DATE: 26 June, 2017

Borja Crane-Amores
Program Administrator
Florida Department of Environmental Protection
NPDES Stormwater Section, Mail Station 2500
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Annual Report for City of Sarasota Municipal Separate Storm Sewer System (MS4)
NPDES Permit No. FLS000004

Greetings,
Enclosed please find the City of Sarasota's MS4 Annual Report for the Term 4 Permit Year 3 period from January 1, 2016 through December 31, 2016. Please note that Sarasota County has a Stormwater Management Interlocal Agreement with the City of Sarasota.

If you have any question, please contact me at 941-329-3136 or at Georges.Nicolas@sarasotaFL.gov

Sincerely,

Georges M. Nicolas
Environmental Services Engineer
Public Works

Cc: Tom Barwin, City Manager, City of Sarasota
Marlon Brown, Deputy City Manager, City of Sarasota
Douglas Jeffcoat, Director of Public Works, City of Sarasota
Alexandrea DavisShaw, P.E, General Manager and City Engineer, City of Sarasota
Michael Del Rossi, P.E, Manager, Public Works, City of Sarasota
Rene A. Janneman, Environmental Specialist III, Stormwater, Sarasota County

Public Works Department, Engineering/Capital Projects Division
Office of Environmental Services
1761 12th Street, Sarasota Florida 34236
Tel: (941) 365-2200 ext. 6367, Fax: (941) 316-1882

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/. 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			
A.	Permittee Name: City of Sarasota		
B.	Permit Name: Sarasota County Municipal Separate Storm Sewer System		
C.	Permit Number: FLS000004-004 (Cycle 4)		
D.	Annual Report Year: ☐ Year 1 ☐ Year 2 ☒ Year 3 ☐ Year 4 ☐ Year 5 ☐ Other, specify Year:		
E.	Reporting Time Period (month/year): 01 / 2016 through 12 / 2016		
F.	Name of the Responsible Authority: Marlon Brown		
	Title: Deputy City Manager		
	Mailing Address: 1565 First St		
	City: Sarasota	Zip Code: 34236	County: Sarasota
	Telephone Number: 941-954-4102	Fax Number: 941-954-4129	
	E-mail Address: Marlon.Brown@sarasotaFL.gov		
G.	Name of the Designated Stormwater Management Program Contact (if different from Section I.F above): Georges M. Nicolas, EI		
	Title: Environmental Services Engineer		
	Department: Public Works		
	Mailing Address: 1761 12th Street		
	City: Sarasota	Zip Code: 34236	County: Sarasota
	Telephone Number: 941-329-6136	Fax Number: 941-316-1882	
	E-mail Address: Georges.Nicolas@sarasotaFL.gov		

SECTION II. MS4 MAJOR OUTFALL INVENTORY (Not Applicable In Year 1)	
A.	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? ☐ Yes ☐ No ☒ Not Applicable)
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? ☐ Yes ☐ No ☒ Not Applicable)
C.	Is the change in the total number of outfalls due to lands annexed or vacated? ☐ Yes ☐ No ☒ Not Applicable

SECTION III. MONITORING PROGRAM	
A.	Provide a brief statement as to the status of monitoring plan implementation: *DEP Note: The co-permittees may refer to the Sarasota County AR here as follows: "The monitoring plan is carried out through an inter-local agreement with Sarasota County. Please see the Sarasota County Annual Report for the monitoring information."* Please see the Sarasota County Annual Report for the monitoring information.
B.	Provide a brief discussion of the monitoring results to date: *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.* 1. All 6 bays were in the Caution category of the Bay Conditions Index. The Index is based on chlorophyll, nitrogen and phosphorus. 2. Nine of 17 creeks passed the Creek Condition Index and 8 were in the Caution category. The index is based on chlorophyll, nitrogen, phosphorus and dissolved oxygen 3. Oysters: fourteen stations ranked excellent with greater than 75% live oysters. Eight stations fell into the "good" category (50%-75% live oysters). Two stations were in the caution category with less than 50% live. 4. Seagrass: Three of 6 bays had increased acreage of seagrass and three had declines. As compared to 2015, there were increases in seagrass abundance, blade length, and percent Halodule. There were decreases in drift algae, and percent Thalassia. 5. Scallop monitoring sites throughout the county had significantly less spat landings in 2016. The county experienced concentrated rainfall events and persistent redtide blooms, each of these conditions have shown to have a negative affect scallop populations. 6. Pollutant Load Modeling was completed for 2001, 2006, 2010 and 2016. It showed increases from pollutant sources like land development, septic systems, and wastewater, plus decreases from stormwater projects and wastewater and septic improvements. 7. Rain for the year was 5 inches above average primarily because of two wet months – January and August. Unusually dry months were September, November and December.
C.	Attach a monitoring data summary, as required by the permit. The monitoring plan is carried out through an inter-local agreement with Sarasota County. Please see the Sarasota County Annual Report for the monitoring information.

SECTION IV. FISCAL ANALYSIS	
A.	Total expenditures for the NPDES stormwater management program for the current reporting year: **$7,087,111** *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.*
B.	Total budget for the NPDES stormwater management program for the subsequent reporting year: **$7,220,215**

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.
☒	☐	A monitoring data summary as directed in Section III.C above and in accordance with Rule 62-624.600(2)(c), F.A.C. (See Sarasota County's Monitoring Report))
☐	☒	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. (See Sarasota County's Monitoring Report)
☐	☒	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): Marlon Brown

Title: Deputy City Manager

Signature: _____ Date: 06/22/17

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	**Structural Controls and Stormwater Collection Systems Operation**				

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.

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.

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.

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 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.

DEP Note: If the minimum inspection frequencies set forth in Table II.A.1.a of the permit 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.

Maintain documentation of the wet detention systems in the Adopt-A-Pond program. Report the number of systems in the Adopt-A-Pond program.

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	Percentage Maintained			
Grass treatment swales (miles)	15	2.17	14.5%	19.87	100%+	OWNERSHIP = 'CS' AND MaintenanceEntity = 'CSW' AND NPDES = 'GS' Maximo WO Database	Public Utilities, Stormwater Harold Roebuck	Mowing is 1.7 miles/cycle, done 11 times/year. Inspections performed each cycle and during Corrective Work
Wet and Dry detention systems	26	312	100%	26	100%	Amended Contract doc. as of 12/31/16	Public Utilities, Stormwater Harold Roebuck	Wet and Dry Detention is not differentiated due

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									to relative shallow ground water level
	Pollution control boxes	32	128	100%	22	69%	Maximo WO Database Route POLLCONTGIS	Public Utilities Stormwater Harold Roebuck	First quarter inspection work orders manually generated by Jean Miles
	Stormwater pump stations	6	72	100%	11	100%	SUBTYPE = 1 AND OWNERSHIP="CS' & MaintenanceEntity = 'CSW' & NPDES = 'PS' Maximo WO Database	Public Utilities Stormwater Harold Roebuck	Work order reports from Maximo Database
	Major stormwater outfalls	18	18	100%	0	0	Total Inventory GIS & Maximo Route WOs database	Public Utilities Stormwater Harold Roebuck	Database updated, FDOT outfalls removed
	Weirs or other control structures	7	7	100%	0	0	Total Inventory Maximo Route Work Order Database	Public Utilities, Stormwater Harold Roebuck	Database updated and structures not controlling flow in channels removed
	MS4 pipes / culverts (miles)	63.4	9.78	15.4%	8.03	12.6%	Total Inventory GIS & Maximo Route Work Order Database I:\BCCSHARE\shared\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\WATERSHEDPROJECTS\NPDES\AnnualReports\ 2016 Annual Report\Admin	Public Utilities, Stormwater Harold Roebuck PW-Capital Projects Peter Peduzzi	PU: 6.7 PW:3.08 SWIRP 3.1 Insp SWIRP 1.1 relining OPS 2.5 Insp Culvert Ownership recalculated.
	Inlets / catch basins / grates	2,830	384	13.6%	185	6.6%	Total Inventory OWNERSHIP=CS & MaintenanceEntity=CSW & NPDES=ICG Maximo Work Order Database & Summary	Public Utilities, Stormwater Harold Roebuck	SWIRP – 117 Insp & cleaned 75874 Saphire Shore OPS -68
	Ditches / conveyance swales (miles)	29.4	115	100%	115	100%	Total Inventory OWNERSHIP=CS & MaintenanceEntity= CSW & NPDES= DCS Maximo Work Order Database	Public Utilities, Stormwater Harold Roebuck	Hand Clearing, Canals Mowed, City Slope and Travel Way

SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE

A. Permit Citation/ SWMP Element	B. Permit Requirement/Quantifiable SWMP Activity	C. Number of Activities Performed	D. Documentation / Record	E. Entity Performing the Activity	F. Comments
	Systems in the Adopt-A-Pond program				
	ATTACH explanation if any of the minimum inspection frequencies in Table II.A.1.a were not met		n/a		
	Year 1 ONLY: Attach a map of all known major outfalls		n/a		
Part III.A.2	**Areas of New Development and Significant Redevelopment**				
	Report the number of significant redevelopment projects reviewed by the permittee for post-development stormwater considerations. Report the number of new development projects reviewed under Part III.A.9.a *DEP Note: Please provide an explanation in Column F for any "0" reported in Column C.*				
	Number of significant redevelopment projects reviewed	26	Neighborhood Development Services/ Lotus Notes	Neighborhood Development Services	Reviewers/ Inspectors: Leonard Scherry, Wesley Stuckey, Stephen Zadrozny
	Provide in the Year 2 Annual Report the summary report of the review of local codes activity. Provide in the Year 4 Annual Report the follow-up report on plan implementation of modifying codes to allow low impact design BMPs. *DEP Note: Refer to Part III.A.2 of the permit for details regarding what the review entails, and what must be included in the summary report and follow-up report. Please provide the title of the attached report in Column D and the name of the entity who finalized the report in Column E.*				
	Year 2 ONLY: Attach the summary report of the review activity		n/a		
	Year 4 ONLY: Attach the follow-up report on plan implementation		n/a		
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. *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.*				
	PERMITTEE Litter Control Program: Frequency of litter collection	6 Days/ Week	Public Works Solid Waste Division	City of Sarasota Douglas Jeffcoat	Reflecting litter, curbside trash i.e. old furniture, electronics, tires, etc.…
	PERMITTEE Litter Control Program: Estimated amount of area maintained (linear feet)				

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	PERMITTEE Litter Control Program: Estimated amount of litter collected (cubic yards)	46.04	Public Works Solid Waste Division	City of Sarasota Douglas Jeffcoat	Reflect litter and curbside trash only
	CONTRACTOR Litter Control Program: Frequency of litter collection				
	CONTRACTOR Litter Control Program: Estimated amount of area maintained (linear feet)				
	CONTRACTOR Litter Control Program: Estimated amount of litter collected (cubic yards)				
	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. *DEP Note: Please provide an explanation in Column F for any "0" reported in Column C. 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 not remove the Adopt-A-Road Program reporting items.*				
	Trash Pick-up Events: Total miles cleaned	27	H:\NPDES\2016	Keep Sarasota County Beautiful Wendi Crisp	
	Trash Pick-up Events: Estimated amount of litter collected (pounds)	4,611.25	H:\NPDES\2016	Keep Sarasota County Beautiful Wendi Crisp	
	Adopt-A-Road Program: Total miles cleaned	21	H:\NPDES\2016	Keep Sarasota County Beautiful Wendi Crisp	
	Adopt-A-Road Program: Estimated amount of litter collected (pounds)	2,257.5	H:\NPDES\2016	Keep Sarasota County Beautiful Wendi Crisp	
	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. *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.* *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.*				
	Frequency of street sweeping	Varies per location (monthly, weekly, twice weekly, 3 times weekly)	Public Works Streets & Highways	Public Works Street & Highways Doug Jeffcoat	**3 times/week**: Main St and Dr. Martin Luther King Jr. Way **2 times/week:** Lemon (1st St to Pineapple. All others per week or

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					month)
	Total miles swept (per year)	8,208 miles	Public Works	Public Works	Based on a total of 232 miles of roads and average frequency of sweeping in 2015
	Estimated quantity of sweeping material collected (cubic yards)	1,567.7 (tons)	Public Works Streets & Highways	Public Works Streets & Highways (Doug Jeffcoat)	W:\NDSengineer\Administration\GEORGES NICOLAS\11 PUBLIC WORKS\01 NPDES\2016 Report
	Total nitrogen loadings removed (pounds)	1,660 (lbs.)	Public Works Streets & Highways	Public Works Streets & Highways (Doug Jeffcoat)	W:\NDSengineer\Administration\GEORGES NICOLAS\11 PUBLIC WORKS\01 NPDES\2016 Report\01 FINAL REPORT
	Total phosphorus loadings removed (pounds)	1,064 (lbs.)	Public Works Streets & Highways	Public Works Streets & Highways (Doug Jeffcoat)	W:\NDSengineer\Administration\GEORGES NICOLAS\11 PUBLIC WORKS\01 NPDES\2016 Report\01 FINAL REPORT
	Year 1 ONLY: If have curbs and gutters, attach explanation of why no street sweeping program and the alternate BMPs used or planned				
	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. *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.*				

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		Number of Inspections			
	Name of facility #1: City of Sarasota Fleet Maintenance Facility	37	Public Works Streets & Highways Environmental Services I:\PDSBC\EPD\AirandWaterQuality\WaterQuality\NPDES\2016 Annual Report\City\2016 City of Sarasota Ind Fac Insp.xlsx	Public Works Streets & Highways (Doug Jeffcoat) County Air and Water Quality Laura Ammeson	(36 Inspection by City) (1 Inspection by County) Inspected 06/30/2016
Part III.A.4	**Flood Control Projects**				
	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. *DEP Note: A "stormwater retrofit project" is one implemented primarily to provide stormwater treatment for areas currently without treatment.* *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.* *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. Please provide an explanation in Column F for any "0" reported in Column C.*				
	Flood control projects completed during the reporting period	0	Primavera Database	County PW-Capital Projects Kim Stafford	
	Flood control projects completed during the reporting period that did not include stormwater treatment	0	Primavera Database	County PW-Capital Projects Kim Stafford	
	ATTACH a list of the flood control projects that did not include stormwater treatment and an explanation for each of why it was not		n/a		
	Stormwater retrofit projects planned	8	Primavera Database	County PW-Capital Projects Kim Stafford	-Hudson Bayou In-stream -US 41 Canal -10st Boat Basin

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					-Downtown COS STW Assess. -Gillespie Park STW Assess.
	Stormwater retrofit projects under construction during the reporting period	5	Primavera Database	County PW-Capital Projects Kim Stafford	-Greenwich -Kensington Park -N. Whitaker Bayou -Sapphire Shores -22nd St
	Stormwater retrofit projects completed during the reporting period	1	Primavera Database	County PW-Capital Projects Kim Stafford	
Part III.A.5	**Municipal Waste Treatment, Storage, and Disposal Facilities Not Covered by an NPDES Stormwater Permit**				

Annually review (and revise, as needed) and implement the permittee's 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:

- Operating municipal landfills;
- Municipal waste transfer stations;
- Municipal waste fleet maintenance facilities; and
- Any other municipal waste treatment, waste storage, and waste disposal facilities.

Report the number of applicable facilities and the number of the inspections conducted for each facility.

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. ***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, and where solid waste collection vehicles are parked and/or maintained.*** *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.*

	Number of Inspections			
Name of facility #1: City of Sarasota Fleet Maintenance Facility	37	Public Works Streets & Highways Environmental Services I:\PDSBC\EPD\AirandWaterQuality\WaterQuality\	Public Works Streets & Highways (Doug Jeffcoat) County Air and Water Quality Laura Ammeson	(36 Inspection by City) (1 Inspection by County) Inspected

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			NPDES\2016 Annual Report\ City\2016 City of Sarasota Ind Fac Insp.xlsx		06/30/2016
	Name of facility #2: City of Sarasota Equipment Yard	1	I:\PDSBC\EPD\AirandWaterQuality\WaterQuality\NPDES\ 2016 Annual Report\ City\2016 City of Sarasota Ind Fac Insp.xlsx	County Air and Water Quality Laura Ammeson	Inspected 06/30/2016
	Name of facility #3: Payne Park	11	Parks & Recs Landscaping (Jerry Fogle)	Parks & Recs Landscaping (Jerry Fogle)	Monthly Inspection
Part III.A.6	**Pesticides, Herbicides, and Fertilizer Application**				
	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. *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.*				
	PERSONNEL: Florida Department of Agriculture and Consumer Services (FDACS) certified applicators of pesticides and herbicides	13	Public Works (Doug Jeffcoat)	Parks & Recs Department (Jerry Fogle)	Daily activities are not recorded with respect to using "caution" labeled herb/pesticides, or fertilizers. We are not currently required to by our licensing agencies.
	CONTRACTORS: FDACS certified / licensed applicators of pesticides and herbicides	1	Public Works (Doug Jeffcoat)	Parks & Recs Department (Jerry Fogle)	
	PERSONNEL: FDACS certified / licensed applicators of fertilizer	1	Public Works (Doug Jeffcoat)	Parks & Recs Department (Jerry Fogle)	
	CONTRACTORS: FDACS certified / licensed applicators of fertilizer	1	Public Works (Doug Jeffcoat)	Parks & Recs Department (Jerry Fogle)	

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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**
	PERSONNEL: Florida Department of Agriculture and Consumer Services (FDACS) certified applicators of pesticides and herbicides	53	I:\CSBC\CoopExt\ PROGRAMS\ Horticulture\NPDES ReportingData2016 G:\INTEGRATED PESTMANAGEMENT\N PDES\MS4_2016\MMS\ Certification	UF/IFAS Extension Service Wilma Holley County Mosquito Management David Jenkins	FYN: 9 MM: 44 FYN: Estimated at 20% of County Extension Totals MM: County Total
	CONTRACTORS: FDACS certified / licensed applicators of pesticides and herbicides	18	I:\CSBC\CoopExt\ PROGRAMS\ Horticulture\NPDES ReportingData2016 G:\INTEGRATED PESTMANAGEMENT\N PDES\MS4_2016\MMS\ Certification	UF/IFAS Extension Service Wilma Holley County Mosquito Management David Jenkins	FYN: 17 MM: 1 IFAS: Estimated at 20% of County Extension Totals
	PERSONNEL: FDACS certified / licensed applicators of fertilizer	4	I:\CSBC\CoopExt\ PROGRAMS\ Horticulture\NPDES ReportingData2016	UF/IFAS Extension Service Wilma Holley	Estimated at 20% of County Extension Totals
	CONTRACTORS: FDACS certified / licensed applicators of fertilizer	29	I:\CSBC\CoopExt\ PROGRAMS\ Horticulture\NPDES ReportingData2016	UF/IFAS Extension Service Wilma Holley	Estimated at 20% of County Extension Totals
	Pursuant to SB 2080 (2009), all local governments are encouraged to adopt a Florida-friendly Landscaping Ordinance similar to the one set forth in the document "Florida-friendly Guidance Models for Ordinances, Covenants and Restrictions." If the broader Florida-friendly ordinance described above is not adopted, then all local governments within the watershed of a nutrient-impaired water body shall adopt the Department's Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes pursuant to SB 494 (2009) or an ordinance that includes all of the requirements set forth in the Model Ordinance. The ordinance shall be adopted within 24 months of the date of permit issuance. Provide a copy of the adopted ordinance with the subsequent Year 1 or Year 2 Annual Report. *DEP Note: If this provision is not applicable because the permittee is not within the watershed of a nutrient-impaired water body, then please indicate that in Column F, but do not remove this reporting item.* *DEP Note: Please provide the title and citation of the ordinance in Column D, and the name of the entity who finalized the ordinance in Column E.*				
	Year 1 or Year 2 ONLY: Attach copy of adopted Florida-friendly ordinance		Submitted in Year 1	County Air and Water Quality Laura Ammeson	No amendments during 2016
	During Year 1 of the permit, develop and implement a written public education and outreach program plan to encourage citizens to reduce their use of pesticides, herbicides, and fertilizers. Report on the public education and outreach activities that are performed or sponsored by the permittee within the permittee's jurisdiction to encourage citizens to reduce their use of pesticides, herbicides, and fertilizers, including the type and number of activities conducted, the type and number of materials distributed, the percentage of the population reached by the activities in total, and the number of Web site visits (if applicable). Activities performed under the Florida Yards and Neighborhoods (FYN) program should only be reported if the permittee is contributing funding towards the FYN staff and program within its jurisdiction.				

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: The permittee should "customize" the list of public outreach activities by removing items or adding items to the list below as appropriate to their particular public outreach program. However, the reporting item of "Estimated percentage of the population reached by the activities in total" must remain. The permittee may add more specifics to the reporting items, such as the name of the brochure or newsletter distributed. If "0" is reported in Column C for all the reporting items please include in Column F an explanation for why no outreach was performed. *DEP Note: IF APPLICABLE Sarasota County is to report the public education and outreach activities that it performed county-wide (and not just in the unincorporated areas of Sarasota County). The co-permittees are to report just the public education and outreach activities that they performed.* *DEP Note: Indicate under Column E "Entity Performing the Activity" if FYN or IFAS is performing any of the reported public education and outreach activities. In addition, please complete the following line:* **FYN PROGRAM FUNDING: Permittee Provides Funding? ☒ Yes ☐ No Amount of Funding = $** *County Provided Funding: $242,013.00*				
	Estimated percentage of the population reached by the activities in total				
	Brochures/Flyers/Fact sheets distributed	3,594	G:\INTEGRATED PESTMANAGEMENT\NPDES\MS4_2016\MMS\ Outreach I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES Info\2016 Folder I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016 Annual Report\2016 AWQ Public Outreach.xlsx \\BCCSHARE\ shared\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\WATERSHED PROJECTS \Outreach\FY16 Outreach\ Measurables	County Mosquito Management David Jenkins County PU-NEST Mollie Holland County Air and Water Quality Laura Ammeson County PU-Stormwater Nicole Iadevia	MMS: 2,000 NEST: 200 AWQ: 419 PU: 975 MMS: Handouts and Brochures: "IPM", Bromeliads" and many others

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Permit Citation/ SWMP Element	**Permit Requirement/Quantifiable SWMP Activity**	**Number of Activities Performed**	**Documentation / Record**	**Entity Performing the Activity**	**Comments**
	FYN: Brochure/Flyers/Fact sheets distributed	13,648	I:\CSBC\CoopExt\ PROGRAMS\ Horticulture\NPDES Reporting Data\ 2016 NPDES	FYN UF/IFAS Extension Service Wilma Holley	Estimated at 20% of County Extension Totals
	Neighborhood presentations: Number conducted	17	G:\INTEGRATED PESTMANAGEMENT\NPDES\MS4_2016\MMS\ Outreach I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES Info\2016 Folder	County Mosquito Management David Jenkins County PU-NEST Mollie Holland	MMS: 16 NEST: 1
	Neighborhood presentations: Number of participants	408	G:\INTEGRATED PESTMANAGEMENT\NPDES\MS4_2016\MMS\ Outreach I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES Info\2016 Folder	County Mosquito Management David Jenkins County PU-NEST Mollie Holland	MMS: 400 NEST: 8
	FYN: Neighborhood presentations: Number of participants	20	I:\CSBC\CoopExt\ PROGRAMS\ Horticulture\NPDES Reporting Data\ 2016 NPDES	FYN UF/IFAS Extension Service Wilma Holley	Estimated at 20% of County Extension Totals
	FYN: Neighborhood presentations: Number conducted	1	I:\CSBC\CoopExt\ PROGRAMS\ Horticulture\NPDES Reporting Data\ 2016 NPDES	FYN UF/IFAS Extension Service Wilma Holley	Estimated at 20% of County Extension Totals
	Newspapers & newsletters: Number of articles/notices published	11	G:\INTEGRATED PESTMANAGEMENT\NPDES\MS4_2016\MMS\ Outreach I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016	County Mosquito Management David Jenkins County Air and Water Quality Laura Ammeson	MM: 9 AWQ: 2 MM: 4 Newspaper articles in Sarasota Herald Tribune and 5 in other outlets

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Permit Citation/ SWMP Element	**Permit Requirement/Quantifiable SWMP Activity**	**Number of Activities Performed**	**Documentation / Record**	**Entity Performing the Activity**	**Comments**
			Annual Report\2016 AWQ Public Outreach.xlsx		
	Newsletters: Number of newsletters distributed	3,676	G:\INTEGRATED PESTMANAGEMENT\NPDES\MS4_2016\MMS\ Outreach I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Mosquito Management David Jenkins County Air and Water Quality Laura Ammeson	MM: 0 AWQ: 3,676 MM: Unknown distribution
	Public displays (e.g., kiosks, storyboards, posters, etc.)	19,650	G:\INTEGRATED PESTMANAGEMENT\NPDES\MS4_2016\MMS\ Outreach \\BCCSHARE\shared\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\WATERSHED PROJECTS\ Outreach\FY16Outreach \ Measurables	County Mosquito Management David Jenkins County PU-Stormwater Nicole Iadevia	MM: 15 PU: 19,635 PU: Summer ads at Burn's Court movie theater
	FYN: Public displays (e.g., kiosks, storyboards, posters, etc.)	0	I:\CSBC\CoopExt\ PROGRAMS\ Horticulture\NPDES Reporting Data\ 2016 NPDES	FYN UF/IFAS Extension Service Wilma Holley	Occasional Displays at Libraries and Plant Clinics. Data not available
	Radio or television Public Service Announcements (PSAs)	36	G:\INTEGRATED PESTMANAGEMENT\NPDES\MS4_2016\MMS\ Outreach I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES Info\2016 Folder I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016	County Mosquito Management David Jenkins County PU-NEST Mollie Holland County Air and Water Quality Laura Ammeson	MMS: 29 NEST: 2 AWQ: 2 PU: 3 MMS: 26 TV spots on SNN & local news 3 radio AWQ: PSA ran on Access 19 TV Station from June through

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			Annual Report\2016 AWQ Public Outreach.xlsx \\BCCSHARE\shared\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\WATERSHED PROJECTS\ Outreach\FY16Outreach\ Measurables	County PU-Stormwater Nicole Iadevia	September; Other PSA on Fertilizer website with 260 views
	FYN: Radio or televiseion Public Service Announcements (PSAs)	0	I:\CSBC\CoopExt\ PROGRAMS\ Horticulture\NPDES Reporting Data\ 2016 NPDES	FYN UF/IFAS Extension Service Wilma Holley	Data not available
	School presentations: Number conducted	12	G:\INTEGRATED PESTMANAGEMENT\NPDES\MS4_2016\MMS\ Outreach I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES Info\2016 Folder	County Mosquito Management David Jenkins County PU-NEST Mollie Holland	MMS: 11 NEST: 1
	School presentations: Number of participants	285	G:\INTEGRATED PESTMANAGEMENT\NPDES\MS4_2016\MMS\ Outreach I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES Info\2016 Folder	County Mosquito Management David Jenkins County PU-NEST Mollie Holland	MMS: 275 NEST: 10
	FYN: School presentations: Number conducted	0	I:\CSBC\CoopExt\ PROGRAMS\ Horticulture\NPDES Reporting Data\ 2016 NPDES	FYN UF/IFAS Extension Service Wilma Holley	None in City Limits
	FYN: School presentations: Number of participants	0	I:\CSBC\CoopExt\ PROGRAMS\ Horticulture\NPDES	FYN UF/IFAS Extension Service Wilma Holley	School Presentation was not in City Limits

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			Reporting Data\ 2016 NPDES		
	Seminars/Workshops: Number conducted	15	G:\INTEGRATED PESTMANAGEMENT\NPDES\MS4_2016\MMS\ Outreach I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Mosquito Management David Jenkins County Air and Water Quality Laura Ammeson	MM: 3 AWQ: 12
	Seminars/Workshops: Number of participants	310	G:\INTEGRATED PESTMANAGEMENT\NPDES\MS4_2016\MMS\ Outreach I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Mosquito Management David Jenkins County Air and Water Quality Laura Ammeson	MM: 90 AWQ: 220
	FYN: Seminars/Workshops: Number conducted	18	I:\CSBC\CoopExt\ PROGRAMS\ Horticulture\NPDES Reporting Data\ 2016 NPDES	FYN UF/IFAS Extension Service Wilma Holley	Estimated at 20% of County Extension Totals
	FYN: Seminars/Workshops: Number of participants	319	I:\CSBC\CoopExt\ PROGRAMS\ Horticulture\NPDES Reporting Data\ 2016 NPDES	FYN UF/IFAS Extension Service Wilma Holley	Estimated at 20% of County Extension Totals
	Special events: Number conducted	16	G:\INTEGRATED PESTMANAGEMENT\NPDES\MS4_2016\MMS\ Outreach I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES Info\2016 Folder	County Mosquito Management David Jenkins County PU-NEST Mollie Holland	MMS: 10 NEST: 1 AWQ: 1 PU: 4 MMS: Earth Day and Fair AWQ: Sarasota County Fair

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			I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016 Annual Report\2016 AWQ Public Outreach.xlsx \\BCCSHARE\shared\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\WATERSHED PROJECTS\ Outreach\FY16Outreach\ Measurables	County Air and Water Quality Laura Ammeson County PU-Stormwater Nicole Iadevia	
	Special events: Number of participants	158,235+	G:\INTEGRATED PESTMANAGEMENT\NPDES\MS4_2016\MMS\ Outreach I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES Info\2016 Folder I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016 Annual Report\2016 AWQ Public Outreach.xlsx \\BCCSHARE\shared\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\WATERSHED PROJECTS\ Outreach\FY16Outreach\ Measurables	County Mosquito Management David Jenkins County PU-NEST Mollie Holland County Air and Water Quality Laura Ammeson County PU-Stormwater Nicole Iadevia	MMS: 1,000 NEST: 50 AWQ: 150,000+ PU: 7,185 AWQ: Website: https://www.sarasotafair.com
	FYN: Special events: Number conducted	0	I:\CSBC\CoopExt\ PROGRAMS\ Horticulture\NPDES Reporting Data\ 2016 NPDES	FYN UF/IFAS Extension Service Wilma Holley	3 Special events held were not in city limits

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	FYN: Special events: Number of participants	0	I:\CSBC\CoopExt\ PROGRAMS\ Horticulture\NPDES Reporting Data\ 2016 NPDES	FYN UF/IFAS Extension Service Wilma Holley	3 Special events held were not in city limits
	Web Site: Number of hits / visitors to the stormwater-related pages	464,665	G:\INTEGRATED PESTMANAGEMENT\NPDES\MS4_2016\MMS\ Outreach Google Analytics for: https://www.scgov.net/WaterServices/Pages/FertilizerManagement.aspx http://sarasota.ifas.ufl.edu/FYN/fyn.shtml \\BCCSHARE\shared\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\WATERSHED PROJECTS\ Outreach\FY16Outreach\ Measurables Google Analytics for: Green Businesses webpage	County Mosquito Management David Jenkins County Air and Water Quality Laura Ammeson FYN UF/IFAS Extension Service Wilma Holley County PU-Stormwater Nicole Iadevia County PU-Stormwater Rene Janneman	MM: 16,713 AWQ: 40,286 FYN: 17,828 PU: 388,399 PU: 1,439 MM: 765 Visitors: IPM 15,948 Visitors: MMS AWQ: 3 webpages FYN: Estimated at 20% of County Extension Total PU: SEC Social Media 299,520 /Sarasota Water Atlas 88,879
	Press Release: Number conducted	1	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Air and Water Quality Laura Ammeson	Fertilizer Restricted Season
	Facebook Campaign: Number of posts conducted	15	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Air and Water Quality Laura Ammeson	
	Facebook Campaign: Number of viewers	9,348	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016 Annual Report\2016	County Air and Water Quality Laura Ammeson	

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A. Permit Citation/ SWMP Element	**B. Permit Requirement/Quantifiable SWMP Activity**	**C. Number of Activities Performed**	**D. Documentation / Record**	**E. Entity Performing the Activity**	**F. Comments**
			AWQ Public Outreach.xlsx		
	Twitter Campaign: Number of posts conducted	11	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Air and Water Quality Laura Ammeson	
	Twitter Campaign: Number of viewers	40,286	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Air and Water Quality Laura Ammeson	
	TV Interviews	2	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016 Annual Report\2016 AWQ Public Outreach.xlsx		Fertilizer Restricted Season interviews: Fox 13 and SNN TV
Part III.A.7.a	**Illicit Discharges and Improper Disposal — Inspections, Ordinances, and Enforcement Measures**				
	Where applicable, strengthen the legal authority to conduct inspections, conduct monitoring, control illicit discharges, illicit connections, illegal dumping and spills into the MS4 and to require compliance with conditions in ordinances, permits, contracts, and orders. Report amendments, as needed. *DEP Note: If applicable, please provide the title of the attached report in Column D and the name of the entity who finalized the report in Column E.*				
	ATTACH a report on any amendments to the applicable legal authority		Submitted in Year 1	County Air and Water Quality Laura Ammeson	No amendments to Water Pollution Control Code during 2016
Part III.A.7.c	**Illicit Discharges and Improper Disposal — Investigation of Suspected Illicit Discharges and/or Improper Disposal**				
	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. Report on the proactive inspection program, including the number of inspections conducted, the number of illicit activities found, and the number and type of enforcement actions taken. *DEP Note: 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. In addition, the permittee should re-word the "NOVs / warning letters / citations issued" reporting item to more accurately reflect its particular initial enforcement activity, if necessary.* *DEP Note: Proactive inspections may include, for example, suspect areas (e.g., industrial areas), commercial businesses (e.g., restaurants, car washes, service stations, laundries / dry cleaners, auto body shops, mobile carpet cleaners) or temporary activities (e.g., special events / fairs / circus) that would not otherwise be inspected during routine inspections and maintenance of the MS4, in association with high risk industrial facilities or construction sites, or in response to citizen or*				

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A. Permit Citation/ SWMP Element	**B. Permit Requirement/Quantifiable SWMP Activity**	**C. Number of Activities Performed**	**D. Documentation / Record**	**E. Entity Performing the Activity**	**F. Comments**
	staff reports. *DEP Note: 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.*				
	Proactive inspections for suspected illicit discharges / connections / dumping	29	I:\PDSBC\EPD\Air and Water Quality\Water Quality\NPDES\2016 Annual Report\ City\2016 City Proactive Insp.xlsx	County Air and Water Quality Laura Ammeson	
	Illicit discharges / connections / dumping found during a proactive inspection	6	I:\PDSBC\EPD\Air and Water Quality\Water Quality\NPDES\2016 Annual Report\ City\2016 City Proactive Insp.xlsx	County Air and Water Quality Laura Ammeson	
	Notices of Violation (NOVs) / warning letters / citations issued for illicit discharges / connections / dumping found during a proactive inspection	3	I:\PDSBC\EPD\Air and Water Quality\Water Quality\NPDES\2016 Annual Report\ City\2016 Enforcement Tracking.xlsx	County Air and Water Quality Laura Ammeson	2 Verbal Warnings, 1 Notice of Violation, 3 Voluntary Compliance
	Fines issued for illicit discharges / connections / dumping found during a proactive inspection	0	N/A	County Air and Water Quality Laura Ammeson	Compliance achieved in all cases; no penalties assessed
	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 MS4, 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 reports received, the number of investigations conducted, the number of illicit activities found, and the number and type of enforcement actions taken. *DEP Note: If the number of reports received differs from the number of reactive investigations, please provide an explanation for the discrepancy in Column F. In addition, the permittee should re-word the "NOVs / warning letters / citations issued" reporting item to more accurately reflect its particular initial enforcement activity, if necessary.*				
	Reports of suspected illicit connections / discharges / dumping received	40	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016 Annual	County Air and Water Quality Laura Ammeson	

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					Report\ City\2016 City Incident Response.xlsx		
	Reactive investigations of reports of suspected illicit discharges/ connections / dumping			40	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016 Annual Report\ City\2016 City Incident Response.xlsx	County Air and Water Quality Laura Ammeson	
	Illicit discharges / connections / dumping found during a reactive investigation			20	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\2016 Annual Report\ City\2016 City Incident Response.xlsx	County Air and Water Quality Laura Ammeson	
	Notices of Violation (NOVs) / warning letters / citations issued for illicit discharges / connections / dumping found during a reactive investigation			11	I:\PDSBC\EPD\Air and Water Quality\Water Quality\NPDES\2016 Annual Report\ City\Enforcement Tracking.xlsx	County Air and Water Quality Laura Ammeson	11 Verbal Warnings, 2 Referrals to other agencies; 7 Voluntary Compliance
	Fines issued for illicit discharges / connections / dumping found during a reactive investigation			0	N/A	County Air and Water Quality Laura Ammeson	Compliance achieved in all cases; no penalties assessed
	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) and contractors 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). *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.*						
		Initial Training	**Refresher Training**				
	Personnel trained		4		I:\PDSBC\EPD\Air	County Air and Water Quality	4 staff; 14 training

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					and Water Quality\ Water Quality\ NPDES\2016 Annual Report\2016 Staff Training.xlsx	Laura Ammeson	classes/webinars attended
	Contractors trained						
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. *DEP Note: The permittee may report the number of hazardous material spills separately from the number of non-hazardous material spills, or report one combined number, to more accurately reflect its tracking of these spills.*						
	Hazardous and non-hazardous material spills responded to			38	Image Trend Reporting Database	Sarasota County Fire Department Mark Calderini	Total County-Wide
	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) and contractors 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). *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.*						
		Initial Training	**Refresher Training**				
	Personnel trained	4	42		I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\ 2016 Annual Report\2016 Staff Training.xlsx Special Operations Training Files	County Air and Water Quality Laura Ammeson Sarasota County Fire Department Mark Calderini	AWQ:4 FD: 42 AWQ: 4 staff; 10 training classes/webinars attended
	Personnel trained	9	1		W:\NDSengineer\Administration\GEORGES NICOLAS\11 PUBLIC WORKS\01 NPDES\2016 Report\06 IDDE CERTS	Public Works Environmental Services	Training was done through Sarasota County's online IDDE class: https://trac.scgov.net/Courseware/BCC/Articulate/2017IllicitDischargeTrainingWEB/story_flash.

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							html
	Contractors trained						
Part III.A.7.e	**Illicit Discharges and Improper Disposal — Public Reporting**						
	During Year 1 of the permit, develop and implement a written public education and outreach program plan to promote, publicize, and facilitate public reporting of the presence of illicit discharges and improper disposal of materials into the MS4. Report on the public education and outreach activities that are performed or sponsored by the permittee within the permittee's jurisdiction to encourage the public reporting of suspected illicit discharges and improper disposal of materials, including the type and number of activities conducted, the type and number of materials distributed, the percentage of the population reached by the activities in total, and the number of Web site visits (if applicable). *DEP Note: The permittee should "customize" the list of public outreach activities by removing items or adding items to the list below as appropriate to their particular public outreach program. However, the reporting item of "Estimated percentage of the population reached by the activities in total" must remain. The permittee may add more specifics to the reporting items, such as the name of the brochure or newsletter distributed. If "0" is reported in Column C for all the reporting items, please include in Column F an explanation for why no outreach was performed.* *DEP Note: IF APPLICABLE Sarasota County is to report the public education and outreach activities that it performed county-wide (and not just in the unincorporated areas of Sarasota County). The co-permittees are to report just the public education and outreach activities that they performed.*						
	Estimated percentage of the population reached by the activities in total						
	Brochures/Flyers/Fact sheets distributed			2,289	I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES Info\2016 Folder I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\ 2016 Annual Report\2016 AWQ Public Outreach.xlsx \\BCCSHARE\shared\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\WATERSHED PROJECTS\ Outreach\FY16Outreach \ Measurables	PU-NEST Mollie Holland County Air and Water Quality Laura Ammeson County PU-Stormwater Nicole Iadevia	NEST: 268 AWQ: 1,046 PU: 975
	Neighborhood presentations: Number conducted			1	I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES	PU-NEST Mollie Holland	

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**
			Info\2016 Folder		
	Neighborhood presentations: Number of participants	8	I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES Info\2016 Folder	PU-NEST Mollie Holland	
	Newspapers & newsletters: Number of articles/notices published				
	Newsletters: Number of newsletters distributed				
	Public displays (e.g., kiosks, storyboards, posters, etc.)	19,635	\\BCCSHARE\shared\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\WATERSHED PROJECTS\ Outreach\FY16Outreach\ Measurables	County PU-Stormwater Nicole Iadevia	
	Radio or television Public Service Announcements (PSAs)	7	I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES Info\2016 Folder I:\PDSBC\EPD\Air and Water Quality \Water Quality\ NPDES\ 2016 Annual Report\2016 AWQ Public Outreach.xlsx \\BCCSHARE\shared\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\WATERSHED PROJECTS\ Outreach\FY16Outreach\ Measurables	PU-NEST Mollie Holland County Air and Water Quality Laura Ammeson County PU-Stormwater Nicole Iadevia	NEST: 2 AWQ: 2 PU: 3 AWQ: 2 PSA ran on Access 19 TV Station from June through September; Other PSA on Fertilizer website with 260 views
	School presentations: Number conducted	1	I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES Info\2016 Folder	PU-NEST Mollie Holland	

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**
	School presentations: Number of participants	10	I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES Info\2016 Folder	PU-NEST Mollie Holland	
	Seminars/Workshops: Number conducted	12	I:\PDSBC\EPD\Air and Water Quality \Water Quality\ NPDES\ 2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Air and Water Quality Laura Ammeson	
	Seminars/Workshops: Number of participants	220	I:\PDSBC\EPD\Air and Water Quality \Water Quality\ NPDES\ 2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Air and Water Quality Laura Ammeson	
	Special events: Number conducted	6	I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES Info\2016 Folder I:\PDSBC\EPD\Air and Water Quality \Water Quality\ NPDES\ 2016 Annual Report\2016 AWQ Public Outreach.xlsx \\BCCSHARE\shared\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\WATERSHED PROJECTS\ Outreach\FY16Outreach \ Measurables	PU-NEST Mollie Holland County Air and Water Quality Laura Ammeson County PU-Stormwater Nicole Iadevia	NEST: 1 AWQ: 1 PU: 4 AWQ: Sarasota County Fair
	Special events: Number of participants	157,235+	I:\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\NEST PROGRAM\NPDES Info\2016 Folder I:\PDSBC\EPD\Air and	PU-NEST Mollie Holland	NEST: 50 AWQ: 150000+ PU: 7,185 AWQ: Website: https://www.sarasotafair.com

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**
			Water Quality \Water Quality\ NPDES\ 2016 Annual Report\2016 AWQ Public Outreach.xlsx \\BCCSHARE\shared\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\WATERSHED PROJECTS\ Outreach\FY16Outreach\ Measurables	County Air and Water Quality Laura Ammeson County PU-Stormwater Nicole Iadevia	
	Press Release: Number conducted	2	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\ 2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Air and Water Quality Laura Ammeson	Pollution Prevention Week and Fertilizer Restricted Season
	Proclamation: Number conducted	1	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\ 2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Air and Water Quality Laura Ammeson	Pollution Prevention Week Proclamation
	Facebook Campaign: Number of posts conducted	15	I:\PDSBC\EPD\Air and Water Quality\Water Quality\NPDES\ 2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Air and Water Quality Laura Ammeson	
	Facebook Campaign: Number of viewers	9,348	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\ 2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Air and Water Quality Laura Ammeson	
	Twitter Campaign: Number of posts conducted	11	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\	County Air and Water Quality Laura Ammeson	

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Permit Citation/ SWMP Element	**Permit Requirement/Quantifiable SWMP Activity**	**Number of Activities Performed**	**Documentation / Record**	**Entity Performing the Activity**	**Comments**
			NPDES\ 2016 Annual Report\2016 AWQ Public Outreach.xlsx		
	Twitter Campaign: Number of viewers	40,286	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\ 2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Air and Water Quality Laura Ammeson	
	Website Videos: Number of links	2	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\ 2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Air and Water Quality Laura Ammeson	Videos: Scoop the Poop and Runoff Isn't Cute
	Website Videos: Number of views	2,693	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES\ 2016 Annual Report\2016 AWQ Public Outreach.xlsx	County Air and Water Quality Laura Ammeson	
	Web Site: Number of visitors to the stormwater-related pages	419,480	Google Analytics for: www.scgov.net \\BCCSHARE\shared\EnvSBC\Water Core\Planning & Regulatory\ENVIRONMENTAL\WATERSHED PROJECTS\ Outreach\FY16Outreach\ Measurables Google Analytics for: Green Businesses & Keep Sarasota County Beautiful webpages	County Air and Water Quality Laura Ammeson County PU-Stormwater Nicole Iadevia County PU-Stormwater Rene Janneman	AWQ: 18,682 PU: 388,399 PU: 12,399 AWQ: Water Pollution Prevention-Water Quality-Watershed Champion-Low Impact Development-Rain Barrel-Domestic Wastewater-Fish Kill-Water Services PU: SEC Social Media 299,520 /Sarasota Water Atlas 88,879
Part III.A.7.f	**Illicit Discharges and Improper Disposal — Oils, Toxics, and Household Hazardous Waste Control**				
	During Year 1 of the permit, develop and implement a written public education and outreach program plan to encourage the proper use and disposal of used motor				

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Permit Citation/ SWMP Element	**Permit Requirement/Quantifiable SWMP Activity**	**Number of Activities Performed**	**Documentation / Record**	**Entity Performing the Activity**	**Comments**
	vehicle fluids, leftover hazardous household products, and lead acid batteries. Report on the public education and outreach activities that are performed or sponsored by the permittee within the permittee's jurisdiction to encourage the proper use and disposal of oils, toxics, and household hazardous waste, including the type and number of activities conducted, the type and number of materials distributed, the amount of waste collected / recycled / properly disposed, the percentage of the population reached by the activities in total, and the number of Web site visits (if applicable). *DEP Note: The permittee should "customize" the list of public outreach activities by removing items or adding items to the list below as appropriate to their particular public outreach program. However, the reporting items of "Estimated percentage of the population reached by the activities in total" and "Household Chemical Collection Center Program: Amount of waste collected / recycled / properly disposed (tons)" must remain. The permittee may add more specifics to the reporting items, such as the name of the brochure or newsletter distributed. If "0" is reported in Column C for all the reporting items, please include in Column F an explanation for why no outreach was performed.* *DEP Note: IF APPLICABLE Sarasota County is to report the public education and outreach activities that it performed county-wide (and not just in the unincorporated areas of Sarasota County). The co-permittees are to report just the public education and outreach activities that they performed.*				
	Estimated percentage of the population reached by the activities in total	9%	Crystal Report from eManager on county eNet: http://hwemanager/	County Solid Waste Oland Stokes	Participation Rate from City compared to Planning & Development
	Household Chemical Collection Center Program: Amount of waste collected / recycled / properly disposed (tons)	722.55	Crystal Report from eManager on county eNet: http://hwemanager/	County Solid Waste Oland Stokes	
	Household Chemical Collection Center Program: Events	777	https://www.scgov.net/Solid_Waste/Pages/HomeHazWaste.aspx	County Solid Waste Oland Stokes	Posted Collection Days on website: 1 facility at 265 days; 1 facility at 309 days; 1 facility at 252
	Household Hazardous Waste Materials Guides distributed	Unknown	https://www.scgov.net/Solid_Waste/Pages/HomeHazWaste.aspx	County Solid Waste Oland Stokes	Hazardous Waste How-To Guide available for download on website and distributed at facilities and events
	Brochures/Flyers/Fact sheets distributed	0	N/A	County Solid Waste Oland Stokes	Refer to Material Guide above.
	Neighborhood presentations: Number conducted	1	H:\kgodwin\\bcchome\home	County Solid Waste Oland Stokes	
	Neighborhood presentations: Number of participants	9	H:\kgodwin\\bcchome\home	County Solid Waste Oland Stokes	
		0		County Solid Waste	

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**
	Newspapers & newsletters: Number of articles/notices published			Oland Stokes	
	Newsletters: Number of newsletters distributed	0		County Solid Waste Oland Stokes	
	Public displays (e.g., kiosks, storyboards, posters, etc.)	0	H:\kgodwin\\bcchome\home	County Solid Waste Oland Stokes	
	Radio or television Public Service Announcements (PSAs)	0		County Solid Waste Oland Stokes	
	School presentations: Number conducted	0	H:\kgodwin\\bcchome\home	County Solid Waste Oland Stokes	
	School presentations: Number of participants	0	H:\kgodwin\\bcchome\home	County Solid Waste Oland Stokes	
	Seminars/Workshops: Number conducted	0		County Solid Waste Oland Stokes	
	Seminars/Workshops: Number of participants	0		Solid Waste Oland Stokes	
	Special events: Number conducted	0	Crystal Report from eManager on county eNet: http://hwemanager/	County Solid Waste Oland Stokes	
	Special events: Number of participants	0	Crystal Report from eManager on county eNet: http://hwemanager/	County Solid Waste Oland Stokes	
	Storm sewer inlets newly marked/replaced	N/A		Unknown	
	Web Site: Number of visitors to the stormwater-related pages	89,007	EIT Google Analytics Report	County Solid Waste Oland Stokes	50,293 to Residential, and 2,527 visits to Commercial Solid Waste Pages on www.scgov.net
Part III.A.7.g	**Illicit Discharges and Improper Disposal — Limitation of Sanitary Sewer Seepage**				
	Annually review (and revise, as needed) and implement the permittee's written procedures to reduce or eliminate sanitary wastewater contamination into the MS4, including discharges to the MS4 from sanitary sewer overflows (SSOs) and from inflow / infiltration from collection / transmission systems and/or septic tank systems. Advise the appropriate utility owner of a violation if constituents common to wastewater contamination are discovered in the MS4. Report on the type and number of activities undertaken to reduce or eliminate SSOs and inflow/ infiltration, the number of SSOs or inflow / infiltration incidents found and the number resolved, and the name of the owner of the sanitary sewer system within the permittee's jurisdiction. *DEP Note: The permittee needs to "customize" this section as it pertains to the type of activities undertaken to reduce or eliminate SSOs and inflow / infiltration into the MS4. The first five reporting items below are examples.* *DEP Note: The permittee should contact the appropriate authorities for accurate reporting information, such as the sanitary sewer system operator who is responsible for investigating and eliminating SSOs and the local health department who is responsible for permitting / overseeing septic tank systems.*				

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: Report only the SSOs and inflow / infiltration incidents into the MS4.				
	Activity to reduce/eliminate SSOs and inflow / infiltration: Sanitary sewer pipe inspected for infiltration (linear feet)	138,623	W:\NDSengineer\Administration\GEORGES NICOLAS\11 PUBLIC WORKS\01 NPDES\2016 Report\03 UTILITIES	COS Utilities Department	Wastewater trenchless and pipe repairs
	Activity to reduce/eliminate SSOs and inflow / infiltration: Sanitary sewer pipe sealed, lined, and / or replaced (linear feet)	24,163	W:\NDSengineer\Administration\GEORGES NICOLAS\11 PUBLIC WORKS\01 NPDES\2016 Report\03 UTILITIES	COS Utilities Department	Wastewater trenchless and pipe repairs
	Activity to reduce/eliminate SSOs and inflow / infiltration: Sanitary sewer line breaks repaired	3	W:\NDSengineer\Administration\GEORGES NICOLAS\11 PUBLIC WORKS\01 NPDES\2016 Report\03 UTILITIES	COS Utilities Department	Wastewater trenchless and pipe repairs
	Activity to reduce/eliminate SSOs and inflow / infiltration: Sanitary Manhole Rehabilitation	+/- 300	W:\NDSengineer\Administration\GEORGES NICOLAS\11 PUBLIC WORKS\01 NPDES\2016 Report\03 UTILITIES	COS Utilities Department	Wastewater trenchless and pipe repairs
	Activity to reduce/eliminate SSOs and inflow / infiltration: Septic systems removed	7	State of Florida Environmental Health Database	Florida Department of Health Virginia Bess	Septic Tank Abandonment Approvals
	Activity to reduce/eliminate SSOs and inflow / infiltration: Emergency generator added				
	SSO incidents discovered	52	State of Florida Environmental Health Database I:\PDSBC\EPD\Air and Water Quality\Water Quality\NPDES\ 2016 Annual Report\City\2016 City SSO.xlsx	Florida Department of Health Virginia Bess County Air and Water Quality Laura Ammeson	DOH: 19 AWQ: 33 DOH: Sewage Complaints AWQ: 4 discharges to MS4 only; 11 discharges to both MS4 and surface waters; 18 discharges to the ground
	SSO incidents resolved	46	State of Florida Environmental Health Database	Florida Department of Health	DOH: 13 AWQ: 33

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Permit Citation/ SWMP Element	**Permit Requirement/Quantifiable SWMP Activity**	**Number of Activities Performed**	**Documentation / Record**	**Entity Performing the Activity**	**Comments**
			I:\PDSBC\EPD\Air and Water Quality\Water Quality\NPDES\ 2016 Annual Report\City\2016 City SSO.xlsx	Virginia Bess County Air and Water Quality Laura Ammeson	DOH: Sewage Complaints
	Inflow / infiltration incidents discovered				
	Inflow / infiltration incidents resolved				
	Name of owner of the sanitary sewer system	1 City of Sarasota Wastewater Treatment Facility			
Part III.A.8.a	**Industrial and High-Risk Runoff — Identification of Priorities and Procedures for Inspections**				

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

- Operating municipal landfills;
- Hazardous waste treatment, storage, disposal and recovery facilities;
- 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
- 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.

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.

DEP Note: The TRI is updated every spring / summer by the U.S. EPA at www.epa.gov/triexplorer. 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.

During Year 1 of the permit, develop and implement a written plan for conducting inspections of high risk facilities 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 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 facilities inspection program, including the number of inspections conducted and the number and type of enforcement actions taken. . 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

DEP Note: If "0" is reported for the number of 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. In addition, the permittee should re-word the "NOVs / warning letters / citations issued" reporting item to more accurately reflect its particular initial enforcement activity, if necessary.

DEP Note: Sarasota County is to report ONLY the inventory of high risk facilities in the unincorporated areas of Sarasota County – the inventory of high risk facilities located in the co-permittees' jurisdictions are to be reported by the co-permittees. Likewise, the County is to report ONLY the high risk facility inspections it performed in the unincorporated areas of Sarasota County – any high risk facility inspections it performed in the co-permittees' jurisdictions are to be reported by the co-permittees. Each co-permittee is to obtain the necessary information from Sarasota County that pertains to its jurisdiction.

	Number of Facilities	**Number of Inspections**	**For violations discovered during a high risk inspection**			
			Fines issued	**Notices of Violation (NOVs) / warning letters / citations issued**		

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**
	Total high risk facilities	27				I:\PDSBC\EPD\Air and Water Quality\Water Quality\NPDES\2016 Annual Report\ City\2016 City HR Inventory.xlsx	County Air and Water Quality Laura Ammeson	27 Low Risk facilities on inventory list; 1 High Risk facility and 1 Low Risk facility closed and removed from inventory
	New high risk facilities added to the inventory during the current reporting period	3				I:\PDSBC\EPD\Air and Water Quality\Water Quality\NPDES\2016 Annual Report\ City\2016 City HR Inventory.xlsx	County Air and Water Quality Laura Ammeson	Added 3 HR: Signature Marble & Granite, Allure Marble & Granite, and United Rentals
	Operating municipal landfills	0	0	0	0		County Air and Water Quality Laura Ammeson	No active facilities within the city
	Hazardous waste treatment, storage, disposal and recovery (HWTSDR) facilities	0	0	0	0		County Air and Water Quality Laura Ammeson	No active facilities within the city
	EPCRA Title III, Section 313 facilities (that are not landfills or HWTSDR facilities)	1	1	0	0	I:\PDSBC\EPD\Air and Water Quality \Water Quality\ NPDES \2016 Annual Report\City\ 2016 City Ind Fac Insp.xlsx	County Air and Water Quality Laura Ammeson	Inspected on 04/19/16; Checked TRI website 11/04/16
	Facilities determined as high risk by the permittee through the proactive inspections as per Part III.A.7.c	1	1	0	0	I:\PDSBC\EPD\Air and Water Quality \Water Quality\ NPDES \2016 Annual Report\City\ 2016 City Ind Fac Insp.xlsx	County Air and Water Quality Laura Ammeson	
	Other facilities determined as high risk by the permittee (that are <u>not</u> facilities identified through the proactive inspections)	25	25	0	1	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES \2016 Annual Report\City\ 2016 City Ind Fac Insp.xlsx	County Air and Water Quality Laura Ammeson	1 Notice of Violation; In addition 4 Low Risk facility inspections conducted
Part III.A.8.b	**Industrial and High-Risk Runoff — Monitoring for High Risk Industries**							
	Sampling of the discharge to the stormwater system may be required on an as-needed basis in the event that inspections of high-risk facilities disclose suspected illicit discharges to the MS4. New high-risk industrial facilities as defined in 40 CFR 122.26(d)(2)(iv)(C) must be evaluated to determine if the new discharge is contributing a substantial pollutant load to the MS4. The evaluation may include site-specific monitoring. Report the number of high risk facilities sampled.							

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**
	High risk facilities sampled	1	I:\PDSBC\EPD\Air and Water Quality\ Water Quality\ NPDES \2016 Annual Report\ City\Marine Max.pdf	County Air and Water Quality Laura Ammeson	Facility: Marine Max (fka Gulfwind Marine FLR05F99)
Part III.A.9.a	**Construction Site Runoff — Site Planning and Non-Structural and Structural Best Management Practices**				
	Continue to implement the local codes or land development regulations and the written pre-construction site plan review procedures that require the use and maintenance of appropriate structural and non-structural erosion and sedimentation controls during construction to reduce the discharge of pollutants to the MS4. Report the number of permittee and private pre-construction site plans reviewed for stormwater, erosion, and sedimentation controls, and the number approved. *DEP Note: Please provide an explanation in Column F for any "0" reported in Column C.*				
	PERMITTEE SITES: Construction site plans reviewed	6	Public Works	City of Sarasota Public Works/ Engineering	Public Works
	PERMITTEE SITES: Construction site plans approved	6	Public Works	City of Sarasota Public Works/ Engineering	Public Works
	PRIVATE SITES: Construction site plans reviewed	232	Neighborhood Development Services/ Lotus Notes	Neighborhood Development Services	Reviewers/ Inspectors: Leonard Scherry, Wesley Stuckey, Stephen Zadrozny
	PRIVATE SITES: Construction site plans approved	232	Neighborhood Development Services/ Lotus Notes	Neighborhood Development Services	Reviewers/ Inspectors: Leonard Scherry, Wesley Stuckey, Stephen Zadrozny
	Annually review (and revise, as needed) and implement the permittee's written procedures to notify all new development / redevelopment permit applicants of the need to obtain all required stormwater permits. Report the number of new development/redevelopment permit applicants notified of the ERP and CGP, and the number of applicants who confirmed ERP and CGP coverage. *DEP Note: Please provide an explanation in Column F for any "0" reported in Column C. If the number of applicants notified of ERP or CGP coverage is less than the number of construction site plans reviewed, please provide an explanation for the discrepancy in Column F.*				
	Notified of ERP stormwater permit requirements	15	Neighborhood Development Services/ Lotus Notes	Neighborhood Development Services	Reviewers/ Inspectors: Leonard Scherry, Wesley Stuckey, Stephen Zadrozny
	Confirmed ERP coverage	15	Neighborhood Development Services/ Lotus Notes	Neighborhood Development Services	Reviewers: Leonard Scherry, Wesley Stuckey, Stephen Zadrozny

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Permit Citation/ SWMP Element	**Permit Requirement/Quantifiable SWMP Activity**	**Number of Activities Performed**	**Documentation / Record**	**Entity Performing the Activity**	**Comments**
	Notified of CGP stormwater permit requirements	5	Neighborhood Development Services/ Lotus Notes	Neighborhood Development Services	Reviewers: Leonard Scherry, Wesley Stuckey, Stephen Zadrozny
	Confirmed CGP coverage	5	Neighborhood Development Services/ Lotus Notes	Neighborhood Development Services	Reviewers: Leonard Scherry, Wesley Stuckey, Stephen Zadrozny
Part III.A.9.b	**Construction Site Runoff — Inspection and Enforcement**				
	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 immediately upon written approval by the Department. 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. *DEP Note: 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. In addition, the permittee should re-word the "NOVs / warning letters / citations issued" reporting item to more accurately reflect its particular initial enforcement activity, if necessary.* *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	6	Public Works Engineering/ Capital Projects	Public Works Engineering/ Capital Projects	All Public Works' Capital Projects have assigned inspectors
	PERMITTEE SITES: Inspections of active construction sites for proper stormwater, erosion and sedimentation BMPs	18	Public Works Engineering/ Capital Projects	Public Works Engineering/ Capital Projects	Capital Projects are routinely inspected until completion
	PERMITTEE SITES: Percentage of active construction sites inspected	100%	Public Works Engineering/ Capital Projects	Public Works Engineering/ Capital Projects	All Public Works' Capital Projects have assigned inspectors
	PRIVATE SITES: Active construction sites	126	Neighborhood Development Services/ Lotus Notes	Neighborhood Development Services	Leonard Scherry, Wesley Stuckey, Stephen Zadrozny
	PRIVATE SITES: Inspections of active construction sites for proper stormwater, erosion and sedimentation BMPs	681	Neighborhood Development Services/ Lotus Notes	Neighborhood Development Services	Reviewers: Leonard Scherry, Wesley Stuckey, Stephen Zadrozny
	PRIVATE SITES: Percentage of active construction sites inspected	97.8%	Neighborhood Development Services/ Lotus Notes	Neighborhood Development Services	Reviewers: Leonard Scherry, Wesley Stuckey, Stephen Zadrozny

SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE

A. Permit Citation/ SWMP Element	B. Permit Requirement/Quantifiable SWMP Activity	C. Number of Activities Performed	D. Documentation / Record	E. Entity Performing the Activity	F. Comments
	Red Tags issued	0	Neighborhood Development Services/ Lotus Notes	Neighborhood Development Services	Reviewers: Leonard Scherry, Wesley Stuckey, Stephen Zadrozny
	Notices of Violation (NOVs) issued	116	Neighborhood Development Services/ Lotus Notes	Neighborhood Development Services	Reviewers: Leonard Scherry, Wesley Stuckey, Stephen Zadrozny
	Stop Work Orders issued	0	Neighborhood Development Services/ Lotus Notes	Neighborhood Development Services	Reviewers: Leonard Scherry, Wesley Stuckey, Stephen Zadrozny
	Fines issued	46	Neighborhood Development Services/ Lotus Notes	Neighborhood Development Services	Reviewers: Leonard Scherry, Wesley Stuckey, Stephen Zadrozny
	Year 1 ONLY: Attach the written construction site inspection program plan				
Part III.A.9.c	**Construction Site Runoff — Site Operator Training**				

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. 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.

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.

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.

	Certification Training	Initial Training (non-certification)	Refresher Training				
Permittee construction site inspectors	**9**		**1**		Public Works Environmental Services	Public Works Environmental Services	Certifications given through Sarasota County online course https://trac.scgov.net/Courseware/BCC/Articulate/2017IllicitDischargeTrainingWEB/story_flash.html

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**
	Permittee construction site plan reviewers		**3**			Neighborhoods Development Services	Neighborhoods Development Services	Reviewers: Leonard Scherry, Wesley Stuckey, Stephen Zadrozny
	Permittee construction site operators		**3**			Neighborhood Development Services	Neighborhoods Development Services	Reviewers: Leonard Scherry, Wesley Stuckey, Stephen Zadrozny
	Private construction site operators		**126**			Neighborhood Development Services/ Lotus Notes	Neighborhoods Development Services	The 185 private construction sites are operated by private contractors under City, County, or State permit

SECTION VIII. EVALUATION OF THE STORMWATER MANAGEMENT PROGRAM (SWMP)		
	Permit Citation/ SWMP Element	**SWMP EVALUATION**
A.	**Part II.A.1 Structural control inspection and maintenance**	**Strengths:** The county continues to update our structural controls inventory and utilize the MAXIMO Work Order Database. We are progressively getting better in inspecting and maintaining our structural controls.
		Weaknesses: The county is having many challenges in the integration of a spatial element to the work order database.
		SWMP Revisions to address deficiencies: Issues are due to poor performance by the procured vendor.
	Part II.A.2 Significant redevelopment	**Strengths:** Proactive Inspections and inter-departmental coordination in order to reduce and eliminate polluted runoffs
		Weaknesses: Lack of time/resources for thorough daily inspection especially pre/post events
		SWMP Revisions to address deficiencies: The City of Sarasota's Engineering Design Criteria Manual (EDCM) is under review to meet new and updated standards and principles to improving our MS4
	Part II.A.3 Roadways	**Strengths:** 1) Frequent street sweeping 2) MS4 cleanup, lining, and maintenance program by County 3) Implementation of Low Impact Development principles and design 4) Increase of greenspace/pervious areas in our modern roundabouts and/or streetscapes projects
		Weaknesses: 1) Depletion of Roadside swales 2) Aging road drainage infrastructure 3) Increase of impervious surfaces and conveyance systems
		SWMP Revisions to address deficiencies: 1) Incorporate Environmental and Sustainable Design to roadway capital projects 2) Conserving, maintaining, and restoring Natural Conveyance Systems
	Part II.A.4 Flood control	**Strengths:** There are 5 retrofit projects currently under construction.
		Weaknesses: No flood control projects completed during this period.
		SWMP Revisions to address deficiencies: None at this time.
	Part II.A.5 Waste TSD Facilities	**Strengths:** The number of facilities is very small and easy to inspect.
		Weaknesses: None at this time.
		SWMP Revisions to address deficiencies: None at this time.
	Part II.A.6 Pesticide, herbicide, fertilizer application	**Strengths**: The City adopted the County's Fertilizer and Landscape Management Code on October 15, 2007 with Ordinance No. 07-4768. Fertilizer applicators continue to enroll in the Green Industries BMP training class and to obtain the DACS Limited Commercial Fertilizer Certification.
		Weaknesses: The retailers are able to promote and sell noncompliant products during the Restricted Season making enforcement of the code very difficult.

SECTION VIII. EVALUATION OF THE STORMWATER MANAGEMENT PROGRAM (SWMP)		
		SWMP Revisions to address deficiencies: None at this time.
	Part II.A.7 Illicit Discharge Detection and Elimination	**Strengths:** The County responds to citizen concerns within the City. The County provides excellent customer service and citizen concerns are quickly responded to. The majority of issues identified are resolved with voluntary compliance. The County has increased the coordination with the City Code Enforcement and Engineering staff.
		Weaknesses: None at this time.
		SWMP Revisions to address deficiencies: None at this time.
	Part II.A.8 High Risk Industry Runoff	**Strengths**: The City of Sarasota has light industry and the manufacturers that operate here are clean businesses.
		Weaknesses: It is difficult to track when businesses close or relocate in or out of the City.
		SWMP Revisions to address deficiencies: None at this time.
	Part II.A.9 Construction Site Runoff	**Strengths:** Increase in proactive inspections and inter-departmental coordination to reduce or eliminate polluted runoffs and erosion
		Weaknesses: Need more time and resources for proactive and reactive inspections
		SWMP Revisions to address deficiencies: The City of Sarasota's Engineering Design Criteria Manual is under engineering standards and guidelines updates.

SECTION IX. CHANGES TO THE STORMWATER MANAGEMENT PROGRAM (SWMP) ACTIVITIES (Not Applicable In Year 4)		
A.	**Permit Citation/ SWMP Element**	**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.** *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.*
		N/A
B.	**Permit Citation/ SWMP Element**	**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)** *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.*
		N/A

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
☐	☒	Part II.F	**EACH ANNUAL REPORT:** If program resources have decreased from the previous year, a discussion of the impacts on the implementation of the SWMP.		
☐	☒	Part III.A.1	**EACH ANNUAL REPORT:** An explanation of why the minimum inspection frequency in Table II.A.1.a was not met, if applicable.		
☐	☒	Part III.A.4	**EACH ANNUAL REPORT:** A list of the flood control projects that did not include stormwater treatment and an explanation for each of why it did not, if applicable.		
☐	☐	Part III.A.7.a	**EACH ANNUAL REPORT:** A report on amendments / changes to the legal authority to control illicit discharges, connections, dumping, and spills, if applicable.		
☒	☐	Part V.B.9	**EACH ANNUAL REPORT:** Reporting and assessment of monitoring results. **[Also addressed in Section III of the Annual Report Form]**		See Sarasota County Monitoring Report
☒	☐	Part VI.B.2	**EACH ANNUAL REPORT:** An evaluation of the effectiveness of the SWMP in reducing pollutant loads discharged from the MS4 that, at a minimum, must include responses to the questions listed in the permit.	See Section VIII	
☒	☐	Part VIII.B.3.e	**EACH ANNUAL REPORT:** 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.		See Sarasota County Monitoring Report
☐	☒	Part VIII.B.4.f	**EACH ANNUAL REPORT after approval of the BPCP:** The status of the implementation of the Bacterial Pollution Control Plan (BPCP).		
☐	☒	Part III.A.1	**YEAR 1:** An inventory of all known major outfalls and a map depicting the location of the major outfalls (hard copy or CD-ROM).		
☐	☒	Part III.A.3	**YEAR 1:** 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.		
☐	☒	Part III.A.6	**YEAR 1 or YEAR 2:** A copy of the adopted Florida-friendly Ordinance, if applicable.		
☐	☒	Part III.A.7.c	**YEAR 1:** A proactive illicit discharge / connection / dumping inspection program plan.		
☐	☒	Part III.A.9.b	**YEAR 1:** A construction site inspection program plan. **[For approval by DEP]**		
☐	☒	Part III.A.2	**YEAR 2:** A summary report of a review of codes and regulations to reduce the stormwater impact from new development / redevelopment.		
☒	☐	Part V.A.2	**YEAR 3:** Estimates of annual pollutant loadings and EMCs, and a table comparing the current calculated loadings with those from the previous two Year 3 ARs.		See Sarasota County Monitoring Report
☐	☒	Part III.A.2	**YEAR 4:** A follow-up report on plan implementation of changes to codes and regulations to reduce the stormwater impact from new development / redevelopment.		
☐	☒	Part V.A.3	**YEAR 4:** If the total annual pollutant loadings have not decreased over the past two permit cycles, revisions to the SWMP, as appropriate.		
☐	☒	Part V.B.3	**YEAR 4:** The monitoring plan (with revisions, if applicable).		
☐	☒	Part VII.C	**YEAR 4:** An application to renew the permit.		
☐	☒	Part VIII.B.3.d	**YEAR 4:** 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 new written SOP / Plan	Reviewed & no revision needed to existing SOP / Plan	Reviewed & revised existing SOP / Plan	Permit Citation	Description of Required SOPs / Plans
☐	☐	☒	☐	Part III.A.1	SOP and/or schedule of inspections and maintenance activities of the structural controls and roadway stormwater collection system.
☐	☐	☒	☐	Part III.A.2	SOP for development project review and permitting procedures and/or local codes and regulations for new development / areas of significant development.
☐	☐	☒	☐	Part III.A.3	SOP for the litter control program.
☐	☐	☒	☐	Part III.A.3	SOP for the street sweeping program.
☐	☐	☒	☐	Part III.A.3	SOP for inspections of equipment yards and maintenance shops that support road maintenance activities.
☐	☐	☒	☐	Part III.A.5	SOP for inspections of waste treatment, storage, and disposal facilities not covered by an NPDES stormwater permit.
☐	☐	☒	☐	Part III.A.6	Plan for public education and outreach on reducing the use of pesticides, herbicides and fertilizer.
☐	☐	☒	☐	Part III.A.6	SOP for reducing the use of pesticides, herbicides and fertilizer, and for the proper application, storage and mixing of these products.
☐	☐	☒	☐	**Part III.A.7.c**	**Plan for proactive illicit discharge / connections / dumping inspections.***
☐	☐	☒	☐	Part III.A.7.c	SOP for reactive illicit discharge / connections / dumping investigations.
☐	☐	☒	☐	Part III.A.7.c	Plan for illicit discharge training.
☐	☐	☒	☐	Part III.A.7.d	SOP for spill prevention and response efforts.
☐	☐	☒	☐	Part III.A.7.d	Plan for spill prevention and response training.
☐	☐	☒	☐	Part III.A.7.e	Plan for public education and outreach on how to identify and report the illicit discharges and improper disposal to the MS4.
☐	☐	☒	☐	Part III.A.7.f	Plan for public education and outreach on the proper use and disposal of oils, toxics and household hazardous waste.
☐	☐	☒	☐	Part III.A.7.g	SOP to reduce / eliminate sanitary wastewater contamination of the MS4.
☐	☐	☒	☐	Part III.A.8	SOP for inspections of high risk industrial facilities.
☐	☐	☒	☐	Part III.A.9.a	SOP for construction site plan review for stormwater, erosion and sedimentation controls, and ERP and CGP coverage.
☐	☐	☒	☐	**Part III.A.9.b**	**Plan for inspections of construction sites.***
☐	☐	☒	☐	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		
Rule / Permit Citation	**Report Title**	**Due Date**
Part VIII.B.3.a	**6 MONTHS from effective date of permit:** TMDL Prioritization Report.	7/1/14
Part VIII.B.3.b	**12 MONTHS from effective date of permit:** TMDL Monitoring and Assessment Plan.	1/1/15
Part VIII.B.3.c	**6 MONTHS from receiving analyses from the lab:** TMDL Monitoring Report.	TBD
Part VIII.B.4	**30 MONTHS from start date per TMDL Prioritization Report:** A Bacterial Pollution Control Plan (BPCP).	6/30/18

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:

Rule/Permit Citation	BMAP Title	Date BMAP Annual Report Submitted to DEP
Part VIII.B.2		
Part VIII.B.2		
Part VIII.B.2		
Part VIII.B.2		

END OF REVISED TAILORED MS4 AR FORM
CYCLE 3 PERMIT

Section III Monitoring Part A & B

Part A.

1. *Ambient Water Quality of Bays.*
   http://www.sarasota.wateratlas.usf.edu/bay-conditions/
   http://www.sarasota.wateratlas.usf.edu/water-quality-trends/
2. *Ambient Water Quality of Watersheds*
   http://www.sarasota.wateratlas.usf.edu/creek-conditions/
   http://www.sarasota.wateratlas.usf.edu/water-quality-trends/
3. *Biological Monitoring – Oysters*
   http://www.sarasota.wateratlas.usf.edu/oysters/
4. *Biological Monitoring – Seagrass*
   http://www.sarasota.wateratlas.usf.edu/seagrass/#sarasota-seagrass
5. *Biological Monitoring – Scallops*
   http://www.sarasota.wateratlas.usf.edu/upload/documents/2016-Scallop-Update-051117.pdf
6. *Pollutant Load Modeling*
   http://www.sarasota.wateratlas.usf.edu/upload/documents/PLM-Full-Report-NPDES-03May2017-corrected.pdf
7. *Rainfall*
   http://www.sarasota.wateratlas.usf.edu/rainfall/
   http://www.sarasota.wateratlas.usf.edu/datamapper/

Part B.

1. All 6 bays were in the Caution category of the Bay Conditions Index. The Index is based on chlorophyll, nitrogen and phosphorus.
2. Nine of 17 creeks passed the Creek Condition Index and 8 were in the Caution category. The index is based on chlorophyll, nitrogen, phosphorus and dissolved oxygen
3. Oysters: fourteen stations ranked excellent with greater than 75% live oysters. Eight stations fell into the "good" category (50%-75% live oysters). Two stations were in the caution category with less than 50% live.
4. Seagrass: Three of 6 bays had increased acreage of seagrass and three had declines. As compared to 2015, there were increases in seagrass abundance, blade length, and percent Halodule. There were decreases in drift algae, and percent Thalassia.
5. Scallop monitoring sites throughout the county had significantly less spat landings in 2016. The county experienced concentrated rainfall events and persistent redtide blooms, each of these conditions have shown to have a negative affect scallop populations.
6. Pollutant Load Modeling was completed for 2001, 2006, 2010 and 2016. It showed increases from pollutant sources like land development, septic systems, and wastewater, plus decreases from stormwater projects and wastewater and septic improvements.
7. Rain for the year was 5 inches above average primarily because of two wet months – January and August. Unusually dry months were September, November and December.

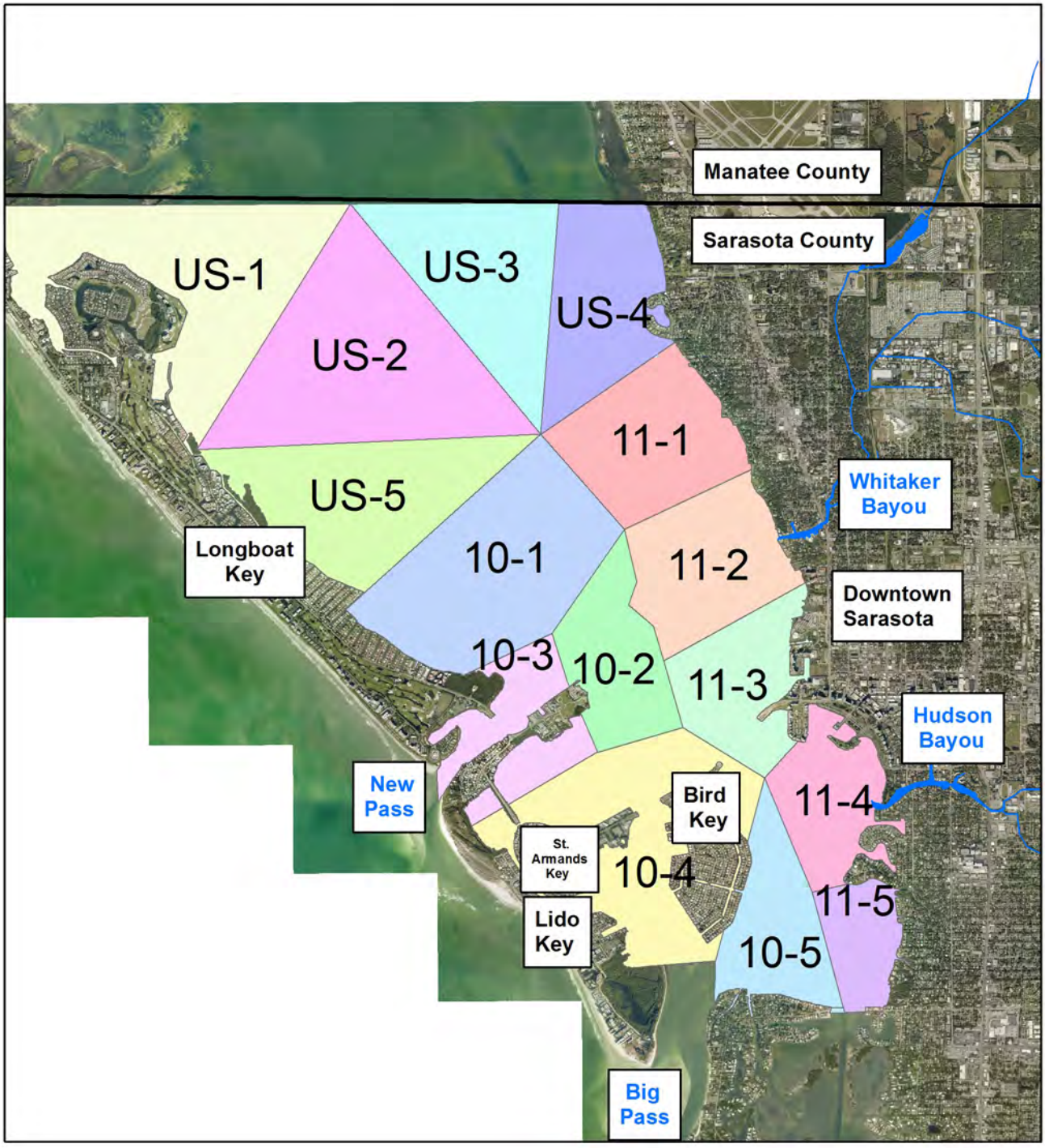
Sarasota County NPDES MS4 2016 Annual Report
Monitoring Data Summaries

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. Pollutant Load Modeling
7. Rainfall
8. TMDL Status Report
9. Sarasota County Monitoring Plan

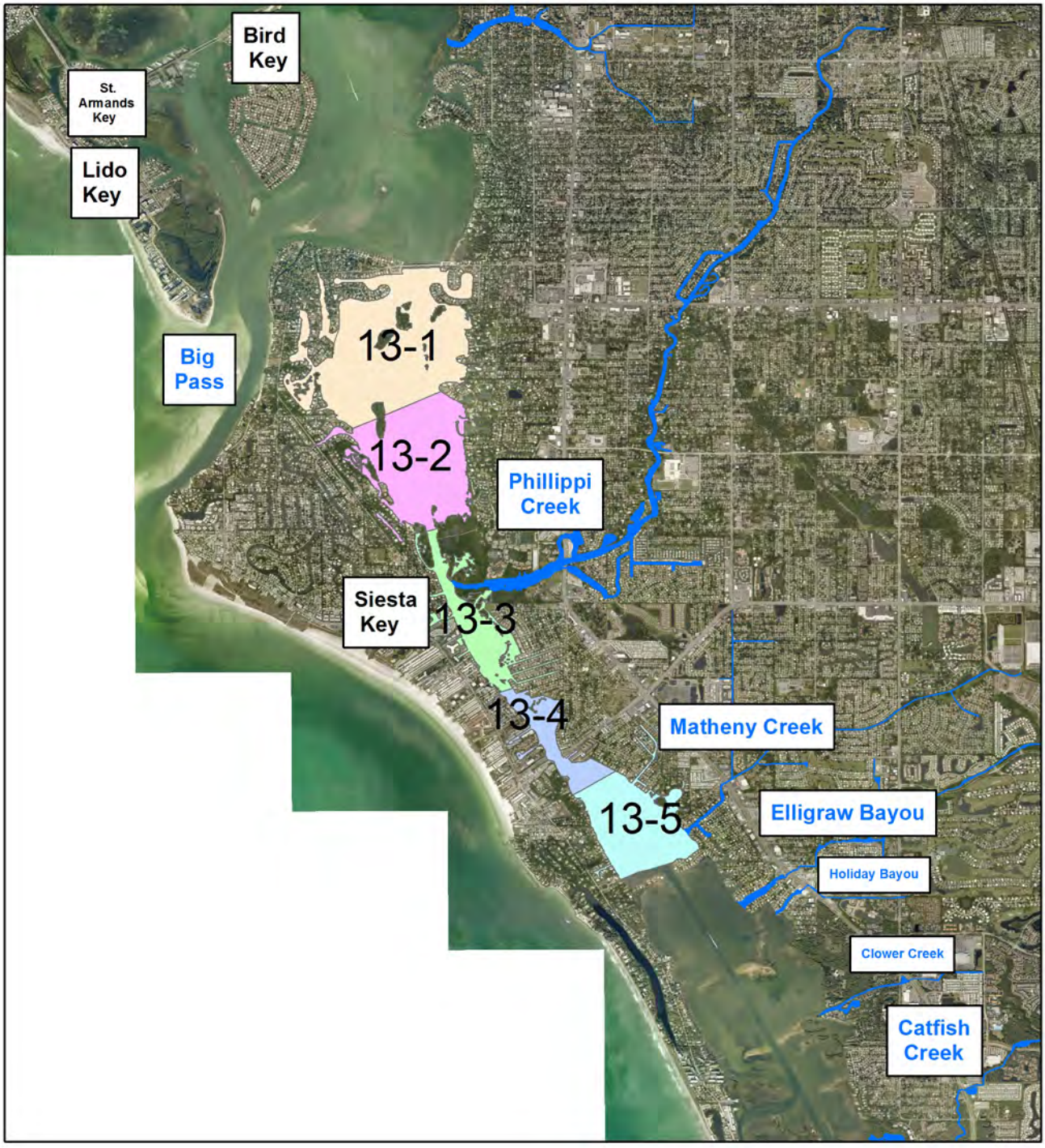
Sarasota County NPDES MS4 2016 Annual Report
Monitoring Data Summary

1. Ambient Water Quality of Bays

Sarasota Bay Segments



Roberts Bay Segments



N

1 0.5 0 1

Miles

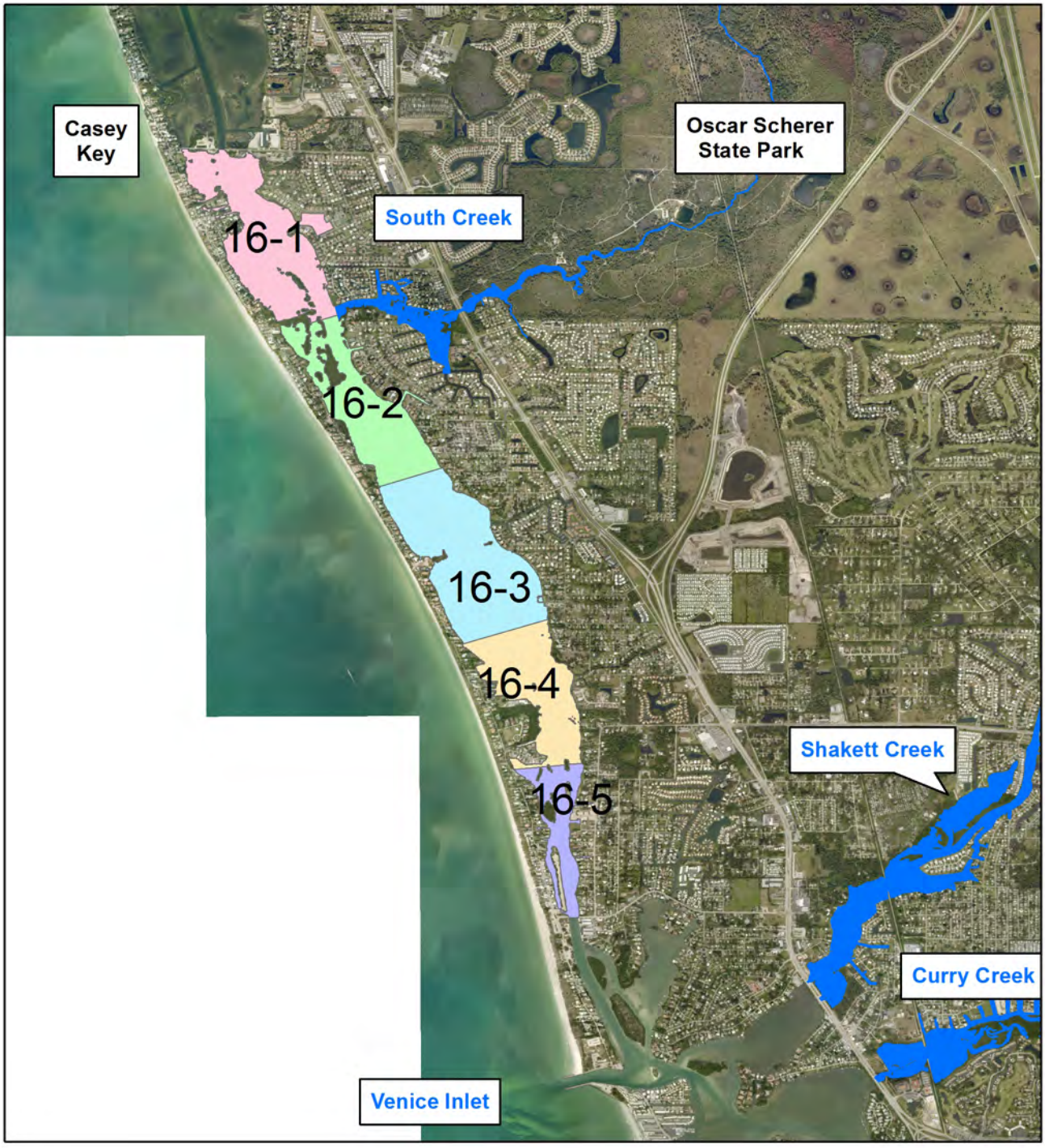
Little Sarasota Bay Segments

N

1 0.5 0 1

Miles

Blackburn Bay Segments



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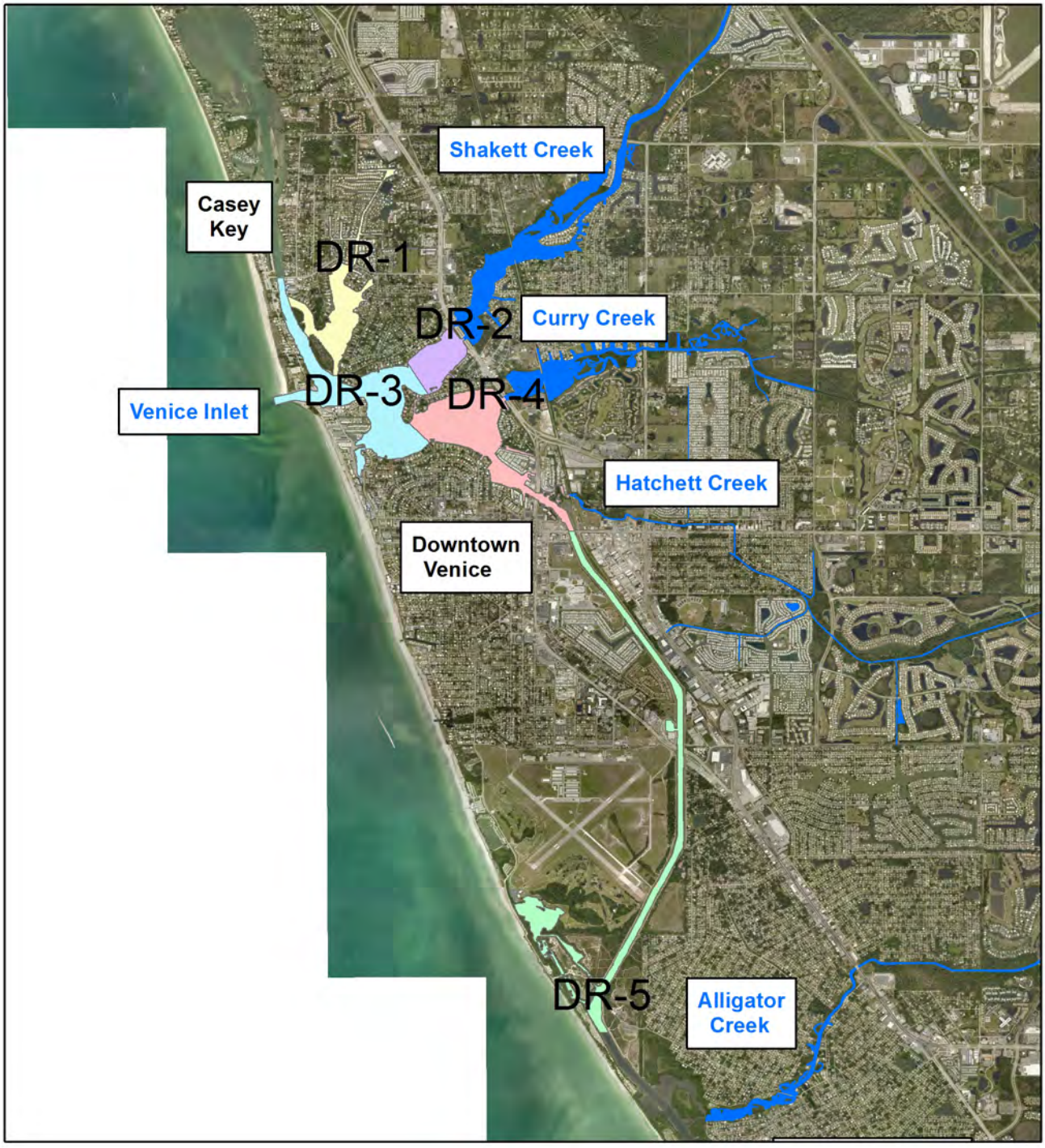
1 0.5 0 1

Miles

Dona - Roberts Bay Segments



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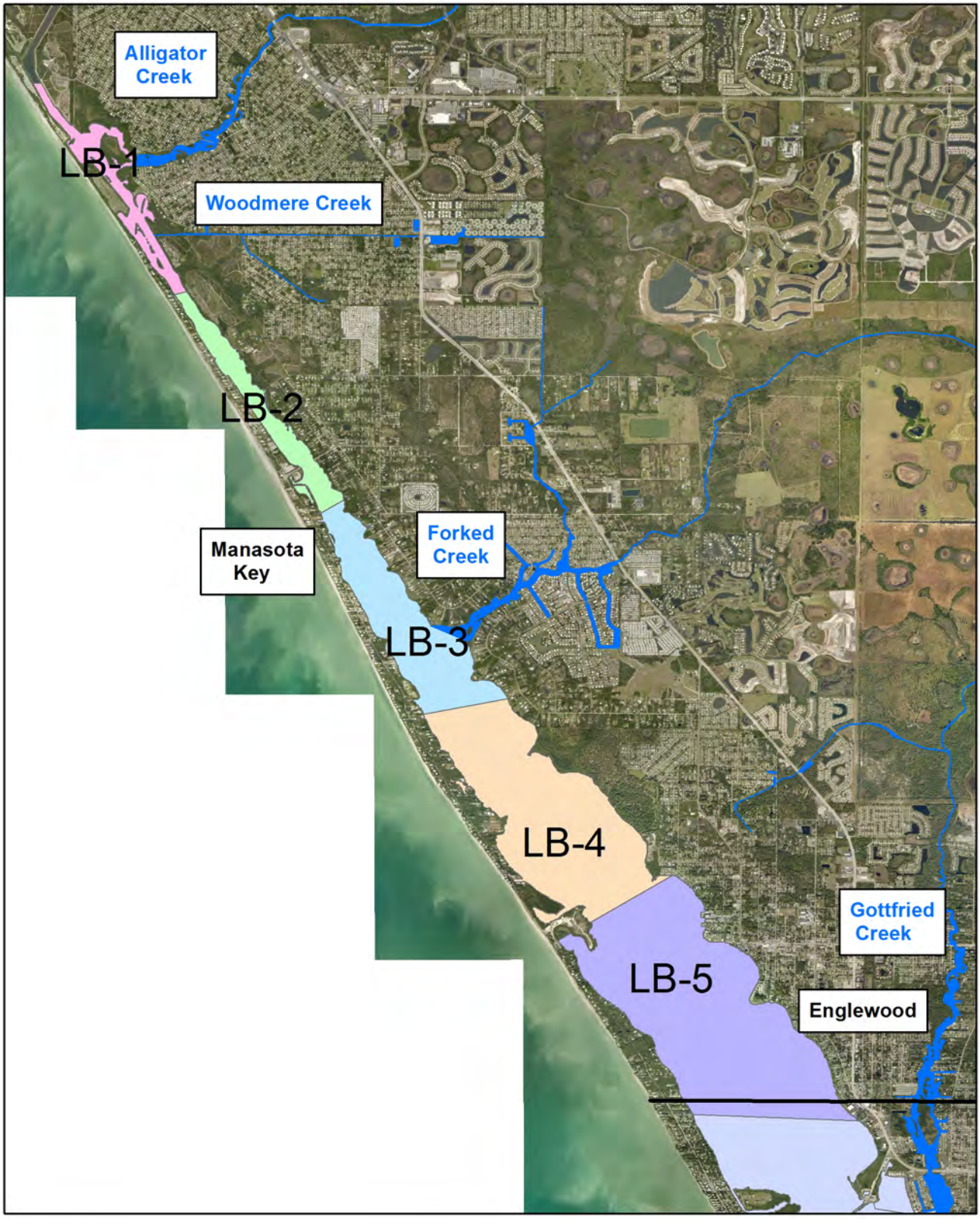
1 0.5 0 1

Miles

Lemon Bay Segments



Ambient Water Quality of Bays
Reporting and Assessment of Monitoring Results

Healthy bays have intrinsic value to marine life, human quality of life, and the local economy. As a monitoring tool, water quality of bays integrates the cumulative effects of watershed management. The foremost example of this is the use of seagrass as an integrated measure for managing nitrogen that comes from the watersheds. This relationship is the foundation of estuarine standards throughout Southwest Florida.

Summary of Monitoring Data from 2016 Reporting Year

Data is summarized on the Sarasota Water Atlas website on the Bay Conditions Pages and on the new Water Quality Trends Pages. Data can also be downloaded.

Long Term Assessment

Six bays were assessed for Bay Conditions using chlorophyll, nitrogen and phosphorus parameters and the information is available at (http://www.sarasota.wateratlas.usf.edu/bay-conditions/). Phosphorus targets were met in all bays and nitrogen targets were met for half of the bays. Results from 2016 show caution levels for all bays, meaning that a passing grade was not met for at least one parameter. None of the bays met the threshold for chlorophyll and three did not meet the nitrogen threshold – Roberts Bay, Dona/Roberts Bays, and Lemon Bay. There is no known pollution source throughout the County that would cause elevated chlorophyll in every bay. It is thought that this may be from a regional effect such as atmospheric deposition or weather and bay circulation patterns. This pattern highlights the necessity for watershed management to protect the highly valued bays of Sarasota County.

Bay Conditions Time Series 2010-2016

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
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
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
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

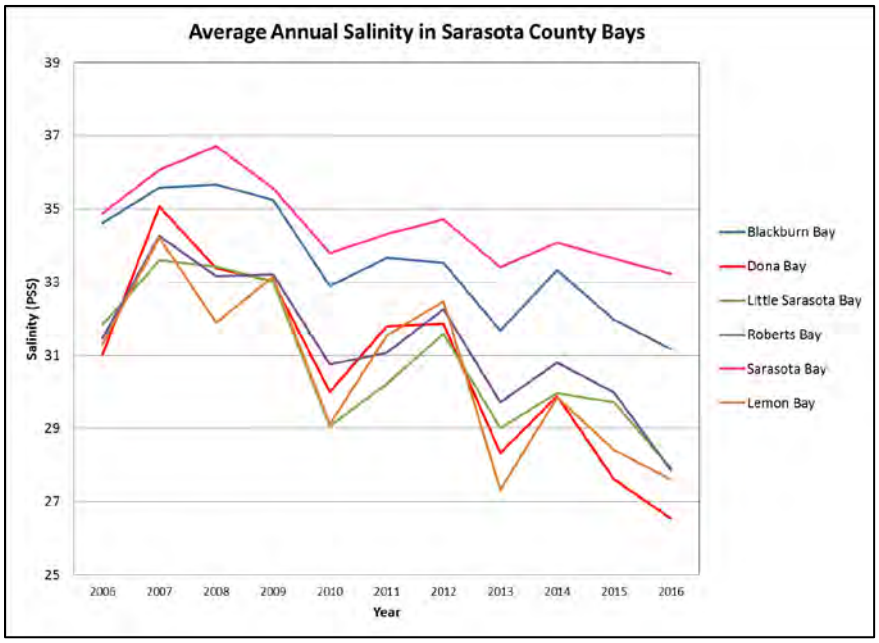
The Bay Conditions pages also provide five year trend graphs for dissolved oxygen, light attenuation, salinity, and turbidity plus information about seagrass acreage and land use. The table below is simply observations of apparent trends as seen on the graphs online. Seagrass declines in Little Sarasota Bay and Blackburn Bay may be related to increased light attenuation, declines in salinity, and increased turbidity in Blackburn Bay.

	Sarasota Bay	Roberts Bay	Little Sarasota Bay	Blackburn Bay	Dona / Roberts Bay	Lemon Bay
Dissolved Oxygen	Flat	Flat	Flat	Flat	Flat	Flat
Light Attenuation	Up	Flat	Up	Up	Up	Up
Salinity	Flat	Down	Down	Down	Down	Down
Turbidity	Up	Flat	Flat	Up	Flat	Flat
Seagrass	Up	Up	Down	Down	Flat	Flat
Urban Land Use in Watershed	62.1%	62.1%	43.1%	43.1%	40.4%	40.4%
	This is just a visual assessment, not a statistical trend test, and is intended to provide an sense of changes to water quality conditions.					

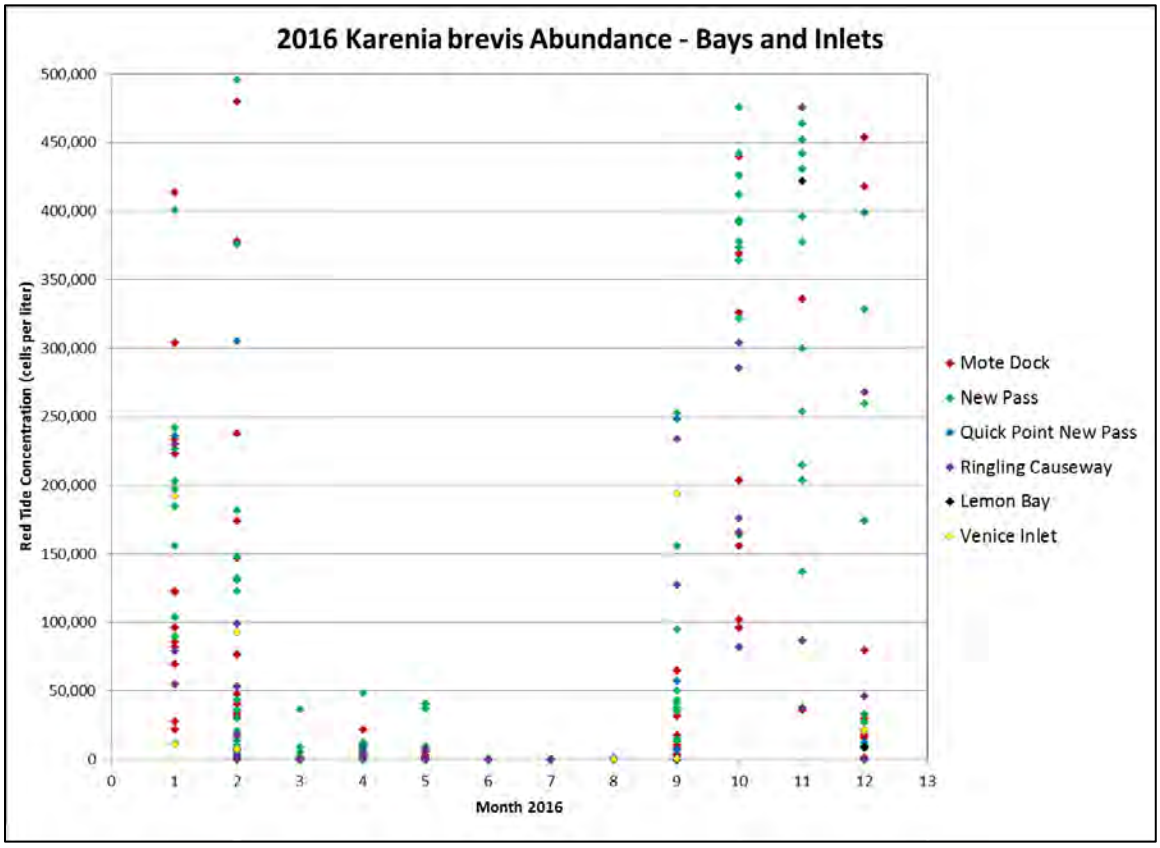
Statistically significant trend analysis for Nitrogen, Chlorophyll-a, and Dissolved Oxygen for both the period of record (POR) and the preceding 10 years is on the Sarasota Water Atlas (http://www.sarasota.wateratlas.usf.edu/water-quality-trends/). Each station is characterized as no trend, or positive or negative trends at a smaller rate or larger rate.

	Sarasota Bay	Roberts Bay	Little Sarasota Bay	Blackburn Bay	Dona / Roberts Bays	Lemon Bay
Total Nitrogen Period of Record 1998-2016	15 of 15 sample sites negative trend, smaller rate	5 of 5 sample sites negative trend, smaller rate	5 of 5 sample sites negative trend, smaller rate	5 of 5 sample sites negative trend, smaller rate	5 of 5 sample sites negative trend, smaller rate	5 of 5 sample sites negative trend, smaller rate
Total Nitrogen 10 Year 2007-2016	15 of 15 sample sites negative trend, smaller rate	5 of 5 sample sites negative trend, smaller rate	5 of 5 sample sites negative trend, smaller rate	5 of 5 sample sites negative trend, smaller rate	5 of 5 sample sites negative trend, smaller rate	5 of 5 sample sites negative trend, smaller rate
Chlorophyll-A Period of Record 1998-2016	6 of 15 sample sites negative trend, smaller rate; 9 of 15 sample sites no trend	4 of 5 sample sites negative trend, smaller rate; 1 of 5 sample sites not trend	1 of 5 sample sites negative trend, smaller rate; 4 of 5 sample sites no trend	5 of 5 sample sites no trend	5 of 5 sample sites negative trend, smaller rate	2 of 5 sample sites negative trend, smaller rate; 3 of 5 sample sites no trend
Chlorophyll-A 10 Year 2007-2016	7 of 15 sample sites negative trend, smaller rate; 8 of 15 sample sites no trend	5 of 5 sample sites negative trend, smaller rate	4 of 5 sample sites negative trend, smaller rate; 1 of 5 sample sites no trend	5 of 5 sample sites negative trend, smaller rate	5 of 5 sample sites negative trend, smaller rate	5 of 5 sample sites negative trend, smaller rate
Dissolved Oxygen Period of Record 1998-2016	15 of 15 sample sites no trend	1 of 5 sample sites positive trend,smaller rate; 4 of 5 sample sites no trend	4 of 5 sample sites positive trend, smaller rate; 1 of 5 sample sites no trend	4 of 5 sample sites negative trend, smaller rate; 1 of 5 sample sites no trend	1 of 5 sample sites negative trend, smaller rate; 4 of 5 sample sites no trend	5 of 5 sample sites no trend
Dissolved Oxygen 10 Year 2007-2016	4 of 15 sample sites negative trend, smaller rate; 1 of 15 positive trend smaller rate; 10 of 15 sample sites no trend	5 of 5 sample sites no trend	1 of 5 sample sites positive trend smaller rate; 4 of 5 sample sites no trend	5 of 5 sample sites no trend	3 of 5 sample sites negative trend, smaller rate; 2 of 5 sample sites not trend	5 of 5 sample sites no trend

The statistical summary above corroborates the bay conditions assessment. All bays have nitrogen increases but some bays are better in terms of chlorophyll and dissolved oxygen – Sarasota Bay, Little Sarasota Bay and Lemon Bay. Again, there is no evidence of widespread increases in pollution discharges so this phenomenon is most likely a result of natural forces like rainfall or salinity. The graph below indicates that salinity appears to be declining in the bays.



Red Tide was present during much of 2016. Data from the Florida Fish and Wildlife Conservation Commission and Mote Marine Laboratory illustrates an abundance of red tide early and late in the year. Blooms are known to reduce dissolved oxygen concentrations, increase chlorophyll concentrations, and decaying fish release nutrients into the water. The chlorophyll data was examined and it was found that chlorophyll in the bays is generally higher in mid-year, which does not correspond with red tide blooms, so Karenia cannot explain the increased chlorophyll in the bays.



Red Tide Sampling Locations

Map published using ArcGIS 10.x by plooma on Wednesday, April 19, 2017

P:\Env_N_Environmental Water Quality\Sampling\Red Tide\sampling\Locations_8.5 x 11.mxd

Sarasota County
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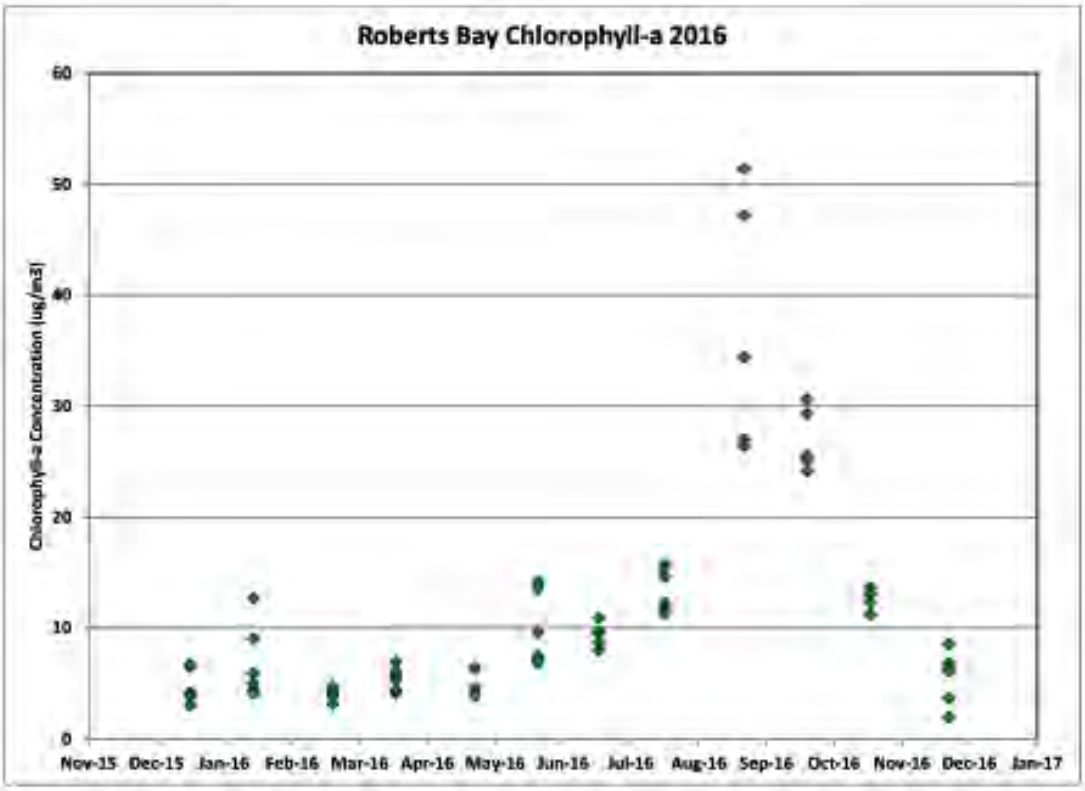
Aerial Imagery Provided by Pictometry International
Sarasota County, FL
January 2016 9.6" Resolution
N.A.D. 1983 HARN State Plane Florida West FIPS 0902
(U.S. Survey Feet)

N W E S

0 1.5 3 6 Miles

This map is produced from Sarasota County GIS, and is representative information only. The County does not warrantee, guarantee, or assume any responsibility for geographic information completeness and/or accuracy. This map should not be used as guide for navigation.



Relationship of Data to Stormwater Management Plan (SWMP)

The bay water quality monitoring program highlights which bays are relatively more impacted by pollutants. When coupled with other elements of the monitoring plan, the results point out where additional focus is needed for the update to the SWMP that will be submitted with the year four annual report. Monitoring data indicates that some negative trends have been found in bay water quality.

The nine elements of the SWMP have been successfully fulfilled since 1995. Capital projects such as the Celery Fields, Dona Bay Project, sediment sumps, the Catfish Creek Stormwater Facility, and the Briarwood Stormwater Treatment Facility reduce pollutant loading. Documentation for projects is on the Sarasota Water Atlas Projects Catalog Pages at http://www.sarasota.wateratlas.usf.edu/projects-catalog/. These pages are a work in progress and additional projects by the County, permit co-permittees, National Estuary Programs and others will be regularly added.

Sarasota County

Dona Bay
Watershed Restoration Program

OBJECTIVES

1. Provide a more natural freshwater/ saltwater regime in the tidal portions of Dona Bay.
2. Provide a more natural freshwater flow regime pattern for the Dona Bay watershed.
3. Protect existing and future property owners from flood damage.
4. Protect existing water quality.
5. Develop potential alternative surface water supply options that are consistent with and support other plan objectives.

Construction of Phase I Control Structure.

BACKGROUND

Comprehensive Watershed Management

The Dona Bay watershed has grown significantly over the past 100 years from a natural slough that meandered south and east toward the Myakka River to an engineered canal system. In the 1960s the United States Department of Agriculture's Natural Resource Conservation Service embarked on one of the most significant drainage projects in the history of Sarasota County. A large canal system with water level control structures was constructed from Shakett Creek, through Cow Pen Slough and north toward Manatee County. This canal system introduced excessive amounts of freshwater to Dona Bay and enlarged the watershed from 15 square miles to almost 75 square miles. Excess fresh water altered the salinity and brought increased nutrients that disrupted the estuary.

Estuaries need an appropriate mix of salt and fresh water for many species, including juvenile commercial and sportfish.

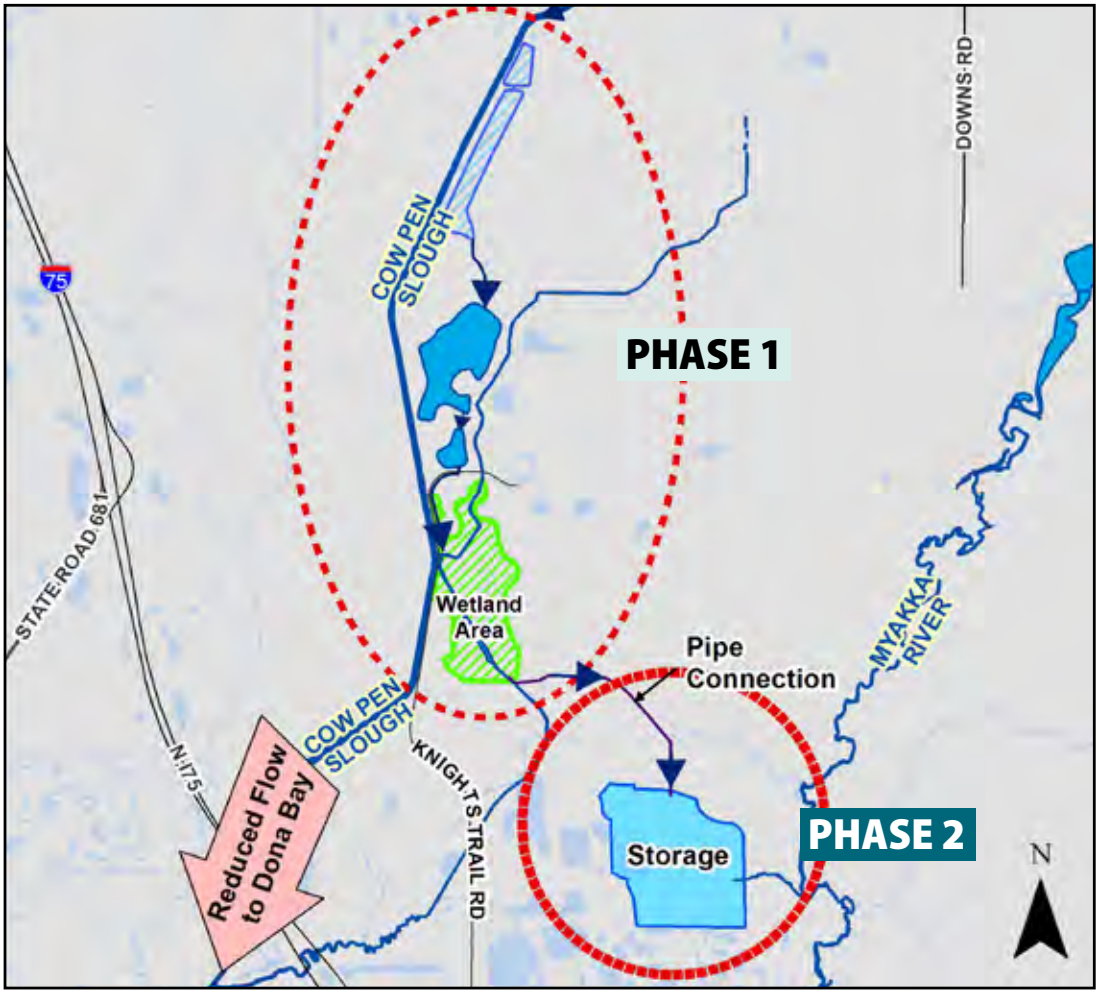
Sarasota County completed a watershed management plan for Dona Bay in 2007 that identified phased projects to restore the natural systems.

PHASING AND STATUS

In 2015, through cooperative funding from the Southwest Florida Water Management District and state appropriations, Sarasota County began construction of the first phase of a series of projects that will meet the watershed management plan objectives. Future phases will be implemented as funding becomes available to restore Dona Bay back to a healthy estuary.

PHASE	IMPROVEMENTS	WATERSHED BENEFITS	COST	SCHEDULE
1	150-acre wetland enhancement by diverting Cow Pen Slough through a new control structure; 1,000-acre storage creation.	Reintroduces historic floodplain; helps to restore natural fresh/saltwater flow regime in Dona Bay; removes 18,000 pounds of nitrogen annually.	$12 million*	Construction began in summer 2015 and will be complete in spring 2017.
2	Divert water to restore some historic flow to the Myakka River. Construct pipeline and reinforce a 380-acre storage facility.	More natural flow regime in Dona Bay by diverting water to the Myakka River; moves towards balancing fresh/saltwater mix; flood protection; removes an additional 7,000 pounds of nitrogen per year.	$8 million	90 percent design and permitting complete in January 2017; construction start fall 2017.
3	Investigate alternative water supply options such as aquifer storage or using excess Cow Pen Slough water.	Decrease fresh water going into Dona Bay; improve salinity and water quality in the estuary.	$6.7 million	Planning, design, permitting January 2017 – September 2019, construction October 2019 – October 2021.
4	Replacement/reconfiguration of the Kingsgate Weir.	Increases ability to control wet season timing and volumes of fresh water entering the estuary.	$2 million	TBD
5	Blackburn Canal Project	Further reduces excess fresh water to the estuary.	$2 million	TBD
6	Habitat Restoration	Oyster, seagrass and wetland restoration and monitoring.	$2 million	TBD

*Cooperatively funded by Sarasota County, Southwest Florida Water Management District, and Florida Department of Environmental Protection.



For more information,
call **941-861-5000**
or visit **www.scgov.net**
(keywords Dona Bay)

Sarasota County
scgov.net | 941.861.5000

CD/1.17

Sarasota County NPDES MS4 2016 Annual Report
Monitoring Data Summary

2. Ambient Water Quality of Watersheds

Ambient Water Quality of Watersheds
Reporting and Assessment of Monitoring Results

Creeks receive stormwater from the watersheds and transport it to the bays. Healthy creeks are nurseries for fisheries and other aquatic life, they add to the human quality of life, and support local property values. Nutrients, bacteria, sediments, and oxygen-demanding substances have been identified as priority pollutants.

Summary of Monitoring Data from 2016 Reporting Year

Data is summarized on the Sarasota Water Atlas website on the Creek Conditions Pages and the new Water Quality Trends Pages. Data can also be downloaded.

Long Term Assessment

Seventeen Creeks were assessed for Creek Conditions using chlorophyll, nitrogen, phosphorus, and dissolved oxygen data and the information is available at (http://www.sarasota.wateratlas.usf.edu/creek-conditions/). The data shows notable differences among creeks with 7 creeks with perfect or excellent grades contrasted with 4 that have a preponderance of Caution grades. The timeline below suggests negative trends for Alligator, Phillippi and Gottfried Creeks, and positive trends for Forked, Hudson, Whitaker, and Phillippi.

Creek Conditions	Whitaker Bayou	Hudson Bayou	Phillippi Creek	Matheny Creek	Elligraw Bayou	Clower Creek	Catfish Creek	North Creek	South Creek	Cowpen Slough	Curry Creek	Hatchett Creek	Alligator Creek	Woodmere Creek	Forked Creek	Gottfried Creek	Ainger Creek
2011	Pass	Caution	Caution	Pass	Caution	Caution	Pass	Caution	Pass	Pass	Pass	Pass	Caution	Pass	Caution	Caution	Pass
2012	Caution	Caution	Pass	Pass	Caution	Caution	Pass	Caution	Pass	Pass	Pass	Caution	Caution	Caution	Caution	Caution	Pass
2013	Caution	Pass	Pass	Pass	Caution	Caution	Caution	Caution	Pass	Pass	Pass	Pass	Caution	Caution	Pass	Caution	Pass
2014	Caution	Pass	Caution	Pass	Caution	Caution	Pass	Caution	Pass	Pass	Pass	Pass	Caution	Caution	Caution	Caution	Pass
2015	Pass	Pass	Pass	Pass	Caution	Caution	Pass	Caution	Pass	Pass	Caution	Pass	Caution	Caution	Caution	Caution	Pass
2016	Pass	Pass	Caution	Pass	Caution	Caution	Caution	Caution	Pass	Pass	Pass	Pass	Caution	Pass	Caution	Caution	Pass

Chlorophyll	Whitaker Bayou	Hudson Bayou	Phillippi Creek	Matheny Creek	Elligraw Bayou	Clower Creek	Catfish Creek	North Creek	South Creek	Cowpen Slough	Curry Creek	Hatchett Creek	Alligator Creek	Woodmere Creek	Forked Creek	Gottfried Creek	Ainger Creek
2011	Pass	Pass	Pass	Pass	Caution	Pass	Pass	Caution	Pass	Pass	Pass	Pass	Caution	Pass	Caution	Pass	Pass
2012	Caution	Pass	Pass	Pass	Caution	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Caution	Pass	Pass
2013	Caution	Pass	Pass	Pass	Caution	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
2014	Caution	Pass	Pass	Pass	Caution	Pass	Pass	Caution	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
2015	Pass	Pass	Pass	Pass	Caution	Pass	Pass	Caution	Pass	Pass	Caution	Pass	Pass	Pass	Pass	Caution	Pass
2016	Pass	Pass	Pass	Pass	Caution	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Caution	Pass	Pass	Pass	Pass

Nitrogen	Whitaker Bayou	Hudson Bayou	Phillippi Creek	Matheny Creek	Elligraw Bayou	Clower Creek	Catfish Creek	North Creek	South Creek	Cowpen Slough	Curry Creek	Hatchett Creek	Alligator Creek	Woodmere Creek	Forked Creek	Gottfried Creek	Ainger Creek
2011	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
2012	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Caution	Pass
2013	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Caution	Pass	Pass	Pass	Pass
2014	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Caution	Pass	Pass	Pass	Pass
2015	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Caution	Pass	Pass	Caution	Pass
2016	Pass	Pass	Pass	Pass	Pass	Pass	Caution	Pass	Pass	Pass	Pass	Pass	Caution	Pass	Pass	Caution	Pass

Phosphorus	Whitaker Bayou	Hudson Bayou	Phillippi Creek	Matheny Creek	Elligraw Bayou	Clower Creek	Catfish Creek	North Creek	South Creek	Cowpen Slough	Curry Creek	Hatchett Creek	Alligator Creek	Woodmere Creek	Forked Creek	Gottfried Creek	Ainger Creek
2011	Pass	Caution	Caution	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Caution	Pass
2012	Pass	Caution	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Caution	Pass
2013	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Caution	Pass
2014	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Caution	Pass
2015	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Caution	Pass
2016	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Caution	Pass

Dissolved Oxygen	Whitaker Bayou	Hudson Bayou	Phillippi Creek	Matheny Creek	Elligraw Bayou	Clower Creek	Catfish Creek	North Creek	South Creek	Cowpen Slough	Curry Creek	Hatchett Creek	Alligator Creek	Woodmere Creek	Forked Creek	Gottfried Creek	Ainger Creek
2011	Pass	Caution	Pass	Pass	Pass	Caution	Pass	Caution	Pass	Pass	Pass	Pass	Caution	Pass	Caution	Caution	Pass
2012	Caution	Caution	Pass	Pass	Caution	Caution	Pass	Caution	Pass	Pass	Pass	Caution	Caution	Caution	Pass	Caution	Pass
2013	Caution	Pass	Pass	Pass	Caution	Caution	Caution	Caution	Pass	Pass	Pass	Pass	Pass	Caution	Pass	Caution	Pass
2014	Pass	Pass	Caution	Pass	Caution	Caution	Pass	Caution	Pass	Pass	Pass	Pass	Caution	Caution	Caution	Caution	Pass
2015	Pass	Pass	Pass	Pass	Caution	Caution	Pass	Caution	Pass	Pass	Caution	Pass	Caution	Caution	Caution	Caution	Pass
2016	Pass	Pass	Caution	Pass	Pass	Caution	Pass	Caution	Pass	Pass	Pass	Pass	Caution	Pass	Caution	Caution	Pass
Pass/Fail	5/24	4/24	3/24	0/24	10/24	6/24	2/24	9/24	0/24	0/24	2/24	1/24	11/24	4/24	6/24	16/24	0/24

The Creek Conditions pages also provide five year trend graphs for dissolved oxygen, rainfall, and salinity for fresh and marine reaches plus impervious surface and land use characteristics for each basin. These graphs appear to show salinity changes in some creeks. Dissolved oxygen apparently declined in five creeks and rose in two others.

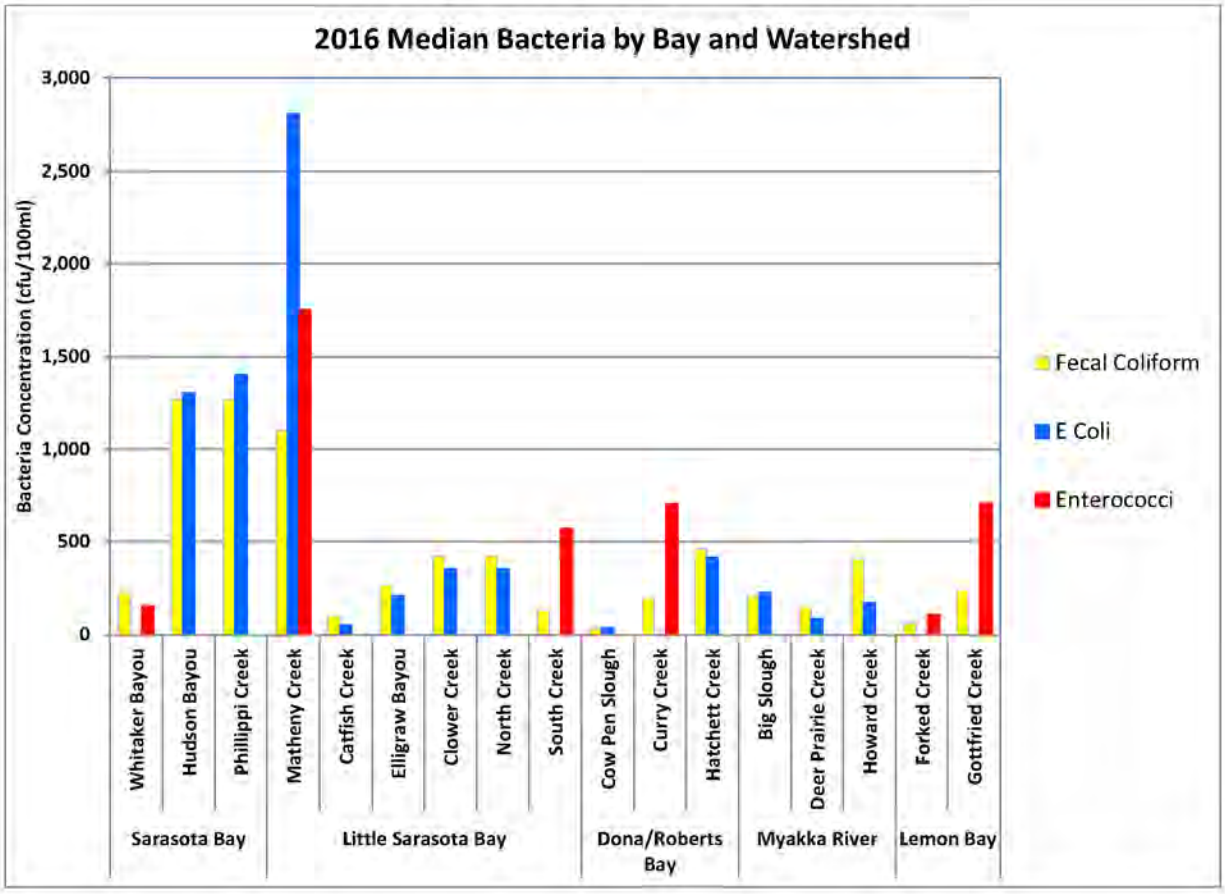
2016		Whitaker Bayou	Hudson Bayou	Phillippi Creek	Matheny Creek	Elligraw Bayou	Clower Creek	Catfish Creek	North Creek	South Creek	Cowpen Slough	Curry Creek	Hatchett Creek	Alligator Creek	Woodmere Creek	Forked Creek	Gottfried Creek	Ainger Creek
Freshwater Portion of the Creek	Dissolved Oxygen Saturation	Flat	Flat	Down	Flat	No Data	No Data	Flat	No Data	Down	Flat	Down	Down	Flat	No Data	No Data	Flat	No Data
	Salinity	Flat	Flat	Down	Up	No Data	No Data	Flat	No Data	Up	Flat	Flat	Flat	Flat	No Data	No Data	Up	No Data
	Turbidity	Down	Down	Up	Flat	No Data	No Data	Down	No Data	Up	Flat	Down	Flat	Up	No Data	No Data	Flat	No Data
Tidal Portion of the Creek	Dissolved Oxygen	Down	No Data	Down	No Data	Up	Flat	Up	Flat	No Data	No Data	No Data	No Data	Flat	Flat	Down	Flat	No Data
	Salinity	Flat	No Data	Down	No Data	Down	Flat	Flat	Flat	No Data	No Data	No Data	No Data	Down	Flat	Flat	Flat	Flat
	Turbidity	Flat	No Data	Flat	No Data	Flat	Flat	Flat	Flat	No Data	No Data	No Data	No Data	Flat	Flat	Flat	Flat	Flat
Basin Qualities	Impervious Surface Coverage 2013	27%	46%	20%	35%	30%	52%	24%	14%	6%	2%	12%	27%	23%	21%	6%	7%	1%
	Urban Land Use in Basin 2011	80%	94%	73%	92%	86%	77%	68%	73%	20%	25%	57%	73%	71%	81%	37%	29%	28%
	Basin Acreage	4,967	2,406	35,771	1,724	473	284	3,984	2,327	12,630	47,518	6,399	3,342	6,789	1,475	5,863	7,209	6,366
		This is just a visual assessment, not a statistical trend test, and is intended to provide an sense of changes to water quality conditions.																

Statistically significant trend analysis for Nitrogen, Chlorophyll-a, and Dissolved Oxygen for both the period of record (POR) and the preceding 10 years is on the Sarasota Water Atlas at (http://www.sarasota.wateratlas.usf.edu/water-quality-trends/). Each station is characterized as no trend, or positive or negative trends at a smaller rate or larger rate.

	Whitaker Bayou	Hudson Bayou	Phillippi Creek	Matheny Creek	Elligraw Bayou	Clower Creek	Catfish Creek	North Creek	South Creek	Cowpen Slough	Curry Creek	Hatchett Creek	Alligator Creek	Woodmere Creek	Forked Creek	Gottfried Creek	Ainger Creek
Total Nitrogen Period of Record 1998-2016	2 of 2 sample sites negative trend, smaller rate	2 of 2 sample sites negative trend, smaller rate	7 of 8 sample sites negative trend, smaller rate; 1 no trend	2 of 2 sample sites negative trend, smaller rate	1 of 1 sample sites negative trend, smaller rate	1 of 1 samples sites no trend	2 of 2 samples sites negative trend, smaller rate	1 of 1 sample sites negative trend, smaller rate	1 of 1 sample sites negative trend, smaller rate	2 of 2 samples sites negative trend, smaller rate	2 of 2 samples sites negative trend, smaller rate	1 of 1 sample sites negative trend, smaller rate	1 sample site negative trend smaller rate; 1 no trend; 1 negative	2 of 2 samples sites negative trend, smaller rate	1 of 1 sample sites negative trend, smaller rate	2 of 2 samples sites negative trend, smaller rate	No Data
Total Nitrogen 10 Year 2007-2016	2 of 2 sample sites negative trend, smaller rate	2 of 2 sample sites negative trend, smaller rate	7 of 8 sample sites negative trend, smaller rate; 1 no trend	2 of 2 sample sites negative trend, smaller rate	1 of 1 sample sites negative trend, smaller rate	1 of 1 samples sites no trend	2 of 2 samples sites negative trend, smaller rate	1 of 1 sample sites negative trend, smaller rate	1 of 1 sample sites negative trend, smaller rate	2 of 2 samples sites negative trend, smaller rate	2 of 2 samples sites negative trend, smaller rate	1 of 1 sample sites negative trend, smaller rate	1 sample site negative trend smaller rate; 1 no trend; 1 negative	2 of 2 samples sites negative trend, smaller rate	1 of 1 sample sites negative trend, smaller rate	2 of 2 samples sites negative trend, smaller rate	No Data
Chlorophyll-A Period of Record 1998-2016	1 of 2 sample sites negative trend, smaller rate; 1 no trend	1 of 2 sample sites positive trend, smaller rate; 1 no trend	8 of 8 sample sites no trend	1 of 2 sample sites negative trend smaller rate; 1 no trend	1 of 1 sample sites positive trend, smaller rate	1 of 1 sample sites no trend	1 of 2 sample sites positive trend smaller rate; 1 no trend	1 of 1 sample sites no trend	1 of 1 sample sites negative trend, smaller rate	1 of 2 samples sites positive trend, smaller rate; 1 no trend	2 of 2 samples sites no trend	1 of 1 sample sites no trend	1 of 3 sample sites positive trend smaller rate; 2 no trend	1 of 2 sample sites positive trend smaller rate; 1 no trend	1 of 1 sample sites no trend	1 of 2 sample sites positive trend, larger rate; 1 no trend	No Data
Chlorophyll-A 10 Year 2007-2016	1 of 2 sample sites negative trend, smaller rate; 1 no trend	1 of 2 sample sites positive trend, smaller rate; 1 no trend	8 of 8 sample sites no trend	1 of 2 sample sites negative trend smaller rate; 1 no trend	1 of 1 sample sites positive trend, smaller rate	1 of 1 sample sites no trend	1 of 2 sample sites positive trend smaller rate; 1 no trend	1 of 1 sample sites no trend	1 of 1 sample sites negative trend, smaller rate	1 of 2 samples sites positive trend, larger rate; 1 no trend	2 of 2 samples sites no trend	1 of 1 sample sites no trend	1 of 3 sample sites positive trend smaller rate; 2 no trend	1 of 2 sample sites positive trend smaller rate; 1 no trend	1 of 1 sample sites no trend	1 of 2 sample sites positive trend, larger rate; 1 no trend	No Data
Dissolved Oxygen Period of Record 1998-2016	2 of 2 sample sites no trend	1 of 2 sample sites positive trend, smaller rate; 1 no trend	7 of 8 sample sites no trend; 1 negative trend smaller rate	2 of 2 sample sites no trend	1 of 1 samples sites no trend	1 of 1 samples sites positive trend smaller rate	1 of 2 sample sites negative trend smaller rate; 1 no trend	1 of 1 sample sites no trend	1 of 1 sample sites no trend	2 of 2 samples sites no trend	2 of 2 samples sites no trend	1 of 1 sample sites positive trend, smaller rate	1 of 3 sample sites positive trend smaller rate; 2 no trend	1 of 2 sample sites positive trend smaller rate; 1 no trend	1 of 1 sample sites negative trend, smaller rate	2 of 2 samples sites positive trend, smaller rate	No Data
Dissolved Oxygen 10 Year 2007-2016	2 of 2 sample sites no trend	1 of 2 sample sites positive trend, smaller rate; 1 no trend	2 of 8 samples sites negative trend smaller rate; 1 positive trend smaller rate, 5 no trend	2 of 2 sample sites no trend	1 of 1 samples sites no trend	1 of 1 samples sites positive trend smaller rate	1 of 2 sample sites negative trend smaller rate; 1 no trend	1 of 1 sample sites no trend	1 of 1 sample sites no trend	2 of 2 samples sites no trend	2 of 2 samples sites no trend	1 of 1 sample sites positive trend smaller rate	1 of 3 sample sites positive trend smaller rate; 2 no trend	1 of 2 sample sites positive trend smaller rate; 1 no trend	1 of 1 sample sites negative trend, smaller rate	2 of 2 samples sites positive trend, smaller rate	No Data

The graph above shows that nitrogen increases in the creeks are common except for Clower Creek. The majority of creeks (7) showed chlorophyll decreases, with 6 unchanged, and increases found in 3 creeks - Whitaker, Matheny and South Creek. Dissolved oxygen was static in 7 creeks, improving in 5 and declining in 3 – Phillippi, Catfish and Forked. There are no known pollution sources that increased in every basin of the County so it is thought that the increasing nitrogen levels may be related to atmospheric deposition or are somehow rainfall related.

Bacteria data was graphed by basin (below). Problem areas with high values (Matheny, Phillippi and Hudson) are in contrast to areas with low values (Catfish, Cowpen, Deer Prairie, and Forked).



Relationship of Data to Stormwater Management Plan

The results of comprehensive creek monitoring highlights the problem areas that are suitable for further investigation. Data suggests that negative trends for Alligator, Phillippi and Gottfried Creeks may be suitable for additional pollutant removal measures to be incorporated into the Stormwater Management Plan in the year four annual report.

Sarasota County NPDES MS4 2016 Annual Report
Monitoring Data Summary

3. Biological Monitoring - Oysters

2016 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 2016 Reporting Year
In 2016 fourteen stations ranked excellent with greater than 75% live oysters. Eight stations fell into the "good" category (50%-75% live oysters). Two stations were in the caution category with less than 50% live

Below is the current and historic percent live oyster monitoring data.

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
AL1					63	68	61	62	69		43	49	65	**81**
AL2					78	84	66	69	80		21	49	73	**49**
ANG1					75	75	46	80	79		75	74	72	**80**
ANG2					85	72	55	80	72		52	85	73	76
CAT1				76	88	94	70	2	0		0			
CC1	0	41	59	59	71	80	68	76	71	61	61	68	45	53
CC2			13	51	74	91	47	59	77	55	21	33	38	35
DB1	22	58	76	64	73	77	67	84	82	74	77	71	79	70
FRK1					64	50	36	48	33		0	84	81	82
FRK1A											44			
FRK2					77	79	69	73	85		72	86	85	87
GOT1					72	75	68	84	84		80	72	86	80
GOT2					79	70	63	70	76		46	79	75	78
GOT3					81	55	55	64	60		69	75	55	64
HUD1				78	75	77	71	79	87		59	85	87	88
HUD2				54	66	63	67	67	70		68	71	63	70
LYB1	80	79	80	77	63	71	78	74	73	75	68	83	84	77
NC1				82	76	69	77	77	85		82			
NC2				0	85	47	59	50	0		0			
NC2A											72			
NO1												86	85	81
PH1				56	76	54	77	78	77		72	56	79	85

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
PH2				60	81	75	72	78	80		67	64	83	88
PH3				21	84	75	66	70	46		23	68	67	55
RB1	79	78	73	73	76	79	80	83	89	87	80	86	77	74
SC1				57	54	62	64	78	80		69	56	67	82
SC2	0			58	85	78	68	73	80		66	75	62	69
SKC1	8	79	89	72	86	82	82				86	78	88	83
SKC2		76	55	56	80	81	81	84	81	78	62	87	65	74
SKC3			36	37	16									

Long Term Assessment

Most oyster stations on Sarasota County creeks followed typical patterns that they have through the years. Some of the upstream stations experienced some die off during the wet season. Sarasota County did experience higher than average rainfall in August 2016. This higher than normal rainfall likely contributed to upstream stations being too fresh for too long causing some oyster die off. This is particularly evident in the Shakett Creek and Dona Bay watershed. This watershed is highly altered and upstream sites have experienced die off in the past during heavy rainfall years.

Relationship of Data to Stormwater Management Plan (SWMP)

The percent live oysters generally drop in the wet season and in certain watersheds with excessive runoff, the die off in up-stream stations is more pronounced. This allows the county to identify areas in which to focus water retention efforts.

A recent watershed restoration effort was completed during the winter of 2016-1017 in the Dona Bay watershed. It is anticipated that upstream die offs in the Dona Bay watershed will decrease in the future due to restoration efforts.

Sarasota County NPDES MS4 2016 Annual Report
Monitoring Data Summary

4. Biological Monitoring - Seagrass

Biological Monitoring – Seagrass Monitoring
Reporting and Assessment of Monitoring Results

Seagrass is the response variable that was used to develop nutrient management criteria for bays in Southwest Florida. The SW Florida Water Management District maps seagrass from aerial photography every other winter. Results from 2016 show an overall increase in seagrass throughout Sarasota County but increases in Sarasota, Roberts and Dona/Roberts Bays were offset by losses in Little Sarasota, Blackburn and Lemon Bays. This data is for Sarasota County only and does not include the portions of Sarasota and Lemon Bay that are beyond the County borders.

Year	*Sarasota Bay*	*Roberts Bay*	*Little Sarasota Bay*	*Blackburn Bay*	*Dona Roberts Bay*	*Lemon Bay*
2014	3,479	321	884	461	99	1,354
2016	3,719	356	772	415	101	1,340

Summary of Monitoring Data from 2016 Reporting Year

Sarasota County monitors the quality of seagrass by monitoring species, percent cover of the bay bottom (abundance), blade length, drift algae, epiphyte coverage and other characteristics. The premise is that healthy seagrass beds will grow densely, be climax species, and be tall. When extremely abundant, drift algae and epiphytes are known to be harmful to the health of seagrass. In 2016, 40 fixed and 130 random sites were sampled throughout all of the bays in Sarasota County.

Long Term Assessment

The SWFWMD Sarasota Bay Surface Water Improvement and Management Plan established that there is a negative correlation between nitrogen and seagrass biomass in Sarasota Bay (Tomasko et al., 1992).

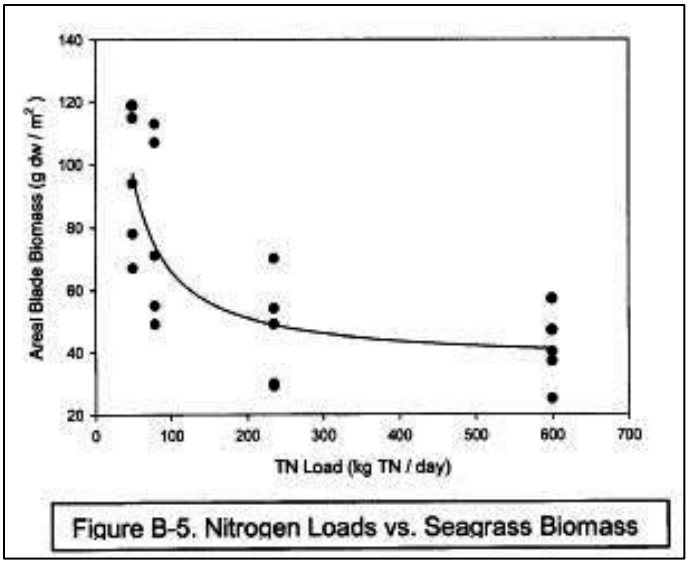
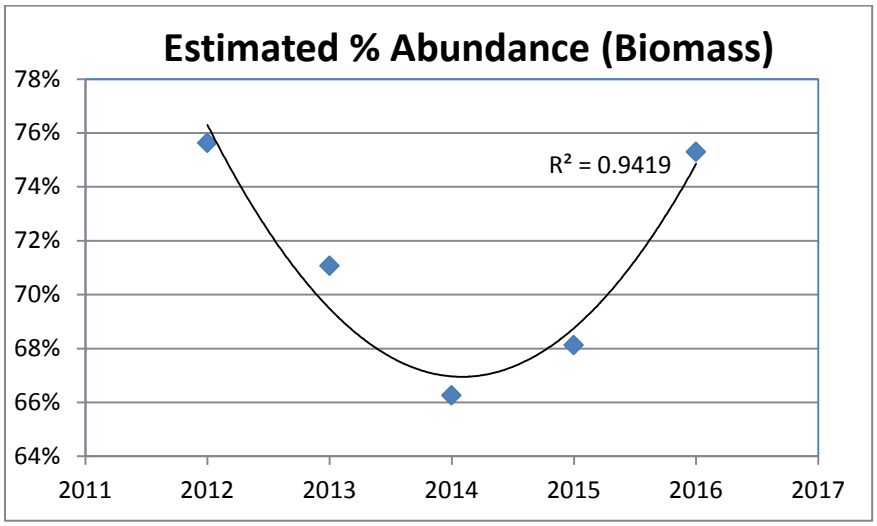


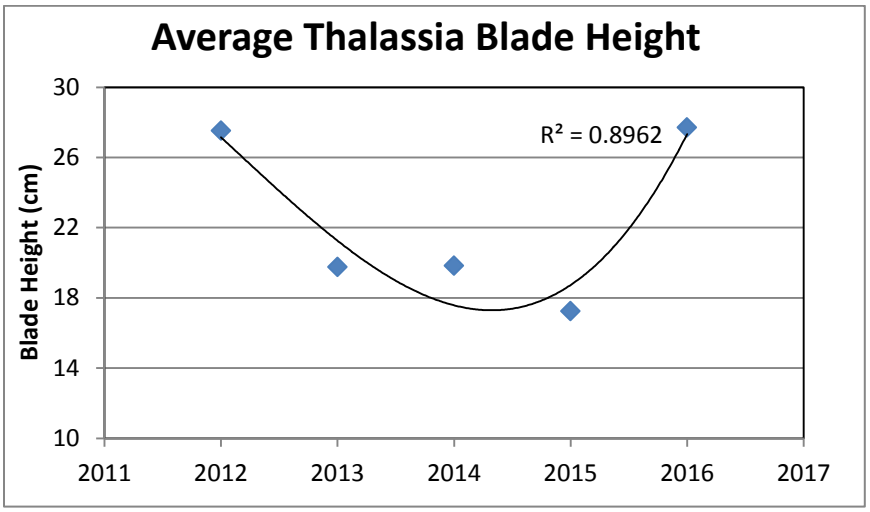
Figure B-5. Nitrogen Loads vs. Seagrass Biomass

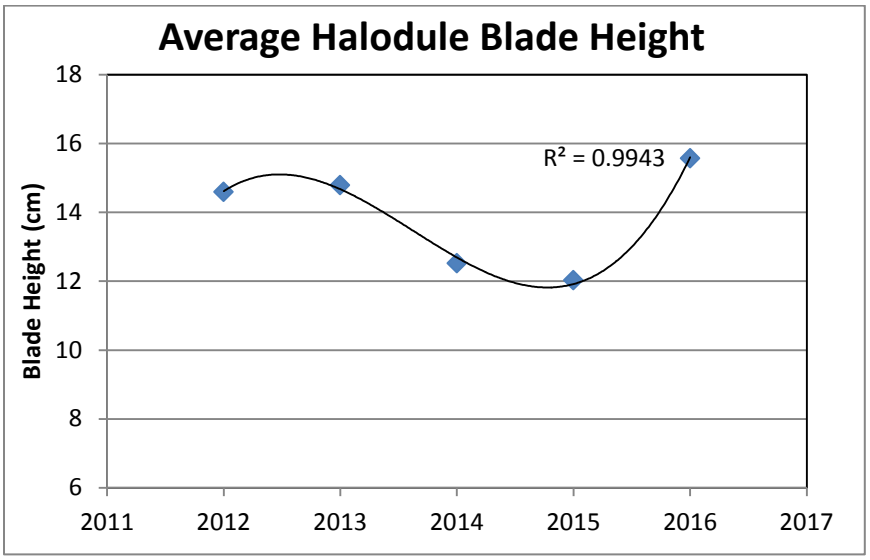
Five-year trends in the majority of the water bodies in Sarasota show evidence of an increase in nitrogen between 2013 and 2014. This correlates with the overall decline in biomass and robustness found by the Sarasota County Seagrass Monitoring Program in those years and subsequent recovery. 2013 demonstrates evidence of slightly higher than rainfall average which may also contribute to increased nitrogen levels.

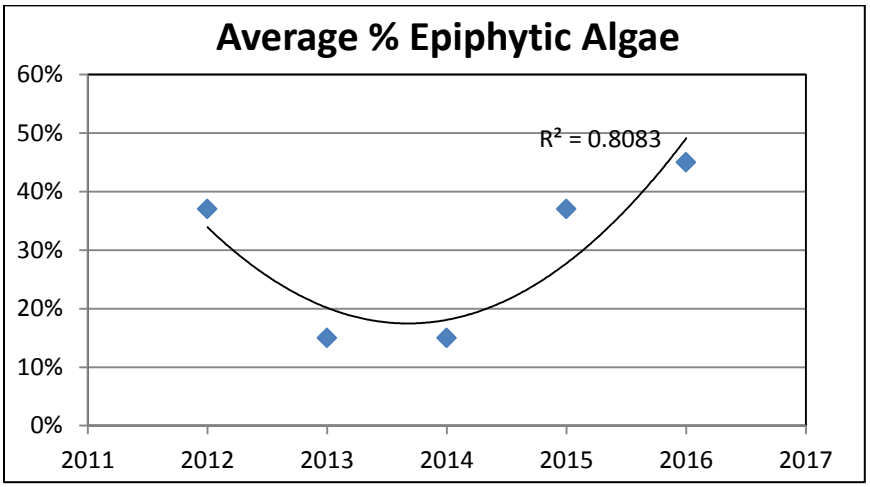
Year	Tot. Abundance	Avg. Thalassia Cover	Avg. Halodule Cover	Avg. Thalassia Blade Height (cm)	Avg. Halodule Blade Height (cm)	Avg. Drift Algae	Avg. Epiphytic Algae
2012	76%	74%	85%	27.52	14.59	6%	37%
2013	71%	70%	89%	19.76	14.78	23%	15%
2014	66%	62%	75%	19.83	12.52	18%	15%
2015	68%	65%	75%	17.23	12.03	18%	37%
2016	75%	58%	99%	27.71	15.57	10%	45%

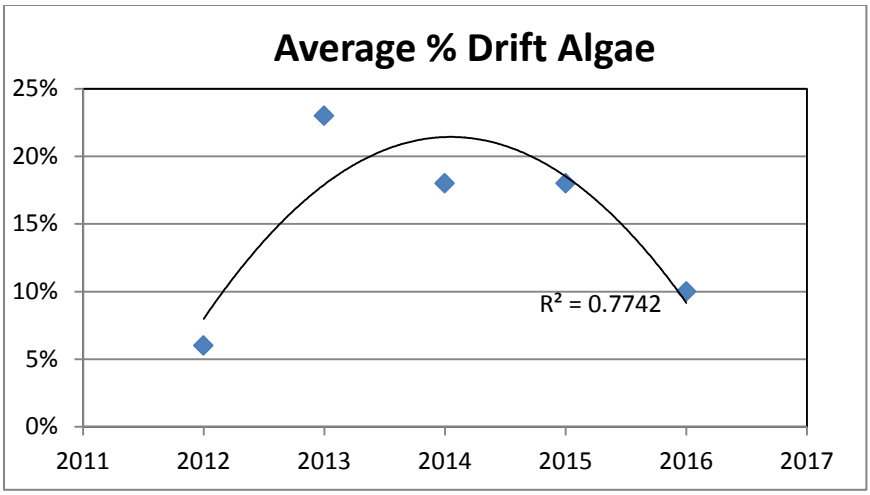
In 2016, increases were seen in abundance, blade length, and epiphytes; drift algae was down, as was the relative abundance of Thalassia. Halodule is a pioneer species and will recover more quickly than Thalassia which is a climax seagrass bed community. The mix of negative and positive characteristics may be analyzed spatially for each bay and bay segment and be correlated to water quality characteristics such as nitrogen and chlorophyll.

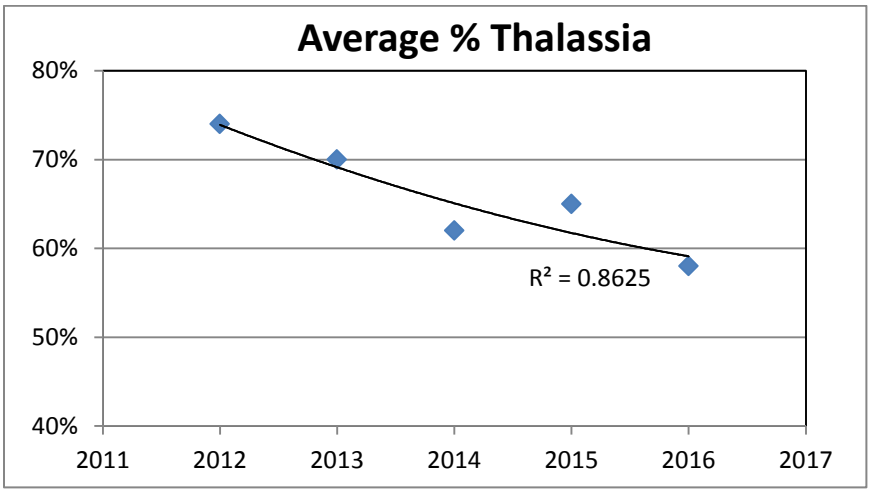


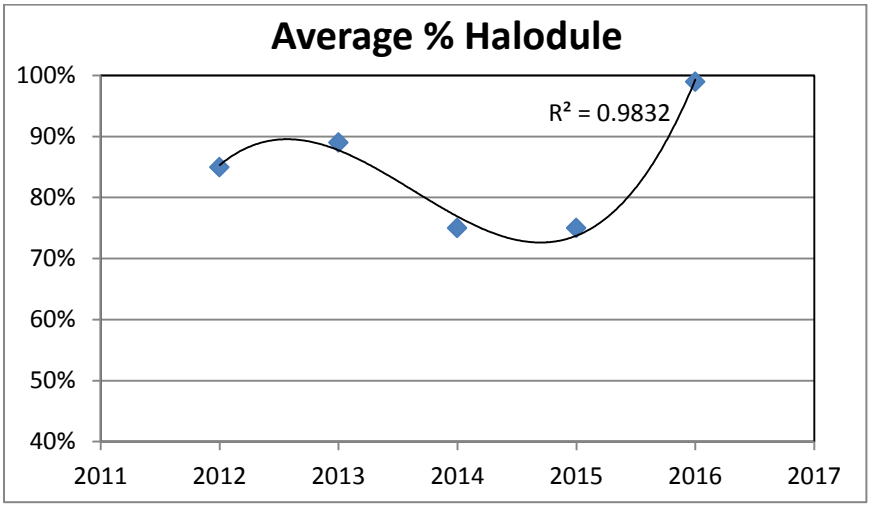

Average Thalassia Blade Height
Blade Height (cm)
30
26
22
18
14
10
2011
2012
2013
2014
2015
2016
2017
R² = 0.8962


Average Halodule Blade Height
Blade Height (cm)
18
16
14
12
10
8
6
2011
2012
2013
2014
2015
2016
2017
R² = 0.9943


Average % Epiphytic Algae
60%
50%
40%
30%
20%
10%
0%
2011
2012
2013
2014
2015
2016
2017
R² = 0.8083


Average % Drift Algae
25%
20%
15%
10%
5%
0%
2011
2012
2013
2014
2015
2016
2017
R² = 0.7742


Average % Thalassia
80%
70%
60%
50%
40%
2011
2012
2013
2014
2015
2016
2017
R² = 0.8625


Average % Halodule
100%
90%
80%
70%
60%
50%
40%
2011
2012
2013
2014
2015
2016
2017
R² = 0.9832

Relationship of Data to Stormwater Management Plan (SWMP)

The County Seagrass Monitoring Program does not just measure the presence of seagrass but also measures the health of seagrass. Note that Halodule is about 60% as tall as Thalassia so having climax species like Thalassia is beneficial as habitat, for sediment control and for grazing by manatees, turtles and other marine life. Seagrass species are sensitive to salinity so have an inherent relationship to stormwater management. It is expected that the Dona Bay Project, which was completed in 2017, will provide measurable benefits to seagrass in the downstream estuary by reducing salinity, color and nutrient levels in the bays.

Sarasota County NPDES MS4 2016 Annual Report
Monitoring Data Summary

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 2016 Reporting Year

A. SPAT MONITORING

Figure 1: Monthly Scallop Spat Landings

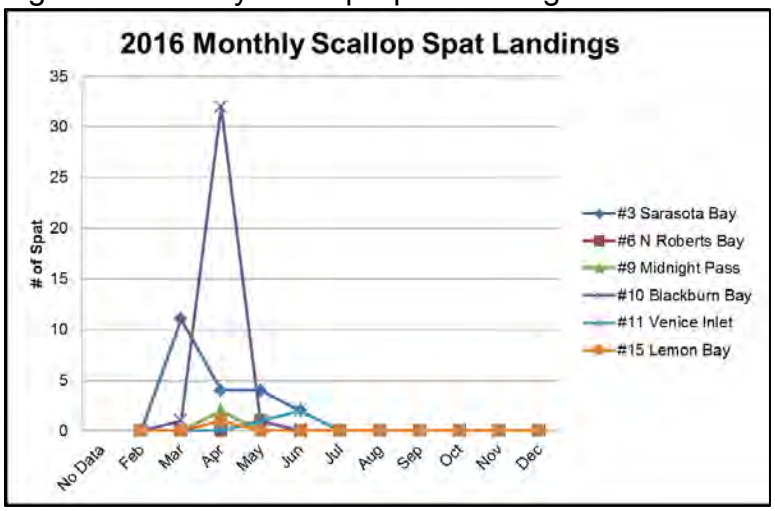
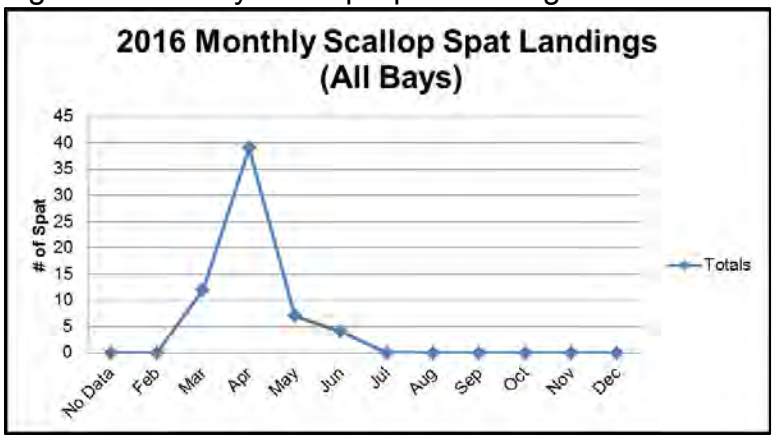
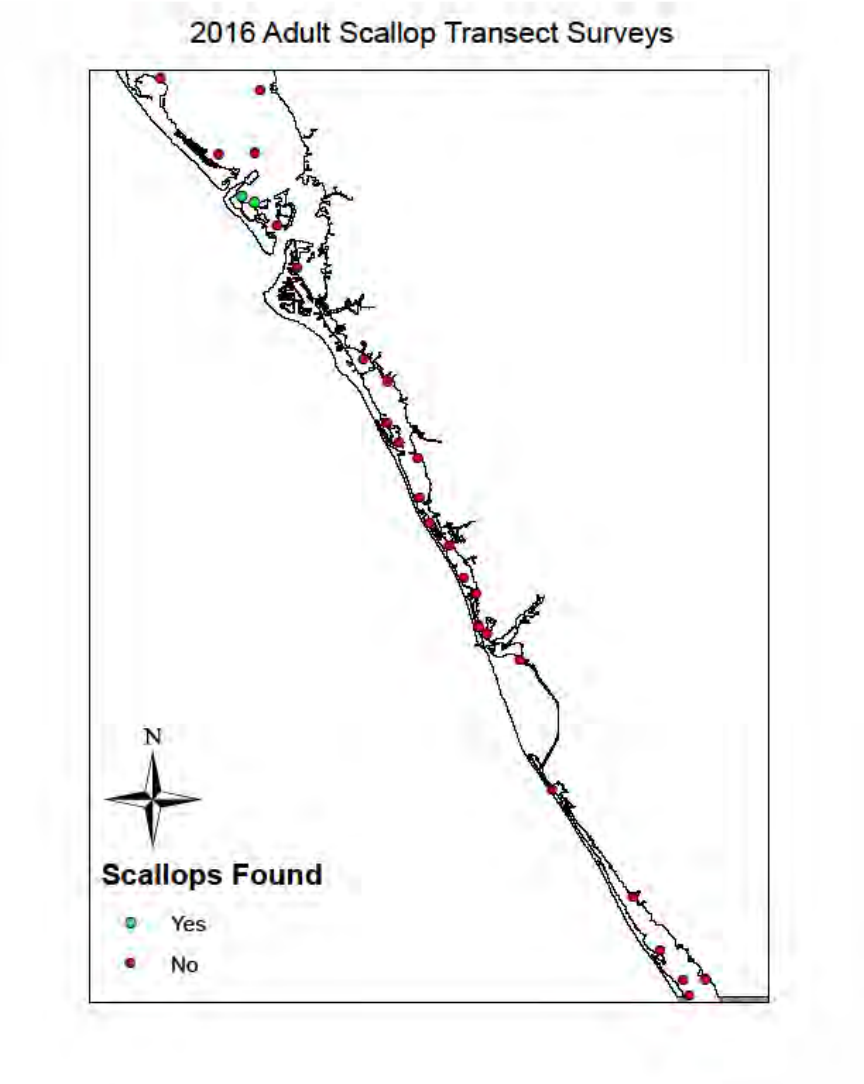


Figure 2: Monthly Scallop Spat Landings



Historical patterns in our spat monitoring program have consistently shown elevated landings from March through May with a peak occurring in April. The 2016 data shows a similar pattern (see figures 1 & 2). Significant countywide rainfall typically starts in June and remains persistent through September. The drop in spat landings follows the increasing rainfall patterns. This increase in fresh water causes decreases in salinity, which can have a negative effect on scallop populations.

B. ADULT SCALLOP TRANSECT SURVEY SITES



During the month of August staff, conducted 26 transect surveys throughout the county's bays searching for scallops. These surveys resulted in four live and eight recently dead scallops. No adult scallops were found during the 2015 survey.

C. CAGE PROGRAM

Figure 3: Caged Scallops Growth Rates

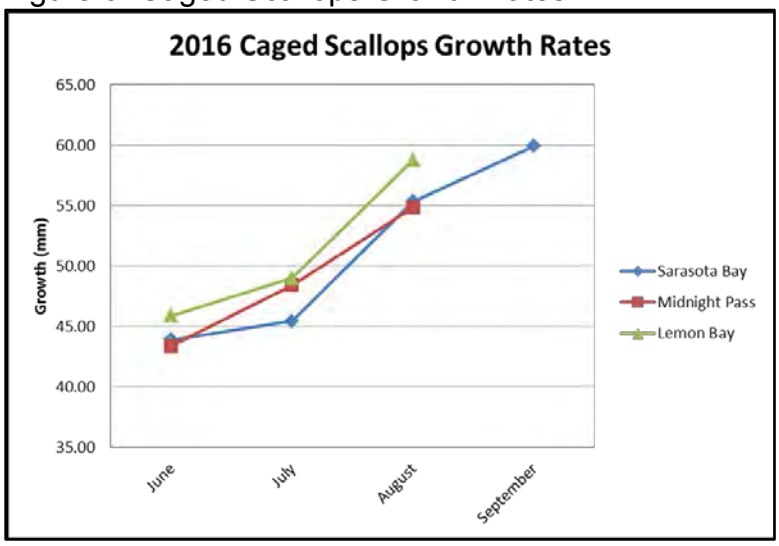
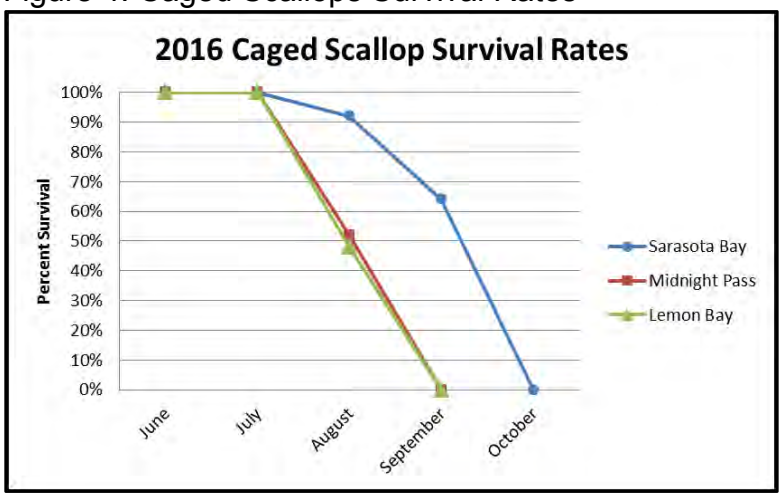


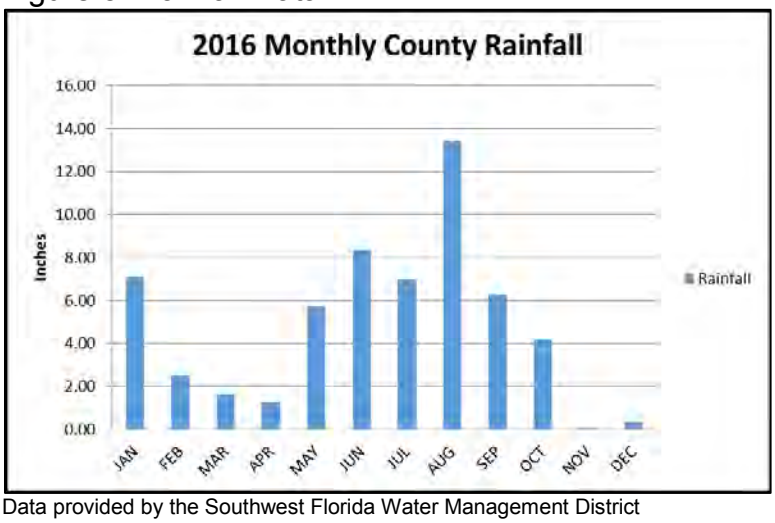
Figure 4: Caged Scallops Survival Rates



The county cage program relies on adult hatchery scallops provided by our partner organizations Mote Marine Laboratory & Sarasota Bay Watch. Scallops provided by our partners were placed at in cages three sites in county bays. The caged scallops experienced a normal growth rates June through August (See figure 3). A spike in redtide blooms during August resulted in significant mortality throughout the three cages (See figure 6). The bulk of the caged scallops did not survive through September.

D. RAINFALL

Figure 5: Rainfall Data

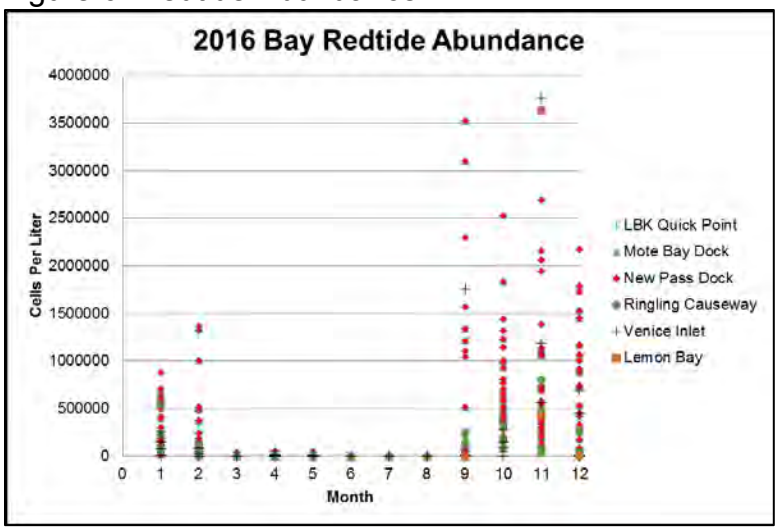


Data provided by the Southwest Florida Water Management District

The graph shows correlation between the typical peak of spat landings (see figure 2) and the decrease of rainfall leading into April (see figure 5). A similar correlation appears between the lack of adult scallops found during transect surveys and an increase in rainfall leading into a significant spike during the month of August.

E. REDTIDE

Figure 6: Redtide Abundance

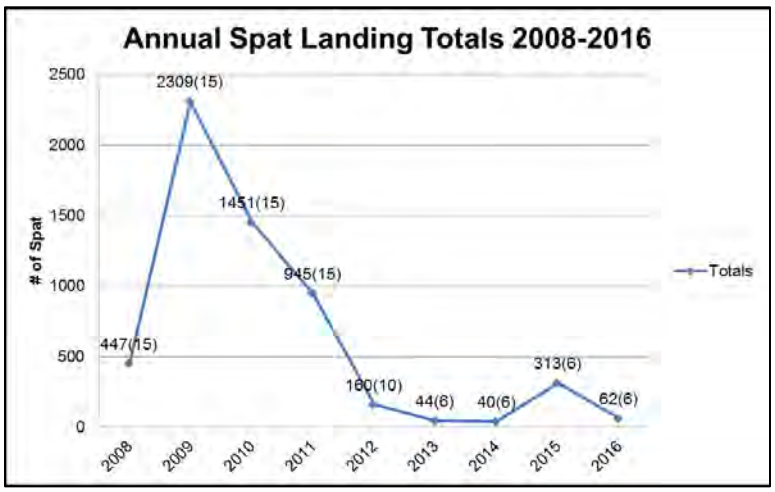


Data provided by FWRI

Redtide was present throughout most of the county's bays during nine months of the year. Red tide cell counts in excess of 1 million cells per liter are in the high range according the FWRI concentration scale. Samples showed medium to high cell counts in six of the nine months in which redtide blooms were present (See figure 6).

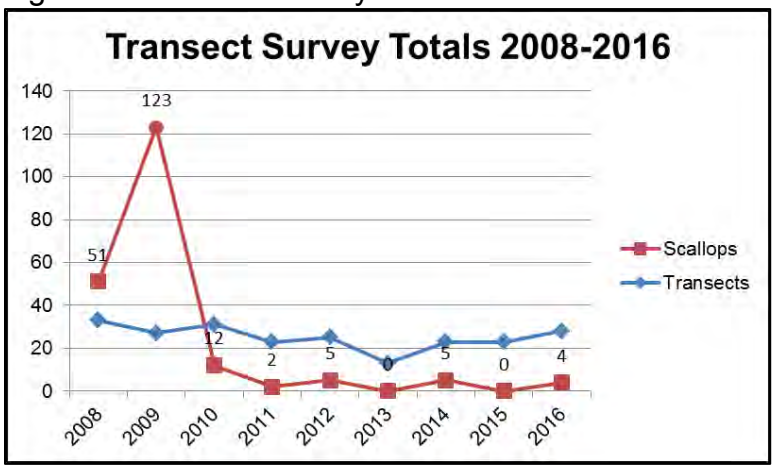
Long Term Assessment

Figure 7: 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 a decrease in 2016 spat landings of 19.8% from the 2015 data. However, this is roughly 30% above spat landing totals in 2013 and 2014.

Figure 8: Transect Survey Totals



After 2009, few adult scallops were found during the annual transect surveys. This trend in number of scallops found has continued from 2010 through 2016. This may indicate that a limited number of scallops remain in our natural background populations (see figure 8). Support for this conclusion is show by relatively low spat landings on our collectors during the same years (see figure 7). It is important to note that environmental factors such as visibility, number of locations surveyed and diver experience can have a significant influence the survey results.

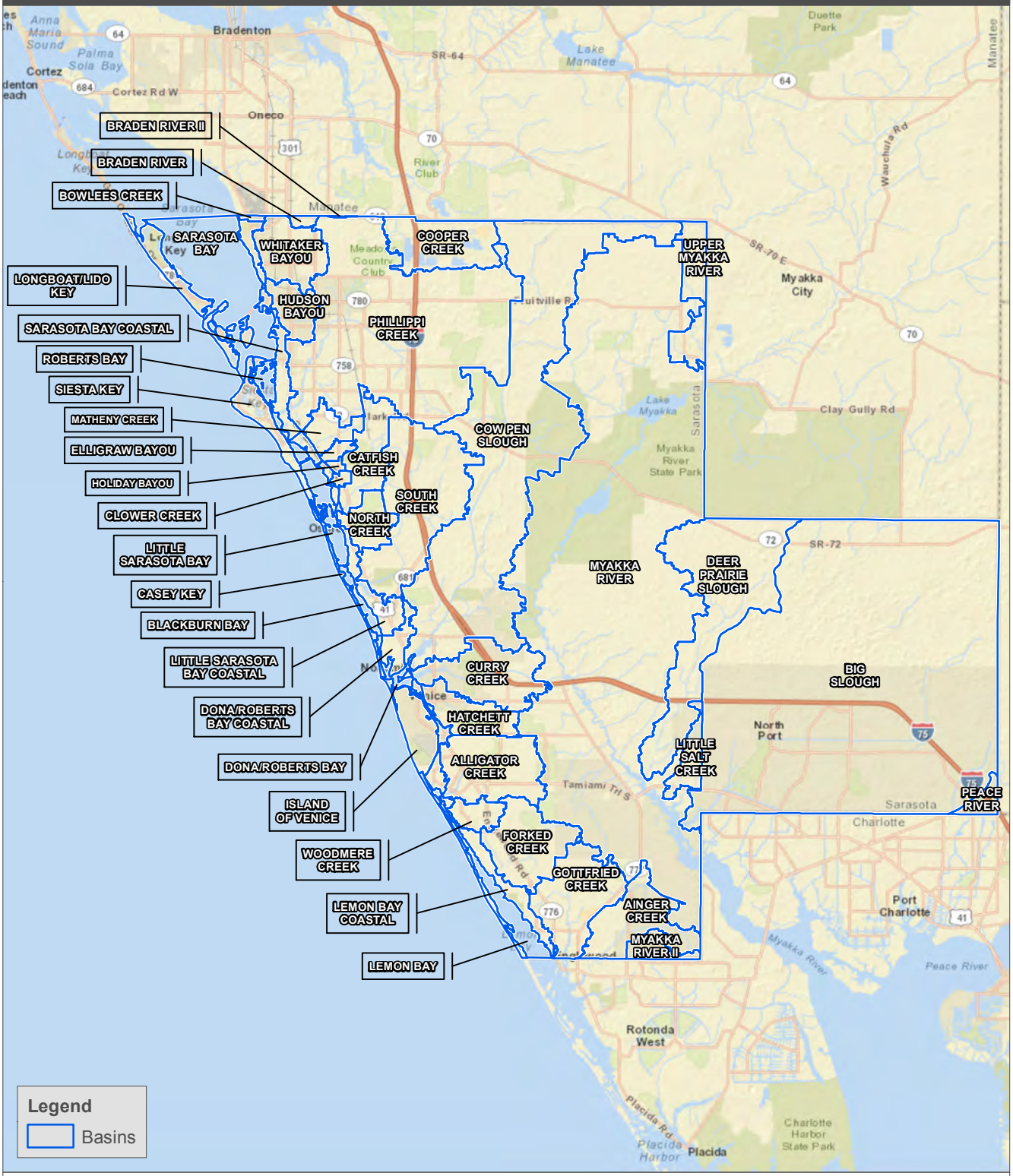
Relationship of Data to Stormwater Management Plan (SWMP)

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. The county experienced concentrated rainfall events and persistent redtide blooms, each have shown to have a negative affect scallop populations. The data suggests that these factors may be the reason scallop monitoring sites throughout the county experienced 19.8% less spat landings than in 2015.

Sarasota County NPDES MS4 2016 Annual Report
Monitoring Data Summary

6. Pollutant Load Modeling

SIMPLE Pollutant Loading Model Basins



0 3 6

Miles

1:380,160

JONES EDMUNDS

For Informational Purposes Only Q:\19006_Sarasota\050_SIMPLE_Updates\mxd\SarasotaCountySubwatersheds.mxd SNyquist 4/12/2017

Pollutant Load Modeling
Reporting and Assessment of Monitoring Results

Modeling provides reasonable estimates of the sources of pollutants to a water body. Good models are internally consistent so provide a rational means for comparisons among a variety of conditions across a landscape.

Summary of Monitoring Data from 2016 Reporting Year

The SIMPLE Model was updated and run for the years 2001, 2006, 2011 and 2016, which corresponds to the last four periods when modeling was required by the NPDES MS4 permit, a year three requirement in each five year permit term. The model produces results for several modules: baseflow, direct runoff, irrigation, point source, atmospheric and septics and the results are totaled. Modeled parameters include nutrients, BOD, solids, metals, oil and bacteria. The entire County was modeled, including 43 areas, the major areas being drainage basins, but some are waterbodies and others are small fragments of basins at the edges of the County boundaries.

Long Term Assessment

The model results are tabular and voluminous. The following is an interpretation of the model results for Nitrogen for select drainage basins.

SIMPLE Pollutant Load Model Results
Examples from Select Basins for Nitrogen

Pounds per year		Nitrogen					
Basin	**Year**	**Baseflow**	**Direct Runoff**	**Irrigation**	**Point Source**	**Septic**	**TOTAL**
Alligator Creek	2001	11,177	31,768	2,644	31	24,838	70,458
	2006	11,324	32,166	2,737	30	26,096	72,353
	2011	11,431	32,401	2,740	53	26,181	72,808
	2016	11,431	32,401	2,940	54	25,447	72,275
Catfish Creek	2001	7,207	23,820	935	121	5,513	37,595
	2006	7,260	24,058	946	130	5,452	37,845
	2011	7,265	24,145	1,002	95	4,878	37,386
	2016	7,269	24,206	984	188	4,586	37,233
Gottfried Creek	2001	6,720	24,022	726	442	2,034	33,944
	2006	6,762	24,199	737	0	2,010	33,709
	2011	6,784	24,282	770	0	2,016	33,851
	2016	6,811	24,351	821	0	2,016	33,999
Cowpen Slough	2001	49,229	227,723	13,879	330	13,906	305067
	2006	49,357	227,794	14,014	328	14,581	306,073
	2011	49,443	228,526	14,014	282	11,209	303,473
	2016	48,816	227,379	14,014	291	10,337	300,836
Hudson Bayou	2001	4,893	19,990	1,372	11,203	1,500	38,960
	2006	4,893	19,990	1,370	0	1,563	27,817
	2011	4,893	19,990	1,370	533	858	27,645
	2016	4,893	19,990	1,370	2	830	27,086
Matheny Creek	2001	3,889	13,724	777	65	4,466	22,922
	2006	3,889	13,724	777	0	4,200	22,591
	2011	3,889	13,724	777	0	2,579	20,969
	2016	3,889	13,724	777	1	2,290	20,681
Phillippi Creek	2001	69,532	197,526	24,755	14,176	90,899	396,890
	2006	71,411	200,426	24,478	18,419	86,319	401,054
	2011	71,440	200,662	25,030	6,116	42,952	346,202
	2016	71,462	200,939	25,058	3,037	40,045	340,543
South Creek	2001	13,430	59,888	2,098	261	936	76,615
	2006	13,930	61,688	2,338	230	960	79,147
	2011	14,060	62,143	2,388	280	862	79,735
	2016	14,219	62,697	2,450	187	674	80,229

The bottom right corner of each basin group in the table is either green for reduced load or red for increased Total load. The contributing factors in the other columns are also color-coded, which illustrates which source is causing the total result. Generally speaking this table suggests improvements in wastewater treatment and septic system removal are offset by increases from stormwater loading probably from land development.

Relationship of Data to Stormwater Management Plan (SWMP)

SIMPLE is a spatial model which means that it can be used to look in detail at relatively small areas. Modeling is a strong tool for identifying portions of the watersheds that can be targeted for loading reductions or corrective actions with additional pollutant reduction measures.

The pending contract for upgrades to the Sarasota Water Atlas will include design and implementation of a Pollutant Load Modeling pages. This will provide transparency to the persons who are interested in having easy access to the model results.

The Sarasota Water Atlas also has Projects Catalog Pages that can be found at http://www.sarasota.wateratlas.usf.edu/projects-catalog/. New information is being added to these pages regularly. This project information is similar, and sometimes identical, to the load reductions found in the pollutant loading model.

Sarasota County NPDES MS4 2016 Annual Report
Monitoring Data Summary

7. Rainfall

Rainfall Monitoring
Reporting and Assessment of Monitoring Results

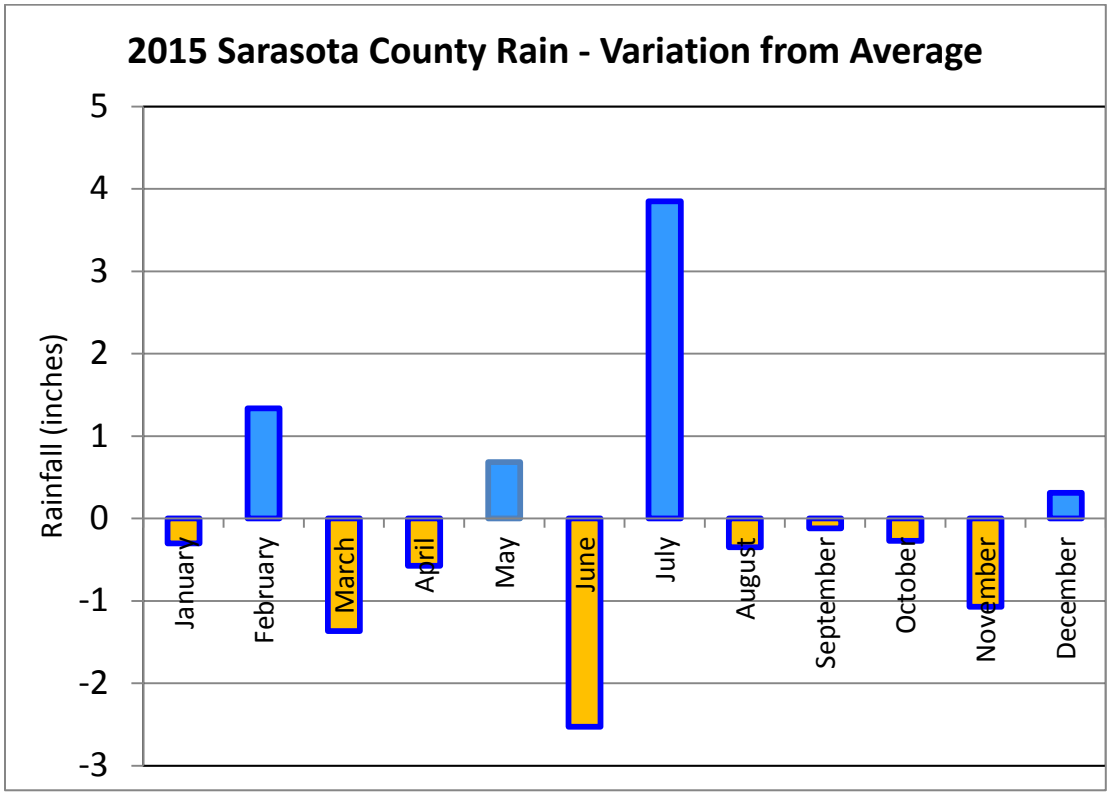
Rain is the driving force for stormwater pollution and plays an important role in other pollutant discharges such as septic systems and wastewater management. The amount and location of rain is not able to be managed but needs to be monitored and correlated to monitoring results.

Summary of Monitoring Data from 2016 Reporting Year

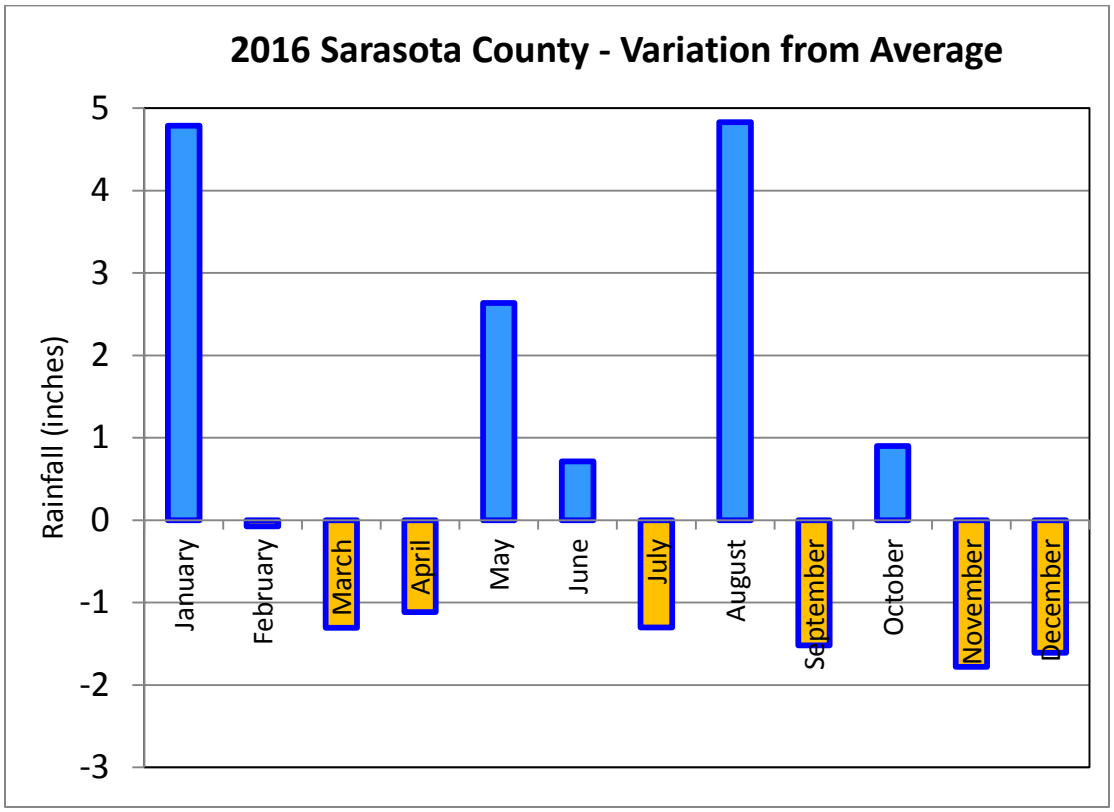
Three main sources of rainfall data are available. The SW Florida Water Management District has rain gauge data and radar-based rainfall. Sarasota County has the Automated Rainfall Monitoring System (ARMS) system. Radar data is available on the Water Atlas at http://www.sarasota.wateratlas.usf.edu/rainfall/. ARMS data is available at http://www.sarasota.wateratlas.usf.edu/datamapper/ and is also available with the data download function. District rain gauge data is available at http://www.swfwmd.state.fl.us/data/hydrologic/rainfall_data_summaries/

Long Term Assessment

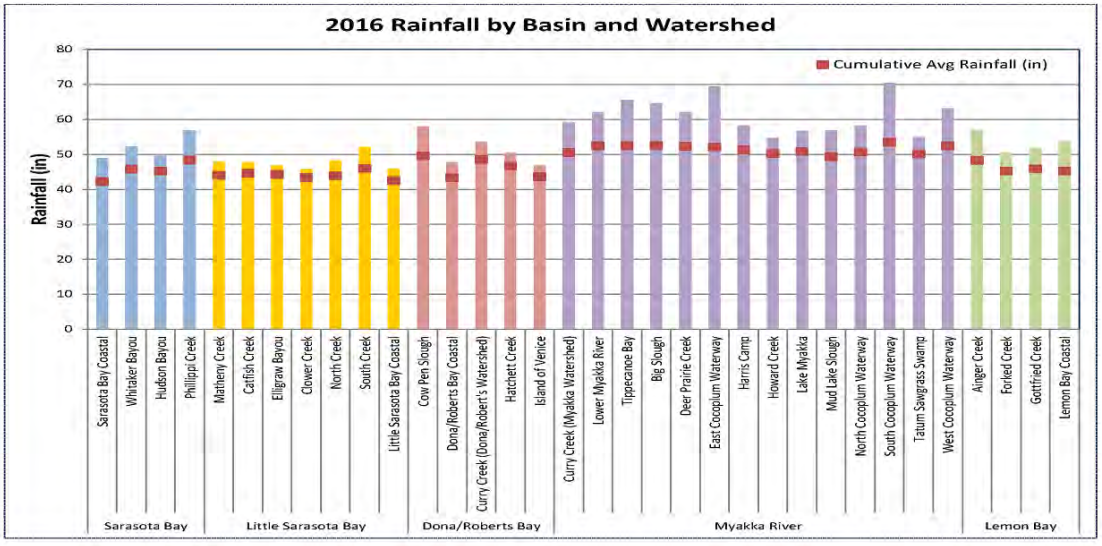
SWFWMD Rain Gauge Data: Average rainfall in Sarasota County is 52 inches per year. 2015 had above average rain (2.3 inches) but the latter part of the year was a dry spell and that may be pertinent to understanding conditions in 2016.



2016 also had above average rain (5.2 inches) primarily because of three heavy months. Six months were dry.



Radar Based Rain: More rain fell in the Myakka watershed than in the coastal watersheds and that relates directly to stormwater runoff and loading.



ARMS Rain: Tendency for more rain in the east and south. Rain is highly variable from month to month and from place to place.

Sarasota County Automated Rainfall Monitoring System 2016

Basin	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Whitaker Bayou	4.3	0.8	1.3	0.5	3.2	3.8	5.8	14.2	4.5	2.6	0.05	0.67	41.8
Hudson Bayou	5.6	2.0	2.0	0.5	4.5	10.2	4.3	11.8	4.4	2.5	0.03	0.29	48.1
Phillippi Creek	5.7	1.7	2.1	0.6	5.3	7.7	7.0	13.6	6.8	3.2	0.03	0.42	54.2
Matheny Creek	6.5	1.8	3.3	0.5	6.0	4.8	3.4	12.5	4.6	3.8	0.05	0.38	47.5
Holiday Bayou	6.8	2.1	2.5	0.9	2.7	1.9	2.7	13.5	4.0	3.4	0.03	0.34	41.1
Elligraw Bayou	5.9	2.0	2.7	0.7	6.9	4.9	2.7	13.7	4.4	3.2	0.06	0.40	47.5
Catfish Creek	5.5	1.6	2.0	1.4	6.2	5.0	3.2	13.5	2.9	1.9	0.03	0.33	43.4
North Creek	6.7	2.1	1.8	1.7	5.2	5.4	3.7	10.9	2.2	5.3	0.04	0.44	45.4
South Creek	6.0	2.3	1.1	2.3	5.3	5.4	4.0	12.7	2.9	2.6	0.03	0.48	45.1
Cowpen Slough	6.9	2.4	1.6	0.8	6.6	7.3	7.2	13.6	7.3	2.3	0.08	0.50	56.5
Hatchett Creek	7.9	2.7	2.5	1.2	5.2	4.8	2.1	11.3	3.0	2.8	0.00	0.14	43.6
Curry Creek	7.8	2.6	2.5	0.9	6.8	7.2	7.0	11.9	6.0	4.0	0.07	0.17	56.9
Alligator Creek	8.1	3.0	2.4	0.8	6.5	6.1	6.9	7.8	5.0	4.0	0.11	0.14	50.7
Woodmere Creek	8.3	3.1	2.4	1.2	4.8	4.4	7.9	8.8	4.5	3.1	0.13	0.09	48.7
Forked Creek	6.7	2.8	2.9	1.1	3.6	4.6	6.3	9.9	1.5	5.0	0.15	0.04	44.4
Gottfried Creek	8.6	3.4	2.1	0.8	2.9	6.6	5.8	11.3	4.2	3.9	0.16	0.12	50.0
Myakka River	6.6	1.7	1.3	0.6	7.7	8.3	6.7	11.4	5.0	4.1	0.08	0.64	54.2
Deer Prairie Creek	8.2	2.2	1.7	1.2	5.8	8.9	5.6	11.7	5.6	4.6	0.04	0.16	55.7
Little Salt Creek	7.4	3.6	2.2	1.9	5.1	11.7	7.5	10.7	5.8	4.4	0.11	0.05	61.3
Big Slough	6.6	3.2	1.8	1.4	3.8	8.1	5.1	12.1	6.2	3.1	0.13	0.11	51.6
Average	6.8	2.4	2.1	1.0	5.2	6.3	5.2	11.8	4.6	3.5	0.07	0.29	49.4
10% above average	7.5	2.6	2.3	1.1	5.7	7.0	5.8	13.0	5.0	3.8	0.08	0.32	54.3
10% below average	6.1	2.1	1.9	0.9	4.7	5.7	4.7	10.7	4.1	3.1	0.06	0.27	44.5

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.

Sarasota County NPDES MS4 2016 Annual Report

8. TMDL Status Report

TMDL Status Report
Sarasota County NPDES MS4 Annual Report for 2016 (Year Three)

- Currently there are 151 WBIDs in Sarasota County
    - Sixteen have TMDLs (1 from FDEP and the rest from EPA)
    - Thirty three are impaired
    - Impairment parameters include bacteria, nutrients, dissolved oxygen and copper

- TMDL priorities for this permit term are Alligator Creek (WBID 2030) for nitrogen and Phillippi Creek (WBID 1937) for bacteria

- In 2010, a TMDL for fecal coliform bacteria in Gottfried Creek (WBID 2049) allocated a 74% fecal coliform load reduction to nonpoint sources. In 2016 the FDEP concurred with the final report of Sarasota County's proactive Walk the WBID Exercise. Data from 2016 is elevated at one of two stations and a follow up investigation will be conducted at Station GOT-2 as per the Proactive Prevention Actions in the report.

Gottfried Creek Monitoring Station GOT-2 located at Park Forest Boulevard												
	January	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
Fecal Coliform	220	770	140	130	310	360	240	290	20	380	650	1,160
Enterococci	710	1,400	530	290	310	360	6,200	1,900	580	670	14,000	1,800
Gottfried Creek Monitoring Station GOT-3 located at Tangerine Woods Boulevard												
	January	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
Fecal Coliform	160	430	10	190	30	80	260	1,300	640	290	20	100
Escherichia coli	336	420	10	121	41	85	201	158	75	379	10	10

- In 2010, the EPA produced a TMDL for Phillippi Creek (WBID 1937) that allocated a 98% reduction of fecal coliform bacteria.

  Sarasota County conducted a Walk the Watershed (WTW) event in the Phillippi Creek watershed from August July to March 2017 in an effort to identify sources of bacterial pollution in the creek. The event had several purposes: 1) receive input from local agencies and residents about potential sources for bacterial pollution; 2) conduct field surveys and sampling events based on that input to isolate potential sources; and 3) provide education and outreach to eliminate sources.

  Field investigations were conducted from August 2016 to March 2017 with staff from the City of Sarasota Utilities and Sarasota County Stormwater participating. Nine bacterial hotspots were investigated, with field staff documenting field conditions upstream and conducting additional water quality sampling. Initial results have did

not find clear indications of sources of bacterial pollution. The WTW activity has narrowed down the list of potential sources of pollution and provided a clearer picture of where the areas of education and outreach should focus.

- In 2006, an EPA TMDL for Alligator Creek (WBID 2030) allocated a 28.2% reduction in nitrogen. In the TMDL, the existing load was 5,370 kg/year and the target load was 3,857 kg/year. The difference between existing and target is 1,512 kg or 3,336 pounds.

  In 2016, Sarasota County operated the Briarwood Stormwater Treatment Facility to reduce the amount of nitrogen and other pollutants reaching Alligator Creek. Over the course of the year a reduction of about 1,960 pounds of nitrogen loading was measured, which is over 50% of the TMDL goal. Additional improvements to the operation of the BSTF are expected to improve load reductions in the future.

  In addition, the Venice Gardens community is very active in improving lake water quality by planting shorelines with aquatic plants and deploying floating wetland islands. In cooperation with the community, Sarasota County planted four demonstration shorelines along these highly eutrophic lakes and co-hosted a well-attended and well-publicized open house. Planting is an effort to shift from a plankton-dominated lake to a macrophyte-dominated lake that will export fewer nutrients downstream.

- The Tampa Bay Estuary Program (TBEP) worked with partners to form a Nitrogen Management Consortium and Reasonable Assurance Plan to restore seagrass and water quality in Tampa Bay. In 2010, the FDEP allocated a Water Quality Based Effluent Limit to Sarasota County for 8.2 tons of nitrogen. Sarasota County provides pollutant removal information for Cooper Creek to the TBEP as needed.

- Sarasota County continues to make significant inroads towards reduction of water pollution.
    - The Phillippi Creek Septic System Replacement Program continues to convert residents from old septic systems to centralized and modern wastewater treatment facilities with effluent reuse capabilities. The program cost is roughly $100,000,000.
    - The $13M Dona Bay Project in the Cowpen Slough watershed was completed in early 2017 and is filling with water. Pollutant removal to the Dona and Roberts Bays area is expected to improve water quality, seagrass, and oysters as well as beach water quality.
    - The expansion of the Celery Fields Regional Stormwater Facility was completed in 2013. A monitoring study showed overall 50% removal efficiency for TP, 53% for TN and 82% for solids and it applies to a large 3,600 acre contributing area.
    - Creative outreach is spreading the message about reducing fertilizer usage and cleaning up after the dogs.


pick it up!
THERE IS NO
POOP FAIRY


PROTECT OUR
WATERS
RAYS
Spread FUN,
not fertilizer
June 1 - Sept. 30

Sarasota County NPDES MS4 2016 Annual Report
Monitoring Data Summary

9. Sarasota County Monitoring Plan

Monitoring Plan for the Sarasota County National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Permit

February 15, 2013

Submitting a monitoring plan to Florida Department of Environmental Protection (FDEP) is required by the National Pollutant Discharge Elimination System (NDPES) Municipal Separate Storm Sewer System (MS4) permit and State rules. The objective of the permit is to reduce pollutant discharges from urban stormwater to the waters of the State to the maximum extent practicable by implementing a Stormwater Management Program (SWMP). The overall purpose of monitoring is to determine the effectiveness of the SWMP. More specific monitoring goals may include prioritizing areas for additional controls, identifying pollutant sources, characterizing water quality trends, modeling pollutant loads, or assessing impaired water bodies. This monitoring plan is to fulfill Part V.B., Monitoring and Reporting Requirements and Monitoring Data Collection of permit FLS000004 for Sarasota County, the City of Sarasota, the City of Venice, the Town of Longboat Key and the Florida Department of Transportation (FDOT), but not including the City of North Port.

Background

Sarasota County encompasses parts of two watersheds: the Myakka River and the Southern Coastal Basin. Within the watersheds are 26 sub-basins named after small creeks. Other water bodies include a series of coastal bays, numerous wetlands, a handful of natural lakes, thousands of ponds, and an extensive network of canals and ditches.

Several agencies are actively involved in watershed management in the area, including three National Estuary Programs (NEPs), the South West Florida Water Management District (SWFWMD), the Environmental Protection Agency (EPA), the FDEP, the County, four Municipalities, and FDOT. Previous studies have highlighted the need to protect receiving waters from nutrients, sedimentation, toxins, and bacteria. Unnatural volumes and timing of stormwater are often cited as a problem. Implementation of the SWMP has been successful since 1995. Many projects have been implemented to reduce pollution from stormwater, sanitary sewers, erosion, and septic systems.

Joint Monitoring Plan

<u>Ambient Water Quality of Bays</u>

Healthy estuaries are among the foremost economic values to our community. Excessive stormwater pollution of the bays can have negative impacts on fish and wildlife, businesses, and the health of our citizens. Monitoring bays provides an integrated assessment of the cumulative impacts of stormwater.

Monthly water samples will be analyzed for specific conductance, salinity, temperature, pH, dissolved oxygen, DO saturation, light attenuation, secchi depth, total nitrate + nitrite, total kjeldahl nitrogen, ammonia nitrogen, orthophosphate, total phosphorus, turbidity, color, 5-day biochemical oxygen demand, and corrected chlorophyll A.

Sampling locations (See Appendix A) will be distributed among all bays, including Sarasota Bay, Roberts Bay North (Sarasota), Little Sarasota Bay, Dryman Bay, Blackburn Bay, Lyons Bay, Dona Bay, Roberts Bay South (Venice), the Intracoastal Waterway (Venice) and Lemon Bay.

Ambient Water Quality of Watersheds

Monitoring water quality in the watersheds is a direct assessment of management success. This program is valuable in measuring compliance with surface water quality standards, identification of impaired waters, and numeric nutrient criteria.

Monthly water samples will be taken from creeks and rivers throughout Sarasota County (See Appendix B). Special attention will be paid to those water bodies designated as not meeting regulatory criteria.

Samples will be analyzed for specific conductance, salinity, temperature, pH, dissolved oxygen, DO saturation, secchi depth, total nitrate + nitrite, total ammonia, total kjeldahl nitrogen, total orthophosphorus, total phosphorus, 5-day biochemical oxygen demand, total suspended solids, turbidity, color and corrected chlorophyll-A (as appropriate).

Biological Monitoring

Oyster Monitoring: Oysters are naturally abundant in coastal creeks and appropriate timing of freshwater is essential to their survival. As a keystone organism, oysters provide habitat by building reefs, improve water quality by filter feeding, stabilize shorelines, and are a delicious food. Oysters will be monitored twice per year in select creeks as a direct indicator of successful watershed management.

Seagrass Monitoring: Seagrass is rebounding to historic levels in the bays of Southwest Florida because of successful wastewater and stormwater management. Seagrass meadows are critical habitat for the fishing economy and have inherent ecological value. Seagrass is the response variable used in the development of Numeric Nutrient Criteria. In cooperation with the SWFWMD, the FWC, and the NEPs, the health of seagrass will be monitored during summer and winter seasons to determine status and trends and also to enhance the accuracy of the SWFWMD aerial surveys.

Scallop Monitoring: Bay scallops are sensitive indicators of excessive freshwater inflows to bays. In cooperation with the Florida Fish and Wildlife Conservation Commission (FWC) and others, scallop monitoring may include larval surveys, adult surveys or survival rates of sentinels.

Pollutant Load Modeling

Modeling of pollutant loading identifies priority areas for pollution reduction and also estimates trends in loading of nutrients and other pollutants. The Spatially Integrated Model for Pollutant Loading Estimates (SIMPLE-Monthly) was developed in cooperation with the SWFWMD and was used for the development of loading targets for Numeric Nutrient Criteria and County watershed plans. The model will be used to comply with the Annual Pollutant Loading and Event Mean Concentration requirement of the NPDES MS4 permit.

Rainfall

Rainfall data will be used to explain the ambient monitoring results, the pollutant loading, and the effectiveness of the SWMP. Rainfall is the principal driving force in understanding stormwater and stormwater pollution. Data sources may include the National Weather Service, the Southwest Florida Water Management District, or the County's Automated Rainfall Monitoring System (ARMS) that also has stage and flow data for selected stations.

Evaluation of the Effectiveness of SWMP

The monitoring program is intended to assess the SWMP, to identify problem areas, to evaluate progress, and to assess pollutant loading. Ambient monitoring in bays is an effective method to evaluate progress and identify problem areas on a broad scale. Declining trends or noncompliance with bay standards would indicate a renewed focus is needed in those bays and associated watersheds. Creek and river ambient monitoring provides a similar but more basin-specific focus. GIS-based pollutant load modeling identifies where on the landscape the pollutants are originating. Based on previous studies, it is expected that the volume of runoff is more influential than the concentration of the runoff. This comprehensive monitoring approach is expected to prioritize activities in the SWMP and also to identify where water quality improvement projects should be sited.

Quality Assurance

All monitoring shall be conducted in accordance with Chapter 62-160, Florida Administrative Code and all National Environmental Laboratory Accreditation Conference (NELAC) standards. Participation in the Southwest Florida Regional Ambient Monitoring Program ("RAMP") will continue. RAMP fosters scrutiny of data outliers and improvement of sampling and analysis techniques to maintain a central tendency among results from various sampling agencies.

Data Analysis and Reporting

Basic analysis of the data will be submitted in the annual reports to the FDEP and will include narrative, tabular, graphical depictions and trend analysis, as appropriate. Monitoring data and reports shall be regularly posted on the Sarasota Water Atlas website at www.sarasota.wateratlas.org. Metadata will be provided on request. Ambient water quality data will be posted to the STORET database.