Trails	1,350	1,850	
Canal at Linwood	8,800	7,701	
Canal at Fruitville	340	426	
Lateral BB at Fruitville	1,115	1,204	
Main B at Fruitville	520	568	
Main B at Gerhardt	405	423	
Red Bug at Wilkinson	3,300	3,351	
Canal at Paw Park	280	270	
Blossom at Brink	1,200	1,296	
Mirror Lake	425	313	
Phillippi at Southgate	375		1,035
Phillippi at 41	185		735

- Twelve-thousand septic systems have been connected to sanitary sewer in the Phillippi Creek basin and an additional 2,900 are slated for replacement, although the work is not funded in the current 5-year capital improvement plan.
- The City of Sarasota and Sarasota County report spills to FDEP, pursuant to Section 403.077, F.S., for Public Notice of Pollution.
- In 2018, microbial source tracking was conducted in the Phillippi Creek at 9 locations with pre-existing elevated fecal coliform levels. Analytes included acetaminophen, sucralose, E. coli, fecal coliform, total phosphorus, plus human, dog and bird DNA. Results detected DNA from humans and dogs, but no evidence of wastewater or septic system leakage was identified.
- The Neighborhood Environmental Stewardship Team (NEST) conducted aquatic plant restoration in Red Bug Slough Preserve and the project is expected to improve water quality in that tributary.
- Bacterial educational outreach was conducted by County staff and through a contract with the Science and Outreach Council of SW Florida. Pet waste education using the poop fairy iconic imagery was distributed at events and on social media. New septic system and sewer system materials were also distributed.



- The continuous 5-year Capital Improvement Program (CIP) includes two on-going projects focused on the repair, renovation, and rehabilitation of existing infrastructure: CIP 55957 - Infiltration & Inflow Reduction Program and CIP 55958 - Lift Station Rehabilitation Program. The funding and capital outlay for the current 5-year period can be found in the County's FY 2018 thru 2022 Adopted Capital Improvement Program. Each program has funding allocated to it in the amount of \$4M per year until the year 2022. The overall program and its funding sources can be found as identified in the attached copy of the Sarasota County 2018-2022 Adopted Financial Plan.

References:

TMDL:

[www.sarasota.wateratlas.usf.edu/upload/documents/196\\_8f\\_sbb\\_1937\\_phillippi\\_creek\\_fc.pdf](http://www.sarasota.wateratlas.usf.edu/upload/documents/196_8f_sbb_1937_phillippi_creek_fc.pdf).

WTW:

[www.sarasota.wateratlas.usf.edu/upload/documents/25\\_WTW-Summary-Report-Phillippi-Creek-FINALv2.9-27-17-web.pdf](http://www.sarasota.wateratlas.usf.edu/upload/documents/25_WTW-Summary-Report-Phillippi-Creek-FINALv2.9-27-17-web.pdf)

BPCP:

[www.sarasota.wateratlas.usf.edu/upload/documents/Phillippi-BPCP-3-26-18.pdf](http://www.sarasota.wateratlas.usf.edu/upload/documents/Phillippi-BPCP-3-26-18.pdf)

MST:

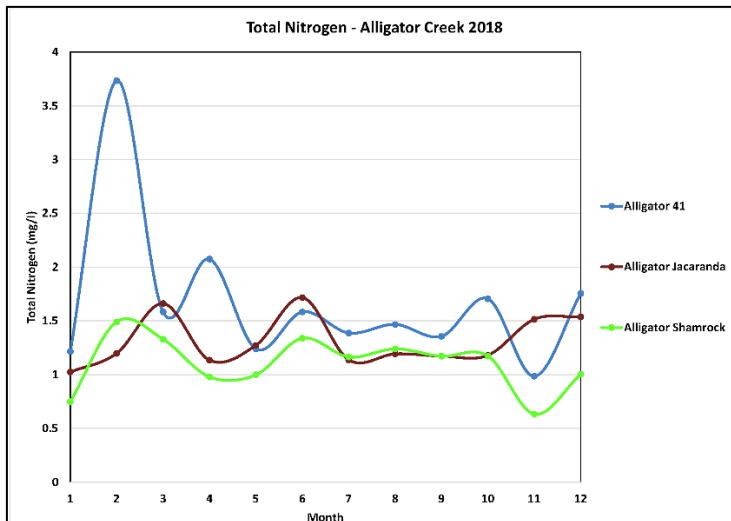
[www.sarasota.wateratlas.usf.edu/upload/documents/25\\_WTW-Summary-Report-Phillippi-Creek-FINALv2.9-27-17-web.pdf](http://www.sarasota.wateratlas.usf.edu/upload/documents/25_WTW-Summary-Report-Phillippi-Creek-FINALv2.9-27-17-web.pdf)

### Alligator Creek

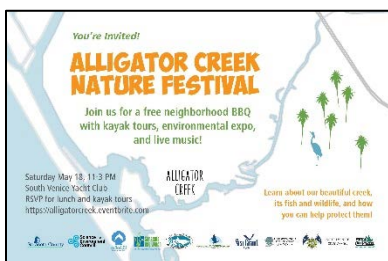
In 2006, the EPA established a TMDL for Alligator Creek WBID 2030 allocating a 28% reduction in total nitrogen, which is equal to a reduction of 3,336 pounds of nitrogen per year. Alligator Creek was proposed as a TMDL priority and the proposal was approved by FDEP in 2016. A TMDL Implementation Plan (also known as a Supplemental Stormwater Management Plan) was proposed and approved by FDEP in 2018. The plan included 11 strategies including monitoring, study, fish harvesting, optimizing the performance of the Briarwood Stormwater Treatment Facility (BSTF), outreach, improving the Venice Gardens lake system, sewage spills, septic systems and Neighborhood Environmental Stewardship Team (NEST) projects.

- The Briarwood Stormwater Treatment Facility removed 1,425 pounds of nitrogen from the Venice Gardens lakes system, which is 43% of the TMDL load reduction goal. Aeration will be installed upstream of the upwelling filter component and is expected to improve removal efficiency by converting nitrogen to the nitrate form which is then available for denitrification.
- The USF Water Institute completed a study in 2018 of the Venice Gardens lake system and learned the lake is shallow, has muck sediments, is dominated by planktonic algae and devoid of underwater plants.
- A study is underway to improve measurements of the flow of treated water from the BSTF to the downstream canal and also to improve monitoring of water volume from the lake system over a weir to the downstream canal. These data will improve the accuracy of the calculations of load reductions to Alligator Creek.

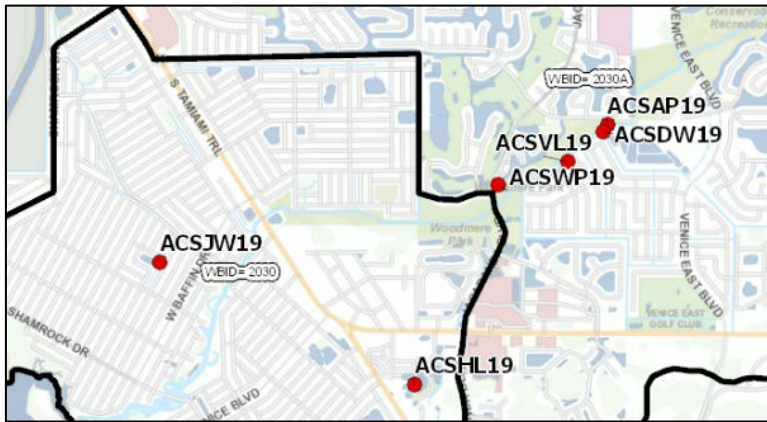
- Water quality monitoring was conducted in Alligator Creek and in two restored tributaries: Siesta Waterway and Briarwood Waterway. Monitoring is also conducted at three locations in the Venice Gardens lake system and 6 locations in the BSTF. Data is available on the Sarasota Water Atlas website on the creek conditions pages and the data download pages.
- In 2018, Alligator Creek had median nitrogen concentrations of 1.17, 1.20 and 1.52 mg/l, at Jacaranda, Shamrock and US41 respectively. The median value for all Sarasota County creeks was 1.27 so Alligator was typical of other creeks. Statistically significant increasing nitrogen trends over the last ten years were detected at Jacaranda and Shamrock but not at US41.



- The Alligator Creek Watershed Tour is an online map and information feature on the Sarasota Water Atlas designed to engage the public in improving water quality in Alligator Creek.
- An Alligator Creek Nature Festival will be held in 2019 to educate the public about Alligator Creek and how to keep the water clean.



- Supplemental sampling was conducted in the Alligator Creek basin at 6 locations. Two stations have elevated nitrogen levels and may be suitable for nutrient reduction efforts. Station ACSAP19 has a high TKN; it is an isolated lake that contains a bird rookery island. Station ACSWP19 has high nitrate level and is located in a drainage ditch downstream of a wastewater treatment facility.

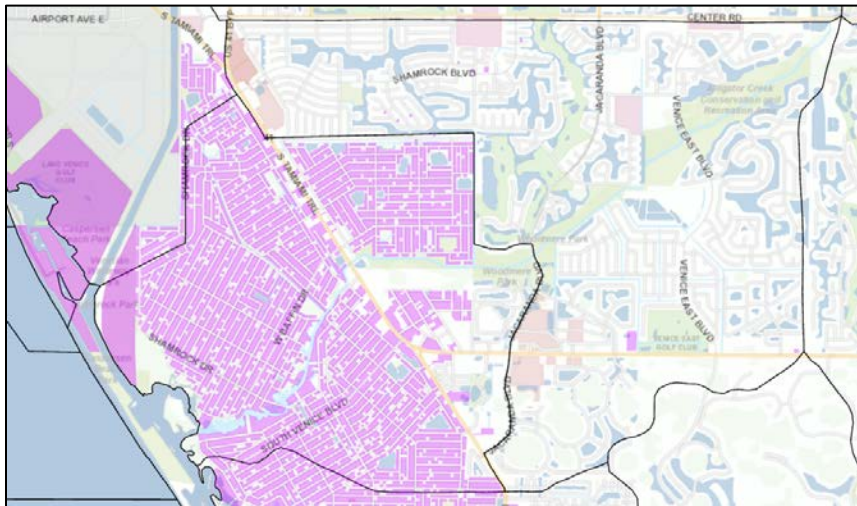


Station	Nitrate - Nitrite (mg/l)	TKN (mg/l)	Total Nitrogen (mg/l)
ACSAP19	0.036	3.54	3.58
ACSDW19	0.053	1.72	1.77
ACSHL19	0.008	0.87	0.88
ACSJW19	0.014	1.33	1.34
ACSVL19	0.005	1.34	1.35
ACSWP19	0.125	0.88	1.00

- Spills of sewage and reclaimed water were monitored; 6,000 gallons of reclaimed water was spilled in the basin in 2018.

Date	Location	Spill Type	Gallons
3/4/18	375 Venice East Blvd.	Reclaimed	500
6/7/18	Center Rd. & Rockley Blvd.	Reclaimed	2,500
9/6/18	416 Shamrock Blvd.	Reclaimed	2,200
10/8/18	375 Venice East Blvd.	Reclaimed	800

- The FDOH recently identified 5,439 potential septic systems in the Alligator Creek WBIDs and are highlighted in the map below.



#### References:

##### TMDL:

[www.sarasota.wateratlas.usf.edu/upload/documents/TMDLNutsDOColiSaraBayCharHrMarch2006.pdf](http://www.sarasota.wateratlas.usf.edu/upload/documents/TMDLNutsDOColiSaraBayCharHrMarch2006.pdf)

##### TMDL Implementation Plan:

[www.sarasota.wateratlas.usf.edu/upload/documents/Alligator-Creek-TMDL-Implementation-Plan-4-23-18.pdf](http://www.sarasota.wateratlas.usf.edu/upload/documents/Alligator-Creek-TMDL-Implementation-Plan-4-23-18.pdf)

##### Water Quality Trends:

[www.sarasota.wateratlas.usf.edu/water-quality-trends/](http://www.sarasota.wateratlas.usf.edu/water-quality-trends/)

##### Creek Conditions:

[www.sarasota.wateratlas.usf.edu/creek-conditions/report/104/alligator-creek/2017/](http://www.sarasota.wateratlas.usf.edu/creek-conditions/report/104/alligator-creek/2017/)

##### Alligator Creek Watershed Tour:

[www.sarasota.wateratlas.usf.edu/watershedtours/alligatorcreek/#](http://www.sarasota.wateratlas.usf.edu/watershedtours/alligatorcreek/#)

##### Venice Gardens Lake Study:

[www.sarasota.wateratlas.usf.edu/upload/documents/USFWIVENICEGARDENS.pdf](http://www.sarasota.wateratlas.usf.edu/upload/documents/USFWIVENICEGARDENS.pdf)