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

Who Must Submit This Annual Report Form?

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

When to Submit This Annual Report Form?

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

Where To Submit This Annual Report Form?

- This form and any REQUIRED attachments must be sent by mail to the address below. The form and attachments may be submitted electronically (on a disk or CD) if a signed paper copy of Section VI of this form (Certification Statement and Signature) is also submitted. Do not submit any materials not specifically required to be submitted as per Section V of this form.

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

Section I: BACKGROUND INFORMATION

- Row A — Provide the name of the governmental entity submitting this form. For example, "City of Lauderhill."
- Row B — Provide the name of the permit as it appears on the first page of your permit. For example, "Broward County MS4." The permit name will not necessarily be the same name provided in Row A if the permit covers multiple co-permittees. If the name of the permit is the same name provided in Row A, repeat the name in Row B – do not leave the row blank.
- Row C — Provide the last two digits of your permit number as it appears on the first page of your permit.
- Row D — Indicate which permit year the annual report covers. If the permit year is beyond Year 5, check the last box and provide the appropriate permit year number.
- Row E — Indicate the twelve-month period the annual report covers. Provide the month and year for the beginning of the period and the month and year for the end of the period. For example, "March/2003 through February/2004." Do not provide the day.
- Row F — Provide contact information for your Responsible Authority. The definition of a Responsible Authority can be found at Rule 62-620.305, F.A.C.
- Row G — Provide contact information for the Designated Stormwater Management Program Contact if it isn't the same person as the Responsible Authority identified in Row F, otherwise leave this section blank. The Stormwater Management Program Contact is the technical person that oversees the stormwater program and is the primary contact for when the Department has questions about the annual report, is scheduling an annual inspection, or needs to discuss miscellaneous issues concerning implementation of the permit.

Section II: MS4 MAJOR OUTFALL INVENTORY

- This section is required to be completed in all permit years EXCEPT Year 1. In Year 1, you are required to provide an inventory and a map of all known major outfalls, in accordance with Rule 62-624.600(2)(a), F.A.C. In all subsequent permit years, you need to only provide any updates to the inventory by completing this section.
- The definition of a "major" outfall can be found at Rule 62-624.200(5), F.A.C.

- For the third item listed, indicate whether you attached the major outfall inventory and a map of the major outfall locations in accordance with Rule 62-624.600(2)(a), F.A.C. This item is only applicable in Year 1. For all other reporting years, check the "N/A" box.

- For the fourth item listed, indicate whether you attached the estimates of pollutant loadings and event mean concentrations as required under Part V.A of your permit and in accordance with Rule 62-624.600(2)(b), F.A.C. This item is only applicable in Year 3. For all other reporting years, check the "N/A" box.

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

Section VI: CERTIFICATION STATEMENT AND SIGNATURE

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

Section VII: STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE

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

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

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

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

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

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

Section VIII: CHANGES TO STORMWATER MANAGEMENT PROGRAM (SWMP) ACTIVITIES

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

- Row A — If applicable, include in this row any requested changes to your SWMP activities that are established as specific requirements under Part III.A of your permit. Provide the permit citation/SWMP element that corresponds to the SWMP activity you want changed, describe the requested change, and provide a rationale for the change. Such changes cannot be implemented without prior approval from the Department and may require a permit revision in accordance with Rule 62-620.325, F.A.C.

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

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 mail to the address in the box at right.
- Refer to the Form Instructions for guidance on completing each section.
- **Please print or type information in the appropriate areas below.**

Submit the form and attachments to:
Florida Department of Environmental Protection
Mail Station 2500
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SECTION I. BACKGROUND INFORMATION			
A.	Permittee Name: City of Miami Beach		
B.	Permit Name: Miami-Dade County Municipal Separate Storm Sewer System		
C.	Permit Number: FLS000003-003 (Cycle 3)		
D.	Annual Report Year: ☐ Year 1 ☐ Year 2 ☒ Year 3 ☐ Year 4 ☐ Year 5 ☐ Other, specify Year:		
E.	Reporting Time Period (month/year): June/2013 through June/2014		
F.	Name of the Responsible Authority: Eric T. Carpenter, P.E.		
	Title: Public Works Department Director		
	Mailing Address: 1700 Convention Center Drive, 4th Floor		
	City: Miami Beach	Zip Code: 33139	County: Miami-Dade County
	Telephone Number: 305-673-7080	Fax Number: 305-673-7028	
	E-mail Address: ericcarpenter@miamibeachfl.gov		
G.	Name of the Designated Stormwater Management Program Contact (if different from Section I.F above): Margarita Wells		
	Title: Environmental Specialist		
	Department: Building Department, Environment and Sustainability Division		
	Mailing Address: 1700 Convention Center Drive, 4th Floor		
	City: Miami Beach	Zip Code: 33139	County: Miami-Dade County
	Telephone Number: 305-673-7010	Fax Number: 786-394-4595	
	E-mail Address: margaritawells@miamibeachfl.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: **The monitoring plan is carried out through an inter-local agreement with Miami-Dade County. Please see the Miami-Dade County Annual Report for the monitoring information.**
B.	Provide a brief discussion of the monitoring results to date: **Please see the Miami-Dade County Annual Report for the monitoring information.**
C.	Attach a monitoring data summary, as required by the permit.

SECTION IV. FISCAL ANALYSIS

A.	Total expenditures for the NPDES stormwater management program for the current reporting year: **NPDES management is incorporated in the Stormwater Utility Budget. The total expenditure was** $ 5,791,839.16 *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: **The Stormwater Operating Budget for the subsequent reporting year is** $ 8,707,000.00

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.
☐	☒	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.
☐	☒	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): Eric T. Carpenter, P.E.

Title: Public Works Department Director

Signature: Eric Carpenter Date: 12/19/14

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.

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			
Exfiltration trench / French drains (linear feet)	23,418.10	2,094.20	9%	2,094.20	9%	GIS Sequel Server Select Queries	Public Works – Stormwater Operations	
Pollution control boxes	154	0	0%	0	0%			
Stormwater pump stations	15	Monthly	100%	Minimum Once Annually	100%		Public Works – Stormwater Operations	
Major stormwater outfalls	20	8	40%	8	40%			
Weirs or other control structures	8	See comments.						Weirs and other control structures are cleaned with the rest of the

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										system, but their clean dates are not currently recorded individually.
	MS4 pipes / culverts (miles)	93.58	3.10	3.32%	4.5	5%				
	Inlets / catch basins / grates	4,754	288	6%	838	18%				
	ATTACH explanation if any of the minimum inspection frequencies in Table II.A.1.a were not met							Attachment 1 - Explanation of Structural Controls and Stormwater Collection Systems Operation Inspection and Maintenance Program.		
	Year 1 ONLY: Attach a map of all known major outfalls									
Part III.A.2	Areas of New Development and Significant Redevelopment									
	Report the number of new development and significant redevelopment projects reviewed by the permittee for post-development stormwater considerations. *DEP Note: Please provide an explanation in Column F for any "0" reported in Column C.*									
	Number of new development / significant redevelopment projects reviewed						499	Completed Review Time Report by Plan Reviewer – Public Works	Planning Department / Public Works Department	Total number was estimated from building permits reviewed for new construction and alteration and remodeling/repairs >$400,000 reviewed during the reporting year.
	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									
	Year 4 ONLY: Attach the follow-up report on plan implementation									
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.									

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
	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	Daily	Sanitation Division Standard Operating Procedures	Public Works – Sanitation Division	The City of Miami Beach transports litter collected to the Miami-Dade County Solid Waste Management Disposal Facilities.
	PERMITTEE Litter Control Program: Estimated amount of area maintained (miles/day)	176			
	PERMITTEE Litter Control Program: Estimated amount of litter collected (tons/year)	8,920	NPDES Tracker – Sanitation		
	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: 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	10.6	NPDES Tracker – Clean-up Events	City of Miami Beach through the non-profit ECOMB	
	Trash Pick-up Events: Estimated amount of litter collected (trash bags)	490			
	Adopt-A-Beach Program: Total miles cleaned	0	NPDES Tracker – Adopt-a-Beach		The City does not have an Adopt-A-Road Program. The City's Adopt-a-Beach Program was on hold this reporting year, but will be re-activated for the second half of reporting year 4.
	Adopt-A-Beach Program: Estimated amount of litter collected (bags)	0			
	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.*				

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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**
	Frequency of street sweeping	Daily	Sanitation Division Standard Operating Procedures	Public Works – Sanitation Division	
	Total miles swept (per day)	117			
	Estimated quantity of sweeping material collected (Kg)	698,680	Calculated Nutrient Load Reductions from MS4 Maintenance Practices		
	Total nitrogen loadings removed (pounds)	867			
	Total phosphorus loadings removed (pounds)	556			
	Year 1 ONLY: If have curbs and gutters, attach explanation of why no street sweeping program and the alternate BMPs used or planned				N/A
	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.*				
		Number of Inspections			
	Name of facility #1: Public Works Yard	1	NPDES Tracker – Facility Inspections	Public Works – Environmental Division	
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.* *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.*				
	Flood control projects completed during the reporting period	3	CIP Office List for NPDES Annual Report	CIP Department / Public Works Department	All of the City's flood control projects include stormwater
	Flood control projects completed during the reporting period that did <u>not</u> include stormwater treatment	0			

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	ATTACH a list of the flood control projects that did not include stormwater treatment and an explanation for each of why it was not				treatment. In July 2013, the City began an aggressive stormwater infrastructure upgrade program as part of its sea level rise adaptation strategy.
	Stormwater retrofit projects planned	5			
	Stormwater retrofit projects under construction during the reporting period	6			
	Stormwater retrofit projects completed during the reporting period	3			
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: Green Waste Facility	1	NPDES Tracker – Facility Inspections	Public Works – Environmental Division	The Green Waste Facility collects only vegetation yard waste that is disposed off-site at Waste Management Hialeah Transfer/Recycling Center (Kimmins).
Part III.A.6	**Pesticides, Herbicides, and Fertilizer Application**				

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	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	11	Parks Maintenance and Greenspace Certifications/Licenses/Certificates	Parks Maintenance and Greenspace Divisions	
	CONTRACTORS: FDACS certified / licensed applicators of pesticides and herbicides	1	NPDES Tracker – Greenspace Management	Parks Maintenance Division	The City uses only one pest control contractor, APEX.
	CONTRACTORS: FDACS certified / licensed applicators of fertilizer	0			
	PERSONNEL: Green Industry BMP Program training completed	6	NPDES Tracker – Greenspace Management	Parks Maintenance and Greenspace Divisions	The remainder of applicable City staff completed this training in 2011.
	CONTRACTORS: Green Industry BMP Program training completed	0	NPDES Tracker – Greenspace Management	Parks Maintenance Division	Due to staff changes, the City cannot confirm at this time that APEX received training this reporting year. However, we will work with the new Greenspace Division Director to ensure they are trained in Year 4.
	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				

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	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				The City is not within the watershed of a nutrient-impaired water body.
	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. *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: Miami-Dade County is to report the public education and outreach activities that it performed county-wide (and not just in the unincorporated areas of Miami-Dade 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 = $**				
	Estimated percentage of the population reached by the activities in total	50%		Building – Environment and Sustainability Division / Communications Department	This estimate takes into consideration that the City's outreach and education activities extend to residents, local visitors and national/internati onal tourists.
	Neighborhood presentations: Number conducted	7	Recycling Outreach Tracker and	Building – Environment and	Environmental Division
	Neighborhood presentations: Number of participants	355			

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Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity	Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
			Communications Statistics	Sustainability Division	incorporates stormwater and water quality into all Division events.
	Newspapers & newsletters: Number of articles/notices published	65,000 Quarterly			
	Newsletters: Number of newsletters distributed	155,000 Readers Quarterly		Communications Department	MB Magazine is produced quarterly. It is estimated that the publication reaches 155,000 readers.
	Public displays (e.g., kiosks, storyboards, posters, etc.)	25		Building – Environment and Sustainability Division	Pollution Prevention Board or other stormwater quality information is included when Division tables at all events.
	Radio or television Public Service Announcements (PSAs)	4		Communications Department	4 PSAs - each airing approximately 5 times per day
	Seminars/Workshops: Number conducted	2		Building – Environment and Sustainability Division	Environmental Division incorporates stormwater and water quality into all Division events.
	Seminars/Workshops: Number of participants	48			
	Special events: Number conducted	2		Building – Environment and Sustainability Division	Pollution Prevention Board or other stormwater quality information is included when Division tables at all events.
	Special events: Number of participants	200			
	Web Site: Number of hits / visitors to the stormwater-related pages	3,775		Building –	

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Permit Citation/ SWMP Element	**Permit Requirement/Quantifiable SWMP Activity**	**Number of Activities Performed**	**Documentation / Record**	**Entity Performing the Activity**	**Comments**
				Environment and Sustainability Division	
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				
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 staff reports.* *DEP Note: Miami-Dade County is to report the ONLY the proactive inspections it performed in the unincorporated areas of Miami-Dade County – any proactive inspections it performed in the co-permittees' jurisdictions are to be reported by the co-permittees. The co-permittees may report the IWP inspections performed by Miami-Dade County in their jurisdictions only if the inspections included looking for illicit discharges / connections / dumping to the MS4. Each co-permittee is to report the Miami-Dade County proactive inspections in their jurisdiction separately from the proactive inspections that the co-permittee performed itself.* *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 performed by Miami-Dade County on behalf of a co-permittee for suspected illicit discharges / connections / dumping	387	Miami Beach – Priority Inspection List	Miami-Dade County RER	These inspections were conducted by DERM as part of a dedicated effort to reduce grease discharges and SSO incidents.
	Proactive inspections performed by the permittee for suspected illicit	17	Search Complaints	Code Compliance	

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	discharges / connections / dumping		Report, NPDES Tracker – SW Inspections, and Miami Beach – Priority Inspection List	and Public Works – Right-of-Way Division	
	Illicit discharges / connections / dumping found during a proactive inspection	261 (244 by MDC, 17 by CMB)		Code Compliance and Public Works – Right-of-Way Division and Miami-Dade County RER	
	Notices of Violation (NOVs) / warning letters / citations issued for illicit discharges / connections / dumping found during a proactive inspection	261 (244 by MDC, 17 by CMB)		Code Compliance and Public Works – Right-of-Way Division and Miami-Dade County RER	
	Fines issued for illicit discharges / connections / dumping found during a proactive inspection	23 (5 by MDC, 18 by CMB)	Search Complaints Report	Code Compliance and Public Works – Right-of-Way Division and Miami-Dade County RER	
	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. If a permittee relies on Miami-Dade County to conduct these activities on its behalf, the permittee shall obtain (and, upon request, Miami-Dade County shall make available) the necessary annual report information from the County. *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	25	Search Complaints Report, NPDES Tracker – SW Inspections	Code Compliance and Public Works – Right-of-Way Division	City staff investigates all reports of suspected illicit connections/discharges/dumping received. Please note that the City launched a new reporting system
	Reactive investigations of reports of suspected illicit discharges/ connections / dumping	25	Search Complaints Report, NPDES Tracker – SW Inspections, and Web Q&A Service Request Reports		

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					this year which may have contributed to the low number of reports received.
	Illicit discharges / connections / dumping found during a reactive investigation	9	Search Complaints Report, NPDES Tracker – SW Inspections, and Web Q&A Service Request Reports		
	Notices of Violation (NOVs) / warning letters / citations issued for illicit discharges / connections / dumping found during a reactive investigation	9	Search Complaints Report, NPDES Tracker – SW Inspections, and Web Q&A Service Request Reports		
	Fines issued for illicit discharges / connections / dumping found during a reactive investigation	9	Search Complaints Report		
	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	0	11	Training Certificates or Attendance List	Building – Environment and Sustainability Division
	Contractors trained	0	0		The City does not utilize contractors to inspect the MS4.
Part III.A.7.d	**Illicit Discharges and Improper Disposal — Spill Prevention and Response**				
	Annually review (and revise, as needed) and implement the permittee's written spill-prevention/spill-response plan and procedures to prevent, contain, and respond to spills that discharge into the MS4. Report on the spill prevention and response activities, including the number of spills addressed. If a permittee relies on the Miami-Dade County Fire Department to conduct these activities on its behalf, the permittee shall obtain (and, upon request, Miami-Dade County shall make available) the necessary annual report information from the County.				

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	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	142	NPDES Tracker – Fire Department	Fire Department	
	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	56	80	Miami Beach Fire Dept Haz-Mat Training	Fire Department
	Contractors trained	0	0	N/A	N/A
					The City does not utilize contractors to respond to hazardous spills.
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. If a permittee relies on the 24-Hour Miami-Dade County hotline as its telephone line for citizen reporting, the permittee shall publicize the existence of the 24-Hour Miami-Dade County pollution complaint hotline number on a routine basis. 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. If the permittee relies on the 24-Hour Miami-Dade County hotline, the reporting item of "Publicize the Miami-Dade County Pollution Complaint Hotline" must also 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: Miami-Dade County is to report the public education and outreach activities that it performed county-wide (and not just in the unincorporated areas of*				

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	Miami-Dade 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	50%		Building – Environment and Sustainability Division / Communications Department	This estimate takes into consideration that the City's outreach and education activities extend to residents, local visitors and national/internati onal tourists.
	Neighborhood presentations: Number conducted	7	Recycling Outreach Tracker and Communications Statistics	Building – Environment and Sustainability Division	Environmental Division incorporates stormwater and water quality into all Division events.
	Neighborhood presentations: Number of participants	355			
	Newspapers & newsletters: Number of articles/notices published	65,000 Quarterly	Recycling Outreach Tracker and Communications Statistics	Communications Department	MB Magazine is produced quarterly. It is estimated that the publication reaches 155,000 readers.
	Newsletters: Number of newsletters distributed	155,000 Readers Quarterly			
	Public displays (e.g., kiosks, storyboards, posters, etc.)	25		Building – Environment and Sustainability Division	Pollution Prevention Board or other stormwater quality information is included when Division tables at all events.
	Radio or television Public Service Announcements (PSAs)	4		Communications Department Building – Environment and Sustainability Division	4 PSAs - each airing approximately 5 times per day Environmental Division incorporates

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					stormwater and water quality into all Division events.
	Seminars/Workshops: Number conducted	2		Building – Environment and Sustainability Division	Pollution Prevention Board or other stormwater quality information is included when Division tables at all events.
	Seminars/Workshops: Number of participants	48			
	Special events: Number conducted	11			
	Special events: Number of participants	3,295			
	Web Site: Number of visitors to the stormwater-related pages	4,765			
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 vehicle fluids, leftover hazardous household products, and lead acid batteries. On a routine basis, inform the public of the locations of collection facilities for these materials, including a description of the types of materials accepted and the hours of operation. 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 "Publicize the Miami-Dade County Home Chemical Collection Program" 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: Miami-Dade County is to report the public education and outreach activities that it performed county-wide (and not just in the unincorporated areas of Miami-Dade 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	50%		Building – Environment and Sustainability Division / Communications Department	This estimate takes into consideration that the City's outreach and education activities extend to residents, local visitors and national/internati onal tourists.
	Publicize the Miami-Dade County Home Chemical Collection Program	415			The City only

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Permit Citation/ SWMP Element	**Permit Requirement/Quantifiable SWMP Activity**	**Number of Activities Performed**	**Documentation / Record**	**Entity Performing the Activity**	**Comments**
					publicizes this program through the Public Works – Sanitation Division Hazardous Waste website, which logged 415 views in this reporting year.
	Neighborhood presentations: Number conducted	7	Recycling Outreach Tracker and Communications Statistics	Building – Environment and Sustainability Division	Environmental Division incorporates stormwater and water quality into all Division events.
	Neighborhood presentations: Number of participants	355			
	Newspapers & newsletters: Number of articles/notices published	65,000 Quarterly		Communications Department	MB Magazine is produced quarterly. It is estimated that the publication reaches 155,000 readers.
	Newsletters: Number of newsletters distributed	155,000 Readers Quarterly			
	Public displays (e.g., kiosks, storyboards, posters, etc.)	25		Building – Environment and Sustainability Division	Pollution Prevention Board or other stormwater quality information is included when Division tables at all events.
	Radio or television Public Service Announcements (PSAs)	4		Communications Department Building – Environment and Sustainability Division	4 PSAs - each airing approximately 5 times per day Environmental Division incorporates stormwater and water quality into

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					all Division events.
	Seminars/Workshops: Number conducted	2			
	Seminars/Workshops: Number of participants	48			
	Special events: Number conducted	2			
	Special events: Number of participants	200			Pollution Prevention Board or other stormwater quality information is included when Division tables at all events.
	Web Site: Number of visitors to the stormwater-related pages	3,775		Building – Environment and Sustainability Division	Tallied by taking total number of stormwater related page visitors (4,765) and reducing by the total number of visitors the the Public Works stormwater and the Recycling Toolbox pages (990).
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 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.* *DEP Note: Report only the SSOs and inflow / infiltration incidents into the MS4.*				
	SSO incidents discovered	12	SSO Incident Reports and Files	Building – Environment and Sustainability Division	Miami-Dade County WASD documented 0 SSO incidents for this reporting
	SSO incidents resolved	12			

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Permit Citation/ SWMP Element	**Permit Requirement/Quantifiable SWMP Activity**	**Number of Activities Performed**	**Documentation / Record**	**Entity Performing the Activity**	**Comments**
					year.
	Inflow / infiltration incidents discovered	811	CityWorks Service Request Query	Public Works – Operations Division	
	Inflow / infiltration incidents resolved	811			
	Name of owner of the sanitary sewer system	Miami-Dade County WASD			
Part III.A.8.a	**Industrial and High-Risk Runoff — Identification of Priorities and Procedures for Inspections**				
	Continue to maintain an up-to-date inventory of all existing high risk facilities discharging into the permittee's MS4. The inventory shall identify the outfall and surface water body into which each high risk facility discharges. For the purposes of this permit, high risk facilities include: • 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 Miami-Dade County to conduct these activities on its behalf, the permittee shall obtain (and, upon request, Miami-Dade 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 . 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.* *DEP Note: The total number of high risk facilities reported needs to equal the sum of the numbers of the four types of applicable facilities.* 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 Miami-Dade County to conduct these activities on its behalf, the permittee shall obtain (and, upon request, Miami-Dade 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: Miami-Dade County is to report ONLY the inventory of high risk facilities in the unincorporated areas of Miami-Dade 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 Miami-Dade 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 Miami-Dade County that pertains to its jurisdiction.*				
		er of F a; In s	**For violations discovered during a high risk inspection**		

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Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity				Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
				Fines issued	Notices of Violation (NOVs) / warning letters / citations issued			
	Total high risk facilities	0					Miami-Dade County RER	There are no high risk facilities in the City of Miami Beach as of July 2014.
	New high risk facilities added to the inventory during the current reporting period	0						
	Operating municipal landfills	0						
	Hazardous waste treatment, storage, disposal and recovery (HWTSDR) facilities	0						
	EPCRA Title III, Section 313 facilities (that are not landfills or HWTSDR facilities)	0						
	Facilities determined as high risk by the permittee through the proactive inspections as per Part III.A.7.c	0						
	Other facilities determined as high risk by the permittee (that are not facilities identified through the proactive inspections)	0						
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. If a permittee relies on Miami-Dade County to conduct these activities on its behalf, the permittee shall obtain (and, upon request, Miami-Dade County shall make available) the necessary annual report information from the County. *DEP Note: Miami-Dade County is to report ONLY the number of high risk facilities in the unincorporated areas of Miami-Dade County that were sampled – the high risk facilities located in the co-permittees' jurisdictions that were sampled by the County are to be reported by the co-permittees.*							
	High risk facilities sampled				N/A		Miami-Dade County RER	There are no high risk facilities in the City of Miami Beach as of July 2013.
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.*							

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	PERMITTEE SITES: Construction site plans reviewed	66	Pending Plan Review Trackers 2012 and 2013	Public Works – Engineering Division	While there were 499 redevelopment projects reviewed by the Building Department this year, a Public Works review is only triggered for projects that based on location or scope have the potential to impact the ROW.
	PERMITTEE SITES: Construction site plans approved	57			
	PRIVATE SITES: Construction site plans reviewed	88			
	PRIVATE SITES: Construction site plans approved	56			
	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				The Public Works – Engineering Division staff notifies all applicable projects of ERP and CGP requirements. The Assistant City Engineer was working to implement a notification and coverage confirmation and tracking system. However, due to staff changes, these improvements are still in development.
	Confirmed ERP coverage				
	Notified of CGP stormwater permit requirements				
	Confirmed CGP coverage				
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				

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**
	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	CIP Projects Spreadsheet	Public Works – Right-of-Way Division / CIP Department	This number was estimated based on the number of CIP projects active during the reporting year.
	PERMITTEE SITES: Inspections of active construction sites for proper stormwater, erosion and sedimentation BMPs	18	Public Works – ROW Division Standard Operating Procedure		The ROW Division conducts an average of 3 inspections of each active construction site during the life of the project.
	PERMITTEE SITES: Percentage of active construction sites inspected	100%			
	PRIVATE SITES: Active construction sites	907	Private Run-off Activities / Projects / Developments Records	Public Works – Right-of-Way Division	This number was estimated based on the number of active ROW permits minus the number of CIP projects active during the reporting year.
	PRIVATE SITES: Inspections of active construction sites for proper stormwater, erosion and sedimentation BMPs	2,712	Public Works – ROW Division Standard Operating Procedure		The ROW Division conducts an average of 3 inspections of
	PRIVATE SITES: Percentage of active construction sites inspected	100%			

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**
					each active construction site during the life of the project.
	Notices of Violation (NOVs) / warning letters / citations issued	8	NPDES Tracker – SW Inspections		This number was based on the number of construction site run-off inspections logged by the Environmental Division
	Stop Work Orders issued	0	NPDES Tracker – SW Inspections	Building Department / Code Compliance	
	Fines issued	3			
	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	0	0	3		Training Certificates or Attendance List	Building – Environment and Sustainability Division and Miami-Dade County RER	The City has a training planned for Code Compliance in Year 4 and is planning to develop an online training module required for City staff.
Permittee construction site plan reviewers	0	2	3				
Permittee construction site operators	0	0	0				
Private construction site	0	0					The City did not

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
	operators							provide a training program for contractors this reporting year.

SECTION VIII. 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.*
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.*

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.	1	Explanation of Structural Controls and Stormwater Collection Systems Operation Inspection and Maintenance Program
☐	☒	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]**	2	Surface Water Quality Discussion and Analysis
☒	☐	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.	3	Evaluation of the SWMP
☐	☒	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.		
☐	☒	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.	4	Estimates of Annual Pollutant Loadings and Event Mean Concentrations
☐	☒	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.	12/21/11
Part VIII.B.3.b	**12 MONTHS from effective date of permit:** TMDL Monitoring and Assessment Plan.	6/21/12
Part VIII.B.3.c	**6 MONTHS from receiving analyses from the lab:** TMDL Monitoring Report.	TBD
Part VIII.B.4	**30 MONTHS from effective date of permit:** A Bacterial Pollution Control Plan (BPCP).	12/21/13

END OF REVISED TAILORED MS4 AR FORM
CYCLE 3 PERMIT

Attachment 1
NPDES Annual Report
Cycle 3, Year 3

Part III.A.1 Explanation of Structural Controls and Stormwater Collection Systems Operation Inspection and Maintenance Program

The Public Works Department, Stormwater Operations Division is responsible for inspecting and maintaining the City's Municipal Separate Storm Sewer System (MS4). The City's MS4 operation inspection and maintenance program uses a combination of contractor and City staff efforts to strategically clean the system basin-by-basin, addressing all structures within a basin from east to west. Per cleaning event, City staff creates a cleaning work order which includes the basin area to be cleaned, the structures within that basin, and an inspection form. The City's work order system in Cityworks allows the City to track these activities in GIS. The City's GIS database is then reviewed and analyzed at the end of each reporting year to provide the information requested in the Annual Report form.

The Public Works Department, Stormwater Operations Division has identified three challenges which may explain why the City appears to have not met the required minimum inspection and maintenance frequencies for exfiltration trench/French drains, pollution control boxes, major stormwater outfalls, and MS4 pipes/culverts. One challenge was that City had limited staff with which to complete the required maintenance and inspection activities during the reporting year. Since the start of Year 4, the City increased stormwater system maintenance frequency so that the entire system is cleaned at least once a year. Additionally, the City has retained a contractor to supplement staff efforts in carrying out the enhanced program.

Another challenge is a change in the process through which the stormwater system data was synthesized between last year and this year. During the preparation of this year's Annual Report, City staff identified an error in the length of exfiltration trench/French drains and of MS4 pipes culverts reported in Year 3. Therefore, the City's maintenance frequency for these structures appears to have greatly decreased since last year. Based on this discovery, the City's GIS Division developed a query process that will allow consistent data analysis moving forward.

Finally, we identified that City staff may be inconsistently recording stormwater system maintenance and inspection activities in our CityWorks system. This possible error was identified specifically in the pollution control box data, which reports that zero pollution control boxes were cleaned this year in contradiction with anecdotal records which demonstrate that some pollution control boxes were cleaned in response to resident anti-litter initiatives. The City's GIS and Operations Divisions will work collaboratively in the coming year to identify and correct the error so we can accurately report our maintenance and activities in the future.

Surface Water Quality Monitoring: Results and Discussion
June 21, 2013 to June 20, 2014

as per Part V. B. of the NPDES MS4 permit #FLS000003-003, issued to
Miami-Dade County and Specified Co-Permittees

INTRODUCTION

The monitoring described herein is a specific condition of the above cited permit, and is submitted on behalf of the County and the thirty two (32) co-permittees.

Inter Agency Agreements were executed in 1994, with each co-permittee that provided for the implementation and funding of the NPDES Permit required Surface Water Quality Monitoring Program (NPDES-SWQP). The Inter Agency Agreement has been renewed periodically, with the most recent renewal in October 2012.

WATER QUALITY SAMPLING ACTIVITIES

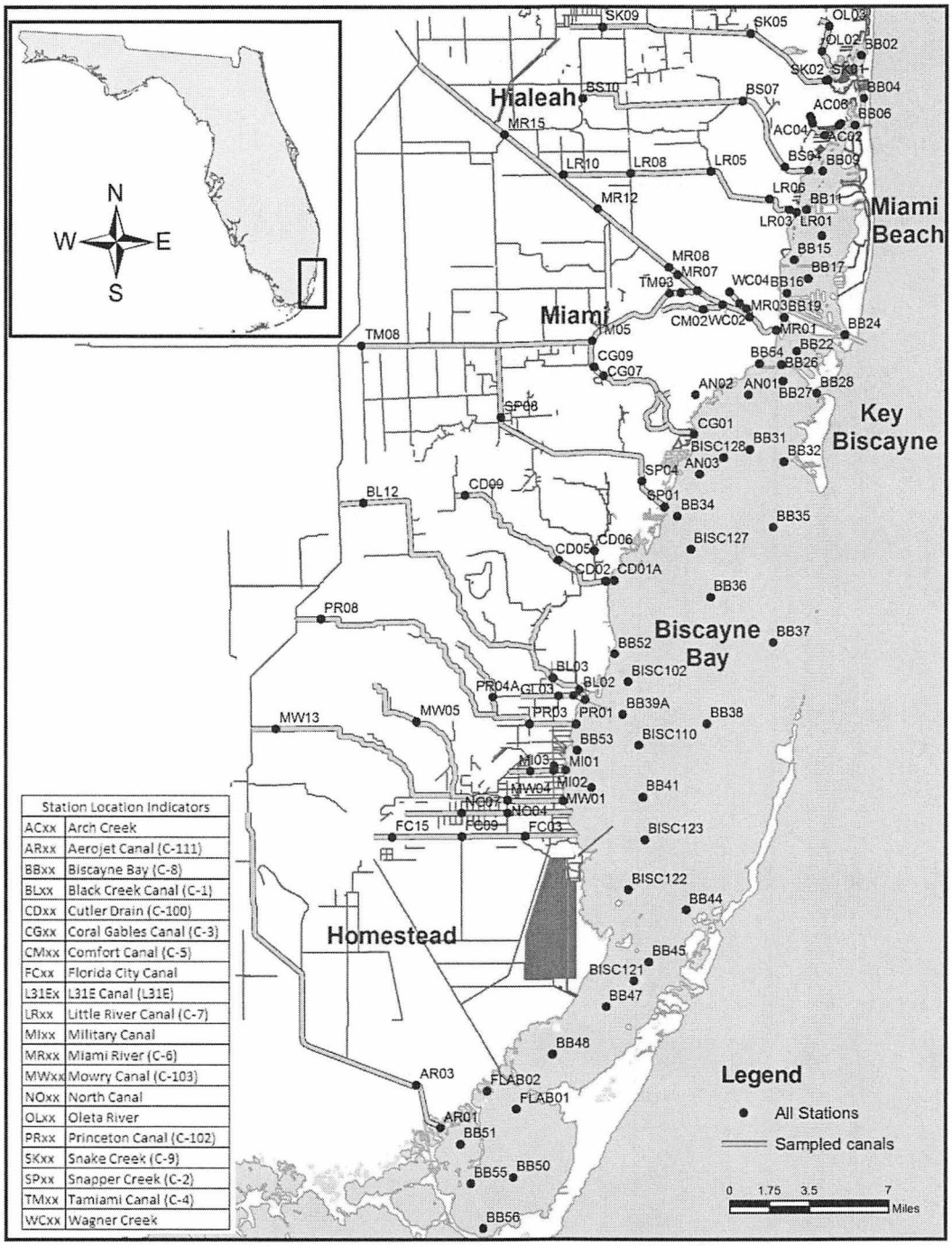
The sampling activities follow the provisions of the monitoring program described in the supplement to the Part 2 Application, submitted to EPA Region IV on April 28, 1995 by the Miami-Dade County's Water Management Division (then of Department of Environmental Resources Management [DERM] & presently of Department of Public Works and Waste Management). Additionally, sampling activities also follow the provisions of the Memorandum of Understanding (MOU) issued by the EPA Region 4, subsequent to a meeting on January 29, 1997, held at Miami-Dade Department of Environmental Resources Management (DERM).

In December 2009 the density, spatial arrangement and parameterization of the monitoring programs' stations were reviewed to reduce redundancy, and optimize the temporal and spatial resolution of the overall water quality monitoring networks. The revisions were approved by FDEP in January 2010, and the current version of the monitoring network has been implemented since that date

The NPDES-SWQP has been integrated into the broader County-wide Biscayne Bay Surface Water Quality Monitoring Program (BBSWQP). A total of one-hundred-and-seventeen (117) stations are sampled in that network. Ninety-three (100) surface water quality stations were identified to meet the requirements of the NPDES monitoring program. Information from these stations was augmented by additional 17 water quality locations available to the County (Figure 1). Surface water quality sampling for the 2013/14 permit year, was conducted on monthly basis between July 8, 2013 and June 4, 2013.

These stations include both fresh water canal and estuarine sites within Biscayne Bay and its tributaries. Thirty-four (34) of the stations are located in internal fresh water canals, across eighteen (18) drainage basins. The remaining seventy three (78 stations are estuarine sites located at discharge points of the canals into Biscayne Bay, and within the bay itself. The matrix showing the sample collection and frequency at each site is presented in Attachment 1.

Miami-Dade County Surface Water Quality Monitoring Stations



Station Location Indicators	
ACxx	Arch Creek
ARxx	Aerojet Canal (C-111)
BBxx	Biscayne Bay (C-8)
BLxx	Black Creek Canal (C-1)
CDxx	Cutler Drain (C-100)
CGxx	Coral Gables Canal (C-3)
CMxx	Comfort Canal (C-5)
FCxx	Florida City Canal
L31Ex	L31E Canal (L31E)
LRxx	Little River Canal (C-7)
MIxx	Military Canal
MRxx	Miami River (C-6)
MWxx	Mowry Canal (C-103)
NOxx	North Canal
OLxx	Oleta River
PRxx	Princeton Canal (C-102)
SKxx	Snake Creek (C-9)
SPxx	Snapper Creek (C-2)
TMxx	Tamiami Canal (C-4)
WCxx	Wagner Creek

Figure 1. Map of surface water quality monitoring stations in Miami-Dade

SAMPLE COLLECTION

All surface water samples were "grab samples" collected by either directly into a sample container, or by using a 'Niskin' bottle grab sampler, or a peristaltic pump. Samples were collected one-half (0.5) meter below the water surface excepting bacteriological and Chlorophyll-A samples, which were collected at the surface. Physical parameters were collected at the bottom, at one-half (0.5) meter and at the surface at each station as described below.

Samples were either collected directly into pre-labeled containers (bacteriological and Chlorophyll-A samples), transferred from the Niskin collector into the pre-labeled container, or collected by filling the pre-labeled container from the peristaltic pump, and transported to the analytical laboratory.

Physical parameters (i.e., temperature, salinity, specific conductance, pH and dissolved oxygen) were measured in the field with YSI multi-probed meter. All readings were 'stored' on YSI data loggers, as well as hand written on field sheets. Physical parameters were measured at three depths (bottom, one-half meter below the surface, and at the surface) at stations with greater than 1 meter water depth, and at two depths (surface and bottom) at stations with water depth less than 0.5 meter. All field documentation, sample collection, and field meter calibration was performed in compliance with the FDEP Standard Operating Procedures for Field Activities (FDEP SOP 001/01).

SAMPLE ANALYSIS

Samples were minimally analyzed for parameters of interest as specified in the Table 1 of the Guidance for Preparing Monitoring Plans as Required for Phase I Municipal Separate Storm Sewer Systems (MS4) Permits (Table 1).

Table 1. List of NPDES Recommended Parameters, and 'other parameters for consideration' sampled in the program.

Recommended Parameters	Other Parameters for Consideration
Chlorophyll A**	Biochemical Oxygen Demand
Conductivity (Salinity)*	Cadmium, Dissolved
Copper, Dissolved*	Chemical Oxygen Demand
Dissolved Oxygen*	Chromium*
Fecal Coliform*	Color
Hardness*	Lead, Dissolved*
Nitrate + Nitrite	Oil & Grease*
pH	Ortho-phosphorus
Phenol	Silver
Total Kjeldahl Nitrogen	Total Phosphorus
Total Nitrogen**	Total Dissolved Solids*
Total Phosphorus**	Total Organic Carbon
Total Suspended Solids	Zinc, Dissolved*

* Parameters with established State or County Criterion
** Estuary-Specific Numeric Criterion

The samples were analyzed by laboratories that maintain NELAC certification for the specific parameters they analyzed, and were analyzed by one of the following laboratories: Miami-Dade Department of

Regulatory and Economic Resources - Environmental Resources Management (DERM), Xenco laboratories Inc, Pace Analytical Services Inc., and/or Florida-Spectrum Environmental Services, Inc.

ANALYSES AND REPORTING

The sample results were evaluated relative to established surface water quality criteria of the State of Florida (62-302.530 and 62-302-532, FAC) and Miami-Dade County (Municipal Code of Miami-Dade County, Chapter 24-42(4); Surface Water Quality Standards). The surface waters of Miami-Dade County (all canals and tidal waters), are designated as "Class-III waters" by the State of Florida. This "Designated Use" as defined provides that these waters are used for: "*Fish Consumption, Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife*" (62-302 F.A.C.), which has also been referred to as "Fishable–Swimmable Waters". If the water body does not meet one or more established water quality criteria, the water body is consider as not meeting its designated use.

Parameters with numeric criteria listed in 62-302.530 FAC, were evaluated according to the State's Impaired Waters Rule's (Chapter 62-303, F.A.C.) procedures for determination of a 'Verified Impaired' water body. The Rule establishes specific data requirements and an assessment period of the most recent 7.5 years for data evaluation. Data utilized in these comparisons met or exceeded the data quality and density requirements of the Rule. The assessments are based on the premise that a water body will be deemed noncompliant with an established water quality criterion if the sample results exceed the criteria 10% or more of the time. Water bodies that are noncompliant with one or more water quality criteria may be declared "Impaired". Accordingly, the most recent 7.5 years of data for each WIBD was compiled and the number of results that exceeded the each established criteria calculated. All sample results within a WBID were pooled, and the number of samples not meeting an applicable water quality criterion was calculated and compared to the value in Table 2 of 62-303 FAC; (replicated in Attachment 2) for its corresponding sample size[1]. The referenced table provides the minimum number of measured exceedances needed, with at least 90% confidence, that water body exceeds the criteria at least ten percent of the time. If a water body exceeds the criteria at least ten percent of the time, then the WIBD is deemed as not meeting the water quality criterion for that parameter.

For those nutrients with numeric interpretations of narrative criteria listed in 62-302.532 FAC, the evaluation followed the protocol as noted in the section of the FAC. At the present time, only estuarine and coastal waters have designated numeric nutrient criteria. The FAC defines compliance with the criterion as: "Annual Geometric Mean (AGM) will not be exceeded more than once in a 3-year period"

[1] For sample sizes larger than 500, the number of exceedances for the specific sample size was estimated based on a power regression (r^2=0.962) of the sample sizes versus the minimum number of exceedances required for consideration as 'impaired'. Parameters with less than the minimum stated sample size (i.e., parameters sampled on an annual or semi-annual basis), were not evaluated with this method, due to there small sample size.

(62-302.532(h)). Estuary-specific numeric nutrient criteria for Coastal and Marine waters within Miami-Dade (i.e., Biscayne Bay), are shown in Table 2 below.

Table 2. Numeric interpretation of State's narrative nutrient criteria (62-302.532 F.A.C.)

Estuary	**Total Phosphorus**	**Total Nitrogen**	**Chlorophyll *a***
(h) **Biscayne Bay**	Annual geometric means that shall not be exceeded more than once in a three year period		
1. Card Sound	0.008 mg/L	0.33 mg/L	0.5 µg/L
2. Manatee Bay – Barnes Sound	0.007 mg/L	0.58 mg/L	0.4 µg/L
3. North Central Inshore	0.007 mg/L	0.31 mg/L	0.5 µg/L
4. North Central Outer-Bay	0.008 mg/L	0.28 mg/L	0.7 µg/L
5. Northern North Bay	0.012 mg/L	0.30 mg/L	1.7 µg/L
6. South Central Inshore	0.007 mg/L	0.48 mg/L	0.4 µg/L
7. South Central Mid-Bay	0.007 mg/L	0.35 mg/L	0.2 µg/L
8. South Central Outer-Bay	0.006 mg/L	0.24 mg/L	0.2 µg/L
9. Southern North Bay	0.010 mg/L	0.29 mg/L	1.1 µg/L

To evaluate the compliance of the appropriate WBIDs with the listed estuarine nutrient criteria, the AGM for each of the last three years was calculated. Each AGM was compared with the criteria to determine if it exceeded the criterion. If the criterion was not exceeded more than once in the most recent past 3-year period the WBID was deemed 'In compliance', and deemed 'Not in compliance' if the criterion was exceeded more than once in the 3-year period (Table 4 and Figure 5).

For those sample results where the analyte (parameter) being assessed was not detected (i.e., concentration was less than the analytical Method Detection Limit (MDL), the samples were designated as being "Below Detection Limit" (BDL), and qualified with a "U" in the associated 'Laboratory Qualifier" column. It is not possible to know the actual concentration of such samples; however, it is desirable and necessary to account for these samples in statistical summaries and comparisons. Therefore, for statistical purposes, analytical results that were qualified with a "U" (i.e., "BDL"), were assigned a value equal to one-half (1/2) the MDL for that analyte, when included in statistical summaries and comparisons. This convention is similar to that noted in Chapter 62-302 of the Florida Administrative Code for assigning numerical values to sample results that are BDL.

As the method noted above (e.g., as described in 62-303 FAC), is the process utilized by the State of Florida for determination of "Impaired Waters", the comparisons and results described herein provide a interim status of the water body relative to a potential 'Impaired' designation.

For parameters without specific numeric criteria, the annual WBID AGM was compared to a "Baseline Criterion". This baseline criterion was derived using the period of 1994-2004, and calculated as the WBID AGM + 1.96 X the Standard Error of the Mean (SEM). The period chosen for the baseline served as the 'health condition' period for the establishment of numeric nutrient criteria, and was considered as a

period of good water quality where no significant disturbances or detrimental impacts to water quality occurred. Those water bodies with a parameter AGM higher than the Baseline Criterion more than once in a three year period, will be identified considered as non-compliant with the non-degradation criteria.
For certain parameters (i.e. Silver and Beryllium), the MDL was higher than the State and or County Standard and thus, an absolute determination of compliance was not possible. The Impaired Waters Rule (62-303.320(9)(b) FAC) provides that when a parameter has a Method Detection Limit higher than the state's criterion, all analytical results reported as BDL are presumed to be compliant with the criterion.

RESULTS

WBID compliance with Water Quality Criteria:

Table 3 lists the water bodies (WIBDs) that, based on the assessment procedures provided in the IWR (62-303 FAC) are not meeting their designated use, as they are noncompliant with one or more surface water quality criteria. It should be noted that these evaluations are not meant to imply a designation of impairment on these water bodies, rather, only to note the present condition of the waterway, which can be used for management considerations within the WIBD and watershed in general. Complete assessment of possible WIBD impairment is conducted by the State as part of their Total Maximum Daily Load program.

Thirteen parameters with established State criteria were monitored within 32 WIBDs; which yielded a total of 338 assessments of the parameters against established criteria (NOTE: all 13 parameters are not collected in every water body). A total of 38 (11.2%) of the assessments identified WBIDs not in compliance with their associated criteria. Twenty-four WIBDS were not in compliance with the Dissolved Oxygen criteria[2], 9 WIBDS did not comply with the Fecal Coliforms criteria, and 5 WIBDs were not in compliance with the Specific Conductance criteria. Figures 2-4 present maps illustrating which WBIDs that were non-compliant with the IWR assessment.
It should noted that some 'parameters' such as Dissolved Oxygen (DO) and Chlorophyll-a, are considered "response" parameters, wherein their non-compliance has to be a result of a causal factor (i.e., excessive nutrients for Chlorophyll-a; high BOD, or other oxygen depleting constituents for DO). If a 'causal' factor cannot be identified or associated with the elevated response parameter, the WIBD will be listed on the "303-4D" list (303-4D list is for water bodies that do not meet applicable criteria, but no causal pollutant can be identified; therefore a TMDL will not be developed at this time).

With regard to the Fecal Coliform non-compliant WBIDs, the 'Cycle-3 (2010) IWR assessment identified 11 WIBDs as being impaired for Fecal Coliform. The present evaluation indicates that 8 WIBDs do not meet the IWR assessment criteria. The differences are associated with 3 WBIDS now showing compliance, and 1 WIBD falling out of compliance (Table 4). WBIDs 3283 (Snake Creek), 3285 (Biscayne Canal, and 3290 (Miami Canal), identified in the 2010 assessment as impaired for Fecal

[2] For this report, Dissolved Oxygen compliance was evaluated using the concentration based numeric criteria in affect during the sampling period. Recent State rule making modified those criteria to saturation based numeric criteria, which will be considered in future evaluations..

Coliform were compliant in the present assessment, while 1 WBID 3286C (Comfort Canal), that was previously compliant for Fecal Coliform, is now not in compliance.

Table 3. Summary of WBIDs showing non-compliance with surface water quality criteria, following assessment as per 62-303.400 FAC (e.g., 90% confidence that a minimum of 10% of samples over the past 7.5 years do not meet the established criteria.

Parameter	SFWMD Canal Name	Local Name	WBID Number	No. of Samples not Meeting Criterion	Total Samples (N)	Percentage of Samples not Meeting Criterion
Dissolved Oxygen		Dumbfoundling Bay - Maule Lake	3226H1	65	352	18.5
Dissolved Oxygen		Oleta	3226L	109	175	62.3
Dissolved Oxygen		Arch Creek	3226M1	63	355	17.7
Dissolved Oxygen	C-9	Snake Creek	3283	196	395	49.6
Dissolved Oxygen	C-8	Biscayne Canal	3285	151	391	38.6
Dissolved Oxygen	C-4	Tamiami Canal	3286	328	529	62
Dissolved Oxygen	C-6	Miami River	3286A	147	156	94.2
Dissolved Oxygen	C-5	Comfort Canal	3286C	52	149	34.9
Dissolved Oxygen	C-7	Little River	3287	518	754	68.7
Dissolved Oxygen	C-6	Miami River-upper	3288	436	762	57.2
Dissolved Oxygen		Wagner Creek	3288A	353	449	78.6
Dissolved Oxygen	C-6	Miami Canal West	3290	110	219	50.2
Dissolved Oxygen	C-3	Coral Gables Canal	3292	146	216	67.6
Dissolved Oxygen	C-2	Snapper Creek	3293	258	354	72.9
Dissolved Oxygen	C-100	Cutler Drain	3295	211	643	32.8
Dissolved Oxygen	C-1	Black Creek	3297	306	707	43.3
Dissolved Oxygen		Goulds Canal	3298A	24	176	13.6
Dissolved Oxygen		L31-E	3298B1	8	42	19
Dissolved Oxygen	C-102/N	Princeton Canal	3300	245	528	46.4
Dissolved Oxygen	C-103	Mowry Canal	3302	189	528	35.8
Dissolved Oxygen	C-111	Aerojet Canal	3303	24	157	15.3
Dissolved Oxygen	AR01	3303B	3303B	63	177	35.6
Dissolved Oxygen		North Canal	3305	65	226	28.8
Dissolved Oxygen		Florida City Canal	3306	130	392	33.2
Fecal Coliform	C-7	Little River	3287	94	357	26.3
Fecal Coliform		Miami River-Upper	3288	58	361	16.1
Fecal Coliform	C-3	Coral Gables Canal	3292	21	110	19.1
Fecal Coliform	C-2	Snapper Creek	3293	35	148	23.6
Fecal Coliform		Oleta	3226L	55	111	49.5
Fecal Coliform		ArchCrk	3226M2	111	195	56.9
Fecal Coliform	C-5	Comfort Canal	3286C	46	89	51.7
Fecal Coliform		Wagner Creek [1]	3288A	163	269	60.6

Parameter	SFWMD Canal Name	Local Name	WBID Number	No. of Samples not Meeting Criterion	Total Samples (N)	Percentage of Samples not Meeting Criterion
Fecal Coliform	C-6	Miami River - Lower	3288B	45	187	24.1
Specific Conductance	C-8	Biscayne Canal	3285	85	598	14.2
Specific Conductance	C-103	Mowry Canal	3302	103	807	12.8
Specific Conductance	C-111	Aerojet Canal	3303	31	240	12.9
Specific Conductance		Military Canal	3304	133	541	24.6
Specific Conductance		Goulds Canal	3298A	102	270	37.8

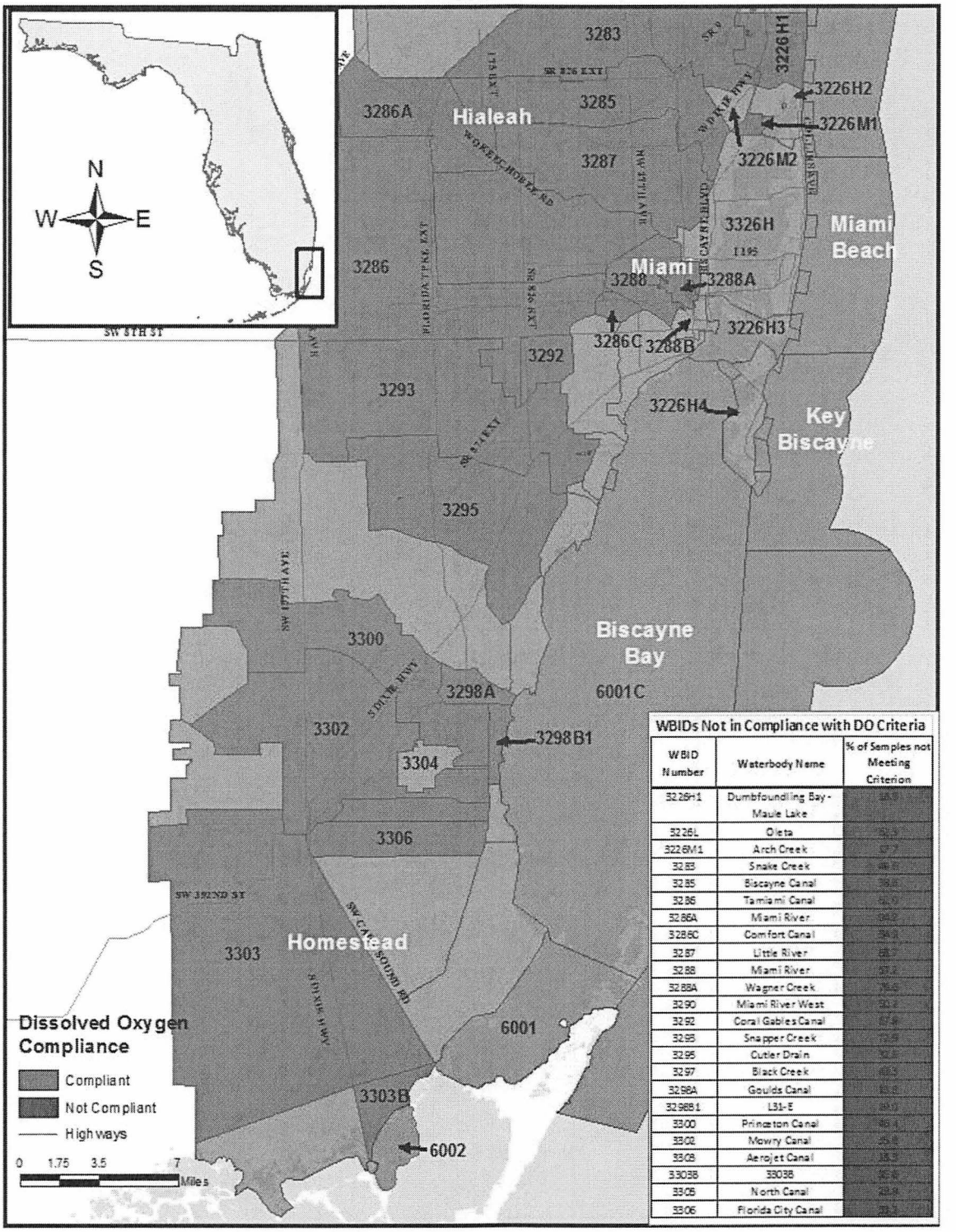
[1] Wagner Creek remains 'impaired', however, as per IWR protocols, it is no longer listed on the 'Verified Impaired Waters" list, as a TMDL has been established for this waterbody.

Table 4. WBID 2013 Status relative to the 2010 'Cycle-2' IWR Assessment Status

WIBD	WIBD name	Parameter	Cycle-3 (2010) Status	Present Status
3283	Snake Creek	Fecal Coliform	Non-Compliant	Compliant
3285	Biscayne Canal	Fecal Coliform	Non-Compliant	Compliant
3290	Miami Canal	Fecal Coliform	Non-Compliant	Compliant
3286C	Comfort Canal	Fecal Coliform	Compliant	Non-Compliant
3290	Miami Canal	Copper	Non-Compliant	Compliant
3288B	Miami Canal-Lower	Copper	Non-Compliant	Compliant

Additionally, the 2 WBIDs that were listed as 'impaired' for Copper in the 'Cycle-3 (2010) IWR Assessment were found to be compliant with criteria during the present assessment (Table 4.)

Exceedance-based Dissolved Oxygen Assesment of Biscayne Bay Water Quality 2014



WBIDs Not in Compliance with DO Criteria

WBID Number	Waterbody Name	% of Samples not Meeting Criterion
3226H1	Dumbfoundling Bay - Maule Lake	
3226L	Oleta	
3226M1	Arch Creek	
3283	Snake Creek	
3285	Biscayne Canal	
3286	Tamiami Canal	
3286A	Miami River	
3286C	Comfort Canal	
3287	Little River	
3288	Miami River	
3288A	Wagner Creek	
3290	Miami River West	
3292	Coral Gables Canal	
3295	Snapper Creek	
3296	Cutler Drain	
3297	Black Creek	
3298A	Goulds Canal	
3298B1	L31-E	
3300	Princeton Canal	
3302	Mowry Canal	
3303	Aerojet Canal	
3303B	3303B	
3305	North Canal	
3306	Florida City Canal	

Figure 2. Compliance assesment of Dissovled Oxygen by WBID.

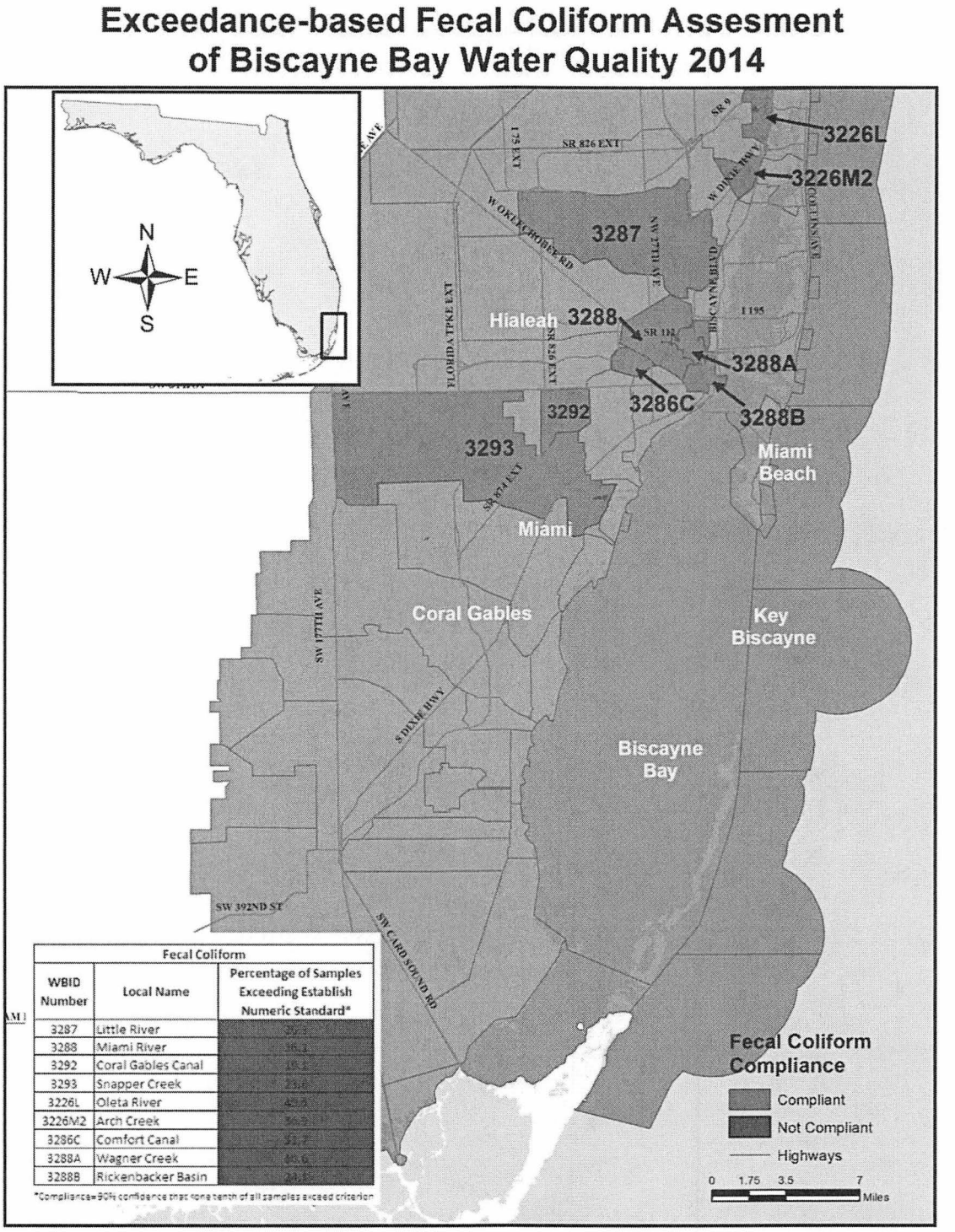
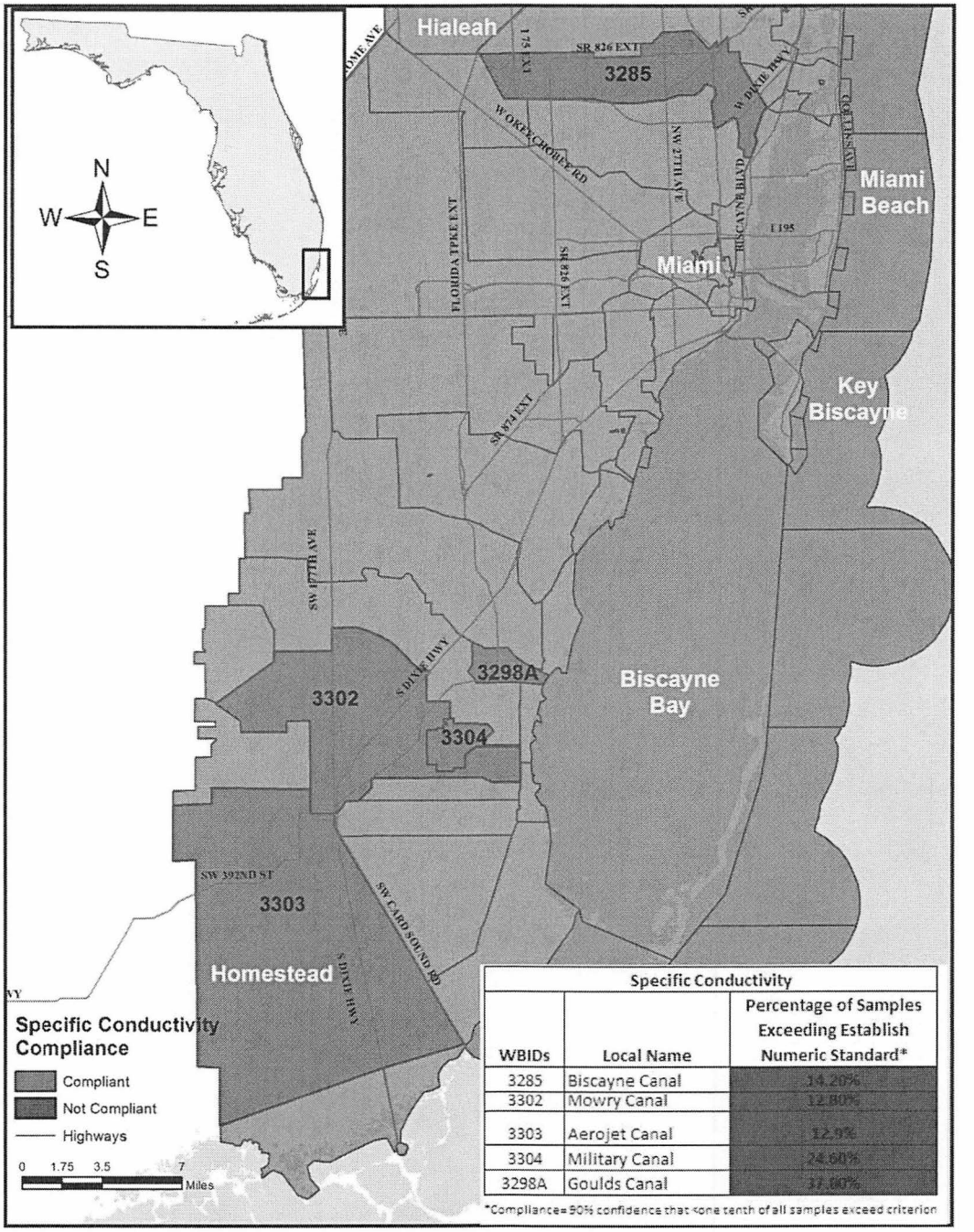


Figure 3: Compliance assessment of Fecal Coliforms by WBID

Exceedance-based Specific Conductivity Assesment of Biscayne Bay Water Quality 2014



Specific Conductivity		
WBIDs	Local Name	Percentage of Samples Exceeding Establish Numeric Standard*
3285	Biscayne Canal	14.20%
3302	Mowry Canal	12.80%
3303	Aerojet Canal	12.9%
3304	Military Canal	24.60%
3298A	Goulds Canal	37.80%

*Compliance=90% confidence that <one tenth of all samples exceed criterion

Figure 4: Compliance assessment of Specific Conductivity by WBID

With respect to DO, as all freshwater samples are collected from the various South Florida Water Management and County drainage and water control system canals, there are conditions unique to these systems that can affect DO concentrations. Specifically, it is recognized that the canal systems are dug to a depth that intersections the surficial Biscayne Aquifer, which allows a free exchange of waters between the surface waters of the canals, and the groundwater of the aquifer. Groundwater characteristically is hypoxic (low DO, commonly < 1 mg/l). This exchange with groundwater minimizes the overall DO concentration within the canals, often to the extent to cause the surface waters to not meet the established criterion. In cases where the concentrations of DO in the canals do not meet the standard, other parameters are evaluated in order to determine if the DO levels are a response to a causal parameter (e.g., high BOD, elevated nutrients or Chlorophyll-A, etc). If no causal parameter can be identified, potential causes for the lower DO values will be investigated, but it is recognized that the low DO concentrations in the canal systems of South Florida are reflection of the ground water exchange, and may not be a 'response' associated with a causal pollutant. It must be noted, however, if a WBID has what could be considered a 'causal' parameter, such as Arch Creek, Litter River, Oleta River (non-compliant for Fecal Coliform), the DO concentration would be considered non compliant in response to a causal parameter.

Please note: The present assessment of Dissolved Oxygen compliance was evaluated using the concentration based numeric criteria in affect during the sampling period. Recent rule making modified those criteria to saturation based numeric criteria, which will be utilized in future evaluations.

Nutrient-Chlorophyll Estuary Assessment:

Prior to November 2012, the State of Florida's surface water criteria for nutrients was a 'narrative' rather than numeric criteria. The criterion read "*In no case shall nutrient concentrations of a body of water be altered so as to cause an imbalance in natural populations of aquatic flora or fauna.*" (62-302.530(47) FAC).

The State of Florida established 'Numeric interpretations of the Narrative Nutrient Criteria for specific Estuaries, including Biscayne Bay (620-302.532 FAC; Table 2 above). However, those criteria were applied to specific 'regions' of the bay, which do not follow the specific WBID boundaries as presently defined. Further, as the criteria are bay region specific, it is not possible to evaluate these criteria on a 'WBID' basis. Therefore, to provide insight into the condition of the Bay relative to Chlorophyll-a and those nutrients with defined criteria (Total Nitrogen [TN] and Total Phosphorus [TP]), the waters of Biscayne Bay were evaluated by their defined 'nutrient regions'. The results of those evaluations are presented in Table 5, and depicted in Figure 5.

Table 5. Results of evaluation of nutrient regions in Biscayne Bay, as per 62-303.353)

NUMERIC NUTRIENT CRITERIA (NNC) STATUS of BISCAYNE BAY 2009-2014
NNC Standard: The Annual Geometric Mean (AGM) Shall not be exceeded more than once in any three-year period (62-302.532 (1) (h) FAC)

AGM for Total Phosphorus Concentration (mg/l)									
Bay Region	CS	MB	NCI	NCO	NNB	SCI	SCM	SCO	SNB
Criterion	**0.008**	**0.007**	**0.007**	**0.008**	**0.012**	**0.007**	**0.007**	**0.006**	**0.01**
2009	0.002	0.002	0.003	0.002	0.005	0.003	0.002	0.002	0.004
2010	0.002	0.002	0.002	0.002	0.005	0.002	0.001	0.001	0.003
2011	0.002	0.003	0.002	0.002	0.005	0.003	0.002	0.002	0.004
2012	0.002	0.003	0.002	0.003	0.006	0.003	0.002	0.002	0.004
2013	0.002	0.003	0.003	0.002	0.006	0.003	0.002	0.002	0.004
2014	0.003	0.003	0.004	0.003	0.006	0.004	0.003	0.003	0.006

AGM for Total Nitrogen Concentration (mg/l)									
Bay Region	CS	MB	NCI	NCO	NNB	SCI	SCM	SCO	SNB
Criterion	**0.33**	**0.58**	**0.31**	**0.28**	**0.3**	**0.48**	**0.35**	**0.24**	**0.29**
2009	0.07	0.17	0.14	0.05	0.08	0.19	0.08	0.05	0.06
2010	0.08	0.28	0.13	0.09	0.11	0.28	0.08	0.08	0.1
2011	0.1	0.18	0.08	0.06	0.09	0.19	0.09	0.06	0.07
2012	0.14	0.32	0.18	0.15	0.19	0.34	0.17	0.13	0.11
2013	0.09	0.15	0.09	0.09	0.1	0.23	0.1	0.08	0.08
2014	0.09	0.27	0.14	0.11	0.12	0.33	0.15	0.07	0.12

AGM for Chlorophyll A Concentration (ug/l)									
Bay Region	CS	MB	NCI	NCO	NNB	SCI	SCM	SCO	SNB
Criterion	**0.5**	**0.4**	**0.5**	**0.7**	**1.7**	**0.4**	**0.2**	**0.2**	**1.1**
2009	0.29	0.47	0.48	0	1.26	0.26	0.17	0.14	0.77
2010	0.43	0.6	0.5	0.49	1.5	0.38	0.28	0.26	0.76
2011	0.34	0.66	0.41	0.62	1.68	0.5	0.3	0.27	0.96
2012	0.39	0.72	0.42	0.54	1.56	0.46	0.29	0.21	0.82
2013	0.55	0.69	0.47	0.44	1.81	0.45	0.34	0.21	0.89
2014	0.65	0.75	0.81	0.92	1.92	0.59	0.39	0.37	1.34

Bay Regions: CS= Card Sound; MB= Manatee Bay/ Barnes Sound; NCI= North Central Inshore; NCO= North Central Offshore; NNB= Northern Norh Bay; SCI= South Central Inshore; SCM= South Central-Mid; SCO= South Central Offshore; SNB= Southern North Bay

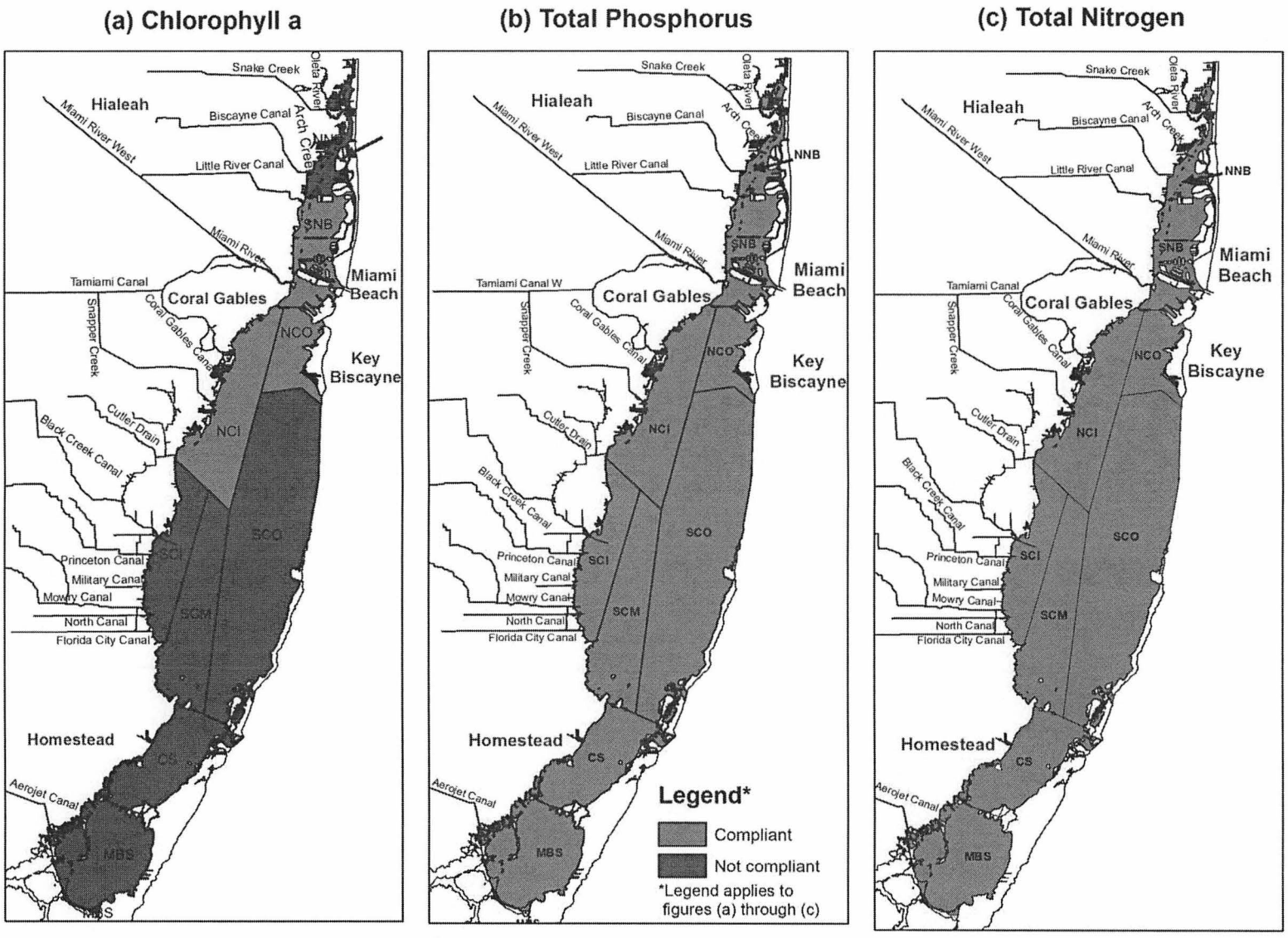
= Region is compliant with Numeric Nutrient Criterion
= Region is not compliant with Numeric Nutrient Criterion

Figure 5 presents maps depicting the results of the estuarine criteria assessments. The Bay segments that failed to meet the criterion (e.g., not to exceed the AGM criterion more than once in any 3 year period), and are shown in red. Chlorophyll a failed to meet the criteria in six of the nine estuarine regions throughout Biscayne. However, no exceedances in criteria were noted for Total Nitrogen nor Total Phosphorus. Therefore, based on the present assessment, six regions of Biscayne Bay would be considered as non-compliant with the Chlorophyll-a criterion.

It must be noted that Chlorophyll-a, like DO, is considered a response variable, and while the AGM was exceeded by a very small amount (generally by less than 0.25 ug/l), a causal parameters needs to be identified to confirm and 'impairment. A review of the other nutrient parameters (TN, TP), show compliance with the criteria, with values well below the criteria. Additionally, other parameters that may indicate enrichment of the 'nutrient' base (e.g., ammonia, BOD, Fecal Coliform), are compliant with the criteria in the regions showing non-compliance with the Chlorophyll-a criteria. Thus, as was the case for DO, potential cause/effect relationships for the elevated Chlorophyll values can not be identified at this time, and therefore a determination of 'impairment' may not apply.

Not withstanding the foregoing statements, it should be noted that 2 significant algal bloom events have occurred, or are ongoing, during the past three years, that could have an effect on the annual geometric means for Chl-a. It is believed that these events (short-term [1-3 month] phytoplankton blooms) were associated with heavy seasonal rains, that resulted in large volume canal discharges, and associated heavy nutrient loading in the Bay. This was especially true for the Northern Bay (NNB), the central segments (NCI, SCI, SCM, and CS). Although phytoplankton bloom resolved themselves within 3 months, elevated Chl-a levels existed for during that period. Those values were not isolated from the data set used for this evaluation, as they are considered to reflect a natural response of the system to an unusual 'loading' that resulted from a natural event (heavy rainfall).

Figure 5: Numeric Nutrient Assesment for Regions of Biscayne Bay 2014



Compliance= Annual Geometric Mean (AGM) does not exceeds criteria more than once in a consecutive three (3) year period.

Evaluation of Parameters without numeric criteria

Table 6 presents those parameters where the WBID AGM was higher than the Baseline Criterion (e.g., 95% Confidence interval of the AGMs during1996 – 2004. A total of 708 Annual Geometric Means were calculated from 10 parameters (Ammonia, Phenols, Color, Total Phosphorus, Nitrate/Nitrite, Phenanthrene, Ortho Phosphate , Total Suspended Solids , Total Kjeldahl Nitrogen, and Total Dissolved Solids) in 33 WBIDs (not all parameters are collected in all WBIDs). Of these 82 (11.5%) were higher than the calculated criterion and these were limited to 3 parameters, Color, Phenols and Total Phosphorus. All Phenanthrene samples were either not detected (BDL) or the values were below the practical quantitative limit (PQL).

Table 6. Results of Assessment of Parameters Without Established Numeric Criteria. Annual Geometric Means (AGM) in relation to the baseline period of 1996-2004.

Parameter	WBID	Baseline Samples (N)	Baseline Standard Error	Baseline Geometric Mean	Year	Annual Samples (N)	Annual Geometric Mean	*Baseline Based Criterion
Color (Apparent)	3283	177	1.01	50.449	2007	17	53.408	52.428
Color (Apparent)	3285	177	1.25	53.328	2007	18	55.948	55.777
Color (Apparent)	3287	370	1.059	50.314	2007	45	54.196	52.39
Color (Apparent)	3287	370	1.059	50.314	2013	3	53.652	52.39
Color (Apparent)	3297	356	1.313	31.196	2012	24	34.314	33.77
Color (Apparent)	3302	254	2.895	13.221	2008	21	24.784	18.896
Color (Apparent)	3302	254	2.895	13.221	2011	23	18.922	18.896
Color (Apparent)	3302	254	2.895	13.221	2012	24	20.799	18.896
Color (Apparent)	3302	254	2.895	13.221	2013	24	21.414	18.896
Color (Apparent)	6001	1772	0.378	10.594	2011	81	13.626	11.335
Color (Apparent)	6001	1772	0.378	10.594	2012	96	14.47	11.335
Color (Apparent)	6001	1772	0.378	10.594	2013	102	15.765	11.335
Color (Apparent)	6001	1772	0.378	10.594	2014	47	12.142	11.335
Color (Apparent)	6002	90	0.654	11.098	2007	12	29.479	12.38
Color (Apparent)	6002	90	0.654	11.098	2008	12	12.688	12.38
Color (Apparent)	6002	90	0.654	11.098	2011	12	15.665	12.38
Color (Apparent)	6002	90	0.654	11.098	2012	12	15.326	12.38
Color (Apparent)	6002	90	0.654	11.098	2013	12	14.913	12.38

Parameter	WBID	Baseline Samples (N)	Baseline Standard Error	Baseline Geometric Mean	Year	Annual Samples (N)	Annual Geometric Mean	*Baseline Based Criterion
Color (Apparent)	6003	90	1.163	10.215	2007	26	31.24	12.496
Color (Apparent)	6003	90	1.163	10.215	2012	12	12.524	12.496
Color (Apparent)	3303B	90	0.973	19.62	2007	12	31.234	21.527
Phenols	3286	62	0.077	1.035	2014	6	1.308	1.187
Phenols	3287	64	0.117	1.08	2014	7	1.486	1.309
Phenols	3292	31	0.111	1.031	2014	4	2	1.248
Phenols	3293	64	0.075	1.031	2014	4	1.414	1.179
Phenols	3297	64	0.075	1.041	2007	8	1.425	1.188
Phenols	3297	64	0.075	1.041	2013	8	1.223	1.188
Phenols	3297	64	0.075	1.041	2014	4	1.821	1.188
Phenols	3300	96	0.061	1.057	2007	12	1.201	1.178
Phenols	3300	96	0.061	1.057	2014	6	2	1.178
Phenols	3302	96	0.061	1.083	2013	12	1.284	1.203
Phenols	3302	96	0.061	1.083	2014	6	1.913	1.203
Phenols	3304	66	0.171	1.094	2011	8	2.768	1.43
Phenols	3304	66	0.171	1.094	2014	4	4.865	1.43
Phenols	3305	31	0.111	1.028	2014	4	1.565	1.245
Phenols	3306	63	0.076	1.01	2011	8	1.297	1.16
Phenols	3226L	32	3.681	1.976	2014	4	12.507	9.19
Phenols	3226M2	20	0.264	1.529	2007	4	26.946	2.047
Phenols	3226M2	20	0.264	1.529	2008	5	18.365	2.047
Phenols	3226M2	20	0.264	1.529	2010	8	77.871	2.047
Phenols	3226M2	20	0.264	1.529	2011	8	77.207	2.047
Phenols	3226M2	20	0.264	1.529	2012	8	5.771	2.047
Phenols	3226M2	20	0.264	1.529	2013	11	21.962	2.047
Phenols	3226M2	20	0.264	1.529	2014	6	67.111	2.047
Phenols	3298A	32	0.414	1.141	2014	2	11.18	1.953
Phosphorus, Total (TP)	3285	192	0.001	0.014	2007	24	0.016	0.015
Phosphorus, Total (TP)	3286	205	0.001	0.006	2008	39	0.008	0.007
Phosphorus, Total (TP)	3286	205	0.001	0.006	2009	36	0.007	0.007

Parameter	WBID	Baseline Samples (N)	Baseline Standard Error	Baseline Geometric Mean	Year	Annual Samples (N)	Annual Geometric Mean	*Baseline Based Criterion
Phosphorus, Total (TP)	3286	205	0.001	0.006	2010	36	0.008	0.007
Phosphorus, Total (TP)	3286	205	0.001	0.006	2011	36	0.008	0.007
Phosphorus, Total (TP)	3286	205	0.001	0.006	2012	36	0.008	0.007
Phosphorus, Total (TP)	3286	205	0.001	0.006	2013	36	0.009	0.007
Phosphorus, Total (TP)	3286	205	0.001	0.006	2014	18	0.008	0.007
Phosphorus, Total (TP)	3287	392	0.001	0.015	2007	60	0.019	0.017
Phosphorus, Total (TP)	3287	392	0.001	0.015	2008	60	0.017	0.017
Phosphorus, Total (TP)	3287	392	0.001	0.015	2010	47	0.018	0.017
Phosphorus, Total (TP)	3287	392	0.001	0.015	2012	47	0.017	0.017
Phosphorus, Total (TP)	3287	392	0.001	0.015	2013	45	0.017	0.017
Phosphorus, Total (TP)	3288	407	0.001	0.013	2011	48	0.014	0.014
Phosphorus, Total (TP)	3295	264	0.001	0.005	2007	44	0.008	0.006
Phosphorus, Total (TP)	3295	264	0.001	0.005	2008	48	0.008	0.006
Phosphorus, Total (TP)	3295	264	0.001	0.005	2009	45	0.008	0.006
Phosphorus, Total (TP)	3295	264	0.001	0.005	2010	36	0.008	0.006
Phosphorus, Total (TP)	3295	264	0.001	0.005	2011	36	0.007	0.006
Phosphorus, Total (TP)	3295	264	0.001	0.005	2012	39	0.008	0.006
Phosphorus, Total (TP)	3295	264	0.001	0.005	2013	48	0.009	0.006
Phosphorus, Total (TP)	3295	264	0.001	0.005	2014	24	0.009	0.006
Phosphorus, Total (TP)	6002	88	0.001	0.003	2007	12	0.006	0.004
Phosphorus, Total (TP)	6003	88	0.001	0.002	2007	32	0.006	0.004
Phosphorus, Total (TP)	3226H	452	0	0.005	2007	60	0.007	0.006
Phosphorus, Total (TP)	3226H	452	0	0.005	2010	72	0.007	0.006
Phosphorus, Total (TP)	3226H	452	0	0.005	2011	72	0.007	0.006
Phosphorus, Total (TP)	3226H	452	0	0.005	2012	72	0.008	0.006
Phosphorus, Total (TP)	3226H	452	0	0.005	2013	72	0.008	0.006
Phosphorus, Total (TP)	3226H	452	0	0.005	2014	36	0.008	0.006
Phosphorus, Total (TP)	3226H3	132	0.001	0.003	2014	30	0.006	0.005
Phosphorus, Total (TP)	3226M1	192	0.001	0.007	2007	24	0.008	0.008
Phosphorus, Total (TP)	3226M1	192	0.001	0.007	2010	24	0.008	0.008

Parameter	WBID	Baseline Samples (N)	Baseline Standard Error	Baseline Geometric Mean	Year	Annual Samples (N)	Annual Geometric Mean	*Baseline Based Criterion
Phosphorus, Total (TP)	3226M1	192	0.001	0.007	2011	24	0.008	0.008
Phosphorus, Total (TP)	3226M1	192	0.001	0.007	2012	24	0.009	0.008
Phosphorus, Total (TP)	3303B	97	0.001	0.005	2007	12	0.008	0.006

Summary of FY14 Miami-Dade County Surface Water Quality Monitoring Program.

During FY 14, 35,164 samples were collected from 117 stations, during 12 sampling events. Eleven parameters with established State or County criteria, were evaluated in each of the 32 WBIDs they were sampled from, generating 338 assessments (note: not all parameters are collected in all WBIDS; therefore, the total number of comparisons will be less than the product of the number of parameters and the number of WBIDS). Of the 338 assessment, 263 (77.8%) were compliant with established criteria, 45 (13.3%) were not compliant, and 9 (2.7%) did not have a sample size large enough to determine its status.

Miami-Dade County has nine estuarine regions identified for the evaluation of nutrient impairments. Six of these are not meeting the chlorophyll criterion, but all estuarine regions meet the criteria for Total Nitrogen and Total Phosphorus.

Of the 32 WIBDS defined within the County, 13 have been identified by the State of Florida as 'impaired' for one or more parameters, and are presently listed on the State's list of 'Verified Impaired Waters' (2005 & 2010 FDEP Impaired Waters Assessments). Eleven of the WBIDS were impaired by Fecal Coliform. Two of those WBIDs had multiple impairments., with WIBD 3288 (C-6/Miami River) having an additional impairment by copper, and WIBD 3295 (C-100 Canal) also having an impairment by nutrients. The final impairment was by Dissolved Oxygen in WBID 3305 (North Canal). Across the County, there were a total of 15 impairments in 13 WBIDS (Table 7).

The results of the present evaluation indicated that 32 WBIDS had a total of 38 instance of non-compliance with surface water quality criteria among within the 338 total parameter/WBID combinations assessed. However, 24 of those 'non-compliance' results were due to low Dissolved Oxygen (DO) in SFWMD drainage canal segments. When these canals were constructed, they were dug sufficiently deep to intersect the surficial aquifer. Thus, ground water with very low concentrations of DO freely exchange with the surface waters of the canals, resulting in depressed Dissolved Oxygen concentrations within the canals. This condition does not result from biological or chemical depletion associated with a causal pollutant, rather, the condition is caused by the consistent northwest-to-southeast flow of groundwater in the aquifer, and the free exchange of the low oxygen groundwater with the surficial canal waters. This has been recognized by the State of Florida during their last evaluation, wherein only 1 WIBD (3305, 'North Canal') was identified as impaired for Dissolved Oxygen. Based on these premises, the state of Florida noted that the 24 WBIDS do not meet the DO criteria, but are not considered 'impaired', as the non-compliance is not associated with a 'causal pollutant'.

There were 5 additional instances of non-compliance associated with 'specific conductivity'. This non-compliance is a result of the close proximity of the sampling stations to the Coastal Control Structures, which essentially holds back tidal (salt) water. The State has determined to not define the water body

impaired by Specific Conductivity, as the non-compliance was due to its proximity to the Coastal Control structures and not a 'causal' pollutant.

The 2005 and 2010 Impaired Waters Assessments identified 11 WIBDs as being impaired by Fecal Coliform, and 2 WBIDS impaired by copper (as multiple impairments on WBIDs 3290 [Miami Canal] and 3288B [Lower Miami River]). The FY13 assessments would indicate that 4 of the WBIDs previously identified as non-compliant (impaired) for Fecal Coliform presently show compliance with the criteria. However, one WBID (Comfort Canal) previously identified as compliant for Fecal Coliform was not compliant in the 2013 assessment. The two WIBDs identified as non-compliant for copper were documented to be compliant with the criteria. These 6 WIBDs (now in compliance) may be de-listed in the coming Impaired Waters Assessment (anticipated in 2015), if conditions remain equivalent to the 2013 assessment

The results of the present assessment do imply improvement in the County's surface water quality. This is evident in the number of WBIDS found to be compliant with all surface water criteria (27 WBIDS), in relation to the number deemed 'impaired' during the 2005 and 2010 FDEP Impaired Waters Assessment (20 WBIDS). The greatest improvement being noted in the increase of WBIDS found to be compliant with Fecal Coliform criteria which showed a 58% improvement (7 of the 12 WIBDS identified in the 2010 assessment are now compliant).

Table 7. Verified list of impaired List

Cycle	Group	OGC Case Number	Basin	Planning Unit	County (ies)	WBID	Water Segment Name	Water body Type	Water body Class[1]	Parameters Assessed Using the Impaired Waters Rule (IWR)	DO / Nutrient / Biology - TN , TP , BOD Median Values (mg/L)[2]	Concentration of Criterion or Threshold Not Met	Priority for TMDL Development[3]	Projected Year For TMDL Development[3]	Verified Period Assessment Data[8]
1	4	06-0637	Southeast Coast - Biscayne Bay	North Dade County	Broward, Miami-Dade	3283	Snake Creek Canal East	Stream	3F	Fecal Coliform		> 400 Counts/100ml	Medium	2011	
1	4	06-0639	Southeast Coast - Biscayne Bay	North Dade County	Miami-Dade	3285	C-8/Biscayne Canal	Stream	3F	Fecal Coliform		> 400 Counts/100ml	Low	2011	
1	4	06-0641	Southeast Coast - Biscayne Bay	North Dade County	Miami-Dade	3287	C-7/Little River	Stream	3F	Fecal Coliform		> 400 Counts/100ml	Low	2011	
1	4	06-0643	Southeast Coast - Biscayne Bay	North Dade County	Miami-Dade	3288	C-6/Miami River	Estuary	3M	Copper		> 3.7 µg/L	Medium	2011	
1	4	06-0644	Southeast Coast - Biscayne Bay	North Dade County	Miami-Dade	3288	C-6/Miami River	Estuary	3M	Fecal Coliform		> 400 Counts/100ml	Low	2011	
1	4	06-0646	Southeast Coast - Biscayne Bay	North Dade County	Miami-Dade	3290	C-6/Miami Canal	Estuary	3F	Fecal Coliform		> 400 Counts/100ml	Medium	2011	
1	4	06-0647	Southeast Coast - Biscayne Bay	North Dade County	Miami-Dade	3292	Coral Gables Canal	Stream	3F	Fecal Coliform		> 400 Counts/100ml	Medium	2011	
2	4	10-2864	Southeast Coast - Biscayne Bay	North Dade County	Miami-Dade	3293	C-2/Snapper Creek	Stream	3F	Fecal Coliform		≤ 400 Counts / 100ml	Low		36/145
2	4	10-2867	Southeast Coast - Biscayne Bay	South Dade County	Miami-Dade	3295	C-100	Stream	3F	Fecal Coliform		≤ 400 Counts/100ml	Low		32/235
2	4	10-2868	Southeast Coast - Biscayne Bay	South Dade County	Miami-Dade	3295	C-100	Stream	3F	Nutrients (Historic Chlorophyll-a)	TN = 0.42 (n=139) TP = 0.003 (n=332) BOD = 2 (n=89)	≤ 4.5 µg/L	Medium		2003 (5.8 µg/L) 2004 (4.6 µg/L) 2005 (2.0 µg/L) 2009 (6.9 µg/L)
2	4	10-2877	Southeast Coast - Biscayne Bay	South Dade County	Miami-Dade	3305	North Canal	Stream	3F	Dissolved Oxygen	TN = 2.415 (n=32) TP = 0.002 (n=76) BOD = 2 (n=22)	≥ 5.0 mg/L	Medium		45/77
1	4	06-0624	Southeast Coast - Biscayne Bay	Biscayne Bay Intracoastal	Miami-Dade	3226H	ICWW Dade Co.	Estuary	3M	Fecal Coliform		> 400 Counts/100ml	Medium	2011	
2	4	10-2837	Southeast Coast - Biscayne Bay	Biscayne Bay Intracoastal	Miami-Dade	3226L	Oleta River (Upper Segment)	Estuary	3M	Fecal Coliform		≤ 400 Counts/100ml	Low		47/95
1	4	06-0649	Southeast Coast - Biscayne Bay	North Dade County	Miami-Dade	3226M 2	Upper Arch Creek	Stream	3F	Fecal Coliform		> 400 Counts/100ml	Medium	2011	
1	4	06-0654	Southeast Coast - Biscayne Bay	North Dade County	Miami-Dade	3288B	C-6/Lower Miami River	Estuary	3M	Fecal Coliform		> 400 Counts/100ml	Medium	2011	

Attachment 1

STATION	fcol	TP	NH3-N (filt.)	NOx-N (filt.)	Color	turb	Chl-a	O-TPO4 (filt.)	TKN	Cu-FW	Pb-FW	Zn-FW	Cd-FW	HRD NES	Cu-SW	Pb-SW	Zn-SW	Cd-SW	TSS	TDS	BOD	COD	PHE NOLS	As	Cr	Hg	Ni	VOC	SEMI-VOC	O-G
AC01	B						M	M											Q										
AC02	B																													
AC03	M							M	B										Q	Q	Q	Q	Q	A	A	A	A	A	A	A
AC06	M	M	M	M		M		M	B	SA	SA	SA	SA	SA					Q	Q	Q	Q	Q	A	A	A	A	A	A	A
AR01	B							M							A	A	A	A	Q											
AR03	B							M											Q	Q	Q	Q	Q	A	A	A	A	A	A	A
BB02	B														A	A	A	A	Q											
BB04	B														A	A	A	A	Q											
BB05A	B					M									A	A	A	A	Q											
BB06 (BISC134)	B																		Q											
BISC 133 (BB09)	B																		Q											
BB11	B	M	M	M			M								A	A	A	A	Q											
BB14	B														A	A	A	A	Q											
BB15																														
BB16																														
BISC 131 (BB17)	B																		Q											
BB19	B	M	M	M				M	B						A	A	A	A	Q											
BB22 (BISC 130)	B														A	A	A	A	Q											
BB24	B	M	M	M				M	B						A	A	A	A	Q											
BB26	B	M	M	M				M	B						A	A	A	A	Q											
BISC129 (BB27)	B																													
BB28																														
BB31															A	A	A	A												
BB32	B	M	M	M			M	M	B						A	A	A	A	Q											
BB34	B	M	M	M			M	M	B						A	A	A	A	Q											
BB35																														

STATION	fcol	TP	NH3-N (filt.)	NOx-N (filt.)	Color	turb	Chl-a	O-TPO4 (filt.)	TKN	Cu-FW	Pb-FW	Zn-FW	Cd-FW	HRD NES	Cu-SW	Pb-SW	Zn-SW	Cd-SW	TSS	TDS	BOD	COD	PHE NOLS	As	Cr	Hg	Ni	VOC	SEMI-VOC	O-G
BB36	B							M											Q											
BISC108 (BB37)	B																		Q											
BISC 111 (BB38)	B																		Q											
BB39A	B														A	A	A	A	Q											
BB41	B														A	A	A	A	Q											
BB44																														
BB45																														
BB47	B														A	A	A	A	Q											
BB48																														
BB50 (FLAB04)	B																		Q											
BB51 (FLAB03)	B																		Q											
BB52	B														A	A	A	A	Q											
BB53	B														A	A	A	A	Q											
BB54	B														A	A	A	A	Q											
BB56	B														A	A	A	A	Q											
BL01	B						M	M							A	A	A	A	Q											
BL02	B																													
BL03	B																			Q	Q	Q	Q	A	A	A	A	A	A	A
BL12	B																			Q	Q	Q	Q	A	A	A	A	A	A	A
BS01	M						M								A	A	A	A	Q											
BS04	M																			Q	Q	Q	Q	A	A	A	A	A	A	A
BS10	M																			Q	Q	Q	Q	A	A	A	A	A	A	A
CD01A	B							M							A	A	A	A	Q											
CD02	B																			Q	Q	Q	Q	A	A	A	A	A	A	A
CD05	M																			Q	Q	Q	Q	A	A	A	A	A	A	A
CD09	M	M	M	M		M		M	B	SA	SA	SA	SA	SA					Q	Q	Q	Q	Q	A	A	A	A	A	A	A
CG01	B						M	M							A	A	A	A	Q											

STATION	fcol	TP	NH3-N (filt.)	NOx-N (filt.)	Color	turb	Chl-a	O-TPO4 (filt.)	TKN	Cu-FW	Pb-FW	Zn-FW	Cd-FW	HRD NES	Cu-SW	Pb-SW	Zn-SW	Cd-SW	TSS	TDS	BOD	COD	PHE NOLS	As	Cr	Hg	Ni	VOC	SEMI-VOC	O-G
CG07	M																			Q	Q	Q	Q	A	A	A	A	A	A	A
CM02	M																			Q	Q	Q	Q	A	A	A	A	A	A	A
FC03	B																			Q	Q	Q	Q	A	A	A	A	A	A	A
FC15	B																			Q	Q	Q	Q	A	A	A	A	A	A	A
GL02	B																													
GL03	B																			Q	Q	Q	Q	A	A	A	A	A	A	A
LR01	M						M	M							A	A	A	A	Q											
LR05	M	M	M	M		M		M	B	SA	SA	SA	SA	SA					Q	Q	Q	Q	Q	A	A	A	A	A	A	A
LR06	M	M	M	M		M		M	B	SA	SA	SA	SA	SA					Q	Q	Q	Q	Q	A	A	A	A	A	A	A
LR08	M	M	M	M		M		M	B	SA	SA	SA	SA	SA					Q	Q	Q	Q	Q	A	A	A	A	A	A	A
LR10	B																			Q	Q	Q	Q	A	A	A	A	A	A	A
MI01	B							M							A	A	A	A	Q											
MI02	B																			Q	Q	Q	Q	A	A	A	A	A	A	A
MI03	B																			Q	Q	Q	Q	A	A	A	A	A	A	A
MR01	M						M	M							A	A	A	A	Q											
MR03	M							M							A	A	A	A												
MR05	M							M	B																					
MR06	M														A	A	A	A												
MR07	M							M	B										Q											
MR08	M																			Q	Q	Q	Q	A	A	A	A	A	A	A
MR15	B																			Q	Q	Q	Q	A	A	A	A	A	A	A
MW01	B						M	M							A	A	A	A	Q											
MW04	B																			Q	Q	Q	Q	A	A	A	A	A	A	A
MW05	B	M	M	M		M		M	B	SA	SA	SA	SA	SA					Q	Q	Q	Q	Q	A	A	A	A	A	A	A
MW13	B	M	M	M	M	M		M	B	SA	SA	SA	SA	SA					Q	Q	Q	Q	Q	A	A	A	A	A	A	A
NO07A	B																			Q	Q	Q	Q	A	A	A	A	A	A	A
OL03	M																			Q	Q	Q	Q	A	A	A	A	A	A	A
PR01	B						M	M							A	A	A	A	Q											
PR03	B																			Q	Q	Q	Q	A	A	A	A	A	A	A

STATION	fcol	TP	NH3-N (filt.)	NOx-N (filt.)	Color	turb	Chl-a	O-TPO4 (filt.)	TKN	Cu-FW	Pb-FW	Zn-FW	Cd-FW	HRD NES	Cu-SW	Pb-SW	Zn-SW	Cd-SW	TSS	TDS	BOD	COD	PHE NOLS	As	Cr	Hg	Ni	VOC	SEMI-VOC	O-G
PR04A	B	M	M	M		M		M	B	SA	SA	SA	SA	SA					Q	Q	Q	Q	Q	A	A	A	A	A	A	A
PR08	M	M	M	M	M	M		M	B	SA	SA	SA	SA	SA					Q	Q	Q	Q	Q	A	A	A	A	A	A	A
SK01	B						M	M							A	A	A	A	Q											
SK02	M																			Q	Q	Q	Q	A	A	A	A	A	A	A
SK09	B																			Q	Q	Q	Q	A	A	A	A	A	A	A
SP01	B							M							A	A	A	A	Q											
SP04	B																			Q	Q	Q	Q	A	A	A	A	A	A	A
SP08	M	M	M	M		M		M	B	SA	SA	SA	SA	SA					Q	Q	Q	Q	Q	A	A	A	A	A	A	A
TM02	B							M							A	A	A	A	Q											
TM03A	B																			Q	Q	Q	Q	A	A	A	A	A	A	A
TM05	M	M	M	M		M		M	B	SA	SA	SA	SA	SA					Q	Q	Q	Q	Q	A	A	A	A	A	A	A
TM08	B	M	M	M		M		M	B	SA	SA	SA	SA	SA					Q	Q	Q	Q	Q	A	A	A	A	A	A	A
WC02	M							M	B						A	A	A	A												
WC03	M																													
WC04	M							M	B										Q	Q	Q	Q	Q	A	A	A	A	A	A	A

M = MONTHLY: JAN - DEC; B = BIMONTHLY: JAN,MAR,MAY,JUL,SEP,NOV; Q = QUARTERLY: MAR,JUN,SEP,DEC; SA = SEMI-ANNUAL: MAR, SEP; A = ANNUALLY: MAR

Attachment 2

Table 2: Verified List

Minimum number of measured exceedances needed to put on the Verified list with at least 90% confidence that the actual exceedance rate is greater than or equal to ten percent.

Sample sizes		Are listed if they have at least this # of exceedances	Sample sizes		Are listed if they have at least this # of exceedances
From	To		From	To	
20	25	5	254	262	33
26	32	6	263	270	34
33	40	7	271	279	35
41	47	8	280	288	36
48	55	9	289	297	37
56	63	10	298	306	38
64	71	11	307	315	39
72	79	12	316	324	40
80	88	13	325	333	41
89	96	14	334	343	42
97	104	15	344	352	43
105	113	16	353	361	44
114	121	17	362	370	45
122	130	18	371	379	46
131	138	19	380	388	47
139	147	20	389	397	48
148	156	21	398	406	49
157	164	22	407	415	50
165	173	23	416	424	51
174	182	24	425	434	52
183	191	25	435	443	53
192	199	26	444	452	54
200	208	27	453	461	55
209	217	28	462	470	56
218	226	29	471	479	57
227	235	30	480	489	58
236	244	31	490	498	59
245	253	32	499	500	60

Attachment 3 Statistical summaries by WBID for each parameter and frequencies of compliance with established State or County criteria

Parameter	Local Name	WBID	Count of Samples in Compliance	Total Samples (N)	Percent of Samples in Compliance	IWR-Based Evaluation	Geometric Mean	MAX	95th Percentile	75th Percentile	MEDIAN	25th Percentile	5th Percentile	MIN
Dissolved Oxygen	Snake Creek _C-9	3283	206	207	99.5	Non-compliant	3.803	11.82	8.14	6.245	4.14	2.53	1.36	0.49
Fecal Coliform	Snake Creek _C-9	3283	165	170	97.1	Compliant	65.444	2400	534	170	67	30	10	5
Oil & Grease	Snake Creek _C-9	3283	12	12	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Snake Creek _C-9	3283	10	10	100	Compliant	0.314	0.5	0.5	0.5	0.23	0.23	0.23	0.23
Dissolved Oxygen	Biscayne Canal_C-8	3285	203	204	99.5	Non-compliant	4.403	9.99	7.71	6.23	5.11	3.49	1.78	-0.65
Fecal Coliform	Biscayne Canal_C-8	3285	190	200	95	Compliant	97.601	6600	905	200	100	50	10	5
Oil & Grease	Biscayne Canal_C-8	3285	12	12	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Biscayne Canal_C-8	3285	8	8	100	Compliant	0.339	0.5	0.5	0.5	0.365	0.23	0.23	0.23
Dissolved Oxygen	Tamiami Canal_C-4	3286	276	276	100	Non-compliant	2.828	9.14	7.82	5.46	3.29	1.61	0.63	0.05
Fecal Coliform	Tamiami Canal_C-4	3286	202	212	95.3	Compliant	59.919	4300	790	175	60	15	10	1
Oil & Grease	Tamiami Canal_C-4	3286	18	18	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Tamiami Canal_C-4	3286	12	12	100	Compliant	0.339	0.5	0.5	0.5	0.365	0.23	0.23	0.23
Dissolved Oxygen	Little River_C-7	3287	398	398	100	Non-compliant	2.54	9.89	6.63	4.55	2.72	1.575	0.73	0.09
Fecal Coliform	Little River_C-7	3287	53	357	14.8	Non-compliant	183.679	10000	2300	430	200	80	10	5
Oil & Grease	Little River_C-7	3287	21	21	100	Compliant	1.405	1.5	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Little River_C-7	3287	14	14	100	Compliant	0.358	0.5	0.5	0.5	0.5	0.23	0.23	0.23
Cadmium	Miami-River_C-6	3288	16	16	100	Compliant	0.024	0.06	0.06	0.06	0.043	0	0	0
Copper	Miami-River_C-6	3288	16	17	94.1	Compliant	0.035	32.4	32.4	0.3	0.16	0	0	0
Dissolved Oxygen	Miami-River_C-6	3288	402	402	100	Non-compliant	3.599	39.33	6.73	4.835	3.82	2.835	1.58	0.27
Fecal Coliform	Miami-River_C-6	3288	347	361	96.1	Compliant	112.778	1970	734	270	120	52	10	5
Lead	Miami-River_C-6	3288	17	17	100	Compliant	0.06	1.87	1.87	0.08	0.08	0	0	0
Zinc	Miami-River_C-6	3288	17	18	94.4	Compliant	0.351	179	179	0.56	0.56	0	0	0
Dissolved Oxygen	Miami-River_C-6	3290	115	115	100	Compliant	3.646	10.38	9.01	7.02	4.03	2.23	0.95	0.16
Fecal Coliform	Miami-River_C-6	3290	109	111	98.2	Compliant	88.465	2000	334	200	100	52	10	1

Parameter	Local Name	WBID	Count of Samples in Compliance	Total Samples (N)	Percent of Samples in Compliance	IWR-Based Evaluation	Geometric Mean	MAX	95th Percentile	75th Percentile	MEDIAN	25th Percentile	5th Percentile	MIN
Oil & Grease	Miami-River_C-6	3290	7	7	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Miami-River_C-6	3290	5	5	100	Compliant	0.314	0.5	0.5	0.5	0.23	0.23	0.23	0.23
Dissolved Oxygen	Coral Gables_C-3	3292	113	113	100	Non-compliant	2.844	9.26	6.69	4.94	3.575	2.09	0.41	0.12
Fecal Coliform	Coral Gables_C-3	3292	99	110	90	Compliant	196.045	6600	2000	340	210	110	20	10
Oil & Grease	Coral Gables_C-3	3292	7	7	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Coral Gables_C-3	3292	4	4	100	Compliant	0.339	0.5	0.5	0.5	0.365	0.23	0.23	0.23
Dissolved Oxygen	Snapper Creek_C-2	3293	185	186	99.5	Non-compliant	2.328	8.5	7.32	4.46	2.4	1.38	0.55	0.09
Fecal Coliform	Snapper Creek_C-2	3293	138	148	93.2	Compliant	107.821	2000	910	350	150	30	10	10
Oil & Grease	Snapper Creek_C-2	3293	13	13	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Snapper Creek_C-2	3293	10	10	100	Compliant	0.314	0.5	0.5	0.5	0.23	0.23	0.23	0.23
Dissolved Oxygen	Cutler Drain_C-100	3295	333	335	99.4	Non-compliant	5.013	10.99	8.72	7.43	5.97	3.51	2.31	0.14
Fecal Coliform	Cutler Drain_C-100	3295	252	259	97.3	Compliant	89.081	1500	520	230	116	40	10	2
Oil & Grease	Cutler Drain_C-100	3295	17	17	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Cutler Drain_C-100	3295	12	12	100	Compliant	0.339	0.5	0.5	0.5	0.365	0.23	0.23	0.23
Cadmium	Black Creek_C-1	3297	5	5	100	Compliant	0.001	0.007	0.007	0	0	0	0	0
Copper	Black Creek_C-1	3297	13	13	100	Compliant	0.043	1.91	1.91	0.2	0.16	0.16	0	0
Dissolved Oxygen	Black Creek_C-1	3297	371	372	99.7	Compliant	3.874	12.37	8.96	6.39	4.45	2.77	1.02	0.13
Fecal Coliform	Black Creek_C-1	3297	237	241	98.3	Compliant	32.812	2000	270	90	30	10	10	1
Lead	Black Creek_C-1	3297	14	14	100	Compliant	0.045	0.143	0.143	0.08	0.08	0	0	0
Oil & Grease	Black Creek_C-1	3297	10	10	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Black Creek_C-1	3297	8	8	100	Compliant	0.339	0.5	0.5	0.5	0.365	0.23	0.23	0.23
Zinc	Black Creek_C-1	3297	14	14	100	Compliant	0.331	1.7	1.7	0.56	0.56	0.001	0	0
Dissolved Oxygen	Princeton_C-102N	3300	274	275	99.6	Non-compliant	3.801	10.05	7.75	5.59	4.19	3.07	1.17	0.09
Fecal Coliform	Princeton_C-102N	3300	207	210	98.6	Compliant	37.221	1820	480	90	30	10	10	2
Oil & Grease	Princeton_C-102N	3300	21	21	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Princeton_C-102N	3300	15	15	100	Compliant	0.314	0.5	0.5	0.5	0.23	0.23	0.23	0.23
Dissolved Oxygen	Mowry_C-103	3302	276	277	99.6	Non-compliant	4.27	17.95	9.17	7.05	5.275	3.34	1.03	0.04
Fecal Coliform	Mowry_C-103	3302	179	181	98.9	Compliant	21.736	1200	170	40	10	10	10	2
Oil & Grease	Mowry_C-103	3302	20	20	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4

Parameter	Local Name	WBID	Count of Samples in Compliance	Total Samples (N)	Percent of Samples in Compliance	IWR-Based Evaluation	Geometric Mean	MAX	95th Percentile	75th Percentile	MEDIAN	25th Percentile	5th Percentile	MIN
Phenol	Mowry_C-103	3302	17	18	94.4	Compliant	0.389	27.87	27.87	0.5	0.23	0.23	0.23	0.23
Dissolved Oxygen	Aerojet_C-111	3303	82	82	100	Non-compliant	6.674	10.33	9.585	8.36	7.495	5.66	3.385	2.47
Fecal Coliform	Aerojet_C-111	3303	56	56	100	Compliant	9.07	120	20	10	10	10	1	1
Oil & Grease	Aerojet_C-111	3303	4	4	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Dissolved Oxygen	Military	3304	185	185	100	Non-compliant	6.732	12.42	10.22	8.61	7.29	5.92	3.2	0.72
Fecal Coliform	Military	3304	119	120	99.2	Compliant	14.694	1700	305	10	10	10	6.5	1
Oil & Grease	Military	3304	8	8	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Military	3304	10	10	100	Compliant	0.314	0.5	0.5	0.5	0.23	0.23	0.23	0.23
Dissolved Oxygen	North Canal	3305	118	119	99.2	Compliant	4.77	9.8	8.1	6.39	4.98	3.73	2.9	0.31
Fecal Coliform	North Canal	3305	84	86	97.7	Compliant	33.042	2000	400	60	30	10	10	2
Oil & Grease	North Canal	3305	7	7	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	North Canal	3305	5	5	100	Compliant	0.314	0.5	0.5	0.5	0.23	0.23	0.23	0.23
Dissolved Oxygen	Florida City	3306	210	210	100	Non-compliant	4.635	14.63	8.3	6.35	5.17	3.825	1.85	0.13
Fecal Coliform	Florida City	3306	143	144	99.3	Compliant	18.337	1200	146	30	10	10	7	1
Oil & Grease	Florida City	3306	12	12	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Florida City	3306	8	8	100	Compliant	0.339	0.5	0.5	0.5	0.365	0.23	0.23	0.23
Cadmium	Bay South	6001	89	89	100	Compliant	0.004	0.06	0.06	0.008	0	0	0	0
Copper	Bay South	6001	135	139	97.1	Compliant	0.037	72	2.33	0.16	0.16	0	0	0
Copper	Bay South	6001	4	139	2.9	Compliant	0.037	72	2.33	0.16	0.16	0	0	0
Dissolved Oxygen	Bay South	6001	2237	2244	99.7	Non-compliant	5.772	69.8	8.18	6.89	6.07	5.25	3.4	-5.04
Fecal Coliform	Bay South	6001	956	963	99.3	Compliant	14.198	2000	170	10	10	10	3	1
Lead	Bay South	6001	152	152	100	Compliant	0.043	4.45	0.193	0.08	0.08	0	0	0
Zinc	Bay South	6001	152	152	100	Compliant	0.315	84.6	1.36	0.56	0.56	0	0	0
Dissolved Oxygen	Barnes Sound	6002	93	93	100	Non-compliant	5.956	10.55	8.12	6.795	6.08	5.32	3.98	2.24
Fecal Coliform	Barnes Sound	6002	60	60	100	Compliant	8.407	50	10	10	10	10	1	1
Cadmium	Manatee Bay	6003	5	5	100	Compliant	0.001	0.009	0.009	0	0	0	0	0
Copper	Manatee Bay	6003	4	4	100	Compliant	0.001	1.08	1.08	0.54	0	0	0	0
Dissolved Oxygen	Manatee Bay	6003	321	322	99.7	Compliant	5.992	9.29	7.91	6.9	6.135	5.455	4.205	1.47
Fecal Coliform	Manatee Bay	6003	56	56	100	Compliant	6.638	90	10	10	10	7.5	1	1

Parameter	Local Name	WBID	Count of Samples in Compliance	Total Samples (N)	Percent of Samples in Compliance	IWR-Based Evaluation	Geometric Mean	MAX	95th Percentile	75th Percentile	MEDIAN	25th Percentile	5th Percentile	MIN
Lead	Manatee Bay	6003	5	5	100	Compliant	0.002	0.07	0.07	0	0	0	0	0
Zinc	Manatee Bay	6003	5	5	100	Compliant	0.038	2.54	2.54	0.001	0	0	0	0
Cadmium	North Bay	3226H	35	35	100	Compliant	0.014	0.06	0.06	0.06	0.013	0	0	0
Copper	North Bay	3226H	59	62	95.2	Compliant	0.054	21.4	3.4	0.16	0.16	0.16	0	0
Dissolved Oxygen	North Bay	3226H	836	836	100	Non-compliant	5.393	19.53	7.43	6.28	5.63	4.89	3.41	0.01
Fecal Coliform	North Bay	3226H	568	584	97.3	Compliant	26.14	3100	500	62	10	10	10	1
Lead	North Bay	3226H	65	65	100	Compliant	0.053	0.461	0.274	0.08	0.08	0.08	0	0
Zinc	North Bay	3226H	65	65	100	Compliant	0.379	8.2	1.79	0.56	0.56	0.56	0	0
Cadmium	Dumbfoundling Bay	3226H1	18	18	100	Compliant	0.014	0.06	0.06	0.06	0.011	0	0	0
Copper	Dumbfoundling Bay	3226H1	17	19	89.5	Compliant	0.03	26.8	26.8	0.16	0.16	0	0	0
Dissolved Oxygen	Dumbfoundling Bay	3226H1	184	185	99.5	Non-compliant	5.265	10.58	7.44	6.44	5.6	4.62	3.02	0.82
Fecal Coliform	Dumbfoundling Bay	3226H1	122	124	98.4	Compliant	24.613	5520	300	60	10	10	5	1
Lead	Dumbfoundling Bay	3226H1	19	19	100	Compliant	0.038	0.726	0.726	0.08	0.08	0	0	0
Zinc	Dumbfoundling Bay	3226H1	19	19	100	Compliant	0.314	18.6	18.6	0.56	0.56	0	0	0
Cadmium	Bakers Inlet	3226H2	18	18	100	Compliant	0.015	0.16	0.16	0.06	0.008	0	0	0
Copper	Bakers Inlet	3226H2	15	17	88.2	Compliant	0.024	7.78	7.78	0.16	0.16	0	0	0
Dissolved Oxygen	Bakers Inlet	3226H2	309	309	100	Non-compliant	5.75	76.7	7.39	6.5	5.975	5.31	3.82	1.01
Fecal Coliform	Bakers Inlet	3226H2	183	183	100	Compliant	15.52	570	140	20	10	10	5	1
Lead	Bakers Inlet	3226H2	19	19	100	Compliant	0.032	0.222	0.222	0.08	0.08	0	0	0
Zinc	Bakers Inlet	3226H2	19	19	100	Compliant	0.267	4.85	4.85	0.56	0.56	0	0	0
Cadmium	Rickenbacker Basin	3226H3	23	23	100	Compliant	0.003	0.06	0.06	0.007	0	0	0	0
Copper	Rickenbacker Basin	3226H3	26	29	89.7	Compliant	0.015	17.6	9.11	0.16	0.16	0	0	0
Dissolved Oxygen	Rickenbacker Basin	3226H3	492	494	99.6	Non-compliant	5.65	24.91	7.21	6.37	5.81	5.19	4.3	0.09
Fecal Coliform	Rickenbacker Basin	3226H3	337	338	99.7	Compliant	15.747	750	170	20	10	10	5	1
Lead	Rickenbacker Basin	3226H3	32	32	100	Compliant	0.045	2.04	0.77	0.08	0.04	0	0	0

Parameter	Local Name	WBID	Count of Samples in Compliance	Total Samples (N)	Percent of Samples in Compliance	IWR-Based Evaluation	Geometric Mean	MAX	95th Percentile	75th Percentile	MEDIAN	25th Percentile	5th Percentile	MIN
Zinc	Rickenbacker Basin	3226H3	32	32	100	Compliant	0.385	26.8	14.6	0.56	0.28	0	0	0
Dissolved Oxygen		3226H4	91	91	100	Non-compliant	6.217	10.69	7.91	6.82	6.25	5.56	4.89	3.87
Fecal Coliform		3226H4	33	33	100	Compliant	10.429	20	20	10	10	10	10	10
Dissolved Oxygen	Oleta River	3226L	112	114	98.2	Compliant	3.379	7.69	6.23	4.6	3.715	2.73	1.44	0.24
Fecal Coliform	Oleta River	3226L	84	111	75.7	Non-compliant	346.888	12000	2200	820	410	190	20	1
Oil & Grease	Oleta River	3226L	7	7	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Oleta River	3226L	5	5	100	Compliant	0.314	0.5	0.5	0.5	0.23	0.23	0.23	0.23
Dissolved Oxygen		3226M	32	32	100	Non-compliant	5.548	10.9	7.37	6.5	6.14	5.71	3.73	0.29
Fecal Coliform		3226M	33	33	100	Compliant	12.541	110	100	10	10	10	10	10
Dissolved Oxygen	Arch Creek	3226M1	182	183	99.5	Non-compliant	5.232	21.96	7.265	6.135	5.54	4.85	3.075	0.25
Fecal Coliform	Arch Creek	3226M1	121	122	99.2	Compliant	18.246	900	430	30	10	10	5	1
Dissolved Oxygen	Arch Creek	3226M2	194	195	99.5	Non-compliant	2.184	90.4	5.33	3.62	2.47	1.38	0.53	-0.6
Fecal Coliform	Arch Creek	3226M2	124	195	63.6	Non-compliant	481.593	140000	10300	1700	500	140	10	5
Oil & Grease	Arch Creek	3226M2	13	13	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Arch Creek	3226M2	6	6	100	Compliant	0.426	0.9	0.9	0.5	0.5	0.23	0.23	0.23
Dissolved Oxygen	Miami River	3286A	81	81	100	Non-compliant	1.693	7.46	4.21	2.52	1.69	1.1	0.67	0.51
Fecal Coliform	Miami River	3286A	57	58	98.3	Compliant	35.691	900	420	70	30	10	9	7
Oil & Grease	Miami River	3286A	5	5	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Miami River	3286A	4	4	100	Compliant	0.279	0.5	0.5	0.365	0.23	0.23	0.23	0.23
Dissolved Oxygen	Comfort Canal	3286C	94	94	100	Non-compliant	4.553	9.72	7.47	6.4	5.035	3.51	1.75	1.41
Fecal Coliform	Comfort Canal	3286C	69	89	77.5	Non-compliant	362.566	4700	1780	800	410	240	20	5
Oil & Grease	Comfort Canal	3286C	5	5	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Comfort Canal	3286C	4	4	100	Compliant	0.339	0.5	0.5	0.5	0.365	0.23	0.23	0.23
Cadmium	Wagner Creek	3288A	4	4	100	Compliant	0.049	0.049	0.049	0.025	0	0	0	0
Copper	Wagner Creek	3288A	3	4	75	Compliant	0.002	8.61	8.61	4.305	0	0	0	0
Dissolved Oxygen	Wagner Creek	3288A	277	279	99.3	Non-compliant	2.455	9.52	5.67	3.535	2.56	1.75	0.95	0.17
Fecal Coliform	Wagner Creek	3288A	135	269	50.2	Non-compliant	877.248	163000	30000	3000	900	200	60	5

Parameter	Local Name	WBID	Count of Samples in Compliance	Total Samples (N)	Percent of Samples in Compliance	IWR-Based Evaluation	Geometric Mean	MAX	95th Percentile	75th Percentile	MEDIAN	25th Percentile	5th Percentile	MIN
Lead	Wagner Creek	3288A	4	4	100	Compliant	2.56	2.56	2.56	1.28	0	0	0	0
Oil & Grease	Wagner Creek	3288A	2	2	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Wagner Creek	3288A	2	2	100	Compliant	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Zinc	Wagner Creek	3288A	4	4	100	Compliant	15.1	15.1	15.1	7.55	0	0	0	0
Cadmium	Lower Miami River	3288B	18	18	100	Compliant	0.016	0.06	0.06	0.06	0.02	0	0	0
Copper	Lower Miami River	3288B	24	26	92.3	Compliant	0.047	6.81	4.28	0.16	0.16	0.16	0	0
Dissolved Oxygen	Lower Miami River	3288B	194	194	100	Non-compliant	4.971	22.27	7	5.92	5.16	4.38	2.94	0.98
Fecal Coliform	Lower Miami River	3288B	165	187	88.2	Compliant	180.219	6100	2300	400	210	100	10	1
Lead	Lower Miami River	3288B	28	28	100	Compliant	0.055	2.18	0.718	0.08	0.08	0	0	0
Zinc	Lower Miami River	3288B	28	28	100	Compliant	0.384	11.9	6.45	0.56	0.56	0.001	0	0
Dissolved Oxygen	Goulds Canal	3298A	95	95	100	Non-compliant	6.155	12.39	9.55	7.97	6.755	5.285	2.95	0.45
Fecal Coliform	Goulds Canal	3298A	60	62	96.8	Compliant	55.484	2700	750	180	65	20	10	1
Oil & Grease	Goulds Canal	3298A	5	5	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Phenol	Goulds Canal	3298A	4	4	100	Compliant	0.339	0.5	0.5	0.5	0.365	0.23	0.23	0.23
Dissolved Oxygen	L31-E	3298B1	21	21	100	Non-compliant	5.992	9.29	8.72	7.73	6.87	4.5	3.21	2.05
Fecal Coliform	L31-E	3298B1	20	20	100	Compliant	6.735	60	47.5	11	10	2.5	1	1
Oil & Grease	L31-E	3298B1	2	2	100	Compliant	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Cadmium	Aerojet Canal	3303B	5	5	100	Compliant	0.002	0.049	0.049	0	0	0	0	0
Copper	Aerojet Canal	3303B	13	13	100	Compliant	0.035	0.372	0.372	0.16	0.16	0.16	0	0
Dissolved Oxygen	Aerojet Canal	3303B	92	92	100	Non-compliant	4.152	8.25	7.07	5.7	4.77	3.79	1.5	0.02
Fecal Coliform	Aerojet Canal	3303B	62	62	100	Compliant	11.737	170	52	10	10	10	5	2
Lead	Aerojet Canal	3303B	14	14	100	Compliant	0.032	0.08	0.08	0.08	0.08	0	0	0
Zinc	Aerojet Canal	3303B	14	14	100	Compliant	0.297	0.56	0.56	0.56	0.56	0.001	0	0
Cadmium	Card Sound	6001C	5	5	100	Compliant	0.001	0.008	0.008	0	0	0	0	0
Copper	Card Sound	6001C	12	13	92.3	Compliant	0.047	9.25	9.25	0.16	0.16	0.16	0	0
Dissolved Oxygen	Card Sound	6001C	334	335	99.7	Non-compliant	5.796	10.22	7.83	6.75	6.015	5.29	4.22	0.11
Fecal Coliform	Card Sound	6001C	28	28	100	Compliant	6.672	40	10	10	10	7.5	1	1
Lead	Card Sound	6001C	14	14	100	Compliant	0.049	0.331	0.331	0.08	0.08	0	0	0
Zinc	Card Sound	6001C	14	14	100	Compliant	0.363	4.8	4.8	0.56	0.56	0.001	0	0

Attachment 3
NPDES Annual Report
Cycle 3, Year 3

Part VI.B.2 Evaluation of the SWMP
Have stormwater pollutant loadings discharged from the MS4 decreased? Why or why not?

As per the Surface Water Quality Discussion and Analysis report provided by Miami-Dade County for this reporting year, the Annual Geometric Mean of stormwater pollutant loadings for the Southern North Bay region, the area corresponding to the City of Miami Beach's stormwater discharges, were measured as follows:

- Chlorophyll-a – 1.34 ug/l. Chlorphyll-a levels increased by 0.45 ug/l since 2013 and fail to meet the established sampling limits of 1.1 ug/l.
- Total nitrogen – 0.12 mg/l. Total nitrogen levels increased by 0.04 mg/l since 2013 and are within the established sampling limits of 0.29 mg/l.
- Total phosphorous – 0.006 mg/l. Total phosphorous levels increased by 0.002 and are within the established sampling limits of 0.01 mg/l.

Miami-Dade County states in the report that six of the nine estuarine regions throughout Biscayne Bay failed to meet the criteria for Chlorophyll-a and that potential cause/effect relationships for these elevated values cannot be identified at this time. They did indicate that algal blooms occurred in other regions of Biscayne Bay from natural events (heavy rainfall) and that the elevated levels of Chlorophyll-a during these events were not isolated from the Annual Geometric Mean.

Which components of the SWMP are working well and are effective in reducing stormwater pollutant loadings? Why are they effective?

The components of the City of Miami Beach's Stormwater Management Program that are working well and are effective in reducing stormwater pollutant loadings include:

1. Flood Control Projects
    a. The City is in the process of upgrading its aging stormwater infrastructure through an aggressive program that includes pump stations, tide flex valves, swale reclamation and other improvements. In the design of these flood management projects, the City is incorporating innovative stormwater treatment strategies to meet or exceed current Environmental Resource Permit rules of the South Florida Water Management District. The City is also leveraging its stormwater infrastructure program to educate the public on stormwater issues.

2. Illicit Discharges and Improper Disposal
    a. The Public Works Department, Right-of-Way Division, and the Building Department, Environment and Sustainability and Code Compliance Divisions are responsible for conducting proactive and reactive inspections to detect, record, and address illicit discharges and improper disposal into the MS4. During the reporting year, the City worked collaboratively with Miami-Dade County to target illicit grease discharges which were severely impacting the City's storm and

sanitary sewer systems. Both the City and the County dedicated substantial resources to conduct proactive inspections in known hotspots throughout the City, including entertainment and commercial districts with high concentrations of Grease Discharge Operating permits.

b. The City is also improving the quality of our stormwater discharges by initiating $2.8 million in sanitary sewer system repairs that will reduce cross-contamination associated with the City's aging infrastructure.

3. Public Reporting
   a. The Building Department, Environment and Sustainability Division, in conjunction with the Communications Department, works diligently to inform and educate the public regarding stormwater issues and BMPs. The City's public reporting program uses various communication mediums, including MBTV programming, MB Magazine articles, the City's website, e-newsletters, and educational events, to reach the wide variety of audience groups that live in or visit the area. This reporting year the City leveraged the media and public attention it received for sea level rise issues to incorporate water quality messaging that will reduce the volume of pollutants that enter the City's waterways.
   b. The Building Department, Environment and Sustainability Division has successfully increased attendance at its bi-annual household hazardous waste collection events and reduced the quantity of household hazardous waste that is improperly or illegally disposed throughout the City.

Which components of the SWMP are not working well and need to be revised to make them more effective in reducing stormwater pollutant loadings?

The City is in the process of updating a number of our standard operating procedures. Through revisiting the City's current procedures and evaluating their effectiveness the City can better align our operations to track reduction of stormwater pollutant loadings. All elements of the City's SWMP work on some level to reduce stormwater pollutant loadings; however, the City has identified room for improvement in the following activities and will work to address them in the coming reporting year:

1. Structural Controls and Stormwater Collection System Operation
   a. The Public Works Department, Stormwater Operation Division is responsible for inspecting and maintaining the City's MS4. Properly maintained infrastructure reduces the discharge of pollutants and floatables and reduces flooding. Based on the results of last year's report, the City improved its maintenance and inspection program by hiring a contractor to clean the entire system once a year. However, due to contractual issues, these changes did not go into effect until after the conclusion of this reporting year. We anticipate that the Year 4 Annual Report will reflect the positive improvements we made to our inspection and maintenance program.

2. Illicit Discharges and Improper Disposal
    a. The Public Works Department, Right-of-Way Division, and the Building Department, Environment and Sustainability and Code Compliance Divisions are responsible for conducting proactive and reactive inspections to detect, record, and address illicit discharges and improper disposal into the MS4. Despite effective collaboration with Miami-Dade County, the City is pre-empted by County Code from sampling the grease traps at facilities with Grease Discharge Operating permits. As such, the City is evaluating options that will allow staff to inspect grease traps through other authorities like the Florida Building Code so we can further reduce the amount of grease that enters the public right-of-way.

3. Construction Site Run-off – Site Operator Training
    a. This year, City staff was not trained as aggressively as they have been in previous years because the City was primarily focused on developing its sea level rise adaptation program. However, Code Compliance staff is scheduled for a stormwater-related training in January 2015 that will include information for identifying and reporting construction site run-off and for enforcing illicit discharges and improper disposal violations more effectively. We will also be developing an online video training module that will be required of all employees and will also be disseminated through our media channels.

Which components of the SWMP do no contribute to reducing stormwater pollutant loads and could be revised or eliminated, and why?

1. Municipal Waste Treatment, Storage, or Disposal Facilities Not Covered by an NPDES Stormwater Permit - The City of Miami Beach does not have any municipal waste treatment sites. For this reporting year, the City included the Green Waste Facility (2800 Meridian Avenue). This facility is a transfer site for yard waste. There are no drainage structures within this facility thus; it has neither a positive or negative impact on the City's MS4. Please advise if it should be included as an existing facility.
2. Industrial and High-Risk Runoff. There are no existing high risk facilities in the City's jurisdiction. The City will continue to monitor; however, Part III.A.8.b could be reduced to every four years.

Is the monitoring program providing data that can be used to assess the effectiveness of the SWMP in reducing stormwater pollutant loadings, assess the effectiveness of specific BMPs, and determine whether stormwater retrofitting projects should be prioritized for implementation?

The City of Miami Beach has signed an Interlocal Agreement with Miami-Dade County providing for Miami-Dade County to conduct surface water quality monitoring on behalf of the City. Miami-Dade County produces on an annual basis a Surface Water Quality Discussion and Analysis Report, which summarizes the data generated for the reporting year by the monitoring program. Miami-Dade County subdivides the County into different monitoring regions that do not necessarily coincide with municipal boundaries. The City's MS4 discharges into the

Southern North Bay region of Biscayne Bay. An increase or decrease in the pollutant loadings within the region could result from the successes or failures of one or more of the region's co-permittees.

In Fiscal Year 2014/2015, the City will be contracting the County to conduct sampling at additional locations closer to our city limits and within our waterways. The City anticipates that the results of these additional sampling points will fill in data gaps in the County's existing program so we can better evaluate the success of our Stormwater Management Program and identify trouble locations that are in need of more targeted action.

Attachment 4
NPDES Annual Report
Cycle 3, Year 3

Estimates of Annual Pollutant Loadings and Event Mean Concentrations

The City's stormwater system has not changed significantly since 2004-2005, the years that correspond to the previous Year 3 NPDES Annual Report reporting year. As such, the estimated annual pollutant loadings and event mean concentrations remain the same (see attached). In Year 4, the City initiated an aggressive program to convert our aging, gravity-based stormwater system into a pumped system. We anticipate that these upgrades will reduce the annual pollutant loadings from our system and will require careful consideration during the preparation of the Cycle 4, Year 3 Annual Report.

Table A-1A

Closed Pond System Existing Conditions

Estimated Pollutants Reduction by Settling and Infiltration (Total Pollutants) for Existing Conditions

Sub-basin Name	Sub-basin Total Area	Total Base pollutant load	Area Draining to Water Body	Runoff Coefficient	Total Runoff Rate tributary to Area Draining to the Water Body	Runoff tributary to the water body surface area	Pollutant loads tributary to Water Body	Sweeping Total Pollutant Reduction	Pollutant Loads After Sweeping	Pollutants Loads Reduction by settling	Pollutants Load Reduction by Infiltration	Net Groundwater Discharge Rate	Net Groundwater Pollutant Load	Net Surfacewater Discharge Rate	Net Surfacewater Pollutant Load
	(acres)	(lb.yr.)	(acres)		(acre-ft/yr.)	(acre-ft/yr.)	(lb.yr.)	(lb.yr.)	(lb.yr.)	(lb.yr.)	(lb.yr.)	(acre-ft/yr.)	(lb.yr.)	(acre-ft/yr.)	(lb.yr.)
Basin 113	54.65	44302.60	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 12	52.25	53844.39	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 17	20.72	24036.38	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 20	206.36	253326.85	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 23	72.07	84806.44	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 53	30.42	27675.43	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 56	37.41	39990.72	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 80	105.35	86509.04	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 86	82.32	87459.20	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 87	51.67	52111.37	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin A	51.01	52057.61	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin B	47.61	54563.94	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin C	76.13	88021.97	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin D	82.58	99377.98	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table A-1A

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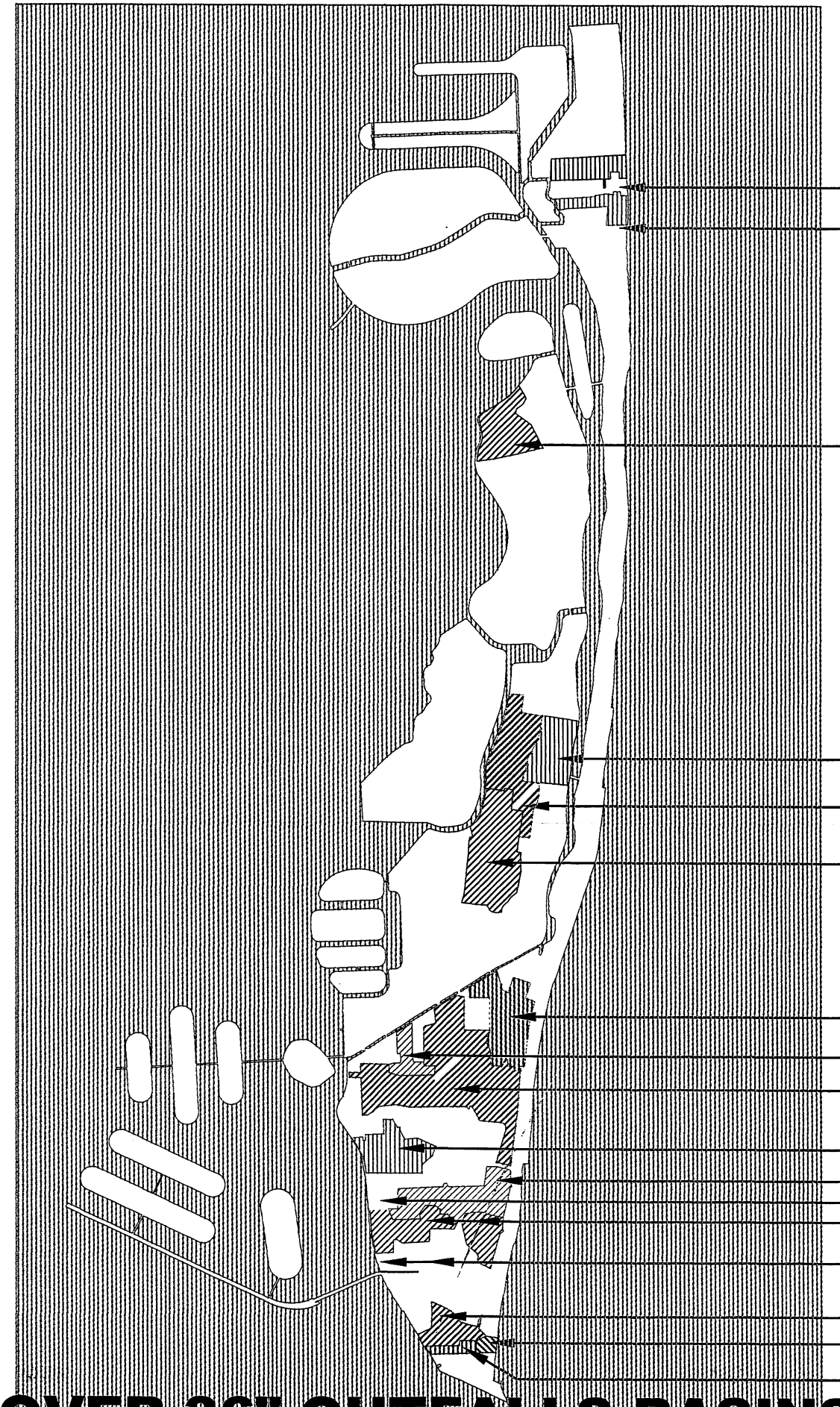
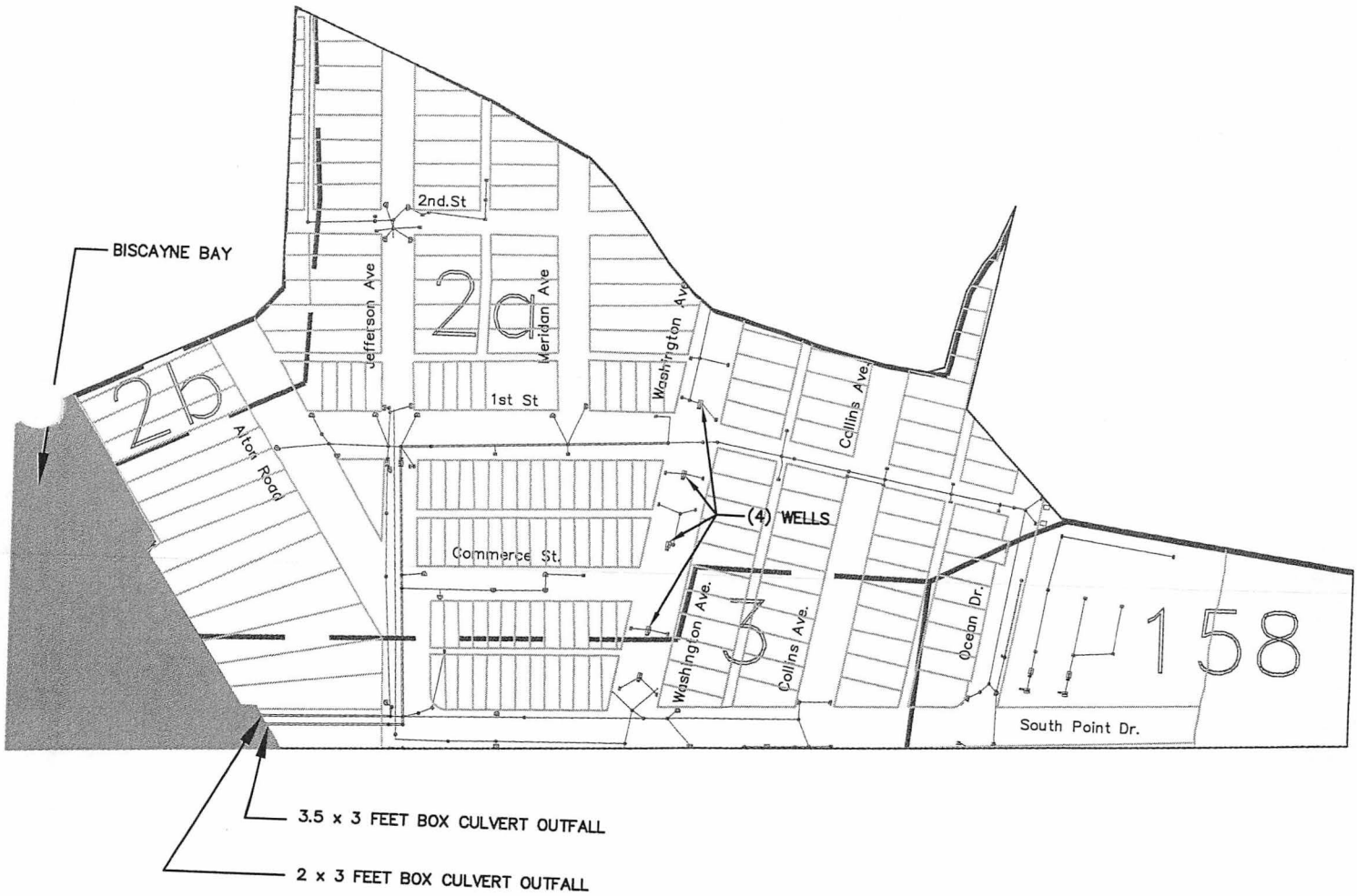
Sub-basin Name	Sub-basin Total Area	Total Base pollutant load	Area Draining to Water Body	Runoff Coefficient	Total Runoff Rate tributary to Area Draining to the Water Body	Runoff tributary to the water body surface area	Pollutant loads tributary to Water Body	Sweeping Total Pollutant Reduction	Pollutant Loads After Sweeping	Pollutants Loads Reduction by settling	Pollutants Load Reduction by Infiltration	Net Groundwater Discharge Rate	Net Groundwater Pollutant Load	Net Surfacewater Discharge Rate	Net Surfacewater Pollutant Load
	(acres)	(lb.yr.)	(acres)		(acre-ft/yr.)	(acre-ft/yr.)	(lb.yr.)	(lb.yr.)	(lb.yr.)	(lb.yr.)	(lb.yr.)	(acre-ft/yr.)	(lb.yr.)	(acre-ft/yr.)	(lb.yr.)
Basin 113	54.65	20383.91	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 12	52.25	24774.15	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 17	20.72	11059.29	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 20	206.36	116557.30	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 23	72.07	39019.98	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 53	30.42	12733.64	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 56	37.41	18399.99	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 80	105.35	39803.36	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 86	82.32	40240.54	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin 87	51.67	23976.77	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin A	51.01	23952.04	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin B	47.61	25105.22	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin C	76.13	40499.47	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basin D	82.58	45724.44	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

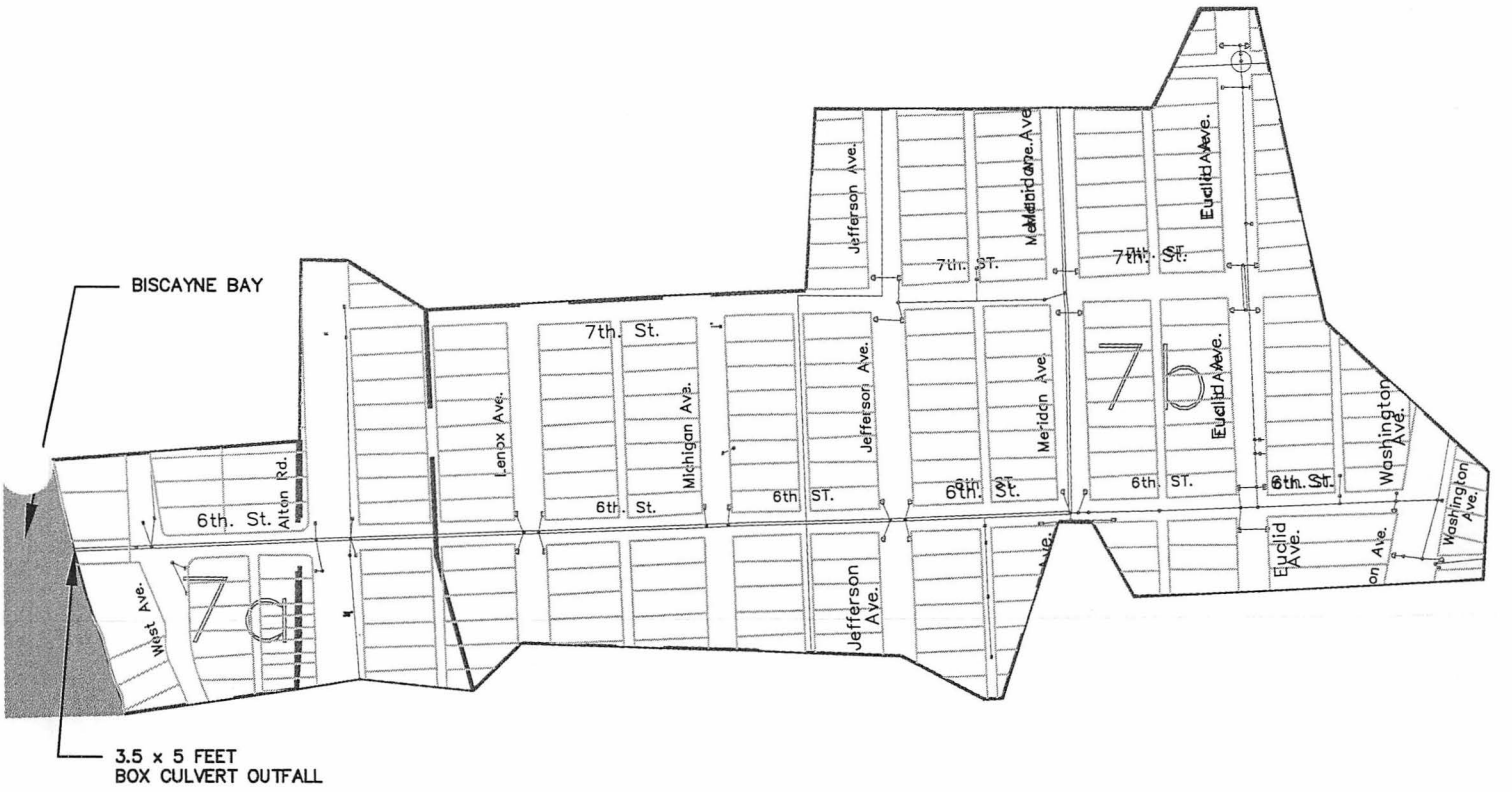


OVER 36" OUTFALLS BASINS



BASIN A LIMITS

(INCLUDES BASINS 3, 158, 2D AND 2B)



BASIN B LIMITS

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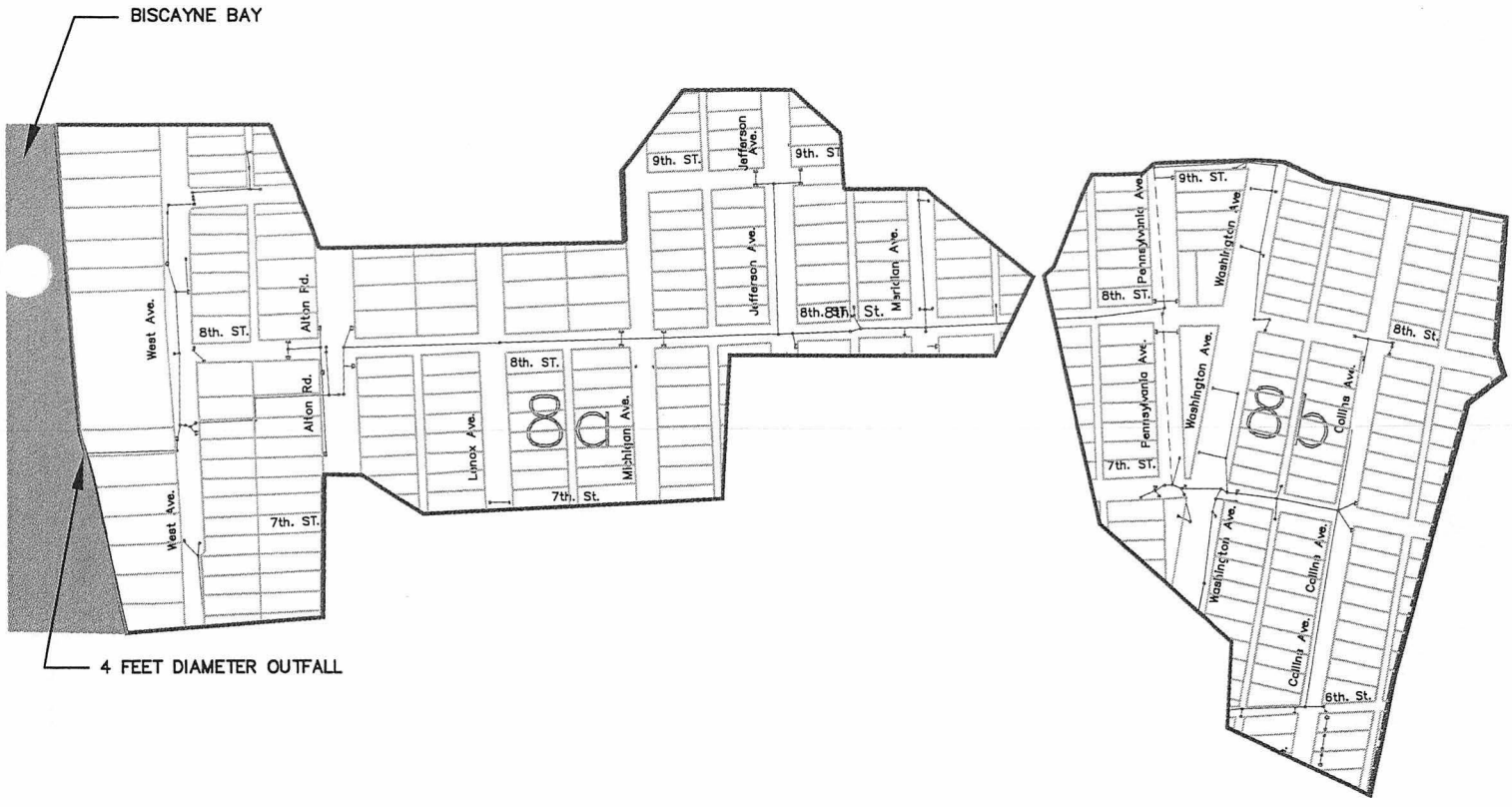

BASIN C LIMITS

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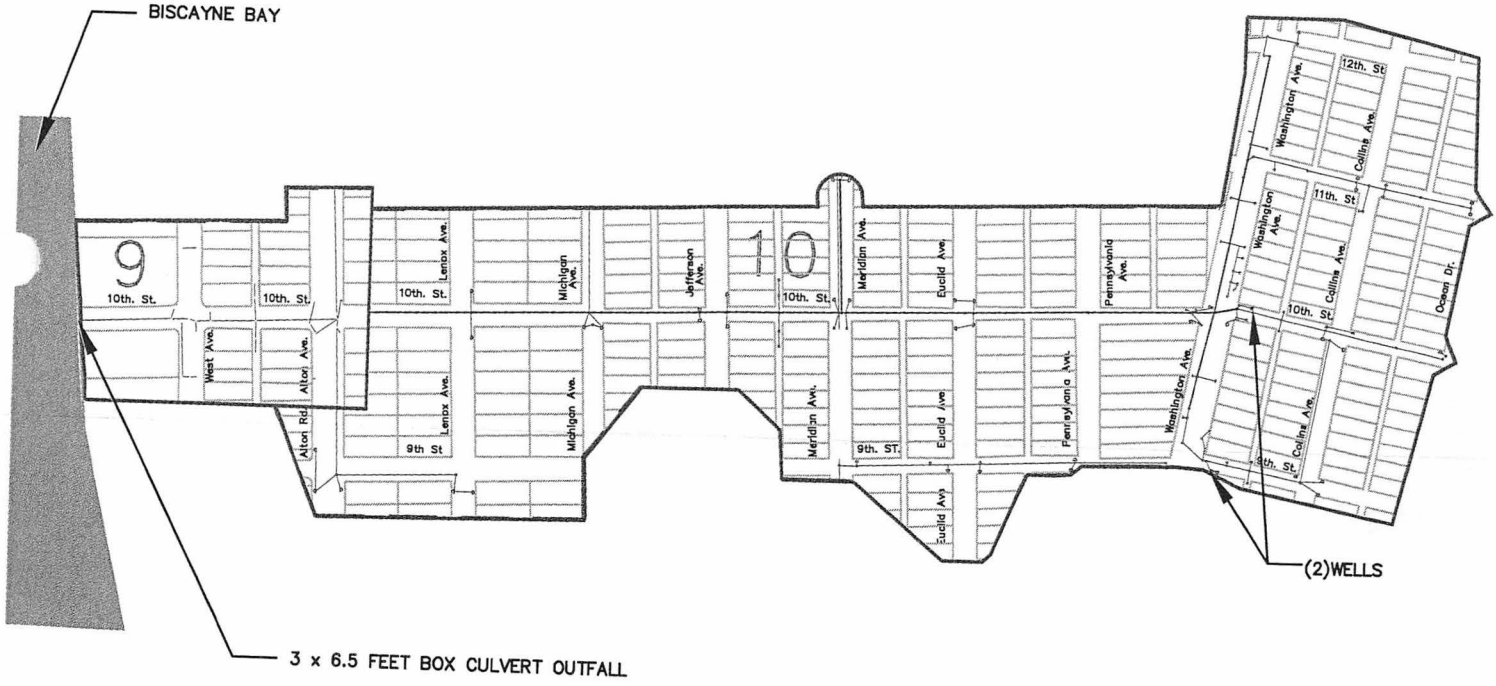

BASIN D LIMITS

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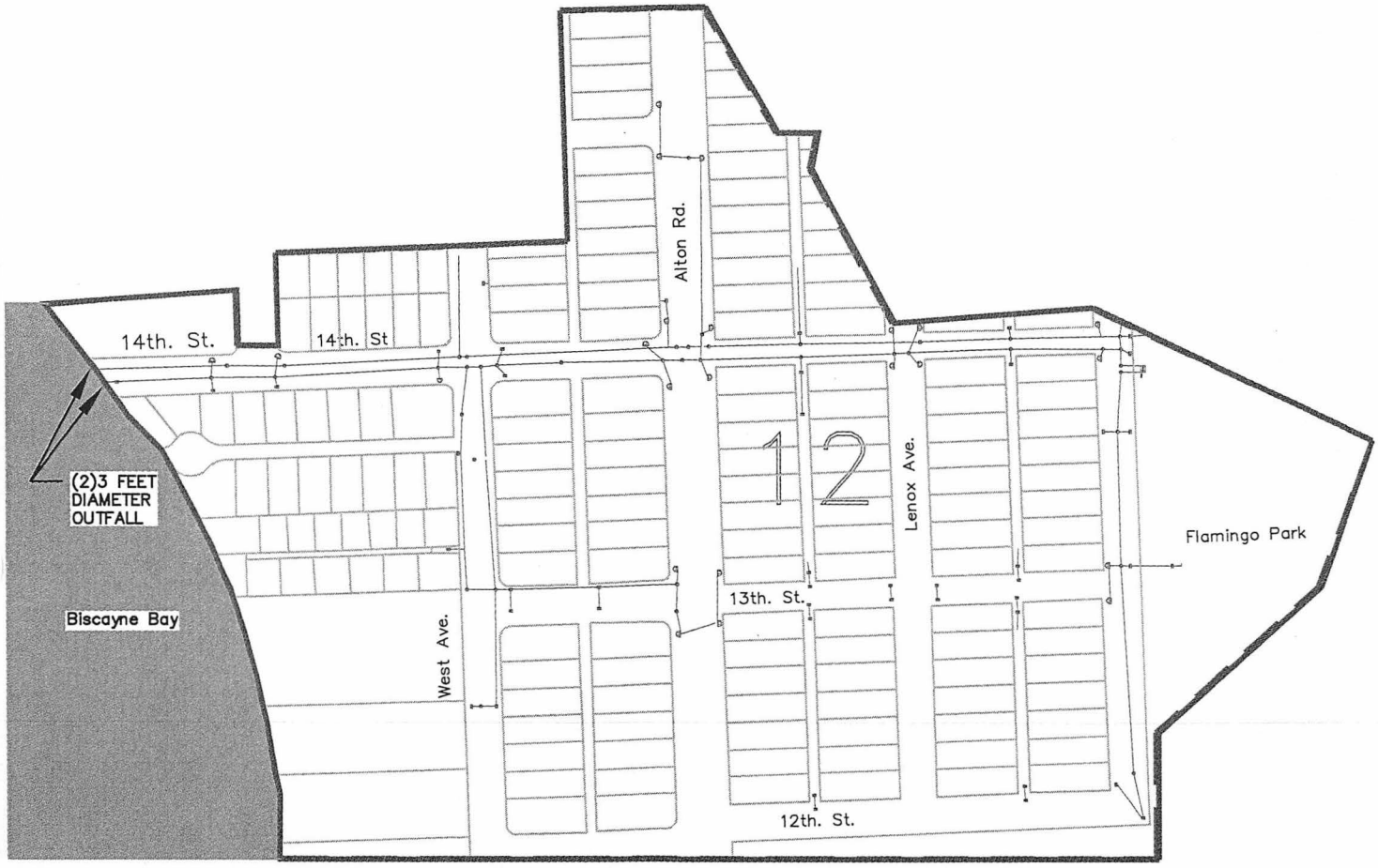

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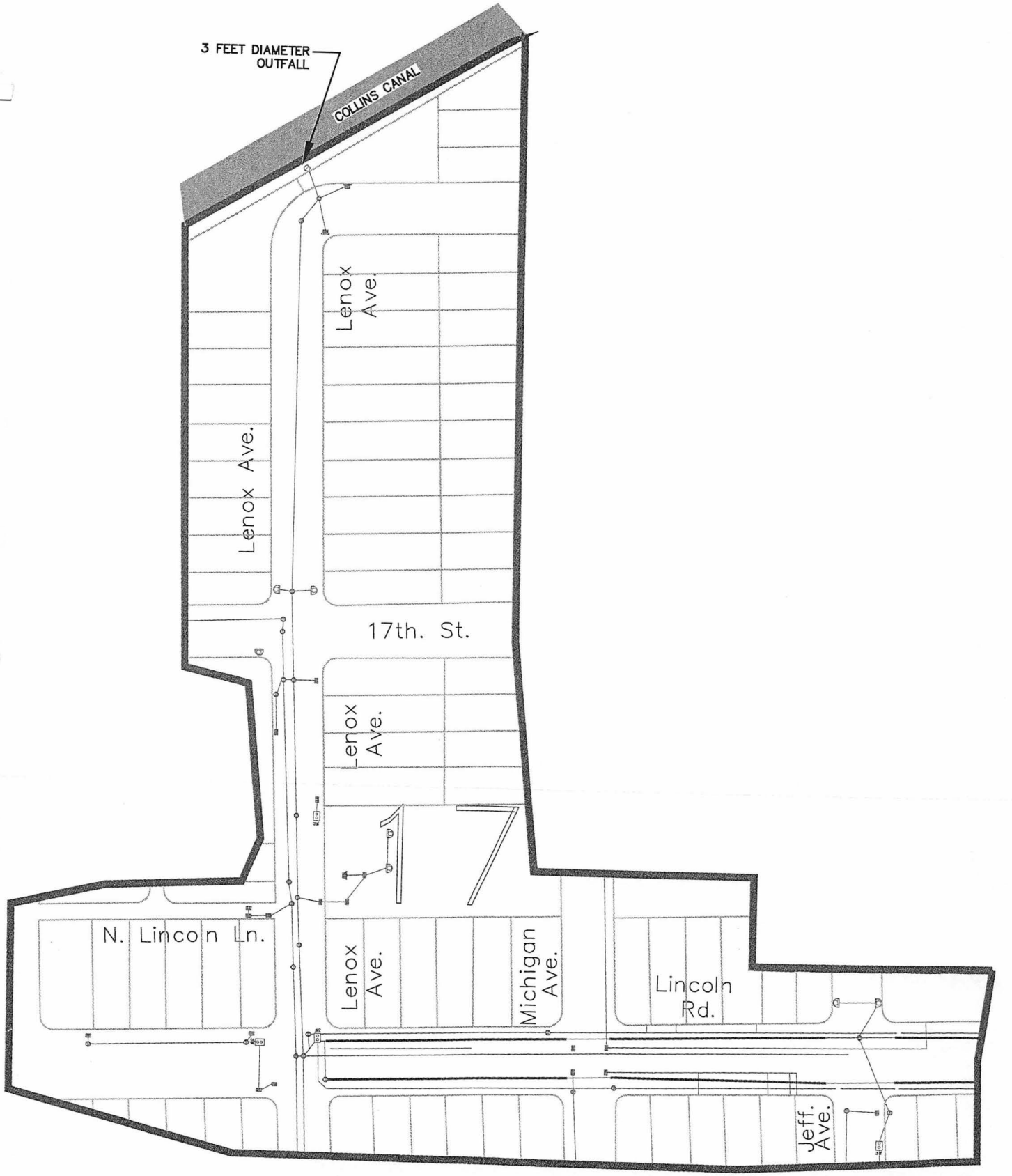
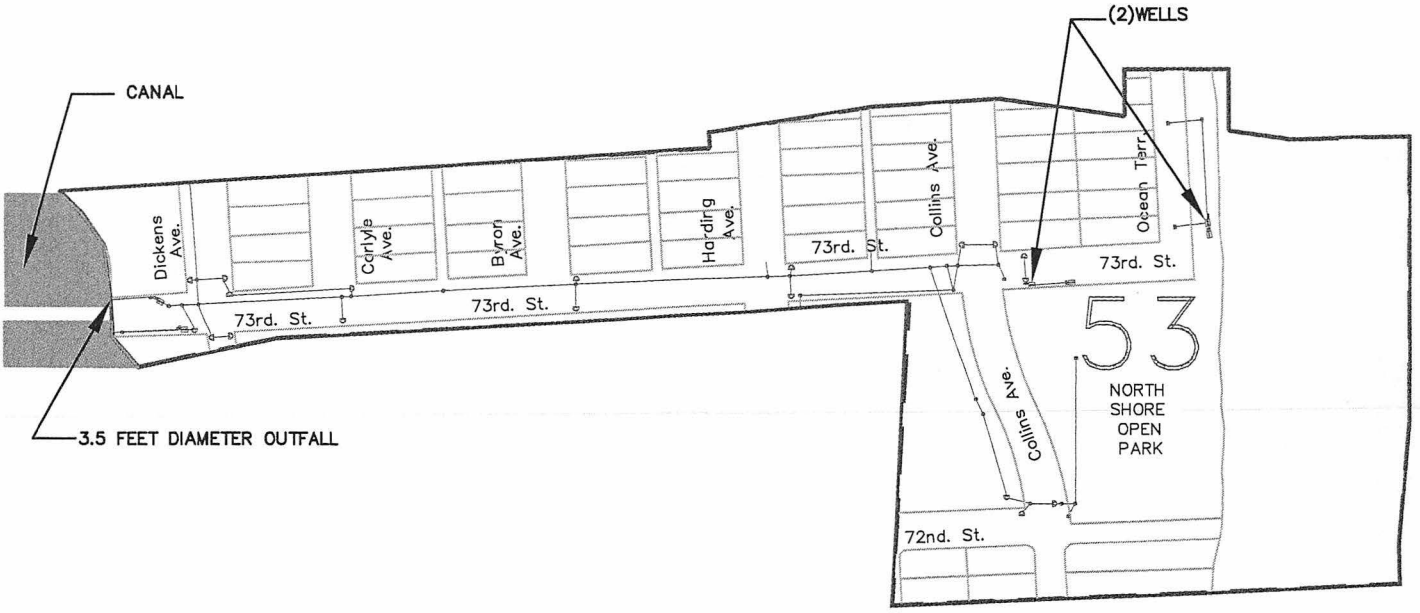


BASIN 17 LIMITS

BASIN 23 LIMITS



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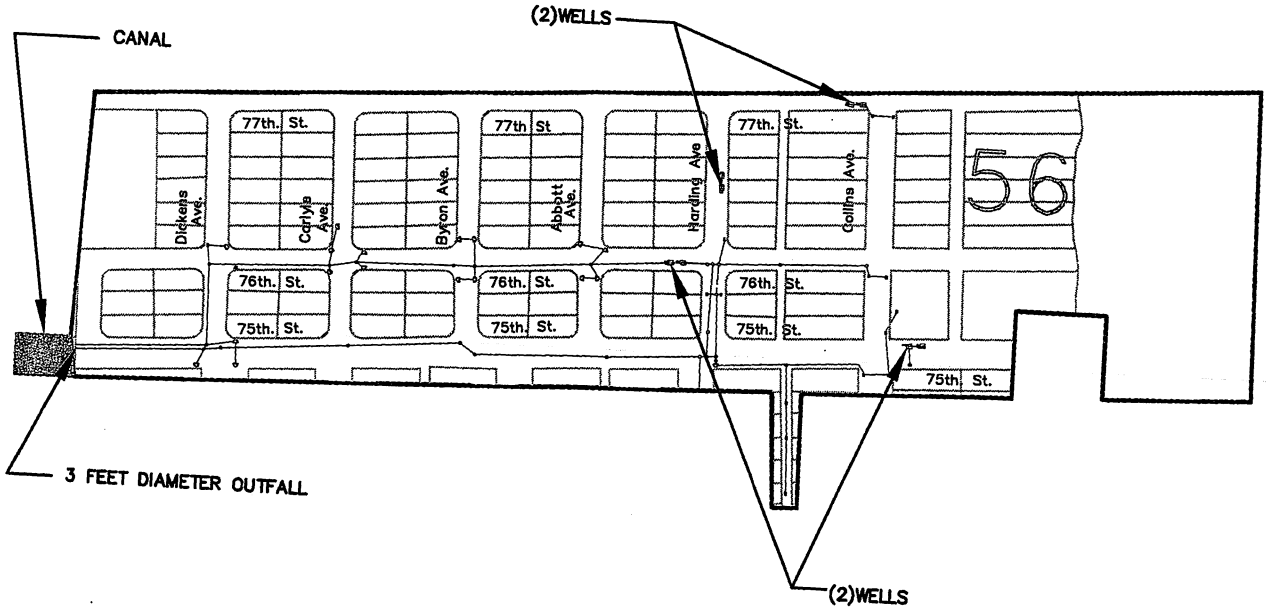

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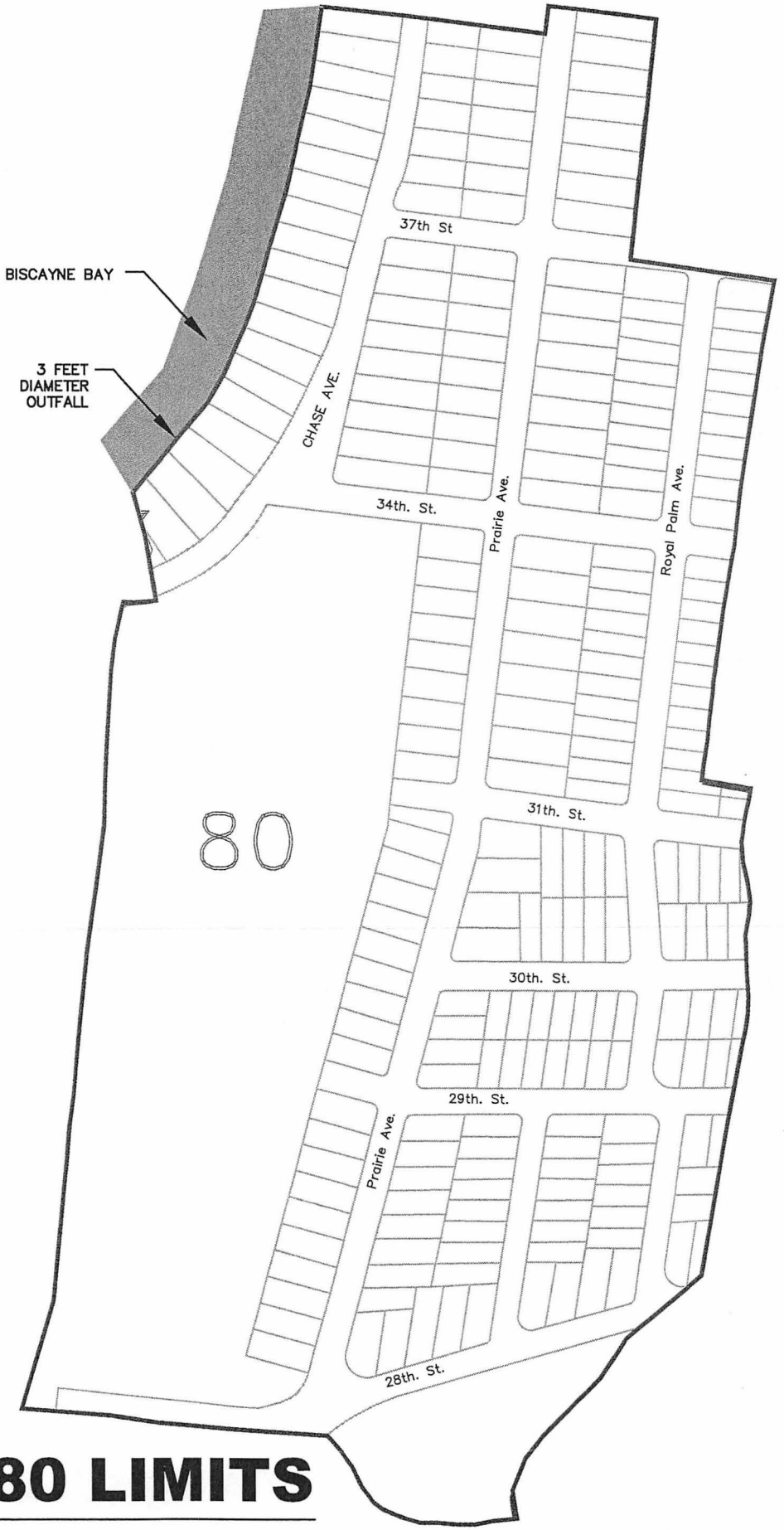

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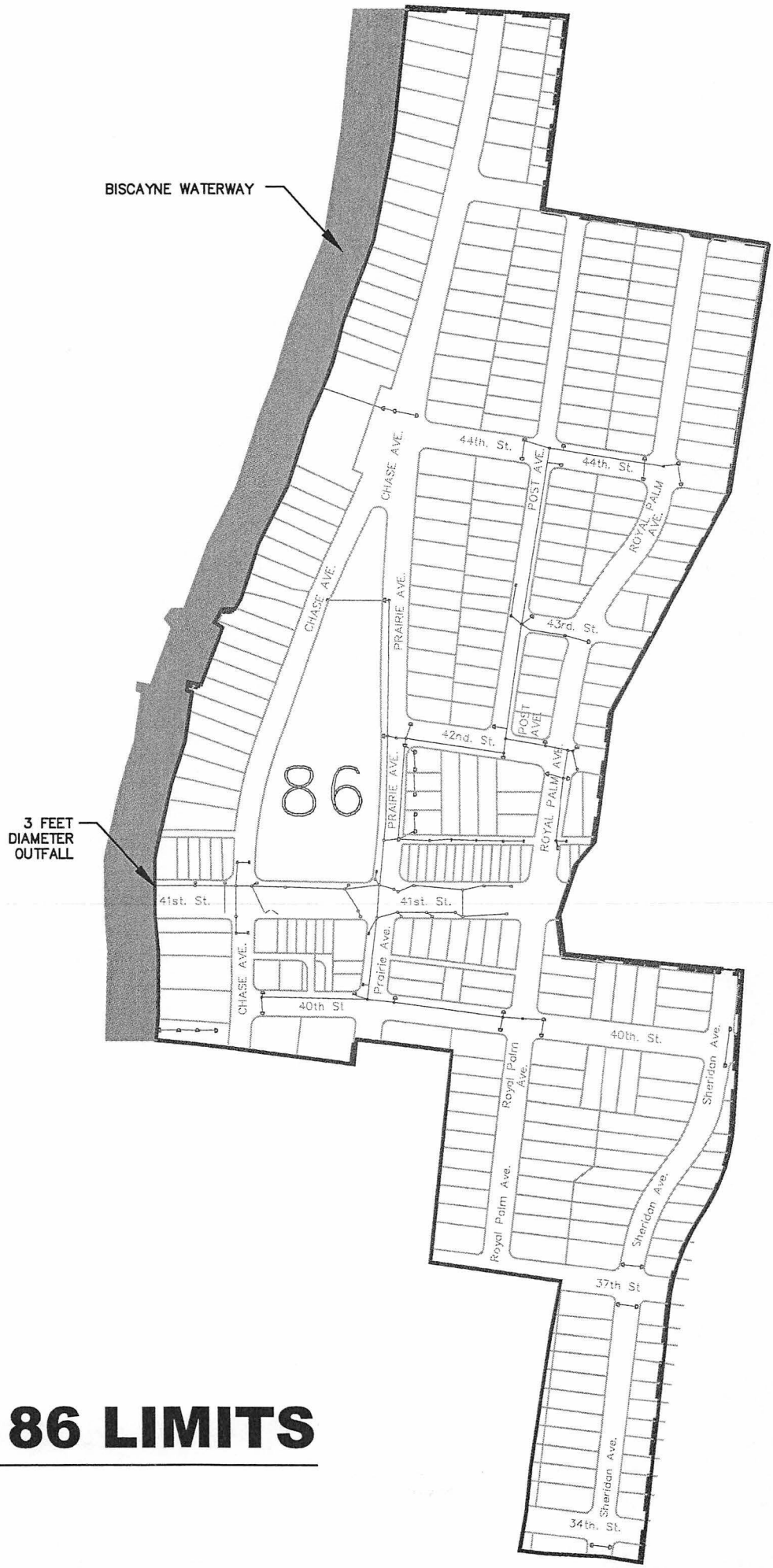

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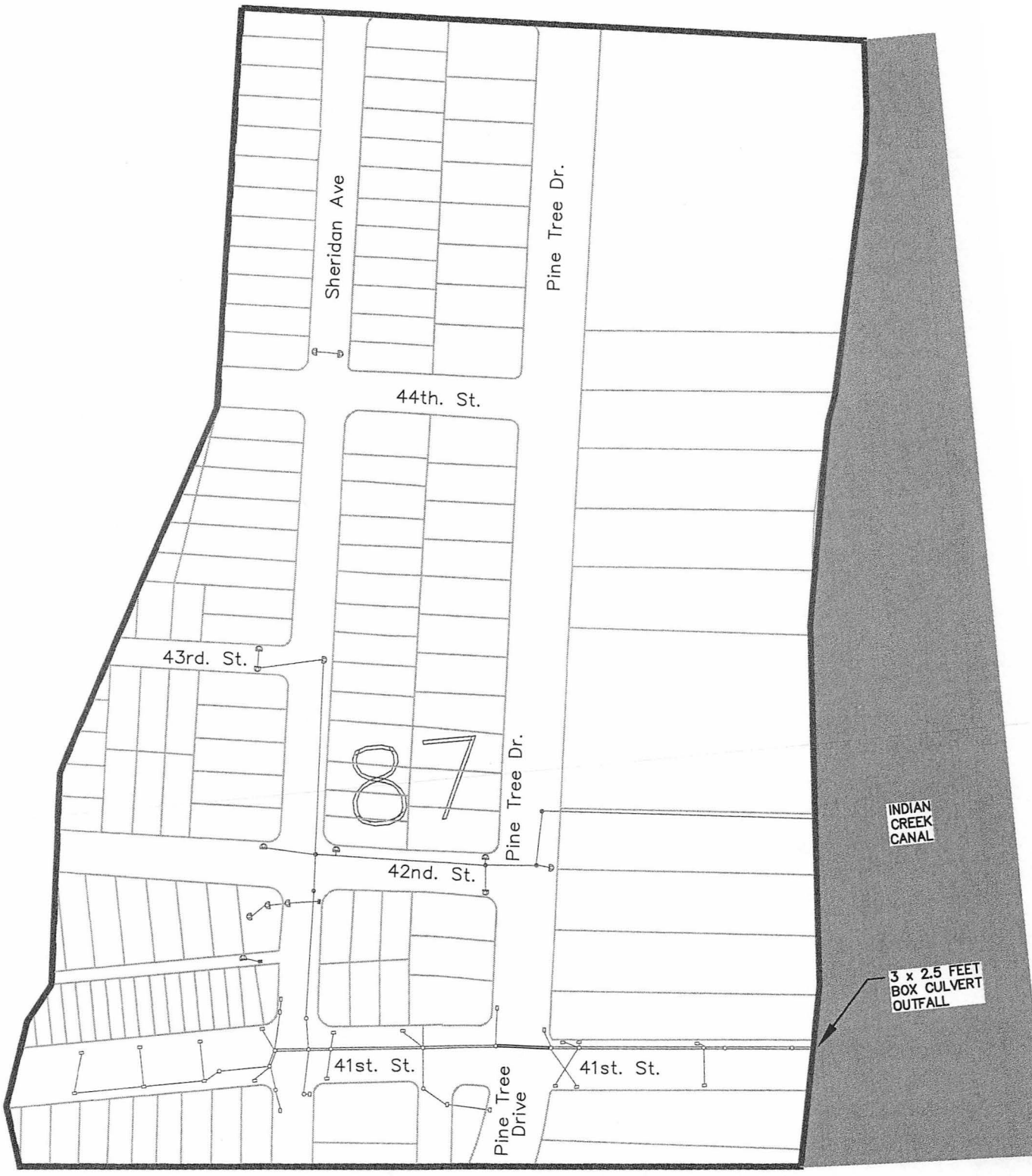

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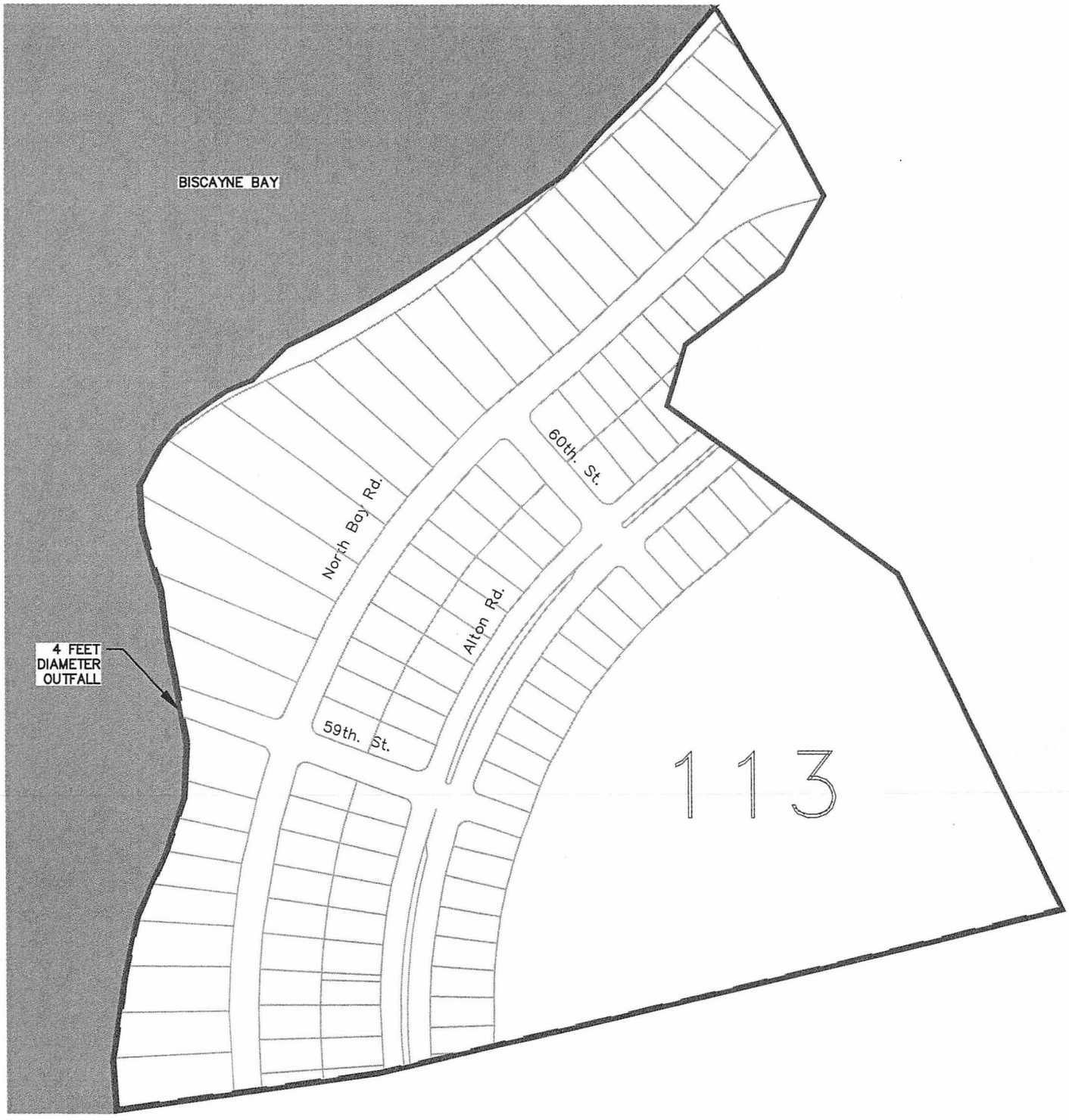

BASIN 113 LIMITS