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 Delray Beach		
B.	Permit Name: Palm Beach County Municipal Separate Storm Sewer System		
C.	Permit Number: FLS000018-003 (Cycle 3)		
D.	Annual Report Year: ☐ Year 1 X Year 2 ☐ Year 3 ☐ Year 4 ☐ Year 5 ☐ Other, specify Year:		
E.	Reporting Time Period (month/year): 10/01/2011 through 09/30/2012		
F.	Name of the Responsible Authority: David T. Harden		
	Title: City Manager		
	Mailing Address: 100 NW 1st Avenue		
	City: Delray Beach, FL	Zip Code: 33444	County: Palm Beach
	Telephone Number: 561-243-7322	Fax Number: 561-243-7199	
	E-mail Address: Harden@mydelraybeach.com		
G.	Name of the Designated Stormwater Management Program Contact (if different from Section I.F above): Randal Krejcarek, PE, LEED AP, GISP		
	Title: City Engineer		
	Department: Environmental Services		
	Mailing Address: 434 South Swinton Avenue		
	City: Delray Beach, FL	Zip Code: 33444	County: Palm Beach
	Telephone Number: 561-243-7322	Fax Number: 561-246-7060	
	E-mail Address: Krejcarek@mydelraybeach.com		

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 X 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 X Not Applicable)
C.	Is the change in the total number of outfalls due to lands annexed or vacated? ☐ Yes ☐ No X 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 as a joint effort by the Palm Beach County Co-permittees. Please see the Palm Beach County Joint Annual Report for the monitoring information.
B.	Provide a brief discussion of the monitoring results to date: • Please see the Palm Beach County Joint Annual Report for the monitoring information." • See Part V of the permit for the monitoring requirements.
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: $2,353,637.50 (10/11-09/12) *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: $2,870,390.00

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

Title: City Manager

Signature: David T. Harden Date: 12/28/2012

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.* 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.* **Entity Performing the Activity** **CI**: Community Improvement **CE**: Code Enforcement **CM/PI**: City Manager Public Information **ENG**: Engineering **CO**: Construction **FD Sp Ops**: Fire Department Special Operations **FI**: Finance **IPP/BF**: Industrial Pretreatment, Back Flow **IT**: Information Technology **LPC**: Litter Prevention Coordinator **PR**: Parks and Recreation **PW**: Public Works **SA**: Stormwater Administrator **SAM**: Stormwater and Me **UT**: Utilities **W/S**: Water/Sewer				

SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE										
A.	B.						C.	D.	E.	F.
Permit Citation/SWMP Element	Permit Requirement/Quantifiable SWMP Activity						Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	Type of Structure	Number of Activities Performed						Documentation / Record	Entity Performing the Activity	Comments
		Total Number of Structures	Number of Inspections	Percentage Inspected	Number of Maintenance Activities	Percentage Maintained				
	Exfiltration trench / French drains (linear feet)	12,211	0	0	3,476	28.5		S:\PW SW Monthly Report for NPDES 2011-12.xls	PW	See Attachment 2
	Grass treatment swales (square feet)	22,977	6,068	26.4	4,803	20.9		S:\PW SW Monthly Report for NPDES 2011-12.xls	PW	
	Dry detention systems	22	19	82.6	225	100		S:\PW SW Monthly Report for NPDES 2011-12.xls	PW	
	Wet detention systems	1	0	0	5	100		S:\PW SW Monthly Report for NPDES 2011-12.xls	PW	
	Pollution control boxes	7	7	100	3	42.9		S:\PW SW Monthly Report for NPDES 2011-12.xls	PW	See Attachment 2
	Stormwater pump stations	7	77	100	14	100		S:\PW SW Monthly Report for NPDES 2011-12.xls	PW	
	Major stormwater outfalls	23	0	0	0	0		S:\PW SW Monthly Report for NPDES 2011-12.xls	PW	See Attachment 2
	Weirs or other control structures	7	7	100	3	42.9		S:\PW SW Monthly Report for NPDES 2011-12.xls	PW	See Attachment 2
	MS4 pipes (linear feet)	107,214	1,276	1.2	6,980	6.5		S:\PW SW Monthly Report for NPDES 2011-12.xls	PW	See Attachment 2
	Inlets / catch basins / grates	2,630	235	8.9	3	0.1		S:\PW SW Monthly Report for NPDES 2011-12.xls	PW	
	ATTACH explanation if any of the minimum inspection frequencies in Table II.A.1.a were not met							Inspection Frequency Explanation 2011-12.doc	PW/SA	See Attachment 2
	Year 1 ONLY: Attach a map of all known major outfalls as per Rule 62-624.600(2)(a), F.A.C.									
Part III.A.2	Areas of New Development and Significant Redevelopment									

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	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. This provision DOES NOT APPLY to Indian Trail Improvement District (ITID), Northern Palm Beach County Improvement District (NPBCID), South Indian River Water Control District (SIRWCD), and FDOT.*				
	Number of new development / significant redevelopment projects reviewed	5	S:\EngAdmin\TAC\TAC Project and Assets\Tac Reports.accdb	ESD Engineering	
	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. This provision DOES NOT APPLY to ITID, NPBCID, SIRWCD, and FDOT.*				
	Year 2 ONLY: Attach the summary report of the review activity		S:\ATTACH6.Code and LDR Review 2012.docx	SA	Attachment #6
	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. *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	Parks Maintenance Management Report Detail Activity Report (Hansen's)	PR	There are two different litter programs. One by employee work orders and one by city generated public education. They are run differently. City workers daily, public involvement included events such as the neighborhood and coastal cleanups.
	PERMITTEE Litter Control Program: Hours of Maintenance	7,558.47	Parks Maintenance Management Report Detail Activity Report (Hansen's/Cartegraph)	PR	City made transition from Hansen's to Cartegraph
	CONTRACTOR Litter Control Program: Frequency of litter collection	0	0	0	City does not use contractor
	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.				

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Permit Citation/SWMP Element	**Permit Requirement/Quantifiable SWMP Activity**	**Number of Activities Performed**	**Documentation / Record**	**Entity Performing the Activity**	**Comments**
	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.				
	International Coastal Cleanup Events: Total miles cleaned	2.00	Known path measured on Google Earth	Sandoway House, City staff and volunteers	
	Great American Coastal Cleanup Events: Estimated amount of litter collected (lbs)	200	Sandoway House email and Registration forms	Sandoway House, City staff and volunteers	
	Adopt-A-Street Program: Total miles cleaned	45	Neighborhood Association map scaled by Stormwater Administrator (hardcopy)	LPC and 13 different community services and businesses	
	Adopt-A-Street Program: Estimated amount of litter collected (pounds)	1,100	Adopt a Street Cumulative Report 2012.xls (Buce)	LPC and 13 different community services and businesses	
	Report on the street sweeping program, including the frequency of the sweeping, total miles swept, an estimate of the quantity of sweepings collected, and the total nitrogen (TN) and total phosphorus (TP) loadings that were removed by the collection of sweepings. If no street sweeping program is implemented, provide the explanation of why not in the Year 1 Annual Report. *DEP Note: Please provide an explanation in Column F for any "0" reported in Column C. Also, the permittee may choose its own unit of measurement for the amount of sweeping material collected. Unit options include: cubic yards, pounds, tons.* *DEP Note: If the permittee has curbs and gutters but no street sweeping program is implemented, the permittee must provide an explanation of why not in the Year 1 Annual Report. Refer to Part III.A.3 of the permit for the information that must be included in the explanation (including the alternate BMPs used or planned in lieu of street sweeping). Please provide the title of the attached explanation in Column D and the name of the entity who finalized the explanation in Column E.*				
	Frequency of street sweeping (days) for 695, 696 & 697	397.5	S:\PW SW Monthly Report for NPDES 2011-12.xls	PW	Daily
	Total curb miles swept (per year)	8,660.7	S:\PW SW Monthly Report for NPDES 2011-12.xls	PW	
	Total cubic yards collected 695	489	S:\PW SW Monthly Report for NPDES 2011-12.xls	PW	
	Estimated quantity of sweeping material collected 696, 697 (pounds)	768,850	S:\PW SW Monthly Report for NPDES 2011-12.xls	PW	
	Total nitrogen loadings removed (pounds)	639.34	S:\PW SW Monthly Report for NPDES 2011-12.xls against Median Value of Nutrient Removal table	PW	

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	Total phosphorus loadings removed (pounds)	409.95	S:\PW SW Monthly Report for NPDES 2011-12.xls against Median Value of Nutrient Removal table	PW	
	Year 1 ONLY: If have curbs and gutters, attach explanation of why no street sweeping program and the alternate BMPs used or planned				
	Annually review (and revise, as needed) and implement the permittee's written standard practices to reduce the pollutants in stormwater runoff from areas associated with road repair and maintenance, and from permittee-owned or operated equipment yards and maintenance shops that support road maintenance activities. Report the number of applicable facilities and the number of inspections conducted for each facility. *DEP Note: The permittee needs to "customize" this section by listing the names of the applicable facilities in Column B and the number of inspections of each facility in Column C. Add more rows if necessary. If "0" is reported in Column C for the number of inspections conducted and the permittee has one or more applicable facilities, please provide an explanation in Column F for why no inspections were conducted. In addition, if the same facility is applicable under both Parts III.A.3 and III.A.5 of the permit, the same site inspection can count towards both inspection requirements as long as it covers the applicable waste area(s). Be sure to report the site inspection under both Parts III.A.3 and III.A.5.*				
		Number of Inspections			
	Roll off (transfer station):	4	Daily Log for Well field Operating Permit/Spill Incident Report (Rummell hardcopy)	Fleet Superintendent	434 S. Swinton Ave., Delray Beach FL 33444
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	0	Capital Improvement Plan Fiscal Years 2010-2016	ENG	
	Flood control projects completed during the reporting period that did not include stormwater treatment	0	Capital Improvement Plan Fiscal Years 2010-2016	ENG	
	ATTACH a list of the flood control projects that did not include stormwater treatment and an explanation for each of why it was not		Capital Improvement Plan Fiscal Years 2010-2016	ENG	N/A
	Stormwater retrofit projects planned	2	Capital Improvement Plan Fiscal Years	ENG	

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			2010-2016		
	Stormwater retrofit projects under construction during the reporting period	5	Capital Improvement Plan Fiscal Years 2010-2016	ENG	
	Stormwater retrofit projects completed during the reporting period	3	Capital Improvement Plan Fiscal Years 2010-2016	ENG	
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			
	Public Works Fleet:	4	Daily Log for Well field Operating Permit/Spill Incident Report (Rummell hardcopy)	Fleet Superintendent	434 S. Swinton Ave., Delray Beach, FL 33444
Part III.A.6	**Pesticides, Herbicides, and Fertilizer Application**				
	Continue to require proper certification and licensing by the Florida Department of Agriculture and Consumer Services (FDACS) for all applicators contracted to apply pesticides, herbicides, or fertilizers on permittee-owned property, as well as any permittee personnel employed in the application of these products. Report the number of permittee personnel applicators and contracted commercial applicators of pesticides and herbicides who are FDACS certified / licensed. Report the number of permittee personnel and contractors who have been trained through the Green Industry BMP Program, and the number of contracted commercial applicators of fertilizer who are FDACS certified / licensed. *DEP Note: If "0" is reported in Column C for any of the reporting items, please include in Column F an explanation of why training was not provided to / obtained by personnel and contractors during the applicable reporting year, the most recent year that training / certification was previously provided / obtained, and the names of the personnel and contractors previously trained / certified.*				
	PERSONNEL: Florida Department of Agriculture and Consumer Services (FDACS) certified applicators of pesticides and herbicides	3	FL Dept. of Agriculture and Consumer Services (hardcopy in personnel file)	PR: Stevens, Rivera and Hazel	
	CONTRACTORS: FDACS certified / licensed applicators of pesticides	5	FL Dept. of Agriculture	Complete Property	

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	and herbicides		and Consumer Services (hardcopy in Finance file)	Services of S. FL, LV Superior, Tara Landscaping, Gator Landscaping	
	CONTRACTORS: FDACS certified / licensed applicators of fertilizer	5	FL Dept. of Agriculture and Consumer Services (hardcopy in Finance file)	Complete Property Services of S. FL, LV Superior, Tara Landscaping, Gator Landscaping	
	PERSONNEL: Green Industry BMP Program training completed	3	FL Dept. of Agriculture and Consumer Services (hardcopy in personnel file)	PR: Stevens, Rivera and Hazel	
	CONTRACTORS: Green Industry BMP Program training completed	0	FL Dept. of Agriculture and Consumer Services (hardcopy in Finance file)	0	New permit requirement by January 1, 2014
	Pursuant to SB 2080 (2009), all local governments are encouraged to adopt a Florida-friendly Landscaping Ordinance similar to the one set forth in the document "Florida-friendly Guidance Models for Ordinances, Covenants and Restrictions." If the broader Florida-friendly ordinance described above is not adopted, then all local governments within the watershed of a nutrient-impaired water body shall adopt the Department's Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes pursuant to SB 494 (2009) or an ordinance that includes all of the requirements set forth in the Model Ordinance. The ordinance shall be adopted within 24 months of the date of permit issuance. Provide a copy of the adopted ordinance with the subsequent Year 1 or Year 2 Annual Report. *DEP Note: This provision DOES NOT APPLY to ITID, NPBCID, SIRWCD, and FDOT. For all other permittees, 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				Attachment #3
	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 unless the permittee chooses to reference the PBC Joint AR, as demonstrated in the first reporting item below. 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, and the PBC Joint AR is not referenced, please include in Column F an explanation for why no outreach was performed.* *DEP Note: All the permittees may refer to the PBC Joint AR in place of reporting individual items as demonstrated in the row below. The permittees may remove all reporting items except the first reporting item if they include reference to the PBC Joint AR. However, a permittee can choose to also report any outreach activities it performs in addition to the joint effort – in such a case, please keep the reporting items that are applicable.*				

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	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? X Yes ☐ No Amount of Funding = see Joint Report				
	Public education and outreach program	The public outreach and education plan is carried out as a joint effort by the Palm Beach County Co-permittees. Please see the Palm Beach County Joint Annual Report for the public education and outreach information.			
	Neighborhood presentations: Number conducted	0			
	Neighborhood presentations: Number of participants	0			
	Newspapers & newsletters: Number of articles/notices published	3	News for Neighborhoods 01/12, The News Wave 11/11, 03/12	CM/PI	
	Newsletters: Number of newsletters distributed	28,500 public and 850 employees	mydelraybeach.com	IT	
	School presentations: Number conducted	0			
	School presentations: Number of participants	0			
	~~During Year 1 of the permit, develop and implement a written plan for the training of all permittee personnel applicators and contracted applicators to emphasize the stormwater implications of pesticide, herbicide and fertilizer application. Follow-up training shall be provided annually. Training to obtain or maintain an FDACS certificate and/or license does not satisfy this requirement. Report the number of permittee personnel applicators and contracted applicators who participated in training on the stormwater implications of pesticide, herbicide and fertilizer application (both in-house and outside training).~~ ***DEP Note: This permit requirement has been removed from other Phase I MS4 permits that were reissued after the Palm Beach County MS4 permit since recent changes to the FDACS certification / licensing program have allowed it to adequately fulfill this requirement. Therefore, at this time, this permit requirement does not need to be implemented.***				
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				N/A
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.*				

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: 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: Refer to Part III.A.7.c of the permit for what must be included in the written proactive inspection program plan. Please provide the title of the attached plan in Column D and the name of the entity who finalized the plan in Column E.*				
	Proactive inspections for suspected illicit discharges / connections / dumping	452	IPP/BF Performance Measurement Reporting Schedule FY 2011/2012	IPP/BF	
	Illicit discharges / connections / dumping found during a proactive inspection	2	DeCarolis C:\PP.mdb	IPP/BF	Not a high risk facility
	Notices of Violation (NOVs) / warning letters / citations issued for illicit discharges / connections / dumping found during a proactive inspection	1	Certified letter to owner	IPP/BF	
	Fines issued for illicit discharges / connections / dumping found during a proactive inspection	1	IPP Performance Measurement Reporting Schedule FY 2011/2012	IPP/BF	In compliance Fine Paid
	Year 1 ONLY: Attach the written proactive inspection program plan				N/A
	Annually review (and revise, as needed) and implement the permittee's written procedures to conduct reactive investigations to identify and eliminate the source(s) of illicit discharges, illicit connections or improper disposal to the MS4, based on reports received from permittee personnel, contractors, citizens, or other entities regarding suspected illicit activity. Report on the reactive investigation program as it relates to responding to reports of suspected illicit discharges, including the number of reports received, the number of investigations conducted, the number of illicit activities found, and the number and type of enforcement actions taken. *DEP Note: If the number of reports received differs from the number of reactive investigations, please provide an explanation for the discrepancy in Column F. In addition, the permittee should re-word the "NOVs / warning letters / citations issued" reporting item to more accurately reflect its particular initial enforcement activity, if necessary.*				
	Reports of suspected illicit connections / discharges / dumping received	0		CE	
	Reactive investigations of reports of suspected illicit discharges/ connections / dumping	0		CE	
	Illicit discharges / connections / dumping found during a reactive investigation	0		CE	
	Notices of Violation (NOVs) / warning letters / citations issued for illicit discharges / connections / dumping found during a reactive investigation	0		CE	
	Fines issued for illicit discharges / connections / dumping found during a reactive investigation	0		CE	
	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. Follow-up training shall be provided annually. Report the number and type of training activities, and the number of permittee personnel and contractors trained (both in-house and outside training).				

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: 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	99 FD	32Field/99 FD		Query executed by Asst. Fire Chief and provided in memo.	SA/FD	
	Contractors trained	0	0		0	0	Being developed
Part III.A.7.d	**Illicit Discharges and Improper Disposal — Spill Prevention and Response**					
	Annually review (and revise, as needed) and implement the permittee's written spill-prevention/spill-response plan and procedures to prevent, contain, and respond to spills that discharge into the MS4. Report on the spill prevention and response activities, including the number of spills addressed. *DEP Note: The permittee may report the number of hazardous material spills separately from the number of non-hazardous material spills, or report one combined number, to more accurately reflect its tracking of these spills.*					
	Hazardous and non-hazardous material spills responded to		62	Query executed by Asst. Fire Chief and provided in memo	FD	
	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. Follow-up training shall be provided annually. Report the number and 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	99 FD	32field/99 FD		Query executed by Asst. Fire Chief and provided in memo.	SA/FD	Haz-mat training
	Contractors trained	0	0		0	0	City does not use contractors for spill response
Part III.A.7.e	**Illicit Discharges and Improper Disposal — Public Reporting**					
	During Year 1 of the permit, develop and implement a written public education and outreach program plan to promote, publicize, and facilitate public reporting of the presence of illicit discharges and improper disposal of materials into the MS4. Report on the public education and outreach activities that are performed or sponsored by the permittee within the permittee's jurisdiction to encourage the public reporting of suspected illicit discharges and improper disposal of materials, including the type and number of activities conducted, the type and number of materials distributed, the percentage of the population reached by the activities in total, and the number of Web site visits (if applicable). *DEP Note: The permittee should "customize" the list of public outreach activities by removing items or adding items to the list below as appropriate to their particular public outreach program. However, the reporting item of "Estimated percentage of the population reached by the activities in total" must remain*					

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**
	unless the permittee chooses to reference the PBC Joint AR, as demonstrated in the first reporting item below. 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, and the PBC Joint AR is not referenced, please include in Column F an explanation for why no outreach was performed. *DEP Note: All the co-permittees may refer to the PBC Joint AR in place of reporting individual items as demonstrated in the first line below. The co-permittees may remove all the other reporting items except the first one if they include reference to the PBC Joint AR. However, a permittee can choose to also report any outreach activities it performs in addition to the joint effort – in such a case, please keep the reporting items that are applicable.*				
	Public education and outreach program	The public outreach and education plan is carried out as a joint effort by the Palm Beach County Co-permittees. Please see the Palm Beach County Joint Annual Report for the public education and outreach information.			
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. 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 item of "Estimated percentage of the population reached by the activities in total" must remain unless the permittee chooses to reference the PBC Joint AR, as demonstrated in the first reporting item below. 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, and the PBC Joint AR is not referenced, please include in Column F an explanation for why no outreach was performed.* *DEP Note: All the co-permittees may refer to the PBC Joint AR in place of reporting individual items as demonstrated in the first line below. The co-permittees may remove all the other reporting items if they include reference to the PBC Joint AR. However, a permittee can choose to also report any outreach activities it performs in addition to the joint effort – in such a case, please keep the reporting items that are applicable.*				
	Public education and outreach program	The public outreach and education plan is carried out as a joint effort by the Palm Beach County Co-permittees. Please see the Palm Beach County Joint Annual Report for the public education and outreach information.			
Part III.A.7.g	**Illicit Discharges and Improper Disposal — Limitation of Sanitary Sewer Seepage**				
	Annually review (and revise, as needed) and implement the permittee's written procedures to reduce or eliminate sanitary wastewater contamination into the MS4, including discharges to the MS4 from sanitary sewer overflows (SSOs) and from inflow / infiltration from collection / transmission systems and/or septic tank systems. Advise the appropriate utility owner of a violation if constituents common to wastewater contamination are discovered in the MS4. Report on the type and number of activities undertaken to reduce or eliminate SSOs and inflow/ infiltration, the number of SSOs or inflow / infiltration incidents found and the number resolved, and the name of the owner of the sanitary sewer system within the permittee's jurisdiction. *DEP Note: The permittee needs to "customize" this section as it pertains to the type of activities undertaken to reduce or eliminate SSOs and inflow / infiltration into the MS4. The first three reporting items below are examples.* *DEP Note: The permittee should contact the appropriate authorities for accurate reporting information, such as the sanitary sewer system operator who is responsible for investigating and eliminating SSOs and the local health department who is responsible for permitting / overseeing septic tank systems.* *DEP Note: Report only the SSOs and inflow / infiltration incidents into the MS4.*				

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**
	Activity to reduce/eliminate SSOs and inflow / infiltration: Repair / lining of sanitary sewer system	1285 LF	Projects 12-030	W/S	
	Activity to reduce/eliminate SSOs and inflow / infiltration: Septic systems removed	0	Sanitary hookup tickets (hardcopy)	CI	No new connections this reporting period
	Activity to reduce/eliminate SSOs and inflow / infiltration: Emergency generator added	0	Utilities MaintSmart Program	UT	No incidents this reporting period requiring generator intervention. Nine permanent generators come on as needed; 30 city owned portables available.
	SSO incidents discovered	6	DeCarolis C:\PP.mdb	IPP/BF	
	SSO incidents resolved	6	DeCarolis C:\PP.mdb	IPP/BF	
	Inflow / infiltration incidents discovered	12 manholes	Project 11-046	W/S	Replacement of 12 manholes
	Inflow / infiltration incidents resolved	12	Project 11-046	W/S	In process of completion
	Name of owner of the sanitary sewer system	City of Delray Beach			
Part III.A.8.a	**Industrial and High-Risk Runoff — Identification of Priorities and Procedures for Inspections**				

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

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.

DEP Note: The TRI is updated every spring / summer by the U.S. EPA at www.epa.gov/triexplorer. Select "Facility" on the left, chose your Geographic Location, and then select "Generate Report." Please indicate in Column F when (month / year) you last checked EPA's TRI for applicable facilities.

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.

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

	Number of Facilities	Number of Inspections	For violations discovered during a high risk inspection				
			Fines issued	Notices of Violation (NOVs) / warning letters / citations issued			
Total high risk facilities	6				DeCarolis C:\IPP.mdb	IPP/BF	
New high risk facilities added to the inventory during the current reporting period	0				0	SA	No new high risk facilities found report generated 9/30/2012.
Operating municipal landfills	0	0	0	0	0	0	No municipal owned sites
Hazardous waste treatment, storage, disposal and recovery (HWTSDR) facilities	1	1	0	0	DeCarolis C:\PP.mdb	IPP/BF	SWA
EPCRA Title III, Section 313 facilities (that	0	0	0	0	0	0	No TRI facilities in EPA

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
	are not landfills or HWTSDR facilities)							database for Delray Beach zip codes
	Facilities determined as high risk by the permittee through the proactive inspections as per Part III.A.7.c	5	5	0	0	DeCarolis C:\IPP.mdb	IPP/BF	
	Other facilities determined as high risk by the permittee (that are not facilities identified through the proactive inspections)	0	0	0	0	0	IPP/BF	No new incidents leading to documentation.
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.							
	High risk facilities sampled				0	0	N/A	No new incidents leading to documentation.
Part III.A.9.a	**Construction Site Runoff — Site Planning and Non-Structural and Structural Best Management Practices**							
	Continue to implement the local codes or land development regulations and the written pre-construction site plan review procedures that require the use and maintenance of appropriate structural and non-structural erosion and sedimentation controls during construction to reduce the discharge of pollutants to the MS4. Report the number of permittee and private pre-construction site plans reviewed for stormwater, erosion, and sedimentation controls, and the number approved. *DEP Note: Please provide an explanation in Column F for any "0" reported in Column C.*							
	PERMITTEE SITES: Construction site plans reviewed				0	S:\EngAdmin\TAC\TAC Project and Assets\Tac Reports.accdb	ENG	No City projects requiring review during this reporting period
	PERMITTEE SITES: Construction site plans approved				0	S:\EngAdmin\TAC\TAC Project and Assets\Tac Reports.accdb	ENG	
	PRIVATE SITES: Construction site plans reviewed				30	S:\EngAdmin\TAC\TAC Project and Assets\Tac Reports.accdb	ENG	All have PPPs
	PRIVATE SITES: Construction site plans approved				30	S:\EngAdmin\TAC\TAC Project and Assets\Tac Reports.accdb	ENG	
	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				2	S:\EngAdmin\TAC\TAC Project and Assets\Tac Reports.accdb	ENG	All have PPPs
	Confirmed ERP coverage				2	S:\EngAdmin\TAC\TAC Project and Assets\Tac Reports.accdb	ENG	
	Notified of CGP stormwater permit requirements				3	S:\EngAdmin\TAC\TAC	ENG	

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**
			Project and Assets\Tac Reports.accdb		
	Confirmed CGP coverage	3	S:\EngAdmin\TAC\TAC Project and Assets\Tac Reports.accdb	ENG	
Part III.A.9.b	**Construction Site Runoff — Inspection and Enforcement**				
	As an attachment to the Year 1 Annual Report, the permittee shall submit a written plan that details the standard operating procedures for implementation of the stormwater, erosion and sedimentation inspection program for construction sites discharging stormwater to the MS4. The permittee shall implement the plan for inspecting construction sites immediately upon written approval by the Department. Prior to Department approval, the permittee shall continue to perform inspections in accordance with its previously developed construction site inspection procedures. Report on the inspection program for privately-operated and permittee-operated construction sites, including the number of active construction sites during the reporting year, the number of inspections of active construction sites, the percentage of active construction sites inspected, and the number and type of enforcement actions / referrals taken. *DEP Note: If "0" is reported in Column C for the number of inspections conducted, please provide an explanation in Column F of why no inspections were conducted. If the number of inspections reported is equal to or less than the number of active construction sites, or the percentage inspected is less than 100%, please provide an explanation in Column F. In addition, the permittee should re-word the "NOVs / warning letters / citations issued" reporting item to more accurately reflect its particular initial enforcement activity, if necessary.* *DEP Note: Refer to Part III.A.9.b of the permit for what must be included in the construction site inspection program plan. Please provide the title of the attached plan in Column D and the name of the entity who finalized the plan in Column E.*				
	PERMITTEE SITES: Active construction sites	10	2010-074, 2007-013, 2010-098	CO	
	PERMITTEE SITES: Inspections of active construction sites for proper stormwater, erosion and sedimentation BMPs	251	S:\EngAdmin\Storm Water\StormWater PPP.mdb	CO	
	PERMITTEE SITES: Percentage of active construction sites inspected	100	S:\EngAdmin\Storm Water\StormWater PPP.mdb	CO	
	PRIVATE SITES: Active construction sites	38	S:\EngAdmin\Storm Water\StormWater PPP.mdb	CO	
	PRIVATE SITES: Inspections of active construction sites for proper stormwater, erosion and sedimentation BMPs	960	S:\EngAdmin\Storm Water\StormWater PPP.mdb	CO	
	PRIVATE SITES: Percentage of active construction sites inspected	100	S:\EngAdmin\Storm Water\StormWater PPP.mdb	CO	
	Notices of Violation (NOVs) / warning letters / citations issued	0	S:\EngAdmin\Storm Water\StormWater PPP.mdb	CO	In compliance
	Stop Work Orders issued	0	S:\EngAdmin\Storm Water\StormWater PPP.mdb	CO	In compliance
	Fines issued	0	S:\EngAdmin\Storm Water\StormWater PPP.mdb	CO	In compliance
	Year 1 ONLY: Attach the written construction site inspection				

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**
	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) and private persons involved in the site plan review, inspection or construction of stormwater management, erosion, and sedimentation controls. All inspectors 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. Follow-up training shall be provided annually. Report the number and 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 persons 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 persons during the applicable reporting year.

DEP Note: The permittee should report only the number of staff and private persons (i.e., private construction site operators) trained / certified during the applicable reporting year, and then note in Column F the number of staff and private persons 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		Certificates, sign in sheets	FDEP and FDEP certified trainers.	Initially 14 employees certified, 16 certified and non-certified viewed refresher video
Permittee construction site plan reviewers	2	0	1		Certificates, sign in sheets	FDEP and FDEP certified trainers.	
Permittee construction site operators	1	0	3		Certificates, sign in sheets	FDEP and FDEP certified trainers.	
Private persons	0	0			Sign in sheet	PBC Steering Committee	PBC Joint Annual Report and website

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.*
		N/A

SECTION VIII. CHANGES TO THE STORMWATER MANAGEMENT PROGRAM (SWMP) ACTIVITIES (Not Applicable In Year 4)		
B.	**Permit Citation/ SWMP Element**	**Changes to the Stormwater Management Program Activities NOT Established as Specific Requirements Under Part III.A of the Permit (Including the Rationale for the Change)** *DEP Note: There may be changes deemed necessary after developing / reviewing your plans and SOPs as per Part III.A of the permit, after completing your SWMP evaluation as per Part VI.B.2 of the permit, or due to a TMDL / BMAP as per Part VIII.B of the permit.*
		N/A

CHECKLIST A: ATTACHMENTS TO BE SUBMITTED WITH THE ANNUAL REPORTS

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

Attached	N/A	Rule / Permit Citation	Required Attachment	Attachment Number	Attachment Title
X	☐	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.	1	Attachment #1Program Resource Explanation
X	☐	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.	2	Attachment #2: Minimum Inspection Frequency Explanation
☐	X	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.		
☐	X	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.		
X	☐	Part V.B.9	**EACH ANNUAL REPORT:** Reporting and assessment of monitoring results. **[Also addressed in Section III of the Annual Report Form]**		Refer to Joint Annual Report
X	☐	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	Attachment #3: SWMP Effectiveness
☐	X	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.		
☐	X	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).		
☐	X	Rule 62-624.600(2)(a), FAC	**YEAR 1:** An inventory of all known major outfalls and a map depicting the location of the major outfalls (hard copy or CD-ROM).		
☐	X	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.		
X	☐	Part III.A.6	**YEAR 1 or YEAR 2:** A copy of the adopted Florida-friendly Ordinance, if applicable.	4	Attachment #4: Florida Friendly Ordinance
☐	X	Part III.A.7.c	**YEAR 1:** A proactive illicit discharge / connection / dumping inspection program		
☐	X	Part III.A.9.b	**YEAR 1:** A construction site inspection program plan. **[For approval by DEP]**		
X	☐	Part II.A	**YEAR 2:** Stormwater Management Program (SWMP)	5	Attachment #5: Stormwater Management Program
X	☐	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.	6	Attachment #6: Code and LDR Review
☐	X	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.		
☐	X	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 /		
☐	X	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.		
☐	X	Part V.B.3	**YEAR 4:** The monitoring plan (with revisions, if applicable).		
☐	X	Part VII.C	**YEAR 4:** An application to renew the permit.		
☐	X	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
☐	☐	X	☐	Part III.A.1	SOP and/or schedule of inspections and maintenance activities of the structural controls and roadway stormwater collection system.
☐	☐	X	☐	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.
☐	☐	X	☐	Part III.A.3	SOP for the litter control program.
☐	☐	X	☐	Part III.A.3	SOP for the street sweeping program.
☐	☐	X	☐	Part III.A.3	SOP for inspections of equipment yards and maintenance shops that support road maintenance activities.
☐	☐	X	☐	Part III.A.5	SOP for inspections of waste treatment, storage, and disposal facilities not covered by an NPDES stormwater permit.
☐	☐	X	☐	Part III.A.6	Plan for public education and outreach on reducing the use of pesticides, herbicides and fertilizer.
N/A	N/A	N/A	N/A	Part III.A.6	~~Plan for pesticide, herbicide and fertilizer application training~~ *DEP Note: A plan is not necessary since the FDACS certification / licensing program adequately fulfills the permit requirement.*
☐	☐	X	☐	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.
☐	☐	X	☐	**Part III.A.7.c**	**Plan for proactive illicit discharge / connections / dumping inspections.***
☐	☐	X	☐	Part III.A.7.c	SOP for reactive illicit discharge / connections / dumping investigations.
☐	☐	X	☐	Part III.A.7.c	Plan for illicit discharge training.
☐	☐	X	☐	Part III.A.7.d	SOP for spill prevention and response efforts.
☐	☐	X	☐	Part III.A.7.d	Plan for spill prevention and response training.
☐	☐	X	☐	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.
☐	☐	X	☐	Part III.A.7.f	Plan for public education and outreach on the proper use and disposal of oils, toxics and household hazardous waste.
☐	☐	X	☐	Part III.A.7.g	SOP to reduce / eliminate sanitary wastewater contamination of the MS4.
☐	☐	X	☐	Part III.A.8	SOP for inspections of high risk industrial facilities.
☐	☐	X	☐	Part III.A.9.a	SOP for construction site plan review for stormwater, erosion and sedimentation controls, and ERP and CGP coverage.
☐	☐	X	☐	**Part III.A.9.b**	**Plan for inspections of construction sites.***
☐	☐	X	☐	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.	9/2/11
Part VIII.B.3.b	**12 MONTHS from effective date of permit:** TMDL Monitoring and Assessment Plan.	3/2/12
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).	9/2/13

END OF REVISED TAILORED MS4 AR FORM
CYCLE 3 PERMIT

ATTACHMENT #1: Program Resource Explanation

Permit #FLS000018-003

Palm Beach County Municipal Storm Sewer System

City of Delray Beach

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.

The subsequent annual budget has decreased but will not impact the implementation of the SWMP. The budget decrease is a reflection of the Capital Improvement projects variations for each respective fiscal year. The City of Delray Beach is committed to its responsibilities under the NPDES program and will continue to implement the SWMP.

ATTACHMENT #2: Inspection Frequency Explanation

Permit #FLS000018-003

Palm Beach County Municipal Storm Sewer System

City of Delray Beach

1) **Exfiltration Trench/French Drains:**

The cctv vehicle utilized for inspection purposes is shared with other City departments thus is subject to an annual rotational schedule. The vehicle and associated equipment were down and not operable for 2-3 months this year which caused a deviation from the normal schedule. Inspections for the infrastructure have been scheduled for early in the 2012-2013 permit year. The City is investigating an alternative solution to prevent future inspection frequency deficiencies and alleviate the reliance and dependence upon the cctv vehicle.

2) **Grass Treatment Swales:**

The City is currently in the process of transferring the MS4 inventory data from AUTOCAD to GIS. Continual updates to the MS4 inventory are made throughout the year and total square footage of all swales is revised as the data is processed and verified.

3) **Pollution Control Boxes:**

The City has 7 know pollution control boxes of which 3 are completely accessible. Routine inspections are conducted at these facilities. During annual inspections it was discovered that four of our pollution control devices are not fully accessible due to various impediments. The situation has been documented and the City is in the process of rectifying the situation.

4) **Major Stormwater Outfalls:**

The new inspection requirement was added in the previous year. An SOP was written and staff received in house training as to protocols and procedures during the current year. The inspection schedule was modified to incorporate the new requirement. Inspections are being conducted outside of the reporting period thus will be reflected in the 2012-2013 program report.

5) **MS4 Pipes/Inlets/Catch Basins/Grates**

The cctv vehicle utilized for inspection purposes is shared with other City departments thus is subject to an annual rotational schedule. The vehicle and associated equipment were down and

not operable for 2-3 months this year which caused a deviation from the normal schedule. Inspections for the infrastructure have been scheduled for early in the 2012-2013 permit year. The City is investigating an alternative solution to prevent future inspection frequency deficiencies and alleviate the reliance and dependence upon the cctv vehicle. The City is currently in the process of transferring the MS4 inventory data from AUTOCAD to GIS. Continual updates to the MS4 inventory are made throughout the year and total linear feet of all pipes is revised as the data is processed and verified.

ATTACHMENT #3: SWMP Effectiveness

Permit #FLS000018-003

Palm Beach County Municipal Storm Sewer System

City of Delray Beach

1) **Have stormwater pollutant loadings discharged from the MS4 decreased? Why or why not?**

   Based upon empirical data collected it would suggest there is a decrease in pollutant loadings discharged from the MS4. Generally speaking, the permit requires development of a SWMP with appropriate BMPs which when implemented should capture pollutants that were previously being discharged thus, decreasing overall pollutant loadings.

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

   All components of the SWMP are effectively reducing stormwater pollutant loadings to some degree. Some components, such as street sweeping and litter control, are more easily quantifiable thus appear to be more effective. Other programs, such as public education, are less quantifiable for direct pollutant loading reduction figures but are still valuable for overall system performance and effectiveness.

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

   All components of the SWMP are effectively working well. The City is proactive in managing operations and strives to stay current in both technology and administration. Advancements in asset management and workflow have been implemented within the City structure. This should result in overall enhancements in operational function and data management. As well the City has adopted a Florida Friendly Landscape Ordinance and is currently reviewing the drainage requirements within the Land Development Regulations. These advancements should further increase the effectiveness of the SWMP in reducing pollutant loadings.

4) **Which components of the SWMP do not contribute to reducing stormwater pollutant loads and could be revised or eliminated, and why?**

   All components of the SWMP are effectively reducing stormwater pollutant loadings to some degree. Some components, such as street sweeping and litter control, are more easily quantifiable thus appear to be more effective. Other programs, such as public education, are

less quantifiable for direct pollutant loading reduction figures but are still valuable for overall system performance and effectiveness.

5) **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 where stormwater retrofitting projects should be prioritized for implementation?**

The monitoring program provides a large scale picture view of the condition of the waterway system on a macro scale. General trends in data can be inferred to suggest relative effectiveness of the combined SWMPs as a whole within the entire NPDES permit area. The scope of the data and geographic bounds do not make the data conducive to gauging the effectiveness of specific BMPs. Groups of regional MS4s located within a particular sampling point's watershed/basin could utilize specific defined datasets to determine collective effectiveness of SWMPs and BMPs. The data could be used to determine locations of larger broad scale projects and potentially programmatic updates but is not useful for localized retrofitting issues within a particular MS4.

ATTACHMENT #4: Florida Friendly Ordinance

Permit #FLS000018-003

Palm Beach County Municipal Storm Sewer System

City of Delray Beach

Section 4.6.16 Landscape Regulations

(A) **Purpose**: The objective of this article is to improve the appearance of setback and yard areas in conjunction with the development of commercial, industrial, and residential properties, including off-street vehicular parking and open-lot sales and service areas in the City, and to protect and preserve the appearance, character and value of the surrounding neighborhoods and thereby promote the general welfare by providing minimum standards for the installation and maintenance of landscaping.

SECTION 4.6.16 (A)

4.6 - 69

This Section is further intended to fulfill objectives as contained within Conservation Element of the Comprehensive Plan, by providing for: the conservation of potable and non-potable water; the implementation of Florida-friendly landscaping principles; proper tree selection adjacent to or within utilities to mitigate damages which may be caused by trees; encouraging the creation or preservation of open space; maintaining permeable land areas essential to surface water management and aquifer recharge; encouraging the preservation of existing plant communities; encouraging the planting of site specific, native and drought tolerant plant materials; establishing guidelines for the installation and maintenance of landscape materials and irrigation systems; reducing air, noise, heat, and chemical pollution through the biological filtering capacities of trees; reducing the temperature of the microclimate through the process of evapotranspiration; and promoting energy conservation through the creation of shade. The provisions of this Section are minimum standards which may be increased in accordance with the guidelines contained herein as well as aesthetic criteria established by the Site Plan Review and Appearance Board and the Historic Preservation Board when applicable. Additional landscape requirements may be required for certain zoning districts and roadways as provided for elsewhere in these regulations. **[Amd. Ord. 6-12 2/21/12]; [Amd. Ord. 50-98 1/5/99]**

(B) **Applicability**: The provisions of this Section shall apply as follows:

(1) To the construction of single family homes, for which a building permit is applied for on or after October 1, 1990. Such properties shall comply with minimum standards set forth in Section 4.6.16(H)(1) and other applicable sections of 4.6.16; **[Amd. Ord. 22-96 5/21/96]**

(2) To existing development of all types, including, but not limited to, commercial, industrial and multi-family development including duplexes, but excluding single family detached dwellings on a single lot. Such development shall comply with the minimum standards set forth within Sections 4.6.16(C)(1) and 4.6.16(H)(6) and other applicable Sections of 4.6.16, in addition to all requirements set forth in the approved landscape plan of record. **[Amd. Ord. 6-12 2/21/12]; [Amd. Ord. 22-96 5/21/96]**

(3) To any new development, or any modification of existing development. That portion of the site which is being newly developed or modified must comply with the requirements contained herein; **[Amd. Ord. 22-96 5/21/96]**

(4) To any modification to existing development which results in an increase of 25% in the gross floor area of the structure, or structures, situated on the site. In such cases the entire site shall be upgraded to present landscape standards; **[Amd. Ord. 22-96 5/21/96]**

SECTION 4.6.16 (C)

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(C) **Compliance, Review, Appeal, and Relief**: **[Amd. Ord. 22-96 5/21/96]**

(1) **Compliance**:

(a) Prior to the issuance of a building permit for a structure or a paving permit, compliance with the requirements of Section 4.6.16 shall be assured through the review and approval of a landscape plan submitted pursuant to Section 2.4.3(C), including the following, if applicable: **[Amd. Ord. 6-12 2/21/12]; [Amd. Ord. 22-96 5/21/96]**

1. A landscape permit, which shall be required for all work whose landscape improvement valuation is greater than $1,000. **[Amd. Ord. 6-12 2/21/12]**

(b) Prior to upgrading landscaping on an existing site, a landscape plan shall be submitted which shall: **[Amd. Ord. 22-96 5/21/96]**

1. Be drawn to scale consistent with the site plan with crowded areas provided in a larger scale presentation. **[Amd. Ord. 22-96 5/21/96]**
2. Clearly delineate the existing and proposed parking spaces or other vehicular use areas, access aisles, sidewalks, building locations and similar features. **[Amd. Ord. 22-96 5/21/96]**
3. Clearly show property lines and all Right-of-Ways adjacent to existing property to be improved. **[Amd. Ord. 6-12 2/21/12]**
4. Contain a Statement of Intent as to the method and coverage of irrigation (irrigation systems require a separate permit; See Section 4.6.16(F) for additional irrigation regulations). **[Amd. Ord. 6-12 2/21/12]; [Amd. Ord. 22-96 5/21/96]**
5. Designate by name and location the plant material to be installed or preserved. **[Amd. Ord. 22-96 5/21/96]**
6. Show location of overhead lines and utility easements. **[Amd. Ord. 22-96 5/21/96]**
7. Show proposed or existing locations of refuse areas and methods of screening. **[Amd. Ord. 22-96 5/21/96]**
8. Show proposed or existing locations of free standing signs. **[Amd. Ord. 22-96 5/21/96]**

SECTION 4.6.16 (C) (1) (b) 9.

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9. Provide an Existing Tree Survey documenting all trees with a caliper equal to or greater than four (4) inches. All trees shall have a number or symbol that is referenced in a table. This table shall be shown on the Existing Tree Survey and shall document the botanical and common name, caliper, height and spread and overall condition for each tree. **[Amd. Ord. 6-12 2/21/12]**

10. Show landscape calculations in a legible tabular format. The type of calculations used will be determined by the property use. Single family dwellings shall utilize the Single family dwelling calculations. Duplexes shall utilize the Duplex calculations. Multi-family, Industrial and Commercial use properties shall utilize the Multifamily/ Industrial/Commercial calculations. **[Amd. Ord. 6-12 2/21/12]**

11. Show proposed plant material in a tabular form. Include botanical and common names, specifications, quantity and symbol (if applicable). **[Amd. Ord. 6-12 2/21/12]**

12. Be accompanied by a Landscape Cost Estimate when proposed landscape improvements are valued at $1,000 or more. Landscape improvements include the cost of material, labor and profit. **[Amd. Ord. 6-12 2/21/12]**

13. Label all plant material to be of Florida # 1 grade or better as illustrated in the Grades and Standards for Nursery Plants, Part 1 (current edition) by the Florida Department of Agriculture. All material that is graded lower than Florida # 1 quality shall be rejected. **[Amd. Ord. 6-12 2/21/12]**

14. Show all sight triangles in their proper locations. See Section 4.6.14. **[Amd. Ord. 6-12 2/21/12]**

15. Be prepared, signed and sealed by a Registered Landscape Architect. Exceptions include Single Family and Duplex Dwellings located in Single Family Zoning Districts that are not within an Overlay District that requires them to be prepared by a Registered Landscape Architect. **[Amd. Ord. 6-12 2/21/12]**

(c) The final completion of landscaping prior to issuance of the Certificate of Occupancy. All landscaping and related items shall be installed in accordance with this section before the Certificate of Occupancy is issued. **[Amd. Ord. 6-12 2/21/12]**

(2) **Review:** Landscape plans of existing properties shall be reviewed by City Staff as appointed by the Chief Building Official. The purpose of the review of landscape plans for existing duplex, industrial, commercial and multi-family properties is to determine if the plans meet the minimum required standards. **[Amd. Ord. 6-12 2/21/12]; [Amd. Ord. 22-96 5/21/96]**

SECTION 4.6.16 (C) (3)

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(3) **Appeals:** Appeal from the City Staff shall be to the Site Plan Review and Appearance Board or the Historic Preservation Board as applicable. Appeal from the Site Plan Review and Appearance Board or the Historic Preservation Board shall be to the City Commission. **[Amd. Ord. 6-12 2/21/12]; [Amd. Ord. 22-96 5/21/96]**

(4) **Relief**: Relief from the provisions of this Section shall only be granted through the waiver process [Section 2.4.7(B)] by the City Commission, Site Plan Review and Appearance Board or Historic Preservation Board as applicable. **[Amd. Ord. 22-96 5/21/96]**; **[Amd. Ord. 83-95 01/09/96]**

(D) **Site Planning and Design Requirements**: The following site design

standards, concepts, and practices shall be adhered to in the preparation of landscape plans. **[Amd. Ord. 6-12 2/21/12]**

(1) **Concepts for Water Conservation**: Creative site development concepts shall be used in order to promote water conservation. Water requirements may be reduced by providing for:

(a) The preservation of existing native plant communities;

(b) The re-establishment of native plant communities;

(c) The use of site specific plant materials;

(d) The use of shade trees to reduce transpiration rates of lower story plant materials;

(e) Limited amounts of lawn grass areas;

(f) Site development that retains storm runoff on site;

(g) The use of pervious materials for non landscaped and parking areas.

(2) **Preservation and Promotion of Existing Plant Communities**: All existing native plant communities on sites proposed for development shall be preserved where possible through their incorporation into the required open space. Existing plant communities that are specified to remain shall be preserved to the greatest extent possible with trees, understory, and ground covers left intact and undisturbed, except for the eradication of prohibited plant species.

(a) **Tree Protection**: Trees which are to be preserved on a site shall be protected from damage during the construction process according to appropriate tree protection techniques. The "Tree Protection Manual for Builders and Developers" published by the Division of Forestry of the State of Florida, Department of Agriculture and Consumer Service, shall be the standard for determining the appropriateness of proposed techniques. All trees which are to be preserved and do not survive shall be replaced by a tree of equal size or an equivalent number of trees based on trunk diameter. [See Section 3.4.6(G) re Tree Removal Permits]

SECTION 4.6.16 (D) (2) (b)

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(b) **Portion of Native Communities to Remain**: When natural plant communities occur on a parcel of land which is to be developed, at least twenty-five percent (25%) of the required open space must be in the form of preserved natural plant communities.

(c) **Native Species Required**: A portion of all plant materials required to be planted shall be native species. The percentage of native plant materials required shall be as follows:

(i) Effective October 1, 1990, twenty-five (25) percent of required trees and twenty-five (25) percent of all other required plant materials shall be native;

(ii) Effective October 1, 1991, thirty-five (35) percent of the required trees and twenty-five (25) percent of all other required plant materials shall be native;

(iii) Effective October 1, 1992, fifty (50) percent of the required trees and twenty-five (25) percent of all other required plant materials

shall be native.
(d) **Substitution of Mature, Exceptional Tree Specimens for Required Parking**: The intent of this section is to preserve those selected mature trees that are not able to be located in required landscape areas while maintaining a reasonable level of off-street parking for new or expanding multi-family, commercial, and industrial developments or redevelopments, as the preservation of these trees, in most instances, is of higher order than providing the exact amount of required off-street parking. **[Amd. Ord. 2-02 2/5/02]**
The City may require or the applicant may request the substitution of existing, mature, healthy, exceptional tree specimens for required parking spaces in instances where the following conditions are met: **[Amd. Ord. 2-02 2/5/02]**
1. Such trees are of a hardwood and/or deciduous variety and a minimum of twelve inches (12") in diameter measured one foot (1') above grade. **[Amd. Ord. 2-02 2/5/02]**
2. Such trees are free of disease and insects. **[Amd. Ord. 2-02 2/5/02]**
3. Every effort has been made in planning and design of parking areas to accommodate such trees in the landscape islands required in Section 4.6.16(H)(3). **[Amd. Ord. 2-02 2/5/02]**
4. Such trees are protected during construction as prescribed in Section 4.6.16(D)(2)(a). **[Amd. Ord. 2-02 2/5/02]**

SECTION 4.6.16 (D) (2) (d) 4.

The applicant shall indicate on the site plan the location of all required parking spaces and indicate those spaces that will be eliminated in order to preserve trees. The amount of parking spaces permitted to be eliminated for any project shall be determined on a case by case basis. **[Amd. Ord. 2-02 2/5/02]**
The Historic Preservation Board (HPB) or Site Plan Review and Appearance Board (SPRAB), as appropriate, may approve such requests or require such preservation provided the conditions of this subsection are met. **[Amd. Ord. 2-02 2/5/02]**
A decision of HPB or SPRAB disapproving a request for or requiring tree preservation may be appealed to the City Commission pursuant to LDR Section 2.4.7(E). **[Amd. Ord. 2-02 2/5/02]**
All tree(s) which are to be preserved under this section and do not survive shall be replaced by a tree a minimum of 18 feet in height with a 10 foot spread of canopy. The City Horticulturist shall approve such replacements. **[Amd. Ord. 2-02 2/5/02]**
(3) **Site Specific Planting Materials**: Trees and other vegetation used in the landscape design should be appropriate to the conditions in which they are planted, to the greatest extent, they shall be:
(a) Salt tolerant relative to the area in which they are planted;
(b) Able to withstand reduced water conditions if planted in sandy soils;

(c) Able to withstand wet conditions when planted around retention/ detention ponds or in swales;
(d) Deleted. **[Amd. Ord. 50-98 1/5/99]**
(4) **Tree Selection Adjacent to or Within Utility Easements**: Required perimeter landscape buffers often coincide with utility easements. Careful selection of tree species is essential to minimize conflicts as trees mature. Trees planted subsequent to the effective date of this ordinance shall meet the following criteria: **[Amd. Ord. 50-98 1/5/99]**
(a) The ultimate mature height and width of a tree to be planted should not exceed the available overhead growing space. Tree species shall be consistent with the recommendation in the most recent publication of Florida Power and Light Company's "Plant The Right Tree In The Right Place" (copies available from the Community Improvement Department), which provides recommendations for tree selections. **[Amd. Ord. 50-98 1/5/99]**

SECTION 4.6.16 (D) (4) (b)

4.6 - 75

(b) Trees shall not be planted within ten (10) feet of any underground utilities. **[Amd. Ord. 50-98 1/5/99]**
(c) Trees shall have non-invasive growth habits which will not interfere with adjacent above/underground utilities. **[Amd. Ord. 50-98 1/5/99]**
(E) **Landscape Design Standards**: The following shall be considered the minimum standards for the design and installation of all plant materials within the City of Delray Beach.
(1) **Design**: Florida-friendly landscape principles shall be utilized in landscape designs and installations. Principles of Florida-friendly landscaping include planting the right tree in the right place, efficient watering, appropriate fertilization, mulching, attraction of wildlife, responsible management of yard pests, recycling yard waste, reduction of stormwater runoff, and waterfront protection. Other important considerations include: **[Amd. Ord. 6-12 2/21/12]**
(a) Appropriate planning and design to include consideration of the size and shape of lot, soil type, topography, intended use of area site specific planting to minimize irrigation waste.
(b) Use of soil analysis and appropriate amendments to provide better absorption of water and to provide beneficial plant nutrients.
(c) Efficient irrigation systems which permit turf and other less drought tolerant plantings to be watered separately from more drought tolerant plantings, consideration of low volume drip, spray or bubbler emitters for trees, shrubs and ground covers.
(d) Reduction of turf areas, utilizing less water demanding materials such as low water demand shrubs and living ground covers in conjunction with organic mulches.
(e) Utilization of drought tolerant plant materials and the grouping of plants with similar water requirements.
(f) Utilization of mulches to increase moisture retention, reduce weed growth and erosion and increase the organic content of soil upon

degradation. Mulch should be initially applied at a three inch depth, but pulled away from direct contact with stems and trunks to avoid rotting. Mulched planting beds are an ideal replacement for turf areas.
(g) Appropriate maintenance to preserve the intended beauty of the landscape and conserve water.

SECTION 4.6.16 (E) (2)

4.6 - 76

(2) **Installation**: All landscaping shall be installed in a sound, workmanlike manner and according to sound horticultural and planting procedures with the quality of plant materials herein described. All elements of landscaping shall be installed so as to meet all other applicable ordinances and code requirements.
(3) **Vehicular Encroachment**: There shall be no vehicular encroachment over or into any required landscape area. In order to prevent encroachment and maintain a neat and orderly appearance of all planting areas adjacent to parking spaces, accessways, and/or traffic, all landscape areas shall be separated from vehicular use areas by carstops or non-mountable, reinforced concrete curbing of the type characterized as "Type D" in the current edition of the "Roadway and Traffic Design Standards" Manual prepared by the State of Florida Department of Transportation, or curbing of comparable durability. In the case of curbing around required landscaped islands, the width of the curbing shall be excluded from the calculation of the minimum dimensions of the required island. Landscape islands are required to be a minimum of 9 feet in width exclusive of the curb width. **[Amd. Ord. 6-12 2/21/12]**
The exception to this is that in paved parking lots, that portion of the parking space extending beyond the car stop may be sodded, and therefore, a vehicle would encroach into this specific landscaped area.
(4) **Quality**: All plant materials used in conformance with provisions of this ordinance shall conform to the Standards for Florida No. 1 or better as given in "Grades and Standards for Nursery Plants" Part I, 1963 and Part II, State of Florida Department of Agriculture, Tallahassee, or the most current revised edition.
(5) **Trees**: Shall be a species having an average mature spread of crown greater than twenty (20) feet and having trunks which can be maintained in a clean condition with over six (6) feet of clear mature wood. Trees having an average mature spread of crown less than twenty (20) feet may be substituted by grouping the same so as to create the equivalent of a twenty (20) foot spread of crown. Tree species shall be a minimum of sixteen (16) feet in overall height at the time of planting, with a minimum of six (6) feet of single straight trunk with eight (8) feet of clear trunk, and a seven (7) foot spread of canopy. Tree species required for single family homes and duplexes shall be a minimum of twelve (12) feet in overall height at the time of planting, with a minimum of four (4) feet of single straight trunk with six (6) feet of clear trunk, and a six (6) foot spread of canopy. **[Amd. Ord. 6-12 2/21/12]**
When more than ten (10) trees are required to be planted to meet the requirements of this section, a mix of species shall be provided. The number of species to be planted shall vary according to the overall number of trees required to be planted. This species mix requirement shall not apply to areas of vegetation required to be preserved by law. The minimum number of species to be planted is as follows:

SECTION 4.6.16 (E) (5)

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REQUIRED NUMBER OF TREES	**MINIMUM NUMBER OF SPECIES**
11 - 20	2
21 - 30	3
31 - 40	4
41 +	5

(6) **Palms**: Shall be considered trees. Palms considered susceptible to lethal yellowing by the Florida Department of Agriculture shall not be used to fulfill the requirements of this article. Palm species which do not have a mature spread of crown of at least fifteen (15) feet shall be grouped in threes, and three (3) palms shall equal one (1) shade tree. Palms must have an overall height of a minimum of sixteen (16) feet and a minimum of eight (8) feet of clear trunk at the time of planting. Palms used for single family homes and duplexes must have an overall height of a minimum of twelve (12) feet and a minimum of six (6) feet of clear trunk at the time of planting. Minimum overall palm height may be increased if palms are of a nature that the fronds hang below an eight (8) foot clearance, and are further, located in an area where pedestrians may be adversely affected by the fronds. No more than fifty (50) percent of the required trees shall be Palms.

Coconut Palms and Royal Palms may be credited on a one for one basis with shade trees. Coconut Palms are permitted to have a minimum of two (2) feet of grey wood at the time of planting, providing they are located so that the fronds are not hazardous. **[Amd. Ord. 6-12 2/21/12]**

(7) **Shrubs and Hedges**: Shall be a minimum of two (2) feet in height when measured immediately after planting. Hedges where required shall be planted and maintained so as to form a continuous, unbroken, solid, visual screen within a maximum of one year after planting. To this end, shrubs shall be spaced a maximum of two (2) feet, center to center, unless plants are exceptionally full, in which case the shrubs shall be permitted to be planted up to a maximum of thirty (30) inches, center to center, provided the branches are touching at the time of planting.

Hedges must be allowed to attain height of thirty-six (36) inches except where providing adequate and safe sight distance requires them to be maintained at a thirty (30) inch height.

SECTION 4.6.16 (E) (7)

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Hedges that are required for screening purposes shall have their height specified as follows: Hedges shall fully screen equipment that is five (5) feet above grade or less. Equipment five (5) to sixteen (16) feet above grade shall be screened with hedges that are half of the height of the item to be screened. In such instances, the required hedge shall not be any less than five (5) feet in height. Anything higher than sixteen (16) feet shall be screened with shrubbery that is a minimum of eight (8) feet in height. **[Amd. Ord. 6-12 2/21/12]**

(8) **Lawn Grass**: (Turf or Sod) A major portion of water demand used for landscape purposes is required for the irrigation of lawn areas. Portions of landscaped areas that have been customarily designed as lawns shall be:
(a) Preserved as natural plant communities;
(b) Planted as redeveloped native areas; or
(c) Planted in traditional mixes of trees, shrubs, and ground covers.
Property managed non-grass landscape developments of site specific plantings will typically be able to survive on reduced water requirement and survive drought conditions better than lawn areas. **[Amd. Ord. 81-91 12/3/91]**
For commercial, industrial and multi-family developments, no more than seventy (70) percent of the combination of the required interior greenspace and the required perimeter landscape buffers, shall be planted in lawn grass. The balance shall be planted in a mix of shrubs and ground covers. **[Amd. Ord. 6-12 2/21/12]; [Amd. Ord. 81-91 12/3/91]**
For the development of single family and duplex residences, no more than eighty (80) percent of the pervious lot area shall be planted in lawn grass. A minimum of twenty (20) percent of the pervious lot area shall be planted in shrubs and ground covers. **[Amd. Ord. 6-12 2/21/12]; [Amd. Ord. 81-91 12/3/91]**
When used, lawn grass shall be clean and reasonably free of weeds and noxious pests or diseases. When grass areas are to be seeded, sprigged or plugged, specifications must be submitted to and approved by the City Horticulturist. One hundred percent (100%) coverage must be achieved within ninety (90) days. Nurse grass must be sown for immediate effect and protection against soil erosion until coverage is otherwise achieved.
Solid sod must be used in swales, canal banks, rights-of-way and other areas subject to erosion.

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(9) **Ground Covers**: Ground covers used in lieu of grass, in whole or part, shall be planted at such spacing to present a finished appearance and reasonably complete coverage within six (6) months after planting. All ground cover areas must be kept free from weeds.
(10) **Vines**: Shall be a minimum of thirty (30) inches in height immediately after planting and may be used in conjunction with fences, screens, or walls to meet physical barrier requirements as specified.
(11) **Organic Mulches**: Organic mulches may be used in combination with living plants as part of a landscape design as provided in this section. However, organic mulches shall not by themselves constitute landscaping. No more than twentyfive
(25) percent of a front or side street setback may be comprised of mulch independent of living plant materials. **[Amd. Ord. 6-12 2/21/12]**
(F) **Irrigation Requirements**: All landscaped areas shall be provided with a fully

automated sprinkler system that will provide complete coverage of all plant materials and grass to be maintained. All systems shall be designed to allow for head-to-head coverage (one hundred (100) percent coverage with one hundred (100) percent overlap). Low-volume irrigation systems, such as drip or micro-irrigation systems, are strongly encouraged. **[Amd. Ord. 6-12 2/21/12]**

(1) **Watering Restrictions:** The Landscape Irrigation Restrictions set forth by the South Florida Water Management District (SFWMD), as amended, are hereby adopted and incorporated as if set forth. **[Amd. Ord. 6-12 2/21/12]**

(2) **Irrigation of Existing Plant Communities**: Existing plant communities and ecosystems, maintained in a natural state, do not require and shall not have any additional irrigation water added in any form.

(3) **Reestablished Native Plant Areas**: Native plant areas that are supplements to an existing plant community or newly installed by the developer may initially require additional water to become established. The water required during the establishment period shall be applied from a temporary irrigation system, a water truck or by hand watering from a standard hose bib source.

(4) **Irrigation Design Standards and Practices**: The following standards shall be considered the minimum requirements for landscape irrigation design: **[Amd. Ord. 6-12 2/21/12]**

(a) All landscaped areas shall be provided with a fully automated sprinkler system that will provide complete coverage of all plant materials and grass to be maintained. The use of recycled water is encouraged. **[Amd. Ord. 6-12 2/21/12]**

SECTION 4.6.16 (F) (4) (b)

(b) All new installations of landscape irrigation systems and substantial modifications of existing irrigation systems which use well water, excluding single family residences, shall install, operate and maintain rust inhibitor equipment to prevent staining of structures and pavements. **[Amd. Ord. 30-93 4/13/93]**

(c) Wherever feasible, sprinkler heads irrigating lawns or other high water demand landscape areas shall be circuited so they are on a separate zone or zones from those irrigating trees, shrubbery or other reduced water requirement areas.

(d) Automatically controlled irrigation systems shall be operated by an irrigation controller that is capable of watering high water requirement areas on a different schedule from law water requirement areas.

(e) Sprinkler heads shall be installed and maintained so as to minimize spray upon any public access, sidewalk, street or other non-pervious area.

(f) The use of low trajectory spray nozzles is encouraged in order to reduce the effect of wind velocity on the spray system.

(g) The use of low volume or drip systems is encouraged.

(h) All new installations of landscape irrigation systems, and modifications of existing irrigation systems, shall be equipped with a rain sensing device which will override the irrigation cycle of the system when

adequate rainfall has occurred. Further, these rain sensing devices must be operated and maintained for the life of the irrigation system. **[Amd. Ord. 30-93 4/13/93]**

(i) The use of pop-up sprinkler heads is required in the swale area between the property line and the edge of pavement of the adjacent right-of-way to minimize pedestrian hazard.

(j) The plant palette and irrigation system shall be appropriate for site conditions, taking into account that, in some cases, soil improvement can enhance water use efficiency. **[Amd. Ord. 6-12 2/21/12]**

(k) Plants shall be grouped together by irrigation demand. **[Amd. Ord. 6-12 2/21/12]**

(l) The percentage of landscaped area in irrigated high water use hydrozones should be minimized. Landscape plans shall depict the different hydrozones and irrigate according to demand. **[Amd. Ord. 6-12 2/21/12]**

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(m) All irrigation systems shall meet current Best Management Practices as established by the most current version of the Florida Green Industries Best Management Practices Handbook, including the uniform distribution of water throughout all zones. **[Amd. Ord. 6-12 2/21/12]**

(n) Irrigation plan shall meet the following requirements: **[Amd. Ord. 6-12 2/21/12]**

(1) Scale of drawing shall be consistent with Site and Landscape Plans. **[Amd. Ord. 6-12 2/21/12]**

(2) Show location of existing and proposed buildings, paving, and site improvements.**[Amd. Ord. 6-12 2/21/12]**

(3) Show locations of Water Meter, Point of Connection (POC), Backflow Preventer, Controller, Pump, Zone Valves, Rain shutoff device, Rust-inhibiting device (if applicable), Main and Lateral Lines, Sprinkler Heads and Sleeves. **[Amd. Ord. 6-12 2/21/12]**

(o) An irrigation legend shall be shown on irrigation plan. The irrigation legend will have the following elements: Separate symbols for all irrigation equipment with different spray patterns and precipitation rates and pressure compensating devices; general description of equipment; manufacturer’s name and model number for all specified equipment; recommended operating pressure per nozzle and bubbler and low-flow emitter; manufacturer’s recommended overhead and bubbler irrigation nozzle rating in gallons per minute or gallons per hour for low flow point applicators; minimum (no less than seventy-five (75) percent of maximum spray radius) and maximum spray radius per nozzle; and manufacturer’s rated precipitation rate per nozzle at specified per square inch. **[Amd. Ord. 6-12 2/21/12]**

(G) **Prohibited and Controlled Species**:

(1) **Prohibited Plant Species**: All prohibited plant species shall be eradicated from the development site and reestablishment of prohibited species shall not be

permitted. The following plant species shall not be planted in the City of Delray Beach:
(a) Melalecua quinquenervia (commonly known as Punk tree, paper bark, Cajeput, Melaleuca); or
(b) Schinus terebinthifolius (commonly known as Brazilian Pepper or Florida Holly); or
(c) Casuarina Species (commonly known as Australian Pine); or

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(d) Acacia auriculiformis (commonly known as Earleaf Acacia); or **[Amd. Ord. 6-12 2/21/12]**
(e) Cupianopsis anacardioides (commonly known as Carrotwood); or **[Amd. Ord. 6-12 2/21/12]**
(f) Schefflera actinophylla (commonly known as Schefflera or Umbrella tree); or **[Amd. Ord. 6-12 2/21/12]**
(g) Bischofia javanica (commonly known as Bischoffia). **[Amd. Ord. 6-12 2/21/12]**
(2) **Controlled Plant Species**: Ficus species can be planted as individual trees provided they are no closer than twelve (12) feet from any public improvement. Ficus species may be planted within twelve (12) feet of any public improvements only if they are maintained as a hedge which is constantly cultivated and does not exceed six (6) feet in height if located within a setback area. Height may be permitted to reach eight (8) feet when planted on a residential project and used to separate the residential use from an arterial or collector road right-of-way.
Ficus hedges located on private property are allowed to exceed the eight (8) foot maximum height limit so long as the respective property owner shows documentation that these hedges were taller than eight (8) feet on or before January 31, 2012. **[Amd. Ord. 6-12 2/21/12]**
(H) **Minimum Landscape Requirements**:
(1) **New Single Family Detached Residences**: For single family residences for which a building permit has not been applied for prior to October 1, 1990, the following minimum standards for landscaping shall apply:
(a) One shade tree shall be planted for every two thousand five hundred (2,500) square feet of lot area. Shade trees for single family residences shall be a minimum of twelve (12) feet in height with a five (5) foot spread at the time of installation. Existing trees preserved on the site with the same specifications as above, may be credited toward this tree requirement. **[Amd. Ord. 6-12 2/21/12]**
(b) Shrubs shall be installed along the foundation of the side of the residence that faces any street.

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(c) Air-conditioning units whose height is five (5) feet or less shall be screened with shrubbery or wood fencing that is tall enough to fully screen the units from view. Units higher than five (5) feet above grade shall be screened with hedges that are half of the height of the item to be screened. In such instances, the required hedge shall not be any

less than five (5) feet in height. **[Amd. Ord. 6-12 2/21/12]**
(d) All other lot areas not covered by driveways or structures shall be planted with lawn grass, ground cover or other approved landscape materials.
(e) The area between the property line and the edge of pavement of the abutting right-of-way shall be sodded or landscaped with ground cover acceptable to the City Engineering Department. Rock or gravel is expressly prohibited from being used in the right-of-way, unless approved by City Engineering.
(f) All refuse container storage areas visible from an adjacent street must be screened with vision obscuring fencing or hedging. A vision obscuring gate must be used in conjunction with hedging.
(g) All landscaped areas shall be provided with an irrigation system, automatically operated, to provide complete coverage of all plant materials and grass to be maintained. The source of water may be either from City water or non-potable water. The use of recycled water is encouraged.
(2) **Duplex Residential Development**:
(a) One (1) tree shall be planted for every two thousand (2,000) square feet of lot area or fraction thereof. Existing trees preserved on the site may be credited toward this tree requirement. **[Amd. Ord. 6-12 2/21/12]**
(b) In addition, in consideration of the fact that some duplex units have back-out parking, and no direct screening can be achieved between the parking and street area, hedging and a shade tree will be required to be installed on both sides of the back-out parking area.
(c) A strip of land a minimum of five (5) feet in width shall be provided around the foundation of the building where it faces the right-of-way and along the side of the building that provides entry for the units and shall be landscaped with shrubs and ground covers. All other lot areas not covered by buildings or paving will be landscaped with sod, shrubs or ground covers.

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(d) In addition the area between the property line and the edge of pavement of the abutting right-of-way shall be provided with sod, irrigation and maintenance.
(e) All air-conditioning units and other mechanical equipment and refuse areas whose height is five (5) feet or less shall be screened with shrubbery that is tall enough to fully screen the units from view. Equipment five (5) feet to sixteen (16) feet above grade shall be screened with hedges that are half of the height of the item to be screened. In such instances, the required hedge shall not be any less than five (5) feet in height. Anything higher than sixteen (16) feet shall be screened with shrubbery that is a minimum of eight (8) feet in height. **[Amd. Ord. 6-12 2/21/12]**

(f) For duplexes that have a parking lot that does not require back-out parking, the screening specified for new multi-family units provided below shall be required.

(3) **New Multiple Family, Commercial, and Industrial Development**: Multifamily, commercial, industrial and all other uses are required to comply with the minimum requirements for off-street parking. On the site of a building or open-lot use providing an off-street parking, storage or other vehicular use area, where such an area will not be screened visually by an intervening building or structure from an abutting right-of-way or dedicated alley, there shall be provided landscaping as follows:

Perimeter requirements adjacent to public and private rights-of-way:

(a) A strip of land at least five (5) feet in depth located between the offstreet parking area or other vehicular use area and the right-of-way shall be landscaped, provided, however, that should the zoning code of the Delray Code of Ordinances require additional perimeter depths, that the provisions of the zoning code shall prevail. This landscape strip shall be free of any vehicular encroachment, including car overhang. The landscaping shall consist of at least one tree for each thirty (30) linear feet or fraction thereof. The trees shall be located between the right-of-way line and the off-street parking or vehicular use area.

Where the depth of the perimeter landscape strip adjacent to the rightof-way exceeds fifteen (15) feet, shade trees may be planted in clusters, but the maximum spacing shall not exceed fifty (50) feet. The remainder of the landscape area shall be landscaped with grass, ground cover, or other landscape treatment excluding pavement.

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Additionally, a hedge, wall or other durable landscape area shall be placed along the interior perimeter of the landscape strip. If a hedge is used, it must be a minimum of two (2) feet in height at the time of planting and attain a minimum height of three (3) feet above the finished grade of the adjacent vehicular use or off-street parking area within one year of planting.

Multiple tier plantings are strongly encouraged for all properties, regardless of the depth of the landscape buffer. Those properties that have a landscape buffer depth of ten (10) feet or more shall be required to provide an additional layer of groundcover. The groundcover shall be located directly in front of the required hedge, so as to be visible from the adjacent right-of-way. This groundcover shall be installed at one-half (1/2) of the height of the required perimeter hedge. **[Amd. Ord. 6-12 2/21/12]**

If a nonliving barrier is used, it shall be a minimum of three (3) feet above the finished grade of the adjacent vehicular use. Nonliving barriers shall require additional landscaping to soften them and enhance their appearance. For each ten (10) feet of nonliving barrier, a shrub or vine shall be planted along the street side of the barrier, in addition to tree requirements.

Earth berms may be used only when installed in conjunction with sufficient plant materials to satisfy the screening requirements. The slope of the berm shall not exceed a 3:1 ratio.
Hedges for multi-family projects which are used to separate a residential use from an adjacent arterial or collector road right-of-way may attain a height of eight (8) feet to mitigate the impact of the adjacent roadway
Perimeter hedging installed to effect screening of storage areas must be a minimum of seventy-five (75) percent of the height of the storage structure at the time of installation and be permitted to grow to a height to conceal the materials being stored. Perimeter shade trees are required to be planted every thirty (30) feet and are not permitted to be clustered. **[Amd. Ord. 6-12 2/21/12]**
(b) The unpaved portion of the right-of-way adjacent to the property line shall be landscaped with sod and provided with irrigation and maintenance.
(c) The width of accessways which provide access to a site or vehicular use areas may be subtracted from the linear dimensions used to determine the number of trees required.

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Perimeter landscaping requirements relating to abutting properties:
(d) A landscaped barrier shall be provided between the off-street parking area or other vehicular use area and abutting properties. The landscape barrier may be two (2) feet at the time of planting and achieve and be maintained at not less than three (3) nor greater than six (6) feet in height to form a continuous screen between the off-street parking area or vehicular use area and such abutting property. This landscape barrier shall be located between the common lot line and the off-street parking area or other vehicular use area in a planting strip of not less than five (5) feet in width that is free of any vehicular encroachment, including car overhang. Duplexes may be permitted to reduce the perimeter planting strip to two and one-half (2 1/2) feet in width in cases where lot frontage is less than fifty-five (55) feet. In addition, one (1) tree shall be provided for every thirty (30) linear feet of such landscaped barrier or fraction thereof. **[Amd. Ord. 6-12 2/21/12]**
(e) Where any commercial or industrial areas abut a residential zoning district or properties in residential use, in addition to requirements established for district boundary line separators in the zoning code, one (1) tree shall be planted every twenty-five (25) feet to form a solid tree line.
(f) The provisions for perimeter landscape requirements relating to abutting properties shall not be applicable where a proposed parking area or other vehicular use area abuts an existing hedge or established tree line, the existing hedge and trees may be used to satisfy the landscape requirements provided the existing material meets all

applicable standards. The landscape strip, a minimum of five (5) feet in depth, however, is still required, and must be landscaped with sod or ground cover and be free of any vehicular encroachment, including car overhang. If the existing landscaping does not meet the standards of this article, additional landscaping shall be required as necessary to meet the standards. In the event that the landscaping provided by the adjacent property which has been used to satisfy the landscaping requirements for the property making application is ever removed, the property heretofore using the existing vegetation to satisfy landscaping requirements, must then install landscaping as required to comply with the provisions of this code. Interior landscape requirements for parking and other vehicular use areas:**[Amd. Ord. 6-12 2/21/12]**

(g) The amount of interior landscaping within off-street parking areas shall amount to no less than ten percent (10%) of the total area used for parking and accessways.

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(h) There shall be a group of palms or a shade tree for every one hundred twenty-five (125) square feet of required interior landscaping. No more than twenty-five percent (25%) of these required trees shall be palms.

(i) Landscape islands which contain a minimum of one hundred thirty-five (135) square feet of planting area, with a minimum dimension of nine (9) feet, exclusive of the required curb, shall be placed at intervals of no less than one landscaped island for every thirteen (13) standard parking spaces. One shade tree shall be planted in every island with a minimum of seventy-five (75) square feet of shrubs and groundcovers. Tree specifications shall adhere to those listed in Section 4.6.16(E)(5) and 4.6.16(E)(6). Where approval for the use of compact parking has be approved, islands may be placed at intervals of no less than one (1) island for every fifteen (15) compact parking spaces. :**[Amd. Ord. 6-12 2/21/12]**

1. The distance between parking islands can be increased up to fifteen (15) standard or seventeen (17) compact parking spaces but the width of the parking island must be increased by one (1) foot for each additional space (i.e. if the distance between parking islands is fifteen (15) standard parking spaces the parking island would have to be eleven (11) feet wide). :**[Amd. Ord. 6-12 2/21/12]**

i. Properties within the Central Business District (CBD) shall adhere to the same landscape island width stated above, unless documentation of site constraints provide that such island width is not feasible. In such cases, the City will accept landscape islands with a minimum width of seven (7) feet, exclusive of curb, with one hundred an five (105) square feet of planting area. Under no circumstances shall any landscape island have a width smaller than seven (7) feet, exclusive of curb. Tree specifications shall adhere to those listed in Section

4.6.16(E)(5) and 4.6.16(E)(6). Minimum tree height shall be increased to eighteen feet (18') in overall height with an eight foot (8') spread if the option to increase the number of parking spaces between landscape islands is chosen. **[Amd. Ord. 6-12 2/21/12]**

2. Unobstructed cross-visibility shall be maintained at all terminal landscape islands where it intersects a right-of-way. Clear visibility shall be maintained between three (3) feet to six (6) feet above ground. Proper plant selection shall be utilized that fully accounts for the mature height and spread of that plant. The proper design shall have low groundcovers within the nose of the island with small shrubs located at the back end of the island. **[Amd. Ord. 6-12 2/21/12]**

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(j) Each row of parking spaces shall be terminated by landscape islands with dimensions as indicated above, An exception to this requirement is when a landscaped area, with the dimensions above, exists at the end of the parking row. :**[Amd. Ord. 6-12 2/21/12]**

(k) Whenever parking tiers abut, they shall be separated by a minimum five (5) foot wide landscape strip. This strip shall be in addition to the parking stall and be free of any vehicular encroachment, including car overhang. In addition, a two foot (2') hedge shall be installed within this landscape strip and run the entire length of the strip. Pedestrian walkways are permitted to allow passage through the hedge. Nonmountable curbs are not required for these landscaping strips, providing carstops are provided. **[Amd. Ord. 6-12 2/21/12]**

(l) Perimeter landscape strips which are required to be created by this code or requirements of the zoning code shall not be credited to satisfy any interior landscaping requirements, however, the gross area of perimeter landscape strips which exceed minimum requirements may be credited to satisfy the interior landscape requirements of this section.

(m) Interior landscaping in both parking areas and other vehicular use areas shall, insofar as possible, be used to delineate and guide major traffic movement within the parking area so as to prevent cross-space driving wherever possible. A portion of the landscaping for interior parking spaces, not to exceed twenty-five percent (25%) of the total requirement, may be relocated so as to emphasize corridors or special landscape areas within the general parking area or adjacent to buildings located on the site, if helpful in achieving greater overall aesthetic effect. Such relocated landscaping shall be in addition to the perimeter landscaping requirements.

(n) Existing native soil within all landscape islands, interior landscape strips and perimeter landscape strips, adjacent to vehicular use areas, shall be excavated down to a depth of thirty (30) inches below existing

grade, except for a 12” buffer from the inside of curb or pavement (see diagram below). A suitable planting soil mixture of fifty/fifty (50/50), sixty/forty (60/40) (sand/topsoil) or as otherwise indicated by the Registered Landscape Architect, shall either be backfilled in place of the native soil or efficiently mixed with the native soil to create an optimum environment for successful root development. If native soil is to be mixed, it shall first be screened to remove rocks and debris larger than one-half (1/2) inch in diameter prior to mixing. All properties under this section shall be required to have an open landscape bed inspection prior to backfilling to insure the thirty (30) inch depth has been met. **[Amd. Ord. 6-12 2/21/12]**

(o) All air-conditioning units and other mechanical equipment and refuse areas whose height is five (5) feet or less shall be screened with shrubbery that is tall enough to fully screen the units from view. Equipment five (5) feet to sixteen (16) feet above grade shall be screened with hedges that are half of the height of the item to be screened. In such instances, the required hedge shall not be any less than five (5) feet in height. Anything higher than sixteen (16) shall be screened with shrubbery that is a minimum of eight (8) in height. **[Amd. Ord. 6-12 2/21/12]**

(p) Landscaping may be permitted in easements only with the written permission of the easement holder. Written permission shall be submitted as part of the site plan or landscape plan review.

(4) **Foundation Landscaping Requirements [Amd. Ord. 6-12 2/21/12]**

(a) Foundation landscaping shall be required. This shall incorporate trees, shrubs and groundcovers with the minimum required specifications as set forth in 4.6.16(E). Multiple tiers of plant material should be utilized and thoughtfully designed to accomplish the goal of softening the building mass while adding vibrant color and textures. **[Amd. Ord. 6-12 2/21/12]**

(b) New multi-story structures or landscape improvements to existing multistructures shall adhere to the landscape requirements set forth in this section. The purpose of these requirements is to aesthetically and visually buffer larger structures and to maintain an appropriately scaled relationship between the height of the structure and its surrounding landscape. Foundation trees with specifications listed in Table 1 shall

be planted along the building façade that faces a Right-of-Way. The spacing of these trees shall be determined based on the average canopy width of the proposed tree. These trees shall be spaced appropriately so that the canopies shall be touching at average maturity. Typical Foundation trees and spacing requirements are listed in Table 2. All trees listed in Table 2 are examples. Other species may

be used so long as the spacing meets the intent of this section. **[Amd. Ord. 6-12 2/21/12]**

Table 1. Foundation Tree Specifications [Amd. Ord. 6-12 2/21/12]

Mean Structure Height (feet)	**Minimum Tree Height (feet)**	**Minimum Tree Spread (feet)**	**Minimum Overall Palm Height (feet)**
To 15	12 to 14 (code)	5	12 (code)
15 to 25	14 to 16	6	16
26 to 35	16 to 18	7	20
36 and greater	16 to 18	7	25

Table 2. Typical Foundation Trees and Spacing Requirements [Amd. Ord. 6-12 2/21/12]

Tree Species	**Typical Spacing**
Quercus virginiana (Live Oak)	30'
Bursera simaruba (Gumbo Limbo)	30'
Swietenia mahagoni (Mahogany Tree)	30'
Cocos nucifera (Coconut Palm)	20'
Wodyetia bifurcata (Foxtail Palm)	20'
Veitchia montgomeriana (Montgomery Palm)	15'
Bismarckia nobilis (Bismarck Palm)	25'
Phoenix dactylifera (Date Palm)	25'

(5) **Special Landscape Regulations for Properties within the Central Business District (CBD) [Amd. Ord. 6-12 2/21/12]**

(a) Landscape Islands shall be installed within designated On-Street Parking locations. Properties submitting for Site Plan Modifications that are designated as Class IV or higher are required to install on-street landscape islands. Site Plan Modifications that are classified as Class III or lower that are proposing onstreet landscape islands shall adhere to the requirements outlined in this section. All islands are to be curbed with Type ‘F’ curbing to protect plant material. There are three types of landscape islands found within designated on-street parking sites. They are Intersection Islands, Driveway Islands and Parallel Parking Islands. **[Amd. Ord. 6-12 2/21/12]**

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1. Intersection Islands are required at the corners of intersecting streets. These islands shall be a minimum of ten feet (10’) in length. One (1) palm tree and associated understory plantings shall be located in each island and shall not pose a hazard to site visibility. If applicable, each palm shall be located behind traffic signs. Species and size to be consistent with those existing within adjacent on-street parking islands. **[Amd. Ord. 6-12 2/21/12]**

2. Driveway Islands are required on each side of the driveway apron leading into the property. These islands shall be a minimum of eight feet (8’) in length. One (1) accent tree or palm and associated

understory plantings shall be located in each island and shall not pose a hazard to site visibility. Species and size to be consistent with those existing within adjacent on-street parking islands. **[Amd. Ord. 6-12 2/21/12]**

3. Parallel Parking Islands shall be used to break up large expanses of pavement utilizing shade-producing canopy trees and associated understory plantings. No more than six (6) parallel parking spaces are allowed between the nearest parallel parking island and the subject property submitting for a Site Plan Modification. Spaces will be counted from the nearest street intersection. Each island shall be a minimum of twenty-two feet (22') in length and contain at least one (1) canopy tree and associated understory plantings. Species and size to be consistent with those existing within adjacent onstreet parking islands.

Properties abutting Atlantic Avenue are exempt from the requirement of constructing on-street landscape islands. The maintenance and irrigating of islands shall be the sole responsibility of the property owner who is located adjacent to these islands. Construction of landscape islands shall not create traffic safety hazards. The utilization of root barriers will be required in instances where underground utilities are present. All compacted soil, rock and other debris shall be removed to a depth of thirty inches (30") below top of curb and replaced with a sixty-forty (60/40) mixture of sand to topsoil.

Existing site conditions will be examined during the plan review process. Flexibility for location and size of islands will be considered in achieving the overall goal of creating a consistent and unified streetscape. **[Amd. Ord. 6-12 2/21/12]**

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(6) **Street Trees for New Residential Developments [Amd. Ord. 6-12 2/21/12]**

A themed landscape is very important for creating unity and common character within residential developments. Street trees are an integral component of creating a themed landscape and shall be required as per this section. All trees shall be in accordance with Section 4.6.16(E)(5). Tree selection shall be approved by City Staff. One (1) street tree shall be required for every forty (40) linear feet of street frontage with a minimum of one (1) tree per property. Street trees shall be located between the inside edge of sidewalk and edge of road pavement. Typical spacing for some commonly used street trees are listed in the below chart. **[Amd. Ord. 6-12 2/21/12]**

Tree Species Typical Spacing (feet)

Quercus virginiana (Live Oak) 40'
Bursera simaruba (Gumbo Limbo) 35'
Swietenia mahagoni (Mahogany Tree) 40'
Peltophorum sp. (Yellow Poinciana) 40'

(7) **Existing Multiple Family, Duplex, Commercial, and Industrial Development**: All existing multi-family units, duplexes, and commercial and industrial

uses shall comply with the minimum standards for landscaping as follows: **[Amd. Ord. 22-96 5/21/96]**

(a) Provide for perimeter landscaping adjacent to public rights-of-way to screen vehicular parking, open-lot sales, service and storage areas to the extent physically possible and deemed feasible by the Landscape Compliance Review Committee. Elimination of parking spaces required by code will not be permitted to upgrade landscaping, however, the deletion of parking spaces in excess of code requirements will be required if they are in areas that will facilitate the required implementation of the minimum landscape requirements for existing development contained herein. **[Amd. Ord. 22-96 5/21/96]**

(b) Provide sod and irrigation within the right-of-way between the property line and the edge of pavement of the adjacent travel lane. The removal of existing asphalt may be required within the area between the property line and the edge of pavement of the adjacent travel lane. **[Amd. Ord. 22-96 5/21/96]**

(c) Provide screening for all dumpsters and refuse areas and all ground level air-conditioning units and mechanical equipment. Adequacy of screening shall be determined by the Landscape Compliance Review Committee. **[Amd. Ord. 22-96 5/21/96]**

(d) Foundation landscaping shall be provided for building elevations that are visible from adjacent rights-of-way.

SECTION 4.6.16 (H) (8)

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(8) **Sight Distance**: Sight distance for landscaping adjacent to rights-of-way and points of access shall be provided pursuant to Section 4.6.14.

(I) **Minimum Maintenance Requirements**:

(1) **General**: The owner or his agent shall be responsible for the maintenance of all landscaping required by ordinance or made a condition for approval for a building permit. Landscaping shall be maintained in a good condition so as to present a healthy, neat, and orderly appearance at least equal to that which was required for the original installation, and shall be kept free from refuse and debris. Maintenance is to include mowing, edging, weeding, shrub pruning, fertilization and inspection and repair of irrigation systems to ensure their proper functioning.

(2) **Yard Waste Management, Composting and Use of Mulches: [Amd. Ord. 6-12 2/21/12]**

(a) Yard wastes shall not be disposed of or stored by shorelines, in ditches or swales, or near storm drains. **[Amd. Ord. 6-12 2/21/12]**

(b) Composting of yard wastes provides many benefits and is strongly encouraged. The resulting materials are excellent soil amendments and conditioners. Other recycled solid wastes products are also available and should be used when appropriate. **[Amd. Ord. 6-12 2/21/12]**

(c) Grass clippings are a natural benefit to lawns, replenishing nutrients drawn up from the soil and as an organic mulch that helps to retain moisture, lessening the need to irrigate. Grass clippings should be left

on your lawn. All discharged clippings are to be kept far away from adjacent shorelines. **[Amd. Ord. 6-12 2/21/12]**
(d) Mulches applied and maintained at appropriate depths in planting beds assist soils in retaining moisture, reducing weed growth, and preventing erosion. Mulch, applied at a layer of two (2) inches thick, shall be specified on landscape plans. Mulches shall be kept six (6) inches away from trunk. Mulch from invasive trees such as Melaleuca and Eucalyptus are highly recommended as a suitable mulching resource. **[Amd. Ord. 6-12 2/21/12]**
(3) **Fertilizer Management: [Amd. Ord. 6-12 2/21/12]**
(a) Spreader deflector shields are required when fertilizing via rotary spreaders. Deflectors must be positioned such that fertilizer granules are deflected away from all impervious surfaces, fertilizer-free zones and water bodies, including wetlands. **[Amd. Ord. 6-12 2/21/12]**

SECTION 4.6.16 (I) (3) (b)

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(b) Fertilizers shall not be applied, spilled or otherwise deposited on any impervious surfaces. Any fertilizers that are spilled, whether intentionally or accidentally, shall be immediately and completely removed. **[Amd. Ord. 6-12 2/21/12]**
(c) In no case shall fertilizer be washed, swept or blown off impervious surfaces into stormwater drains, ditches conveyances or water bodies. **[Amd. Ord. 6-12 2/21/12]**
(4) **Pesticide Management [Amd. Ord. 6-12 2/21/12]**
(a) All landscape applications of pesticides, including Weed and Feed products, should be made in accordance with State and Federal Law and with the most current version of the Florida-friendly Best Management Practices for Protection of Water Resources by the Green Industries. **[Amd. Ord. 6-12 2/21/12]**
(b) Property owners and landscape management companies performing pesticide control within the City are strongly encouraged to use Integrated Pest Control (IPC). Biological control is a natural and effective means of eradicating unwanted pests within a landscape. It has relatively little impact on the environment and prevents the unnecessary use of chemicals. **[Amd. Ord. 6-12 2/21/12]**
(c) When using pesticides, all label instructions are state and federal law and must be adhered to. **[Amd. Ord. 6-12 2/21/12]**
(5) **Pruning of Trees**: Maintenance pruning of trees is to allow for uniform healthy growth. Trees shall be allowed to attain their normal size, and at a minimum attain a twenty (20) foot spread of canopy, prior to any pruning except in conjunction with the removal of diseased limbs, or to remove limbs or foliage that present a hazard to power lines or structures. Lower branches and suckers must be selectively removed to provide a minimum of six (6) feet of clear trunk. Severely cutting back lateral branches and canopy, or "hatracking" is expressly prohibited. Trees may be periodically thinned in order to reduce the leaf mass in preparation for tropical storms. All pruning shall be accomplished in accordance with the National Arborist's Standards. A tree's

habit of growth must be considered before planting to prevent conflicts with view or signage and such a conflict shall not of itself necessarily permit the pruning or removal of a tree.**4.6 - 94**

ATTACHMENT #5: SWMP

Permit #FLS000018-003

Palm Beach County Municipal Storm Sewer System

City of Delray Beach

City of Delray Beach
Stormwater Management Plan

INTRODUCTION

The City of Delray Beach, like many areas in the United States has and continues to experience impact to its natural resources due to increased urbanization. These impacts are especially evident with its surface water resources. The City is an established community with infill and redevelopment and Delray's downtown area continues a revitalization that has occurred over the past 25 years. With this growth and revitalization comes an increased need to protect and enhance the water resource features that are evident throughout the City and so significantly contribute to the City's distinctive character. Urbanization impacts these water resource features by increasing the rate and volume of stormwater runoff. These increases, if uncontrolled will lead to a degradation of the natural drainage system. The increased soil erosion and sedimentation from construction sites, along with more impervious surfaces, combine to cause increased stormwater related problems commonly experienced as flooding, sewer back-up, and deteriorated water quality.

The City of Delray Beach recognizes the need for a more proactive and comprehensive approach to manage stormwater runoff. The purpose of this Stormwater Management Program (SWMP) is to establish the framework and goals that will direct Stormwater Management for the City of Delray Beach. Ultimately the plan will provide the City of Delray Beach with effective rules, regulations, and projects that will reduce the potential for stormwater damage to life, public health, safety, property, and the environment.

Section 402(p) of the 1987 Federal Clean Water Act required the U.S. Environmental Protection Agency (EPA) to establish the National Pollutant Discharge Elimination System (NPDES) stormwater permit program. The goal of the NPDES program is to restore and maintain the chemical, physical, and biological integrity of waters of the state through management and treatment of urban storm water runoff. This program requires local governments to obtain permits for their existing stormwater drainage systems, and for stormwater from certain industrial activities. This includes all construction projects that will disturb one or more acres of land, government owned landfills, power plants, airports, vehicle maintenance facilities and wastewater treatment plants.

In October 2000, EPA authorized the Florida Department of Environmental Protection (DEP) to implement the NPDES stormwater permitting program in the State of Florida (in all areas except Indian Country lands). DEP's authority to administer the NPDES program is set forth in Section 403.0885, Florida Statutes (F.S.). The NPDES stormwater program regulates point source discharges of stormwater into surface waters of the State of Florida from certain municipal, industrial and construction activities. As the NPDES stormwater permitting authority, DEP is responsible for promulgating rules and issuing permits, managing and reviewing permit applications, and performing compliance and enforcement activities. As one of 40 co-permittees in Palm Beach County, Delray Beach is authorized to discharge stormwater from their stormwater system into the waters of the United States and is responsible for developing a long term, comprehensive stormwater program to reduce the pollutant loading from their systems caused by non-point sources. To achieve comprehensive management of Municipal Separate Storm Sewer Systems (MS4s), permittees are required to prepare and implement a Storm Water Management Program (SWMP). This SWMP has been prepared in conformance with the NPDES, Phase I Rules and is in compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251ET SEQ; hereafter, the “Act”), 40 CFR 122, 123, and 124, as amended, and applicable Florida Statutes. The urbanized area and major outfalls covered by this SWMP are shown in **Figure 1**.

The SWMP identifies the goals and the Best Management Practices (BMPs) that will be undertaken to meet the requirements of the NPDES Phase I rules. Measurable goals have been established for each of the BMPs included in the SWMP along with an implementation plan and the persons responsible for implementing the BMPs. This SWMP has been prepared to manage and reduce the discharge of pollutants from MS4s to the maximum extent practicable (MEP). This will be accomplished through the implementation of the BMPs outlined within this SWMP. These BMPs could be a combination of education, maintenance, control techniques, system design and engineering methods, and other such provisions that are appropriate to meet the requirements of the NPDES Phase I permit. As outlined in the rules, nine functional areas related to stormwater have been identified as minimum control measures necessary for a SWMP. These nine minimum control measures are:

1. Structural Controls and Stormwater Collection Systems Operation.
2. Areas of New Development and Significant Redevelopment.
3. Roadways.

4. Flood Control Projects.
5. Municipal Waste Treatment, Storage, and Disposal Facilities Not Covered by an NPDES Stormwater Permit.
6. Pesticides, Herbicides, and Fertilizer Application.
7. Illicit Discharges and Improper Disposal.
8. Industrial and High-Risk Runoff.
9. Construction Site Runoff.

For each of these nine minimum control measures, appropriate BMPs have been identified along with measurable goals, and the persons responsible to complete each measure. An ongoing analysis and assessment of BMPs will be undertaken to ensure the appropriateness and effectiveness of the selected measure. Standard Operating Procedures (SOPs) have been developed as a guide to efficient and effective program implementation and permit compliance.

STORMWATER MANAGEMENT AUTHORITY

The stormwater element of the federal NPDES program is mandated by Section 402(p) of the Clean Water Act (CWA), which is set out in the federal statutes at 33 U.S.C. Section 1342(p) and implemented through federal regulations including 40 Code of Federal Regulations (CFR) 122.26. The Department of Environmental Protection (Department) implements the stormwater element of the federal NPDES. Authorized by Section 403.0885, F.S., the Department's federally approved NPDES stormwater program is set out in various provisions within Chapters 62-4, 62-620, 62-621 and 62-624 of the Florida Administrative Code (F.A.C.). Chapter 62-624, F.A.C., specifically addresses Municipal Separate Storm Sewer Systems (MS4s). The NPDES permit is issued pursuant to Section 403.0885, Florida Statutes (F.S.), and rules promulgated thereunder.

The City of Delray Beach, as one of 40 co-permittees is authorized to discharge stormwater to waters of the State, in accordance with the approved Stormwater Management Programs (SWMPs), effluent limitations, monitoring requirements, and other provisions as set forth in NPDES permit #FLS000018-003. Authority to effectively and efficiently develop and implement the stormwater management system within the City has been established within Title 5, Section 56 of the Code of Ordinances. Delray Beach has entered into an inter-local agreement which identifies the obligations and allocation of duties pursuant to the NPDES permit. A copy of the agreement can be found at www.pbc-npdes.org. In addition, the City has created a Storm Water Utility whose mission is to inventory, operate, and maintain the City's storm water drainage systems and to insure compliance with City Commission policies and the NPDES permit requirements.

GOALS AND POLICIES

The City of Delray Beach SWMP recognizes the critical need to reduce the potential for reoccurring flood and water quality damage within the City. It also recognizes the need to address the historic trend of increasing flood risk and flood damage as the City continues to develop, and to avoid further environmental degradation associated with urbanization.

The Stormwater Management Plan defines seven goals to address these needs:

- Reduce the existing potential for stormwater damage to public health, safety, life, property, and the environment.

- Control future increase in stormwater damage within The City of Delray Beach and in adjacent jurisdictions affected by City of Delray Beach drainage.
- Protect and enhance the quality, quantity, and availability of surface and groundwater resources.
- Preserve and enhance existing aquatic and riparian environments and encourage restoration of degraded areas
- Control sediment and erosion in and from drainageways, developments, and construction sites.
- Establish comprehensive basin plans that quantify, plan for, and manage stormwater flows within and among the appropriate jurisdictions in those basins.
- Promote equitable, acceptable, and legal measures for stormwater management.

Policies developed to implement the Plan must respond to the specific characteristics that have historically contributed to stormwater quantity and quality issues in the City of Delray Beach. The following outlines the key physical and institutional characteristics affecting the City's stormwater management and presents the policies developed to address these characteristics. These policies will serve as the mechanisms for attaining the plan goals.

1. The City of Delray Beach Stormwater Management Plan requires appropriate and adequate provision for site runoff control consistent with watershed/basin plans wherever the land is developed for human activity.

When implemented, this policy will reduce future onsite/offsite flood damage and minimize the effect stormwater may have on human activities and the natural environment.

2. The City of Delray Beach Stormwater Management Plan recognizes the inherent advantages of stormwater infiltration or storage and encourages the use of these techniques where appropriate in preference to stormwater conveyance.

When implemented, this policy will:

- Reduce downstream flood damages.
- Minimize increases in stormwater runoff rates
- Maintain the adequacy of existing conveyance by not increasing the flows to be conveyed.
- Promote stormwater infiltration and evaporation, reducing the volume of runoff.
- Maintain the environmental integrity of stream channels by avoiding the need for channel modifications.
- Reduce the impact of development on stream erosion rates by limiting peak flows.
- Reduce the impact of non-point sources of pollution on downstream waters.

3. The City of Delray Beach Stormwater Management Plan requires design and evaluation of each site runoff control plan to be consistent with basin capacities.

When implemented, this policy will reduce offsite and regional flood damages.

4. The City of Delray Beach Stormwater Management Plan will restrict future development in the floodplain to facilities that will not adversely affect flood damage

potential. With the floodway, development will be prohibited unless it involves facilities that enhance flood protection and/or water quality.

When implemented, this policy will reduce future flood damage and maintain the integrity of drainage system and preserve established environments.

5. The City of Delray Beach Stormwater Management Plan will incorporate water quality and habitat protection measures in all stormwater management activities within The City of Delray Beach.

When implemented, the policy will protect the environmental integrity of the watershed and allow The City of Delray Beach to meet NPDES Phase I requirements.

6. The City of Delray Beach Stormwater Management Plan requires regular, planned maintenance of stormwater management facilities, whether publicly or privately owned.

When implemented, this policy will reduce flood damage and maintain the integrity of drainage systems, providing water quality benefits.

7. The City of Delray Beach Stormwater Management Plan encourages control of stormwater quantity and quality at the most site-specific level as possible, but only where long-term maintenance is fully provided.

When implemented, this policy will reduce flood damage and erosion from development, prevent non-point source pollution, and minimize runoff pollution.

8. The City of Delray Beach Stormwater Management Plan will provide clear identification of responsibilities and authorities delegated to the various agencies having jurisdiction for stormwater or floodwater control within the City of Delray Beach.

When implemented, this policy encourages implementation of all other policies to achieve all plan goals.

9. The City of Delray Beach Stormwater Management Plan requires cooperation in stormwater management activities within and between agencies having stormwater jurisdiction in shared watersheds/basins.

When implemented, this policy will require the City to initiate cooperation to ensure implementation of all other policies to achieve all plan goals.

10. The City of Delray Beach Stormwater Management Plan requires strict compliance and enforcement of the stormwater management plan policies and their implementing regulations.

When implemented, this policy will reduce opportunities to circumvent the plan and will help achieve all goals.

11. The City of Delray Beach Stormwater Management Plan allows simple technologies wherever appropriate and realistic, but demands use of more sophisticated techniques where necessary to ensure the adequacy of stormwater controls.

When implemented, this policy encourages use of appropriate technology, thereby reducing the risk of inappropriate stormwater management activities. This in turn will enhance the effectiveness of the stormwater management activities undertaken to achieve Plan goals.

12. The City of Delray Beach Stormwater Management Plan encourages cost effective methods of achieving stormwater management goals.

When implemented, this policy will reduce overall cost, allow funding of more facets of the Plan, and increase the Plan's effectiveness in achieving all goals.

13. The City of Delray Beach Stormwater Management Plan requires the estimation of costs of stormwater management recommendations and identification of appropriate revenue sources before their adoption.

When implemented, this policy enhances the credibility and acceptability of the Plan, thereby encouraging its implementation and the achievement of all its goals.

MUNICIPAL SEPARATE STORM SEWER SYSTEM EVALUATION

The City of Delray Beach will undertake an ongoing self-assessment of the storm sewer system throughout the life of the permit. This self-assessment will be used to determine the factors affecting the maximum extent practicable standards set forth within the NPDES Phase I Rule. As part of the continual evaluation and NPDES requirments, the City of Delray Beach will develop and maintain a current MS4 inventory. The following factors will be monitored as the City revises and undertakes new BMPs under this permit.

1. Sources of pollutants
2. Potential polluting activities being conducted in the contributing basins
3. Sensitivity of receiving waters within the system
4. Intended uses of receiving waters
5. Local concerns and storm water issues
6. The size of the MS4, the available staff, and the number of residents
7. BMP implementation schedules
8. Ability to finance storm water related programs
9. Hydraulics and hydrology of the surface/ground water system
10. Geology
11. Ability to finance and perform operation and maintenance of the MS4
12. Land uses
13. Development and redevelopment expectations
14. Watershed/Basin characteristics
15. Organizational structure of the municipal operator

In conformance with the requirements for the preparation of the SWMP, a number of non-storm water discharges will be evaluated to determine if they are significant contributors of pollutants to the storm sewer system. The following non-storm water discharges will be evaluated as part of this SWMP:

1. Flushing of municipal waterlines
2. Residential, commercial and agricultural landscape irrigation
3. Stream flow diversions

4. Groundwater outputs and rising elevations
5. Uncontaminated pumped ground water
6. Uncontaminated groundwater infiltration
7. Filtration backwash from municipal water treatment facility
8. Discharge of foundation drains into the MS4
9. Potable water source discharges
10. Condensation from air conditioning units
11. Car washing by individual residents
12. Discharges from the chlorinated swimming pools
13. Wash water from street sweeping activities
14. Water discharged from firefighting activities

The City of Delray Beach has developed this SWMP and the Best Management Practices within it, to reach the goal of reducing the discharge of pollutants to the "maximum extent practicable." This SWMP incorporates new activities and existing practices to develop a program, designed to protect water quality as required by the Clean Water Act. The City believes the BMPs included within this SWMP and the continuing monitoring of the storm sewer system, will result in the City meeting the prescribed "maximum extent practicable" standard.

STORM WATER POLLUTION PREVENTION/MANAGEMENT PROGRAM

This Storm Water Pollution Prevention/Management Program outlines the Best Management Practices that are appropriate for the City of Delray Beach to control or reduce the pollutants in storm water runoff to the maximum extent practicable. This SWMP was developed based on the factors previously discussed within the areas tributary to the Municipal Separate Storm Sewer System.

The City of Delray Beach reserves the right to amend and/or delete the described BMPs based on the availability of funding for this program. Furthermore, the City may coordinate the responsibility of selected BMPs with other governing agencies such as community groups, nonprofit organizations, soil and water conservation districts, watershed districts, watershed management organizations, school districts, University of Florida Extension, or county, regional, state, and federal government programs, which represent storm water within the City.

Best Management Practices (BMPs) have been identified for each of the nine minimum control measures (MCM). A description of the nine minimum control measures and the BMPs that have been developed to meet the requirements of each minimum control measure are outlined in the following pages. Associated SOP's developed to assist BMP implementation are included as appendix to the SWMP. BMP's and SOP's are annually reviewed and necessary revisions are made on an as needed basis.

1. Structural Controls and Stormwater Collection System Operation

The City of Delray Beach shall continue to operate the MS4 and any stormwater structural control in a manner to reduce the discharge of pollutants (including floatables) to the MEP. The Structural Controls and Stormwater Collection System Operation BMPs that will be undertaken include:

- 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. Update MS4

mapping, as needed. *Inventory previously submitted to FDEP and maintained by the City of Delray Beach Stormwater Utility.

- Annually review (and revise, as needed) and implement the permittee's written Standard Operating Procedures to conduct inspections and maintenance of the structural controls and roadway stormwater collection systems operated by the permittee in accordance with Table II.A.1.a of the permit to reduce pollutants, including floatables, in discharges from the MS4.

- Maintain an internal record keeping system to schedule and document inspections and maintenance activities conducted on the structural controls and roadway stormwater collection structures operated by the permittee.

2. Areas of New Development and Significant Redevelopment

The City of Delray Beach shall continue the comprehensive master planning process (or equivalent) to reduce the stormwater discharge of pollutants from MS4s, which receive discharges from areas of new development and significant redevelopment, after construction is completed to the MEP. The Areas of New Development and Significant Redevelopment BMPs that will be undertaken include:

- Continue to adhere to the policies of the current Comprehensive Plan and the requirements of local codes and regulations, as well as development review and permitting procedures that incorporate stormwater quality considerations into land-use planning and development activities to reduce pollutants in stormwater discharges from areas of new development and significant redevelopment, and guide new development away from environmentally sensitive areas. The comprehensive planning process shall limit the increases in the discharge of pollutants in stormwater as a result of new development, and shall reduce the discharge of pollutants in stormwater from redeveloped areas, consistent with the requirements set forth in the Environmental Resource Permitting rules of the South Florida Water Management District.

- Maintain documentation of the new development and significant redevelopment project review activity.

- Conduct an inter-departmental review of the current local codes and land development regulations to identify potential changes to existing codes or regulations that will further reduce the stormwater impact of new development and areas of significant redevelopment. In particular, focus on changes to the code that will promote: reductions in impervious surfaces, the use of swales, the incorporation of low impact development principles, reduction in flow and volume of stormwater, increase in natural hydrology, and adherence to the principles of the Florida Yards and Neighborhoods program in new landscaping.

- Develop a summary report of the review activity that includes the following information: all applicable local code and regulation citations reviewed (both current and draft); a description of the current and proposed techniques aimed at reducing the stormwater impact of new development and areas of significant redevelopment that are included within the applicable codes and regulations; a description of innovative stormwater

planning techniques, including those described above, recommended for possible future incorporation into the codes and regulations (beyond what may be currently in draft); and, a plan for implementing changes to codes and regulations.

- Develop a follow-up report that summarizes plan implementation to change the local codes and regulations and promote reducing stormwater impact from new development and areas of significant redevelopment.

3. Roadways

Public streets, roads, and highways, including rights-of-way, shall continue to be operated and maintained by the City of Delray Beach in a manner to reduce the discharge of pollutants in stormwater to the MEP. The Roadways BMPs that will be undertaken include:

- Annually review (and revise, as needed) and implement the written procedures for the litter control program(s) for public streets, roads, and highways, including rights-of-way, employed within the jurisdictional area and properly dispose of collected material. Implement the program on a monthly, or on an as needed, basis.

- Maintain documentation of the litter control program activities.

- Annually review (and revise, as needed) and implement the written procedures for the street sweeping program for highways and streets, including rights-of-way, with curbs and gutters employed within the jurisdictional area and properly dispose of collected material. The procedures shall include the criteria for determining which roadways will be swept and the frequency of sweeping, and the method for quantifying and tracking the amount of material removed by the street sweepers.

- Maintain documentation of the street sweeping program activities.

- Annually review (and revise, as needed) and implement the written standard practices to reduce the pollutants in stormwater runoff from areas associated with road repair and maintenance, and from City-owned or operated equipment yards and maintenance shops that support road maintenance activities.

- Identify the equipment yards and maintenance shops that support road maintenance activities, and shall determine the necessary control measures and procedures to be employed at each facility through annual site inspections.

- Maintain documentation of the inspections that demonstrates the stormwater concerns reviewed and the appropriate control measures and procedures implemented or needing to be implemented.

4. Flood Control Projects

The City of Delray Beach shall continue to assure that flood management projects assess the impacts on the water quality of receiving water bodies and meet current Environmental Resource Permitting rules of the South Florida Water Management District for stormwater treatment. Existing structural flood control devices shall be evaluated to determine if retrofitting

the device to provide additional pollutant removal from stormwater is needed or feasible. The Flood Control Projects BMPs that will be undertaken include:

- Provide stormwater treatment for all flood management projects undertaken by the City as required by the Environmental Resource Permitting rules of the South Florida Water Management District.

- Maintain a list of stormwater capital improvement projects proposed by the City of Delray Beach.

- Annually evaluate existing structural flood control devices to determine if retrofitting the device to provide additional pollutant removal from stormwater is needed or feasible.

5. Municipal Waste Treatment, Storage, and Disposal Facilities Not Covered by an NPDES Stormwater Permit

The City of Delray Beach shall continue to implement a program to reduce pollutants in stormwater discharges from facilities that handle municipal waste not covered by an NPDES stormwater permit through procedures to evaluate, inspect, and monitor these facilities to the MEP. The Municipal Waste Treatment, Storage, and Disposal Facilities Not Covered by an NPDES Stormwater Permit BMPs that will be undertaken include:

- Annually review (and revise, as needed) and implement the 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
    - municipal waste treatment, waste storage, and waste disposal facilities.
- Maintain documentation of the inspections that demonstrates the stormwater concerns reviewed, and the appropriate pollution control measures and procedures implemented or needing to be implemented.

6. Pesticide, Herbicide, and Fertilizer Application

The City of Delray Beach shall continue to implement controls to reduce the stormwater discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers applied by employees or contractors to public property to the MEP. The Pesticide, Herbicide, and Fertilizer Application BMPs that will be undertaken include:

- Require proper certification and licensing by the Florida Department of Agriculture and Consumer Services (FDACS) for all applicators contracted to apply pesticides or herbicides on City owned property, as well as any City personnel employed in the application of these products.

- By January 1, 2014, all City personnel as well as contracted commercial applicators applying fertilizer shall be trained through the Green Industry BMP Program and have

obtained a limited certification for urban landscape commercial fertilizer application under Section 482.1562, F.S.

- Maintain a list/documentation of the proper FDACS certification/ licensing for all City personnel applicators and contracted commercial applicators of pesticides, herbicides and fertilizer.

- Develop, implement and maintain documentation of the training activities of a written education and outreach program plan to educate citizens, employees and contractors to the implications of their use of pesticides, herbicides, and fertilizers and to encourage them to reduce their use of pesticides, herbicides, and fertilizers.

- Annually review (and revise, as needed) and implement the City's written standardized procedures to minimize its use of pesticides, herbicides, and fertilizers on public property and to properly apply, store, and mix these products.

7. Illicit Discharges and Improper Disposal

The City of Delray Beach shall continue the ongoing program to detect and eliminate (or require the discharger to the MS4 to eliminate) illicit discharges and improper disposal into the MS4 to reduce pollutants discharged to the MS4 to the MEP. The Illicit Discharges and Improper Disposal BMPs that will be undertaken include:

- Effectively prohibit non-stormwater discharges to the MS4 through the use of inspections, ordinances, and enforcement.

- Implement a program developed to identify and eliminate source(s) of illicit discharges, illicit connections and dumping to the MS4 through a proactive/reactive inspection schedule and through investigations into reports of suspected illicit activity.

- Implement procedures to prevent, contain, and respond to spills that may discharge into the MS4.

- Implement a program to promote, publicize, and facilitate public reporting of illicit discharges.

- Effectively prohibit the discharge or disposal of used motor vehicle fluids, household hazardous wastes, and lead acid batteries into the MS4.

- Prevent unpermitted discharges of dry and wet weather overflows from sanitary sewers into the MS4 to the MEP.

8. Industrial and High Risk Runoff

The City of Delray Beach shall continue to implement a program to reduce the discharge of pollutants from industrial and high risk sites to the MEP. The Industrial and High Risk Runoff BMPs that will be undertaken include:

- Implement a program to identify and control pollutants in stormwater discharges to the MS4 to the MEP from any operating municipal landfill(s); hazardous waste treatment, storage, disposal and recovery facilities; facilities that are subject to EPCRA Title III, Section 313; and any other industrial or commercial discharge that the City determines is contributing a substantial pollutant loading to the MS4.

- Implement a program 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.

- Implement a plan for identifying, inspecting and monitoring of high risk facilities to determine compliance with all appropriate aspects of the stormwater program (e.g., no illicit discharges/connections/ dumping, compliance with local stormwater regulation requirements, coverage under the Department's NPDES Multi-Sector Generic Permit for Stormwater Discharge Associated with Industrial Activity (62-621.300(5), F.A.C.), referred to as the MSGP.

9. Construction Site Runoff

The City of Delray Beach shall continue to implement a program to reduce the discharge of pollutants from construction sites to the MEP. The Illicit Discharges and Improper Disposal BMPs that will be undertaken include:

- Require the use and maintenance of appropriate structural and non-structural best management practices to reduce pollutants discharged to the MS4 during the time of construction.

- Implement a program to notify all new development/ redevelopment permit applicants of the need to obtain all required stormwater permits including but not limited to, the Environmental Resource Permit (ERP) from the South Florida Water Management District or DEP Southeast District Office, and the Department's *NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities* (Rule 62-621.300(4), F.A.C.), referred to as the CGP, as applicable.

- Implement a program for inspecting construction sites and enforcing the requirements for stormwater runoff control measures.

- Provide appropriate education and training measures for those associated with the review, implementation, and inspection of proper stormwater, erosion, and sedimentation control measures at construction sites.

ANNUAL REPORT

An annual report will be prepared and submitted to the Northern Palm Beach County Improvement District prior to February 15 of each year for the life of the permit. This annual report will summarize the following:

A. Status of Compliance With Permit Conditions

The annual report will contain an assessment of the appropriateness of the BMPs and progress toward achieving the identified measurable goals for each of the minimum control measures. This assessment will be based on results collected and analyzed, inspection findings, and public input received during the reporting period.

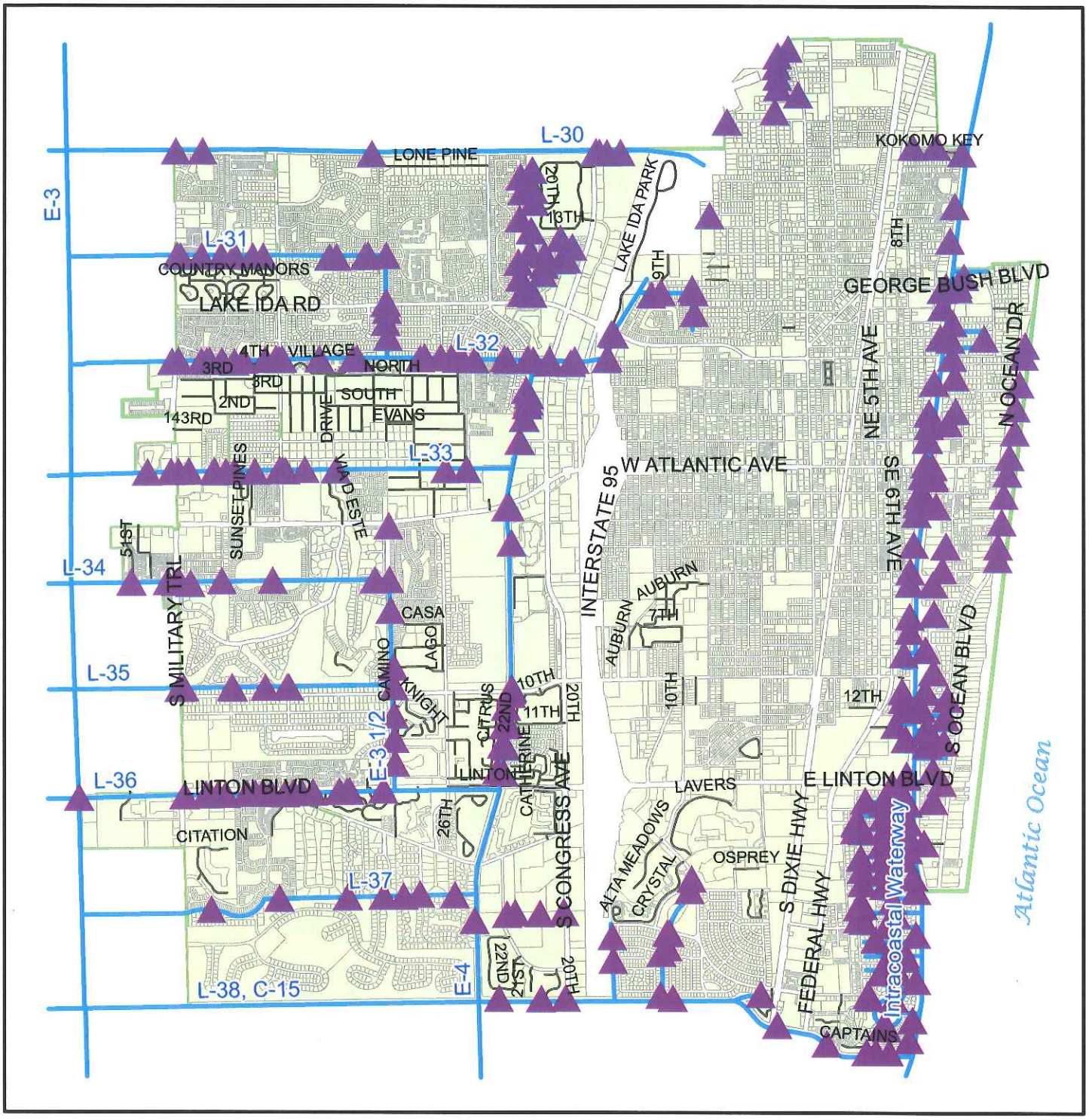
B. Modifications to the SWMP

The annual report will identify changes to BMPs or measurable goals for any of the minimum control measures.

C. Notice of Coordinated Activities

A notice will be included in the annual report for any portions of the permit for which a government entity or organization outside of the MS4 is being utilized to fulfill any BMP contained in the SWMP.

Waterways and Outfalls Within the City of Delray Beach



Drainage Outfalls

Canals and Waterways

Private Streets

Parcels

City Boundary Nov2009

N W E S

Not to Scale

CITY OF DELRAY BEACH

Waterways and Outfalls

City of Delray Beach
Environmental Services
Engineering/Stormwater
434 South Swinton Avenue
DelrayBeach, FL 33444
561-243-7298

Construction Site Inspection Plan and SWPPP Inspection Form

Construction site inspections are conducted for land-disturbing projects which have the potential to discharge stormwater runoff into our MS4 (Municipal Separate Storm Sewer System).

Timing

Construction site inspections are conducted:

- Before the start of construction, after the placement of temporary BMPs
- During construction (weekly and/or every 0.5" rain event)
- At the end of the construction

Site Priority

All construction sites are considered priority if they have the potential to discharge into water bodies or our MS4. Sites will be inspected with a frequency deemed appropriate during the site plan review process and with consideration to rainfall events. In addition, any site where compliance is a concern will be inspected more frequently.

Inspection Procedure

Inspections are the responsibility of Environmental Services Construction and are conducted using the attached construction site inspection form. The intent of the inspection is to verify and document that BMPs are performing. All completed inspection forms are kept in Project / TAC files and entered into the SWPPP database.

Enforcement

Instances of non-compliance will be handled with successively more rigorous enforcement measures.

1. Verbal notice of violation
2. Dollar hold (stop work order)

Dollar hold will be lifted upon compliance.

Construction Site Inspection Form

Site: _____ Inspection Date: _____

Inspector: _____ Longitude/Latitude: _____

Days since last rainfall: _____ Amount: _____

Receiving water body (if applicable): _____

Project owner: ☐ Private ☐ City of Delray Beach

YES	NO	N/A	
☐	☐	☐	SWPPP documents are on site and available.
☐	☐	☐	Erosion and Sedimentation Controls are installed as shown on plan.
☐	☐	☐	Erosion is being controlled on site.
☐	☐	☐	Sedimentation is being contained on site.
☐	☐	☐	All other sources of pollution are being contained/controlled.
☐	☐	☐	Prior non-compliance issues have been addressed.
☐	☐	☐	Changes required (comments)
☐	☐	☐	Dollar Hold
☐	☐	☐	Release Dollar Hold

Comments:

_____

_____

_____

_____

_____

_____

To be completed every 7 days and within 24 hours of a rainfall event of 0.5 inches or more

High Risk Facilities Inspection Program

High Risk facilities have been defined as:

- Operating municipal landfills
- Hazardous waste treatment, storage, disposal and recovery facilities
- Facilities that are subject to EPCRS Title III, Section 313 (Toxics Release Inventory)
- Any other industrial or commercial discharge that the permitte determines is contributing a substantial pollutant loading to the permittees MS4. This could include facilities identified through the proactive inspection program as per Part III.A.7.c. of the permit.

Procedures

- **An up-to-date inventory**

  The inventory is updated as follows:

  - Municipal landfills are located using the Palm Beach County Solid Waste Authority website (www.swa.org).
  - Hazardous Waste TSDR facilities are located using the EPA's Envirofacts website (www.epa.gov/enviro/).
  - Facilities subject to EPCRA Title III, Section 313 are located using EPA's Toxic Release Inventory (www.epa.gov/tri).
  - Additional facilities are added as deemed appropriate during the proactive inspections for illicit discharges.

  The inventory includes the following information about each facility:

  Name
  Address
  Latitude/Longitude (optional)
  Source of listing
  Type (landfill, HWTSDR, TRI sites, other)
  Priority

  The inventory is updated annually.

- **Procedure Prioritizing Facilities**

  Facilities that have had recent reported releases or that were added to the high risk facility inventory as a result of a pro-active inspection for illicit discharges are given top priority, "Priority 1". Facilities that are in the watershed of E-4 Canal will be given secondary priority, "Priority 2". The balance of the facilities will be "Priority 3".

- **Procedure for conducting site inspections (include checking for MSGP):**
  The inspector conducts an unannounced visit to the facility. All High Risk facilities are inspected annually. The Illicit Discharge/Illegal Connection Inspection form shall be used for High Risk Facilities (attached). Information available ahead of time is filled in before going into the field. At this time the facilities to be inspected are compared to the list of business types that require an MSGP. If a facility appears to be required to have coverage under an MSGP, it is noted on the inspection form and will be checked at the facility at the time of the inspection.

- **Procedures for enforcement actions:**
  Any facility found not to be in compliance will be notified verbally. If non-compliance continues, further escalating notification will be put in place until compliance is followed.

- **Procedure for documenting the inspections and enforcement activities:**
  Inspections shall be documented on the inspection form and entered into the IPP and Code Enforcement databases.

- **Identification of staff /department/ entity responsible for inspections and for enforcement:**
  The following staff members are responsible for the high risk facility inspections and enforcement activity:

Name	Department
IPP Inspectors	Environmental Services
Code Enforcement Inspectors	Community Improvement

- **Schedule for Training Inspectors:**
  Annual training is provided for individuals whose job responsibility it is to conduct high risk facility inspections. The training is concurrent with the training for the Pro-active illicit discharge inspection program.

1. **Description of resources allocated to implement this permit element:**
   Annually, $_____ is budgeted for this permit program.

Illicit Discharge/Illegal Connection Inspection Form

Date of Inspection: _____

Inspector: _____

Address of Facility OR General Description of Area Inspected: _____

_____

Identification of MS4 component that could receive discharge from this site: _____

Does type of business require an MSGP? Yes___ No___

If yes, does this facility have one? Yes___ No___

Findings:

Evidence of illicit connections to storm sewer?	Yes___	No___
Evidence of dumping/spills to storm sewer?	Yes___	No___
Evidence of wash water going to storm sewer?	Yes___	No___
Storage tanks leaking or improperly contained?	Yes___	No___
Stockpiles/debris piles uncontained?	Yes___	No___

If "yes," to any above, describe:

_____

_____

_____

_____

Enforcement Action taken: _____

Date to verify elimination: _____

Date of Referral to FDEP of facility that may require MSGP: _____

Proactive Inspection Program

- According to the MS4 NPDES permit, priority areas for inspection should include:
  - Areas with older infrastructure
  - Industrial, commercial, or mixed use areas
  - Areas with history of past illicit discharges and/or illegal dumping
  - Areas with on-site sewage disposal systems
  - Areas upstream of sensitive or impaired water bodies

- A list of the priority proactive inspection area/facilities follows. Priority facilities are checked against the list of facility types associated with the FDEP MSGP (multi-sector general permit) Sectors to determine their need to be covered by a MSGP.

- All areas/facilities will be inspected at least once within the current permit term. If a facility or area is discovered to have illicit discharges/connections/dumping, it will be placed on the schedule for re-inspection the following year. Facilities are inspected unannounced between June of the current year and May of the next year.

- Procedure for conducting site inspections (include checking for MSGP)
  Priority Facility inspections: For proactive facility inspections, the inspector conducts an unannounced visit to the facility. A standardized inspection form is used (see attached).

  Priority Area inspections: For general areas that have been designated to have a reasonable potential of containing illicit discharges/connections/dumping, a drive-around procedure is followed. The inspector patrols the prioritized area searching for indications of illicit discharges/connections/dumping. If any are identified, the inspector either stops to do a Facility Inspection, a reactive investigation, or completes a work order form for the appropriate personnel to complete the investigation.

- Once an illicit discharge is found:
  a. Inspect land surface area.
  b. Inspect surrounding inlets for chemical/sewage/grease indicators.
  c. Inspect storm manholes for chemical/sewage/grease indicators that can isolate discharges to a specific pipe segment.
  d. Follow pipe/illicit flow to source.
  e. Document source and determine if illicit is flowing/connected to a body of water.

- Procedure for eliminating the discharge:
  a. Determine type of spill/illicit connection.
  b. Verbally notify property owner/manager to contain contaminant.
  c. Notify State Warning Point if applicable.
  d. Determine what needs to be repaired and/or clean up required and notify property owner/manager.
  e. Schedule follow up and document.
  f. If following up inspection shows non-compliance, provide written warning to property owner/manager.

g. If applicable, mark property for escaladed frequency of inspections.

- All inspections and follow up inspections will be documented and placed within the facility's City file.

- Any facility found not to be in compliance will be notified verbally. If non-compliance continues, further escalating notification will be put in place until compliance is followed.

- Environmental Services IPP Inspectors will conduct inspections, and IPP Inspectors and Community Improvement Code Enforcement Inspectors are responsible for enforcement of City codes.

- Stormwater inspections are combined with pretreatment inspections. The IPP Inspectors are highly trained at detecting illicit discharges, and potential discharges, not only for sewer pretreatment, but also for stormwater. The IPP Inspector(s) must be certified as a Stormwater Erosion and Sediment Control Inspector and receive regular, updated illicit discharges and spill detection, prevention and elimination training.

List of Identified Priority Facilities

Facility	System	Priority	Receiving Water
Delray Medical Center	Private	3	None
Continental Concrete	City	2	E4
Hardrives Asphalt	County	2	E4
Everything Automotive	County	3	None
Solid Waste Authority	County	3	None

Illicit Discharge/Illegal Connection Inspection Form

Date of Inspection: _____

Inspector: _____

Address of Facility OR General Description of Area Inspected: _____

_____

Identification of MS4 component that could receive discharge from this site/area: _____

If Facility inspection, does type of business require an MSGP? Yes___ No___

If yes, does this facility have one? Yes___ No___

Findings:

Evidence of illicit connections to storm sewer? Yes___ No___

Evidence of dumping/spills to storm sewer? Yes___ No___

Evidence of wash water going to storm sewer? Yes___ No___

Storage tanks leaking or improperly contained? Yes___ No___

Stockpiles/debris piles uncontained? Yes___ No___

If "yes," to any above, describe:

_____

_____

_____

_____

_____

Enforcement Action Taken: _____

Date to verify elimination: _____

Date of Referral to FDEP of facility that may require MSGP: _____

Reactive Inspection Program

Section III.A.7.c – Illicit Discharges and Improper Disposal – Inspection and Investigation of Suspected Illicit Discharges and/or Improper Disposal. This permit element requires a written reactive investigation program for suspected illicit discharges and/or illegal dumping reported by others.

Procedure for tracing source of discovered illicit discharge:

- Look for illicit as described by the caller.
- Inspect land surface area.
- Inspect surrounding inlets.
- Inspect storm manholes (if applicable) for indicators that can isolate discharges to a specific pipe segment.
- Follow pipe/inlet to source.
- Document source and determine if illicit is flowing/connected to a body of water.
- Determine whether a MSGP (multi-sector general permit) is required.

Procedure for eliminating the discharge:

- Determine type of spill/illicit connection.
- Verbally notify property owner/manager to contain contaminant.
- Notify State Warning Point if applicable.
- Determine what needs to be repaired and/or clean up required and notify property owner/manager.
- Schedule follow up and document.
- If following up inspection shows non-compliance, provide written warning to property owner/manager.
- If applicable, mark property for escaladed frequency of inspection.

✓ All inspections and follow up inspections will be documented and placed within the facility's City file.

✓ Any facility found not to be in compliance will be notified verbally. If non-compliance continues, further escalating notification will be put in place until compliance is followed.

✓ Environmental Services IPP Inspectors and Community Improvement Code Enforcement Inspectors will conduct inspections, and IPP Inspectors and Code Enforcement Inspectors are responsible for enforcement of City codes.

✓ The IPP Inspectors and Code Enforcement Inspectors are highly trained at detecting illicit discharges, and potential discharges, not only for sewer pretreatment, but also for stormwater. The Inspectors must receive regular, updated illicit discharges and spill detection, prevention and elimination training.

Illicit Discharge/Illegal Connection Inspection/Illegal Dumping Inspection Form

Date of Inspection: _____ Date of Call (if applicable)_____

Inspector: _____

Address of Facility OR General Description of Area Inspected: _____

_____

Identification of MS4 component that could receive discharge from this site/area: _____

If Facility inspection, does type of business require an MSGP? Yes___ No___

If yes, does this facility have one? Yes___ No___

Findings:

Evidence of illicit connections to storm sewer? Yes___ No___

Evidence of dumping/spills to storm sewer? Yes___ No___

Evidence of wash water going to storm sewer? Yes___ No___

Storage tanks leaking or improperly contained? Yes___ No___

Stockpiles/debris piles uncontained? Yes___ No___

If "yes," to any above, describe:

_____

_____

_____

_____

_____

Type of Enforcement Action Taken: _____

Date to verify elimination: _____

Date of Referral to FDEP of facility that may require MSGP: _____

Stormwater Pump Station – Structural Control Inspection
Standard Operational/Maintenance/Documentation Protocol

There are seven stormwater pump stations that are part of our MS4; they are located as shown on the City of Delray Beach Drainage Atlas.

Inspections:
Stormwater pump stations are inspected monthly.

Maintenance:
There are several maintenance activities that may be associated with stormwater pump stations. The appropriate activity is chosen to correspond to the reported condition. The following activities may be required:

- Remove trash and debris and dispose of properly.
- Pull transducer and clean.
- Remove accumulated vegetative matter and dispose of properly.
- Remove accumulated sediment and dispose of properly.
- Maintain pump in accordance with pump manufacturer's recommendations.

Documentation:
The documentation for the inspection and maintenance activities related to stormwater pump stations is the completed work order and inspection form.

Joint Training Program

There are a number of permitte training requirements in the permit that are conducted jointly by the Steering Committee. These include the topics:

- Identifying and reporting conditions that may indicate illicit discharge/connection/dumping to the MS4 (for permitte personnel & contractors)
- Spill prevention, containment and response techniques (for permitte personnel & contractors)
- Stormwater management, erosion and sedimentation controls (for permitte personnel or contractors)

The first two topics are presented as refresher training once a year. The training is open to all permitte personnel. EXCAL videos are used to present the material. Attendance is documented using sign in sheets.

The last topic is presented at an annual FDEP Erosion and Sedimentation Control Inspector Training, sponsored by the Palm Beach County MS4 permitte group, and presented by Cheryl Moore, a state certified trainer.

Details about the program are provided in the joint annual report and on the website (pbco-npdes.org).

Litter Control Program

The Litter Control Program for The City of Delray Beach consists of:

- All City parks will be checked and attended to daily via work orders.
- All City parking lots and garages will be checked and attended to daily via work orders.
- Community centers, Boy Scout Hut, Boys and Girls Club, Marina, Old School Square, Spady House, Swim and Tennis Center, and the Tennis Center will be attended to via daily work orders, or by as needed work orders.
- Streets, whether City, County or Federal, will be attended to via work orders. Historically heavily trafficked roads will be attended to daily, while historically low trafficked roads will be attended to as needed.
- The library and county parking will be attended via work orders as needed.
- Daily work orders will be issued for other miscellaneous areas on an as needed basis.
- Documentation of litter hours worked will be logged into the Parks and Recreation module by date and is summarized for reporting each year.
- All collected litter is properly disposed of to a SWA roll off.
- There is an “Adopt-a-Street” program in place:

  The “Adopt-A-Street” Program was created in 1995 to help address the problem of roadside litter throughout the City. Organizations, individuals, and businesses “adopt” a minimum of one half mile stretch of a City street and agree to pick up litter at least four times a year.

  The goal of “adopting” a street is to improve the quality of life through litter prevention, education and promoting volunteerism; to promote civic responsibility, community pride and enhance Delray Beach’s visual appearance through clean streets and beautiful neighborhoods.
- In City Ordinance, Title 9 – General Regulations, Chapter 98 is known as the City’s Anti-Litter Chapter.
- City code enforcement officers will issue notices of violation to property owners who do not comply with these general provisions.

Public Works Yard/Shop Maintenance Practices And Inspections

General Housekeeping:

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date, and implement accordingly.
- Place adequate stockpiles of spill cleanup materials where they are readily accessible.
- Keep work sites clean and orderly; remove debris in a timely fashion.
- Spot clean leaks and drips routinely. Leaks are not cleaned up until the absorbent is picked up and disposed of properly.
- Clean leaks, drips, and other spills with as little water as possible. Use rags for small spills, a damp mop for general cleanup, and dry absorbent material for larger spills. Use the following three-step method for cleaning floors:
    1. Clean spills with rags or other absorbent materials
    2. Sweep floor using dry absorbent material
    3. Mop the floor. Mop water may be discharged to the sanitary sewer via a toilet or sink.
- Sweep the maintenance area weekly, if it is paved, to collect loose particles. Do not hose down the area to a storm drain.
- Report leaking vehicles to fleet maintenance.

Vehicle/Equipment Fueling:

- Maintain clean fuel-dispensing areas using dry cleanup methods such as sweeping for removal of litter and debris, or use of rags and absorbents for leaks and spills. Do not wash down areas with water.
- Post signs at the fuel dispenser or fuel island warning vehicle owners/operators against "topping off" of vehicle fuel tanks.

Vehicle/Equipment Washing:

- Use contained wash area to properly collect and dispose of wash water to the holding tank when engine cleaning is conducted and when chemical additives, solvents, or degreasers are used.
- Post signs stating that only washing is allowed in wash area, and that discharges to the storm drain are prohibited.
- Use biodegradable, phosphate-free detergents for washing vehicles as appropriate.
- Use hoses with nozzles that automatically turn off when left unattended.

Vehicle/Equipment Repair:

- Move maintenance and repair activities indoors whenever feasible.
- If outside, use a vehicle maintenance area designed to prevent stormwater pollution.
- If temporary work is being conducted outside, use a tarp, ground cloth, or drip pans beneath the vehicle or equipment to capture all spills and drips.
- Draining and replacing motor oil and other vehicle fluids to be performed within the confines of vehicle repair bays, with containment berms in place, absent of any floor drains connected to storm drains or sanitary sewer systems.

- Drain all fluids from wrecked vehicles immediately. Ensure that the drain pan or drip pan is large enough to contain drained fluids (e.g. larger pans are needed to contain antifreeze, which may gush from some vehicles).
- Do not pour liquid waste to floor drains, sinks, outdoor storm drain inlets, sewer connections.
- Dispose of all waste materials according to applicable laws and regulations.
- Collect leaking or dripping fluids in drip pans or containers. Fluids are easier to recycle if kept separate. Promptly transfer used fluids to the proper waste or recycling drums and store in an appropriately designed area that can contain spills. Don't leave drip pans or other open containers lying around.
- Do not dispose of oil filters in trash cans or dumpsters, which may leak oil and contaminate stormwater. Place the oil filter in a funnel over a waste oil recycling drum to drain excess oil before disposal. Most municipalities prohibit or discourage disposal of these items in solid waste facilities. Oil filters can also be recycled. Ask your oil supplier or recycler about recycling oil filters.
- Avoid hosing down your work areas. If work areas are washed, collect and direct wash water to sanitary sewer.

Storage:

- Store materials and wastes under cover whenever possible.
- Minimize stormwater run on by enclosing the area or building a berm around it.
- Cover the containers where they are stored.
- Raise the containers off the ground by use of pallet or similar method, with provisions for spill control and secondary containment.
- Use covered dumpsters for waste product containers.
- Contain the material in such a manner that if the container leaks or spills, the contents will not discharge, flow, or be washed into the storm drainage system, surface waters or groundwater.
- Store cracked and/or dead batteries in a non-leaking covered secondary container and dispose of properly at recycling or household hazardous waste facilities.
- If equipment (e.g., radiators, axles) is to be stored outdoors, oil and other fluids should be drained first. This is also applicable to vehicles being stored and not used on a regular basis.
- Try to keep chemicals in their original containers, and keep them well labeled.
- Store idle equipment containing fluids under cover.

Inspections:

The attached form is used for the inspection of each site on a monthly basis.

Public Works Yard/Maintenance Shop Inspection Form

Inspected by:_____ Date of Inspection: _____

YES	NO	N/A	
☐	☐	☐	Materials/chemicals are stored, handled, and discarded in a manner to reduce the potential risk of spills entering the MS4
☐	☐	☐	A spill kit is on site
☐	☐	☐	Outfalls, inlets, and outlets of stormwater treatment systems are free of debris/pollutants
☐	☐	☐	Storage tanks are clearly marked, properly contained, and protected from potential damage
☐	☐	☐	Loading, unloading, and transfer areas are neat and free of spills/debris/pollutants
☐	☐	☐	Vehicle maintenance areas are properly maintained and draining to the treatment system or sanitary sewer line
☐	☐	☐	Outdoor manufacturing areas are properly maintained and free of spills or debris
☐	☐	☐	Outdoor stockpile/material handling areas are properly maintained and the materials are properly contained (i.e., no potential to leak or leach pollutants)
☐	☐	☐	Trash and debris areas are conspicuous and properly protected from stormwater runoff
☐	☐	☐	Fueling stations are free of petroleum product spills/leaks
☐	☐	☐	Vehicle wash and rinse areas are draining to the treatment system or sanitary sewer line
☐	☐	☐	The site was free of any visual indication of potential illicit connection/illicit discharge to the MS4. If no, note type of indication:

Odor ☐ Color ☐ Foam ☐ Sheen ☐ Surface Scum ☐ Solids ☐ Turbidity ☐

Comments: _____

_____

_____

_____

Municipal Waste TSD Facility Procedures

There are two waste transfer stations (roll offs) at the Public Works compound located at 434 South Swinton Avenue. Necessary control measures have been put in place at the facility to ensure that any potential pollution of stormwater runoff from this facility is minimized or prevented. Site inspections are conducted annually using the attached inspection form.

Municipal Waste TSD Facility Inspection Form

Facility: Public Works roll off

Date of Inspection: _____

Address: 434 South Swinton Avenue

Inspector: _____

YES	NO	N/A	
☐	☐	☐	All waste at site is inside appropriate receptacles.
☐	☐	☐	Area around waste receptacles is neat and free of debris.
☐	☐	☐	Waste receptacles are sturdy, leak-free, and in acceptable condition.
☐	☐	☐	Waste receptacles are away from storm inlets.
☐	☐	☐	Waste collection area does not drain to stormwater system (MS4).
☐	☐	☐	A spill kit is on site.
☐	☐	☐	Sediment and erosion controls are operating properly.

Comments:

_____

_____

_____

_____

_____

_____

Pesticide, Herbicide & Fertilizer Minimization Procedures

In accordance with our MS4 permit, the City continues to endeavor to minimize its use of pesticides, herbicides, and fertilizers on public property. The procedures used to achieve this are as follows:

Pesticides & Herbicides
Only personnel and contractors who have proof of certification and licensing by the Florida Department of Agriculture and Consumer Services (FDACS) for the application of pesticides and herbicides, are allowed to apply these products.

Fertilizers
All personnel, and contractors by January 1, 2014, who apply fertilizers must demonstrate proof of training through the Green Industry BMP Program. In addition, contracted applicators are required to prove certification for "urban landscape commercial fertilizer application."

Annually, or more often, training on the proper storage and handling of these products is provided to all relevant personnel. Typically, relevant personnel are required to attend the Palm Beach County joint training event where EXCAL employee training videos on stormwater pollution prevention are shown.

A list is maintained of all personnel and contractors who have received training, licensing, certification, and annual refresher training.

Plan to Eliminate Wastewater Contamination in Stormwater

The City of Delray Beach operates the wastewater collection and transmission system within its jurisdiction. The City's Industrial Pretreatment Program (IPP) is responsible for reducing/elimination wastewater contamination. The IPP Program ensures that pretreatment of pollutants is performed at the source by requiring the facility to install a pretreatment system using various gravity traps, chemical or biological action or by no discharge. The City inspects restaurants, commercial, medical and industrial businesses that have potential to discharge pollutants in the sanitary system, and possible discharge/runoff into storm sewer systems.

Identified indications of wastewater contamination are documented in the IPP Inspector database. Follow-up with the Water/Sewer Division is conducted so that documentation of the response and resolution can also be logged.

The program is enforced under Title V, Chapter 53 of the City's ordinances. The program is mandated under Chapter 62-625 Florida Administrative Code and 40 Code of Federal Regulations, Part 403 as part of the Clean Water Act.

Roadway Maintenance Practices
To Reduce Pollutants

Roadway repairs and maintenance may take place anywhere throughout the City's jurisdictional area, and is conducted on an as-needed basis. Major repair work is typically done as a construction project by a contractor. These projects most often required a Notice of Intent under the State's Generic Construction Permit, which requires a Stormwater Pollution Protection Plan. Routine inspections are done as part of the construction site inspection program.

Minor repairs, completed by municipal staff, are performed using the following practices:

- Painting, striping, marking, and asphalt and concrete cutting or repair activities are done in dry weather.

- Nearby storm drain inlets are protected by covers, straw bales, sand bags, filter fabric or plastic to reduce the possible entry of wastes, dusts, overspray and/or slurry.

- All waste and debris remaining after the work is swept up and removed.

- Water use is minimized when saw cutting concrete. The waste slurry is allowed to dry and then swept up or a wet vacuum is used to pick up the waste slurry during or immediately after cutting.

- Maintenance supplies (e.g., cement bags, sealants and tars) are stored under cover and away from drainage areas.

- Waste, scraps, rust and paint from any sandblasting or painting projects is collected and disposed of properly.

City of Delray Beach Site Plan Review Procedures

Site Plan Reviews are required for all projects within the City of Delray Beach that result in the development of vacant land, modification of developed property where no valid site plan of record exists, change in intensity of use or which affects the spatial relationship among improvements on land.

Application packages for building/construction/grading permits include brochures presenting the need for obtaining an Environmental Resource Permit (ERP) and/or coverage under the NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities (CGP).

Site plan Reviews are typically conducted at the first step in the process. Personnel in the Engineering Department conduct the reviews. Current local, state and federal standards criteria are used as the guideline for review of the temporary and permanent stormwater treatment practices that are being proposed by the site plan.

Applicants of a building/construction/grading permit are advised that coverage under the Construction Generic Permit may be required. Applicants are further advised that permission/permit authorization to perform clearing, grading or construction activities will not be granted until proof of a SFWMD or FDEP ERP and/or coverage under the CGP is provided, if required.

Control Structures – Structural Control Inspection
Standard Operational/Maintenance/Documentation Protocol

Control structures (weirs, orifices, gates, etc.) that are associated with other structural controls, such as wet and dry retention and detention areas, exfiltration trench, and swales, are inspected along with the structural control system of which they are a part.

Control structures that associated with pipe networks and/or canals (weirs, operable gates, etc.) are inspected as stand-alone facilities. Currently, there are seven stand-alone control structures that are part of our MS4. The location of these control structures may be found on the City of Delray Beach Drainage Atlas, and the City of Delray Beach Overflow Control Box Inventory booklet.

Inspections:

Stand-alone control structures are inspected annually, or more frequently if historic operations indicate that it is needed for a particular control structure.

Maintenance:

There are several maintenance activities that may be associated with control structures. Because these structures are each unique, their maintenance needs are specific to each structure. The appropriate activity is chosen to correspond to the reported condition or required action. The following activities may be required:

- Remove trash and debris and dispose of properly.
- Remove accumulated vegetative matter and dispose of properly.
- Remove accumulated sediment and dispose of properly.
- Remove barnacles and/or other marine life and dispose of properly.
- Repair/replace the mechanical parts, if applicable.
- Repair/replace structure, if needed.

Documentation:

Currently, the documentation for the inspection and maintenance activities related to control structures are completed work orders and inspection forms. Data totals are to be entered in the PW SW Monthly Report.

During normal inlet inspections all inlets found with weirs, baffles or gate valves are to be inventoried and added to this control structure inspection list

The following is a list of current City owned control structures:

12C170
17M030
18C456
19C253
24C158
25C007
30N087

Control Structure Inspection Procedure/Checklist/Form

Structure ID: _____ Date: _____

Inspected by: _____

FUNCTION:

Is weir, baffle, gate working properly to allow only overflow? *YES* *NO*

Is weir, baffle, gate working properly to withhold debris? *YES* *NO*

If *NO*, schedule for maintenance.

GENERAL:

Any indications of illicit discharge or illegal dumping? *YES* *NO*

If *YES*, describe and report to supervisor for proper response:_____

Debris accumulation upstream or downstream of structure? *YES* *NO*

Sediment accumulation upstream or downstream of structure? *YES* *NO*

Headwall, riprap, weir, gate or baffle in need of repair/replacement? *YES* *NO*

If *YES*, schedule for maintenance.

Dry Detention and/or Retention System – Structural Control Inspection Standard Operational/Maintenance/Documentation Protocol

There are 23 dry retention systems that are part of our MS4; they are located as shown on the Drainage Atlas.

Inspections:

Established dry detention/retention systems are inspected once every three years, using the following Structural Control Inspection Form. In addition, they are observed for problems that may impact their function whenever they are mowed.

New dry detention/retention systems are inspected annually for the first two years of operation. If chronic problems are identified with a dry detention/retention system, it is inspected annually until the problem is resolved (two consecutive annual inspections without an issue). Inspections are conducted close to the storage recovery time of that dry detention/retention system (generally 72 hours after a significant rainfall event) to verify that the system still functions as intended. Attached is a list of current dry retention systems.

Maintenance:

There are several maintenance activities that may be associated with a dry detention/retention system. The appropriate activity is chosen to correspond to the reported condition. The following activities may be required:

- Mow grass.
- Remove trash and debris from system and dispose of properly.
- Remove accumulated sediment from the inflow pipe and dispose of properly.
- Eliminate any mosquito breeding habitats.
- Repair any undercutting or piping around inflow structure.
- Repair and re-establish any eroded areas on the bottom, side slopes, and/or near inflow structure.
- Scrape, disc, or otherwise aerate the bottom of the detention/retention area to restore the infiltration capacity. Include soil testing, as needed, to verify that the infiltration capacity has been restored.
- Re-sod and re-seed as needed.

List of current dry retention systems:

08R001	20R001
08R002	20R002
08R003	20R003
08R004	20R004
09R001	20R005
09R002	20R006
09R003	21R001
09R004	21R002
17R001	21R003
17R002	29R001
17R003	
17R004	
17R005	

Dry Detention/Retention System – Structural Control Inspection

Facility ID: _____ Date: _____

FUNCTION:

Wet bottom? *YES* *NO*

Dead or dying vegetation on bottom? *YES* *NO*

Any signs of accumulated sediment? *YES* *NO*

If *YES*, report to supervisor for further investigation or schedule for maintenance.

EROSION:

Vegetation on bottom and side slopes failing? *YES* *NO*

Any signs of erosion? *YES* *NO*

If *YES*, describe and schedule for maintenance:

_____

INFLOW STRUCTURE:

Any signs of erosion? *YES* *NO*

Any signs of structure settling? *YES* *NO*

Any signs of physical damage? *YES* *NO*

Any signs of accumulated sediment? *YES* *NO*

If *YES* to any of the above, schedule the structure for maintenance.

Any debris present? *YES* *NO*

If *YES*, remove debris or schedule for maintenance.

OUTFLOW STRUCTURE (for Dry Detention systems only):

Any signs of erosion? *YES* *NO*

Any signs of structure settling? *YES* *NO*

Any signs of physical damage? *YES* *NO*

Any signs of accumulated sediment? *YES* *NO*

If *YES* to any of the above, schedule the structure for maintenance.

Any debris present? *YES* *NO*

If *YES*, remove debris or schedule for maintenance.

GENERAL:

Any signs of “excessive petroleum hydrocarbon contamination”? *YES* *NO*

Any indications of illicit discharge or illegal dumping? *YES* *NO*

If *YES*, address issue as required.

Exfiltration Trench – Structural Control Inspection
Standard Operational/Maintenance/Documentation Protocol

There are currently 12,211 linear feet of exfiltration trench that are part of our MS4.

Inspections:
Established exfiltration trench is inspected once every three years, using the following Structural Control Inspection Form. New exfiltration trench is inspected annually for the first two years of operation. If chronic problems are identified with a run of exfiltration trench, it is inspected annually until the problem is resolved (two consecutive annual inspections without an issue). The inspection to check for proper function is conducted close to the recovery time of that exfiltration trench system (generally 72 hours after a significant rainfall event) to verify that the system still functions as intended. The inspection for sediment accumulation in the system is conducted in dry weather.

The location of the City owned exfiltration trenches may be found on the City of Delray Beach Drainage Atlas, and a list may be found at S:\EngAdmin\NPDES\Copy of Exfilt Trnch.

Maintenance:
There are several maintenance activities that may be associated with an exfiltration trench. The appropriate activity is chosen to correspond to the reported condition. The following activities may be required:

- Remove sediment in pipe(s) and/or upstream and downstream structures. This may be done by flushing or vacuuming.
- Remove trash and debris from the system and dispose of properly.
- Total rehabilitation (removal and replacement) of the exfiltration trench system may be required when the system fails to function at the design capacity.

Documentation:
Currently, the documentation for the inspection and maintenance activities related to exfiltration trenches are completed work orders and inspection forms. Data totals are to be entered in the S:\Mon_Rpt*year*\PW SW for NPDES *years*.xls spreadsheet.

Exfiltration Trench – Structural Control Inspection

Facility/Segment ID:_____ Date: _____

Inspected by: _____

Inspection conducted _____ days/hours after significant rainfall event.

FUNCTION:

Standing water in observation well, inspection port, or inlet? *YES* *NO*

Standing water above inlet grates? *YES* *NO*

If *YES*, report to supervisor for further investigation or schedule for maintenance.

GENERAL:

Sediment amount less than one foot below pipe invert in up or downstream structure? *YES* *NO*

Sediment visible in pipe? *YES* *NO*

Debris accumulation at weir? *YES* *NO*

If *YES*, describe and schedule for maintenance:_____

Any indications of illicit discharge or illegal dumping? *YES* *NO*

If *YES*, describe and report to supervisor for proper response:_____

Major Stormwater Outfalls – Structural Control Inspection
Standard Operational/Maintenance/Documentation Protocol

There are currently 23 major stormwater outfalls (MSWOs) that are part of our MS4. A MSWO is defined as:

- An outfall pipe larger than 36-inch inside diameter.
- Discharge from a single conveyance other than a pipe that serves a drainage area of 50 acres or more.
- An outfall pipe larger than 12-inches inside diameter that serves a drainage area containing industrial land uses.
- Discharge from a single conveyance other than a pipe that serves a drainage area of 2 acres or more than include industrial land uses.

The MSOWs within our MS4 are located on the Drainage Atlas; a Major Outfall Inventory is included here.

Inspections:

MSWOs are inspected annually, or more frequently if historic operations indicate that it's needed for a particular MSWO. Outfalls are inspected as tidal influence allows. Inspections are conducted in accordance with the following Structural Control Inspection Form.

Maintenance:

There are several maintenance activities that may be associated with MSWOs. The appropriate activity is chosen to correspond to the reported condition. The following activities may be required:

1. Remove trash and debris and dispose of properly.
2. Remove accumulated vegetative matter and dispose of properly.
3. Remove accumulated sediment and dispose of properly.
4. Maintain earthen bank adjacent to the discharge pipe or headwall.
5. Maintain the headwall at the outfall, if applicable.
6. Repair/replace pipe if needed.

Documentation:

The inspection and maintenance activities related to major stormwater outfalls are documented as work orders completed in Cartegraph, and updated in the PW SW Monthly Report.

Major Outfall Inventory					
Outfall #	**Discharge To**	**Ownership**	**Location**	**Diameter**	**Insp Date**
05D001	LAKE IDA	CITY	PINERIDGE RD	36	
05D015	LAKE EDEN	CITY	N SWINTON AVE	36	
08D030	E-4	CITY	DEPOT RD	72	
12D090	L-31	CITY	PLACE TAVANT	36	
12D113	L-32	CITY	BARWICK RD	36	
12D182	L-32	CITY	NW 5 ST	42	
16D122C	ICW	CITY	ATLANTIC AVE PS	42	
16D190	ICW	CITY	BAY ST PS	36	
16D222	ICW	CITY	NE 2 ST	48	
16D327	ICW	CITY	NE 1 ST	48	
16D327A	ICW	CITY	NE 1 ST	48	
16D327B	ICW	CITY	NE 1 ST	36	
16D516	ICW	CITY	SE 3 ST	72	
19D079B	E-4	CITY	MAHOGANY WAY	36	
19D138	E-4	CITY	LOWSON BLVD	48	
19D148	E-4	CITY	LOWSON BLVD	36	
19D361	E-4	CITY	CITRUS WAY	36	
21D033	ICW	CITY	TAMARIND RD	36	
25D015	L-37	CITY	RABBIT HOLLOWE	48	
28D182	ICW (ELEUTHERA CANAL)	CITY	SPANISH TR	42	
29D037	C-15 (BASS CANAL)	CITY	DUNLIN RD	36	
29D116	C-15	CITY	LINDELL BLVD	42	
30D086	L-37	CITY	VIA VERONA	36	

Major Stormwater Outfalls – Structural Control Inspection

Facility ID: _____ Date: _____

Inspected by: _____

FUNCTION:

Debris or sediment accumulation in pipe? *YES* *NO*

Barnacle accumulation in pipe? *YES* *NO*

Sediment accumulation in receiving water? *YES* *NO*

Pipe in need of repair/replacement ? *YES* *NO*

If *YES*, report to supervisor for further investigation or schedule for maintenance.

GENERAL:

Any indications of illicit discharge or illegal dumping? *YES* *NO*

If *YES*, describe and report to supervisor for proper response:

_____

Signs of erosion on bank near outfall? *YES* *NO*

Rip-rap in need of maintenance? *YES* *NO*

Headwall in need of repair/replacement? *YES* *NO*

If *YES*, schedule for maintenance.

Swale System – Structural Control Inspection
Standard Operational/Maintenance/Documentation Protocol

There are _____ linear feet (or miles) of swales that are part of our MS4; the swale segments are located as entered into Cartegraph.

Inspections:
Established swales are inspected once every three years, using the following Structural Control Inspection Form. In addition, they are observed for problems that may impact their functionality whenever they are mowed/maintained.
New swales are inspected annually for the first two years of operation.
If chronic problems are identified with a swale, it is inspected annually until the problem is resolved (two consecutive annual inspections without an issue).
Inspections are conducted close to the recovery time of that swale (generally 72 hours after a significant rainfall event) to verify that the system still functions as intended.

Maintenance:
There are several maintenance activities that may be associated with swales. The appropriate activity is chosen to correspond to the reported condition. The following activities may be required:

- Mow grass.
- Remove trash and debris from system and dispose of properly.
- Remove accumulated sediment from the inflow and/or outflow pipe and dispose of properly.
- Eliminate any mosquito breeding habitats.
- Repair any undercutting or piping around inflow and/or outflow structure.
- Repair and re-establish any eroded areas on the bottom, side slopes, and/or near any structure.
- Scrape, disc, or otherwise aerate the bottom of the swale to restore the infiltration capacity. Include soil testing, if needed, to verify that the infiltration capacity has been restored. Re-establish the surface to its final condition.

Documentation:

The documentation for the inspection and maintenance activities related to swales will be entered into Cartegraph as completed work orders, which will be noted in the PW SW Monthly Report.

Grass Swale – Structural Control Inspection

Facility/Segment ID: _____ Date: _____

Inspected by: _____

Inspection conducted _____ days/hours after significant rainfall event.

FUNCTION:

Wet bottom?	*YES*	*NO*
Aquatic vegetation present?	*YES*	*NO*
Dead or dying grass on bottom?	*YES*	*NO*
Sediment accumulation?	*YES*	*NO*
Grading issue?	*YES*	*NO*

If *YES*, report to supervisor for further investigation or schedule for maintenance.

EROSION:

Vegetation on bottom or side slopes failing?	*YES*	*NO*
Any signs of erosion?	*YES*	*NO*

If *YES*, describe and schedule for maintenance:

_____

GENERAL:

Any signs of damage from parking in swale?	*YES*	*NO*
Any fences or other objects that could obstruct flow into/through the swale?	*YES*	*NO*

If *YES*, schedule for maintenance.

Any indications of illicit discharge or illegal dumping?	*YES*	*NO*

If *YES*, describe and report to supervisor for proper response:

_____

Wet Detention System – Structural Control Inspection
Standard Operational/Maintenance/Documentation Protocol

There is currently one wet detention system that are part of our MS4; it is located as shown on the City of Delray Beach Drainage Atlas.

Inspections:

Established wet detention systems are inspected once every three years, using the following Structural Control Inspection Form. In addition, they are observed for problems that may impact their function whenever the side slopes are maintained (mowed, trimmed, etc.)
New wet detention systems are inspected annually for the first two years of operation.
If chronic problems are identified with a wet detention system, it is inspected annually until the problem is resolved (two consecutive annual inspections without an issue).
Inspections are conducted close to the storage recovery time of that wet detention system (generally 72 hours after a significant rainfall event) to verify that the system still functions as intended.
The current wet detention system is 18R001.

Maintenance:

There are several maintenance activities that may be associated with a wet detention system. The appropriate activity will be chosen to correspond to the reported condition. The following activities may be required:

- Maintain and re-establish any eroded areas on side slopes.
- Repair any undercutting or piping around inflow and/or outflow structure(s).
- Remove trash and debris from system and dispose of properly.
- Remove accumulated sediment from the inflow and/or outflow pipe and dispose of properly.
- Remove any trees or shrubs that may have become established near the discharge structure/pipe.
- Remove exotic vegetation from the littoral zone (if applicable) and replant as needed.
- Remove accumulated sediment from basin to restore design storage volume.
-

Documentation:

The documentation for the inspection and maintenance activities related to the wet detention systems are completed work orders and inspection forms. Data totals are to be entered in the PW SW Monthly Report.

Wet Detention System – Structural Control Inspection

Facility ID: 18R001 Inspector_____ Date:_____

Inspection conducted _____ days/hours after significant rainfall event.

FUNCTION:

Pond/Lake level above control elevation longer than recovery time (see facility inventory)? *YES* *NO*

If *YES*, report to supervisor for further investigation or schedule for maintenance.

EROSION:

Vegetation on side slopes failing? *YES* *NO*

Any signs of erosion? *YES* *NO*

If *YES*, describe and schedule for maintenance:

_____

INFLOW STRUCTURE:

Any signs of erosion? *YES* *NO*

Any signs of structure settling? *YES* *NO*

Any signs of physical damage? *YES* *NO*

Any signs of accumulated sediment? *YES* *NO*

If *YES* to any of the above, schedule the structure for maintenance.

Any debris present? *YES* *NO*

If *YES*, remove debris or schedule for maintenance.

OUTFLOW STRUCTURE:

Any signs of erosion? *YES* *NO*

Any signs of structure settling? *YES* *NO*

Any signs of physical damage? *YES* *NO*

Any signs of accumulated sediment? *YES* *NO*

If *YES* to any of the above, schedule the structure for maintenance.

Any debris present? *YES* *NO*

If *YES*, remove debris or schedule for maintenance.

GENERAL:

Any indications of illicit discharge or illegal dumping? *YES* *NO*

If *YES*, describe and report to supervisor for proper response:

_____

SPILL INCIDENT REPORT

Provide a summary of the spill incident. Include the date, time, material spilled, location, circumstances, and cleanup measures taken.

QUARTERLY INSPECTION LOG: Facilities in Zones 1, 2, or 3 are required to provide the date and name of individual who performed the quarterly inspections of secondary containment systems and emergency response equipment.

1st quarterly inspection performed on ___/___/___ by _____.

2nd quarterly inspection performed on ___/___/___ by _____.

3rd quarterly inspection performed on ___/___/___ by _____.

4th quarterly inspection performed on ___/___/___ by _____.

Comments: _____

DAILY LOG FOR WELLFIELD OPERATING PERMIT NO. WP- -

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
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2												
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ovide spill information on page 2 of this form and contact Palm Beach County partment of Environmental Resources Management at (561) 233-2400.

Spill Prevention and Response Procedures

Following are the procedures for preventing and responding to spills within our jurisdictional area:

Prevention:

- Store hazardous materials and wastes in covered container and protect from vandalism.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- Train employees in spill prevention and cleanup.
- Designate responsible individuals to oversee and enforce control measures.
- Place proper storage, cleanup and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
- Keep waste storage areas clean, organized and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, cover and liner should be repaired or replaced as needed to maintain proper function.

Response:

- Based on training received, identify whether the spill requires a call be made to a supervisor or the Fire Department. If it does, do so immediately and follow any instructions given.
- Take appropriate steps to contain the spill in order to eliminate or minimize the possibility of the spilled substance entering the storm sewer system.
- If within your authority, clean up the spill. Rely on training to determine the appropriate method for spill clean-up.
- Spills should be covered and protected from stormwater runoff during rainfall to the extent that is doesn't compromise cleanup activities.
- Do not bury or wash spills with water.
- Follow up with documentation on any spill incident.

Documentation:

Spills and the follow-up responses are documented in the Spill Incident Report log.

Spill Prevention and Response Training Plan

Following is the plan for training the appropriate personnel in preventing and responding to spills within our jurisdictional area.

Who
All Environmental Public Works street maintenance, stormwater maintenance and Parks and Recreation maintenance shall receive training.

Topics
The information covered by the training includes:

- Practices to prevent spills.
- How to recognize & assess the nature of a spill.
- How to contain a spill.
- How to report a spill that is hazardous, too large to manage, or threatens a water body.

Method
The training is presented via EXCAL employee training videos. The primary videos for spill prevention & response are “Spills & Skills” and “Controlling Oil: Spill Prevention, Control & Countermeasure.” Refresher courses shall be provided.

Presenter
The training is presented by the NPDES Co-permittee and the Stormwater Administrator.

Schedule
The training is presented annually.

Training Documentation
Attendance at the training session is documented by sign-in sheets.

Street Sweeping Program

The City sweeps all public streets, garages and parking lots within its jurisdiction. CRA parking lots are swept as well. Three different sweepers (#695, #696 and #697) are currently in use. Roadways without curb and gutter, and roadways not owned/maintained by subdivisions with privately owned streets, are not included in the program. The frequency of sweeping is daily.

The areas swept most frequently are the priority areas. Documentation of volume of street sweeping collection is kept in a log book by date and is summarized for reporting each year in the PW SW Monthly Report.

An estimate of the total phosphorus and total nitrogen collected by the street sweeping is performed based on the Florida Stormwater Association's determinations of street sweeping removal rates project. For this calculation, the land use of the area swept and the amount of material collected is used.

All street sweeping collection is properly disposed of in accordance with DEP's "Guidance For The Management Of Street Sweepings, Catch Basin Sediments and Stormwater System Sediments."

Schedules for the three sweepers are listed here.

Florida Stormwater Association Street Sweeping Nutrient Removal Rates

Based on the May 31, 2011 Final Report "Quantifying Nutrient Loads Associated with Urban Particulate Matter (PM), and Biogenic/Litter Recovery Through Current MS4 Source Control and Maintenance Practices" and Table 8 in the report (pg.41), the following values may be used to estimate nutrient removal values from street sweeping activity:

Median Value of Nutrient Removal per Unit of Material Collected	
Total Phosphorus	**Total Nitrogen**
0.000361	0.000563

Example Calculations:

In fiscal year 2010, Palm Beach County collected 1,915 cubic yards of material with the street sweeping program. Assuming the average density of the street sweeping material is 2,295 pounds per cubic yard,* then 4,394,925 pounds were collected. Using the table above, the total phosphorus removed would be estimated at (4,394,925)(0.000361) = 1,587 pounds. The total nitrogen removed would be estimated at (4,394,925)(0.000563) = 2,474 pounds.

Last year the Town of Jupiter collected 35.8 dry tons (71,600 pounds) of street sweeping material from residential areas. The estimated nutrient removal rates for total phosphorous and total nitrogen would be (71,600 pounds)(0.000361) = 26 pounds, and (71,600)(0.000563) = 40 pounds, respectively.

* *This assumption is based on information from the study referenced above.*

Clean Safe Sweeping *Schedule Mon/Wed/Fri (5:00AM-1:00PM)*

MONDAY / WEDNESDAY / FRIDAY	MAINTENANCE ISSUES	Date & Time Completed
City Hall / Parking Lot M/W/F		
Community Center / Parking Lot M/W/F		
Tennis Center / Parking Lot M/W/F		
Old School Square / Parking Lot M/W/F		
Hands / Parking Lot M/W/F		
NE 2nd Ave. Atlantic to NE 4th St. M/W/F		
NW 5th Ave./ Parking Lot M/W/F		
Gladida / Parking Lot M/W/F		
Veterans / Parking Lot M/W/F		
DB City Garage (Entrance on NE 1st St.)		
#434 South Swinton (Compound) M/W/F		
Delray Beach Golf Course (Friday)		
Available Personnel To Cover As Needed		
Other Areas Swept Or Requested (Note Below)		
Revised 3/16/2009 RWH		

Sweeper #695 Unless Otherwise Noted

Sweeping Schedule Tues. Thurs. (5:00AM-1:00PM)

TUESDAY		Maintenance Issues	Date & Time Completed
Palm Ave.	Tues.		
Bronson Ave.	Tues.		
Salia Ave.	Tues.		
Knowles Parking Lot	Tues.		
Chamber Of Commerce Lot	Tues.		
Sandoway Parking Lot	Tues.		
Ingraham Parking Lot	Tues.		
Anchor Parking Lot	Tues.		
Dunes Parking Lot	Tues.		
Bankers Row	Tues.		
Thursday			
Barwick Park / Lot	**(Thurs.)**		
Pompey Park / E&W Lots	**(Thurs.)**		
Delray Beach Golf Course	**(Thurs.)**		
Lakeview Golf Course	**(Thurs.)**		
Miller Park	**(Thurs.)**		
Lakeview Park	**(Thurs.)**		
Water Treatment / Lot	**(Thurs.)**		
Bankers Row	**(Thurs.)**		
DBPD Lot	**(Thurs.)**		
Other Sweeping Request Note Below			
Revised 11/10/2008 RWH			

Sweeper #695 Unless Otherwise Noted

For use by #696 & 697

MONDAY

Sweeping Route

Odometer Start : _____ **Sweeper #** _____
Odometer Finish: _____ **Routine Maintenance:**
Total Miles: _____ **Greased** _____ **Washed** _____
Debris Weight: _____ **Ticket #** _____

5:00 AM Atlantic Ave. "DOWNTOWN" SWEEPING" Scheduled

A-1-A (N&S Bound) **(Atlantic To Casuarina To N. Beach)**	**Curbside miles**	**1.75**	**Completed:** _____
Ingraham Ave. W/Bound **(A-1-A To Gleason)**	**Curbside miles**	**.10**	**Completed:** _____
Vista Del Mar / E&W Bound **(A-1-A To A-1-A)**	**Median** **Valley Gutter**	**.50** **.70**	**Completed:** _____ **Completed:** _____
Thomas St. / E&W Bound **(Andrews Ave. To Seabreeze Ave.)**	**Valley Gutter**	**.20**	**Completed:** _____
Seabreeze Ave. / N&S Bound **(Atlantic Ave. To Dead End)**	**Valley Gutter**	**.50**	**Completed:** _____
Basin Dr. / E&N Bound **(Seabreeze To Lowery)**	**Valley Gutter**	**.20**	**Completed:** _____
Cemetery	**Street / Curbside miles**	**4.00**	**Completed:** _____
8th Ave. / S Bound **(Outside Cemetery)**	**Curbside miles**	**.20**	**Completed:** _____

TOTAL CURB MILES COMPLETED _____

If Not Completed Please Supply Reason _____

OPERATOR SIGNATURE _____

For use by #696 & #697

Monday

Sweeping Route

Odometer Start: _____ **Sweeper #** _____
Odometer Finish: _____ **Routine Maintenance:**
Total Miles: _____ **Greased** ___ **Washed** ___
Debris Weight: _____ **Ticket #** _____

5:00 AM Atlantic Ave. "Down Town" Sweeping Scheduled

SE 2nd Street (E&W Bound) (Swinton Ave. to SE 6th Ave.)	**Curbside miles**	**0.60**	**Completed:** _____
SE 1st Street (E&W Bound) (Swinton Ave. to SE 6th Ave.)	**Curbside miles**	**0.80**	**Completed:** _____
S. Swinton Ave. **(N&S Bound)** **(South 10th St. To Atlantic Ave.)**	**Street/Curb miles**	**2.00**	**Completed:** _____
N. Swinton Ave. (N&S Bound) **(Atlantic Ave. to NE 22nd St.)**	**Street/Curb miles**	**3.20**	**Completed:** _____
Lake Ida Rd. **(NE 6th Ave. To Military Tr.)**	**Curbside miles** **Median miles**	**6.80** **5.40**	**Completed:** _____ **Completed:** _____
NE 1st Street (West Bound)	**Curbside miles**	**0.70**	**Completed:** _____
3rd Ave. (N&S Bound) **(Atlantic Ave. to SE 2nd Street)**	**Curbside miles**	**0.20**	**Completed:** _____
4th Ave. (N&S Bound) **(SE 2nd St. to NE 2nd St.)**	**Curbside miles**	**0.40**	**Completed:** _____
5th Ave. (N&S Bound) **(Atlantic Ave. to NE 2nd St.)**	**Curbside miles**	**0.20**	**Completed:** _____
Alley N. Bound (Between 4th & 5th Ave.) **(Atlantic Ave. to NE 2nd St.)**	**Curbside miles**	**0.20**	**Completed:** _____
Alley Between 5th & 6th Ave. **(Atlantic Ave. To SE 2nd St.)**	**Curbside miles**	**0.20**	**Completed:** _____
Alley Between 6th & 7th Ave. **(Atlantic Ave. To SE 3rd St.)**	**Curbside miles**	**0.30**	**Completed:** _____

For use by #696 & #697

Tuesday

Sweeping Route

Odometer Start: _____
Odometer Finish: _____
Total Miles: _____

Date: _____
Routine Maintenance: Greased: _____
Washed: _____

U.S. 1 (North & Southbound) Gulfstream Blvd. to Linton Blvd	Curbside & Median	14.4 Completed: _____
Banyan Tree Ln. (East & Westbound) U.S. 1 to Dead End	Curbside & Median	.15 Completed: _____
SE 1st St. (One Way Eastbound) Swinton to SE 6th Ave	Curb Miles	.80 Completed: _____
SE 4th St. (North Side) SE 7th Ave to SE 5th Ave.	Curb	.10 Completed: _____
SE 5th St. (East & Westbound) SE 4th Ave to Dead End	Median Miles	.30 Completed: _____
SE 7th St. (Single Curb) Between SE 5th & SE 6th Ave.	Curb	.10 Completed: _____
SE 8th St. (Double Curb) Between SE 5th, SE 6th, & SE 7th Ave.	Curb Median	.30 Completed: _____
SE 9th St. (Single Curb) Between SE 5th & SE 6th Ave.	Curb	.10 Completed: _____
SE 10th St. (Double Curb) Between SE 5th & SE 6th Ave.	Curb	.20 Completed: _____
Palm Trail (North & Southbound) From NE 8th St.	Curb & Median	.30 Completed: _____
Dixie Hwy. (Southbound) Behind I Hop	Curb	.20 Completed: _____
NE 8th St. (East & Westbound) NE 3rd Ave. To NE 2nd Ave.	Curb	.30 Completed: _____
Linton Blvd. (East & Westbound) A1A to Catherine Dr.	Curb & Median	8.00 Completed: _____
SW 4th St. (North & Southbound) Linton Blvd. To Miller Park	Curb	.25 Completed: _____
Lavers Ave. (North & Southbound) Linton Blvd. To Lavers Circle	Median	.25 Completed: _____
NE 1st,2nd,4th,5th,6th,7th,8th St. Between NE 5th & NE 6th Ave.	Curb	.60 Completed: _____

Signature : _____

TOTAL ROUTE MILES SWEPT: 26.35

18824
49
18877

For use by #696 & #697

Wednesday

Sweeping Route

Odometer Start: _____ ***Sweeper #***_____
Odometer Finish: _____ ***Routine Maintenance:***
Total Miles: _____ ***Greased*** ____ ***Washed*** ____
Debris Weight_____ ***Ticket #***_____

West Atlantic Ave. /East & West Bound (From Swinton Ave. To Military Trail)	Curbside miles Median miles	6.0 6.0	Completed _____ Completed _____
Barwick Road /North Bound (From Atlantic Ave. To End Of Curb)	Curbside miles	0.2	Completed _____
U.S. 1 /North & South Bound (From Linton Blvd. South To C-15 Canal)	Curbside miles Median miles	2.4 2.4	Completed _____ Completed _____
SE 10th Street & Dixie Hwy (Intersection)	Curbside miles	0.2	Completed _____
Tropic Isle Drive /East & West Bound (From U.S. 1 East Bound To End)	Median miles	0.3	Completed _____
Spanish Circle /East & West Bound	Median miles	0.4	Completed _____
Tropic Blvd. /East & West Bound (From U.S. 1 To Spanish Trail)	Median miles	0.25	Completed _____
Lamat Ave. / East & West Bound (From U.S. 1 To Florida Blvd.)	Curbside miles Median miles	0.6	Completed _____
SW 4th Ave. & SW 10th Street (Intersection)	Curbside miles	.25	Completed _____
Lake Ida Road (NE 6th Ave to Military Trail)	Curbside miles Median miles	6.80 5.40	Completed _____ Completed _____
5th Ave. / North & South Bound (From Atlantic Ave. To NW 2nd Street)	Curbside miles	0.5	Completed _____
Lake Ida Road (NE 6th Ave. To Military Trail)	Curbside miles Median miles	6.80 5.40	Completed _____ Completed _____

Total Route Miles Swept 32.60

Incomplete Route (Explain Problem) _____
Additional Sweeping Requested _____
Operators Signature _____ ***Date:*** _____

MONDAY / WEDNESDAY / FRIDAY

Clean & Safe Sweeping Route Mileage & Time

Start Time: _____ Sweeper # _____

Finish Time: _____ Total Miles 14.6

NW/SW 12th Ave. / North & South Bound	(Street Miles .4)	Completed _____
NW/SW 11th Ave. / North & South Bound	(Street Miles .4)	Completed _____
NW/SW 10th Ave. / North & South Bound	(Street Miles .4)	Completed _____
NW/SW 9th Ave. / North & South Bound	(Street Miles .4)	Completed _____
NWSW 8th Ave. / North & South Bound	(Street Miles .4)	Completed _____
NW/SW 7th Ave. / North & South Bound	(Street Miles .4)	Completed _____
NW/SW 6th Ave. / North & South Bound	(Street Miles .4)	Completed _____
NW/SW 5th Ave. / North & South Bound	(Street Miles .4)	Completed _____
NW/SW 4th Ave. / North & South Bound	(Street Miles .4)	Completed _____
NW 3rd Ave. / North & South Bound	(Street Miles .2)	Completed _____
SW 2nd Ave. / North & South Bound	(Street Miles .2)	Completed _____
NW 1st Ave. / North & South Bound	(Street Miles .2)	Completed _____
SW 1st Ave. / North & South Bound	(Street Miles .2)	Completed _____
(Atlantic Ave.)Swinton Ave. - NW 12th Ave.	(Street Miles 1.4)	Completed _____
(Atlantic Ave.)SW 12th Ave. - Swinton Ave.	(Street Miles 1.4)	Completed _____
Andrews Ave. / North & South Bound	(Street Miles .2)	Completed _____
Seabreeze Ave. / North & South Bound	(Street Miles .2)	Completed _____
Gleason St. / North & South Bound	(Street Miles .2)	Completed _____
East Road / North & South Bound	(Street Miles .2)	Completed _____
Venetian Dr. / North & South Bound	(Street Miles .2)	Completed _____
Palm Square / North & South Bound	(Street Miles .2)	Completed _____
NE/SE 7th Ave. / North & South Bound	(Street Miles .4)	Completed _____
NE 4th Ave. (2Blocks) N&S Bound	(Street Miles .4)	Completed _____
SE 4th Ave. / North & South Bound	(Street Miles .2)	Completed _____
SE 3rd Ave. / North & South Bound	(Street Miles .2)	Completed _____
Railroad Ave. / North & South Bound	(Street Miles .2)	Completed _____
NE 2nd Ave. (4 Blocks) N&S Bound	(Street Miles .8)	Completed _____
SE 2nd Ave. / North & South Bound	(Street Miles .2)	Completed _____
SE 1st Ave. / North & South Bound	(Street Miles .2)	Completed _____
(Atlantic Ave.)Swinton Ave.- Ocean Blvd.	(Street Miles 1.8)	Completed _____
(Atlantic Ave.)Ocean Blvd.- Swinton Ave.	(Street Miles 1.8)	Completed _____

Route Problems (Specify) _____

For use by #696 & #697

Thursday

Sweeping Route

Odometer Start: _____ **Sweeper #** _____
Odometer Finish: _____ **Routine Maintenance**
Total Miles: _____ **Washed:** ___ **Greased:** ___

Other Notes Of Interest: Debris Weight_____ Ticket #_____

Linton Blvd. / East & West Bound (From Congress Ave. to Military Trail)	Median miles 3.60 Curbside miles 3.60	Completed: _____ Completed: _____
Fairways Of Delray (From Homewood Entire Community)	Curbside miles 1.00	Completed: _____
Homewood Blvd. / North & South Bound (From Linton Blvd. to Lowson Blvd.)	Curbside miles .50 Median miles 1.50	Completed: _____ Completed: _____
Congress Ave. / North & South Bound (From Lowson Blvd. to South City Limits)	Curbside miles 3.00 Median miles 3.00	Completed: _____ Completed: _____
U.S. 1 / North & South Bound (From Gulfstream Blvd. to Linton Blvd.)	Curbside miles 7.30 Median miles 7.30	Completed: _____ Completed: _____
Cross Streets E/W (From (Between 5th & 6th Aves.)	Curbside miles	
Streets SE 1st – SE 10th (Between 5th & 6th Aves.)	Curbside miles	
Congress Ave. & Lowson Blvd. (Intersection)	Curbside miles 0.35	Completed: _____

Total Route Miles Swept 31.15

Incomplete Route (Explain Problem) _____
_____

Additional Sweeping Requested _____
_____
_____

Operators Signature _____ ***Date:*** _____

For use by #696 & #697

Friday

Sweeping Route

Odometer Start: _____ Sweeper # _____
Odometer Finish _____ Routine Maintenance:
Total Miles: _____ Grease: _____ Washed: _____

Debris Weight: _____ Ticket# _____

5:00 AM Atlantic Ave. "Down Town" Sweeping Scheduled

Other Notes Of Interest:

_____

_____

SE 3rd Ave. / North & South Bound (From SE 1st St. to SE 2nd St.)***Extension off / C&S***	Curbside miles	0.2	Completed _____
SE 4th Ave. / North & South Bound (From SE 2nd St. to SE 1st St.)***Extension off / C&S***	Curbside miles	0.2	Completed _____
NE 7th Ave. / North & South Bound (From NE 1st St. to NE 2nd St.)***Extension off / C&S***	Curbside miles	0.2	Completed _____
Atlantic Ave. / East & West Bound (From 12th Ave. to Military Tr.)***E/C&S***	Curbside miles Median miles	4.6 4.6	Completed _____ Completed _____
NW 5th Ave. / North & South Bound (From NW 1st St. to NW 2nd St.)***Extension off / C&S***	Curbside miles	0.2	Completed _____
Congress Ave. / North & South Bound (North City Line to South City Line)	Curbside miles Median miles	8.2 8.2	Completed _____ Completed _____

TOTAL ROUTE MILES SWEPT **26.4**

Incomplete Route (Explain Problem) _____

Additional Area Sweeping Request _____

Operator Signature _____ *Date* _____

Pollution Control Device – Structural Control Inspection
Standard Operational/Maintenance/Documentation Protocol

There are currently no pollution control devices (PCDs) that are part of our MS4.

The purpose of PCDs is the removal of debris, sediment, oils, and/or other materials from the stormwater stream before it discharges into a receiving water body. Frequent inspection and maintenance is the key to the proper function of these units.

Inspections:
PCDs are inspected quarterly, unless historic operations indicate that a less or more frequent inspection schedule is needed for particular PCDs. Inspections are conducted in accordance with the PCD manufacturer's recommendations. In general, inspections will include the items listed on the following Structural Control Inspection Form.

Maintenance:
There are several maintenance activities that may be associated with PCDs. The appropriate activity is chosen to correspond to the reported condition. The following activities may be required:

- Remove trash and debris from system and dispose of properly.
- Remove accumulated vegetative matter and dispose of properly.
- Remove accumulated sediment and dispose of properly.
- Replace absorbent materials as required.
- Repair damage to structure, inflow or outflow pipes.

Documentation:
The documentation for the inspection and maintenance activities related to pollution control devices is by work orders completed and summarized in the PW SW Monthly Report.

PCD – Structural Control Inspection

Facility ID: _____ Date: _____

Inspected by: _____

FUNCTION:

Sediment accumulation? *YES* *NO*

Debris accumulation? *YES* *NO*

Absorbent materials need replacement? *YES* *NO*

If *YES*, report to supervisor for further investigation or schedule for maintenance.

GENERAL:

Any indications of illicit discharge or illegal dumping? *YES* *NO*

If *YES*, describe and report to supervisor for proper response:

_____

_____

Inlets/Outlets damaged or obstructed? *YES* *NO*

If *YES*, schedule for maintenance.

Pipes and Inlets – Structural Control Inspection
Standard Operational/Maintenance/Documentation Protocol

There are currently 95,000 known linear feet of pipe that is part of our MS4. This value does not include exfiltration trenches, which are catalogued separately. Each pipe segment has a unique identification number (upstream to downstream) found on the City of Delray Beach Drainage Atlas.

There are currently 2,630 inlets that are part of our MS4. Each structure has a unique identification and the information is stored on the City of Delray Beach Drainage Atlas.

Inspections:

At least 10% of the total number of linear feet of pipe is inspected each year. The inlets associated with a pipe system are inspected concurrently. Visual inspections are conducted in accordance with the checklist/procedure that follows. Inspection forms are not used. If warranted, as a result of the visual inspection, a work order for maintenance, repair, or a more detailed pipe or structure investigation is generated. A more detailed investigation may include televising the pipe, or using mirrors or other devices, as appropriate, to determine the condition of the pipe. As a result of the more detailed investigation, a work order for maintenance or repair may be generated.

Maintenance:

There are several maintenance activities that may be associated with stormwater networks . The appropriate activity is chosen to correspond to the reported condition. The following activities may be required:

- Remove trash and debris and dispose of properly.
- Remove accumulated vegetative matter and dispose of properly.
- Remove accumulated sediment and dispose of properly.
- Remove barnacles and/or other marine life and dispose of properly.
- Repair/replace the headwall at the end of the pipe, if applicable.
- Repair/replace pipe or structure, if needed.

Documentation:

The documentation for the inspection and maintenance activities related to the pipes, inlets and manholes are recorded as completed work orders, and summarized in the PW SW Monthly Report.

Pipes – Structural Control Inspection

VISUAL INSPECTION:

Evidence of settling above the pipe alignment?	*YES*	*NO*
Sediment accumulation in pipe (viewed from inlets, manholes, etc.)?	*YES*	*NO*
Barnacle accumulation in pipe (viewed from inlets, manholes, and/or outfall)?	*YES*	*NO*

If *YES*, schedule for maintenance and report to supervisor for further investigation.

Attachment #6: Code and LDR Review

Permit #FLS000018-003

Palm Beach County Municipal Storm Sewer System

City of Delray Beach

As required by the NPDES permit, the City of Delray Beach conducted an inter-departmental review of current local codes and land development regulations. As directed, the review focused on potential areas of change within the code that would promote:

- reduction in impervious surfaces,
- reduction in flow and volume of stormwater,
- increase in natural hydrology, and
- adherence to the principles of the Florida Yards and Neighborhoods program in new landscaping.

This report provides a summation of the current codes and land development regulations pertaining to stormwater and makes recommendations for potential changes that will encourage low impact development strategies in areas of new development and significant redevelopment.

General authority to effectively and efficiently develop and implement the stormwater management system within the City has been established within Title 5, Section 56 of the Code of Ordinances.

> The scope and purposes of this Chapter are:
>
> (A) To provide for effective management and financing of a stormwater management system within the City (the "system");
> (B) To provide a mechanism for mitigating the damaging effects of uncontrolled and unplanned stormwater runoff from both a water quality and water quantity standpoint;
> (C) To improve the public health, safety and welfare by providing for the safe and efficient capture and conveyance of stormwater runoff and the correction of stormwater problems;
> (D) To authorize the establishment and implementation of a master plan for stormwater drainage including design, coordination, construction, management, operation, maintenance, inspection and enforcement;
> (E) To establish a reasonable stormwater management assessment based on each property's estimated contribution of stormwater runoff to the system and the benefit derived from the use of the facilities of the system;
> (F) To encourage and facilitate urban water resources management techniques, including but not limited to the retention-detention of stormwater runoff, minimization of the need to construct storm sewers, and the enhancement of the environment; and
> (G) To provide for the issuance of bonds to finance additions, extensions and improvements to the system.

Performance Standards:

As a basis for determining consistency with Comprehensive Plan policy or a principle of good planning practice, Section 3.2 of the LDR's establishes these objectives. In particular Section 3.2.4(D) requires certification of proper mitigation provisions for any developments proposed within a flood prone area.

Base District Development Standards:

The City of Delray Beach requires minimum open space and maximum lot coverage ratios for land use and development activities as an integral part of the Land Development Regulations. The following standards are provided in Section 4.3.4 of the LDR's as a guide to determination and regulation of area, size, bulk, height, and other physical aspects of development. The basis for measurement or calculation of those standards, are set forth in the tables below.

DEVELOPMENT STANDARDS MATRIX - RESIDENTIAL ZONING DISTRICTS
(This matrix is to be interpreted and applied pursuant to Section 4.3.4)

		MINIMUM LOT SIZE (sq. ft.)	LOT WIDTH I/C (ft.)	LOT DEPTH (ft.)	LOT FRONTAGE I/C (ft.)	MINIMUM FLOOR AREA (sq. ft.)	MAXIMUM LOT COVERAGE	MINIMUM OPEN SPACE REQUIRE-MENT	SETBACKS				DENSITY	HEIGHT(4) (ft.)	MINIMUM DEVELOPMENT AREA
									FRONT 1&2/3 (7) (ft.)	SIDE STREET 1&2/3 (7) (ft.)	SIDE INTERIOR 1&2/3 (7) (ft.)	REAR (ft.)			
Agriculture	**AG**	10 AC. (2)	100	110	100	1,500			35	25	15	25		35	
Rural Residential	**RR**	3 ACRES				2,200				17	12	12		35	
Single Family	**R-1-AAA**	12,500	100	110	100	2,200			35	17	12	12		35	
	R-1-AAAB	12,500	100	110	100	1,500			35	17	12	12	N/A	35	
	R-1-AA	9,500	75/95	100	75/95	1,500	N/A		30	15	10	10		35	N/A
	R-1-AAB	9,000	90	100	90	1,500			25	20	8 1/2	25		35	
	R-1-A	7,500	60/80	100	60/80	1,000			25	15	7 1/2	10		35	
	R-1-AB	7,500	60/80	100	60/80	1,500			25	15	7 1/2	10		35	
Low -	**RL (5)**														
Medium Density	**Multi-family**	8,000	60	100	60	(1)	40%	(3)	25	25	15	25	3-6	35	
	Duplex								25	25	15	15	UNITS/		
	Zero Lot Line	4,800		80					25	25	15	25	ACRE		
Medium -	**RM (5)**														
Medium High Density	**Multi-family**	8,000	60	100	60	(1)	40%		25/30 (6)	25/30 (6)	15/30 (6)	25 (6)	6-12	35	
	Duplex											15	UNITS/		
	Zero Lot Line	4,800		80								25	ACRE		
Planned Residential	**PRD**												PER LAND		
Multifamily Component		N/A	N/A	N/A	N/A	(1)	40%		25/30	25/30	15/25	25	USE MAP OR	35	5 ACRES
Single Family Component	**Conventional**	7,500	60/80	100	60/80	1,200			25	15	7 1/2	10	NUMERICAL	35	
	Zero Lot Line	4,500	40/60	80	40/60	1,000	N/A		20		0/15		SUFFIX		
Mobile Home Park	**Park**	2 ACRES	120	N/A	N/A	N/A			25	15	7 1/2	10	N/A	35	2 ACRES
	Sites	3,200	N/A						5	5	5	5			

I/C = Interior Lot/Corner Lot

SUBNOTES:
(1) = Minimum Floor Area for Duplexes and Multifamily Dwelling Units:

Duplexes	1000	sq. ft.*
Efficiency	400	sq. ft.
One Bedroom	600	sq. ft.
Two Bedroom	900	sq. ft.
Three Bedroom	1250	sq. ft.
Four Bedroom	1500	sq. ft.

* Represents absolute minimum size. Must also comply with minimums for corresponding number of bedrooms.

(2) = See Section 4.4.1(F) for exceptions.
(3) = A minimum of 25% non-vehicular open space shall be provided. Interior and perimeter landscaping may be applied toward meeting this requirement.
(4) = See Paragraph 4.3.4(J)(2) for single family detached structures in residentially zoned districts.
(5) = The provisions for the R-1-A District shall apply for single family dwellings.
(6) = Refer to individual district regulations "Development Standards" section for special setbacks in the Southwest Neighborhood Overlay District, Carver Estates Overlay District and Infill Workforce Housing Area. **[Amd. Ord. 24-07 8/21/07]; [Amd. Ord. 7-05 2/15/05]**
(7) = 1&2/3 = 1st & 2nd Story / 3rd Story. The setback for the 3rd story shall only be applied to those portions of the building which are 3 stories in height, not the entire building. **[Amd. Ord. 29-06 5/16/06]**

[Amd. Ord. 42-97 10/7/97]; [Amd. Ord. 16-93 2/9/97]

DEVELOPMENT STANDARDS MATRIX - NONRESIDENTIAL ZONING DISTRICTS
(This matrix is to be interpreted and applied pursuant to Section 4.3.4)

		MINIMUM				MAXIMUM	MINIMUM	SETBACKS							
		LOT SIZE (sq. ft.)	LOT WIDTH (ft.)	LOT DEPTH (ft.)	LOT FRONTAGE (ft.)	LOT COVERAGE	FLOOR AREA (sq. ft.)	PERIMETER (ft.)	FRONT (ft.)	SIDE STREET (ft.)	SIDE INTERIOR (ft.)	REAR (ft.)	HEIGHT (ft.)	MINIMUM DEVELOPMENT AREA	OTHER
General Commercial	**GC**	0	0	0	0	(3)	N/A	N/A	10 (5)	10 (5)	(2) (5)	10 (5)	48	N/A	
Automobile Commercial	**AC**	10,000/(1)	50/(1)	100/(1)	50/(1)	(3)	N/A	(1)	15 (5)	15	(2)	10	48	(1)	Refer to special requirements for auto sales
Neighborhood Commercial	**NC**	1 ACRE	100	200	100	40% (3)	4,000	N/A	40	30	30	10 (4)	48	1 ACRE	Maximum site area of two (2) acres
Planned Commercial	**PC**	10,000	50	100	50	(3)	6,000	N/A	10	10	0	10	48	N/A	Refer to Section 4.4.12(F)(2) restrictions on floor area
Central Business District	**CBD**	0	0	0	0	(1)	N/A	N/A	(1)	(1)	(1)	(1)	48	N/A	
Central Business District-Rail Corridor	**CBD-RC**	0	0	0	0	(1)	N/A	N/A	(1)	(1)	(1)	(1)	48	N/A	
Resort-Tourism	**RT**	1 ACRE	100	100	100	60% (3)	N/A	15	N/A	N/A	N/A	N/A	48	N/A	
Planned Office Center	**POC**	1 ACRE	N/A	N/A	N/A	60% (3)	4,000	(1)	30	30	10	10	48	3 ACRES	
Professional/Office	**POD**	0	0	0	0	40% (3)	N/A	N/A	25	25	0/(2)	10	48	N/A	
Residential Office	**RO**	8,000	80	100	80	40% (3)	N/A	N/A	25	15	7 1/2	10	35	N/A	
Planned Commerce Center	**PCC**	See Section 4.4.18											48	10 ACRES	
Mixed Industrial/Commercial	**MIC**	0	0	0	0	50% (3)	N/A	N/A	25	25	10	10	48	N/A	
Industrial	**I**	20,000	100	200	100	50% (3)	N/A	(1)	30	30	10	10	48	(1)	
Light Industrial	**LI**	20,000	0	0	100	50%(3)	N/A	N/A	10	10	5	10	48	1 ACRE	
O.S.S. Historic Arts	**OSSHAD**	8,000	80	100	80	40% (3)	(1)	N/A	25 (1)	15 (1)	7 1/2 (1)	10 (1)	35	N/A	Refer to Section 4.4.24 for special areas and additional regulations
Community Facilities	**CF**	0	0	0	0	(3)	N/A	10	N/A	N/A	N/A	N/A	48	N/A	Refer to Section 4.4.21(H) for additional setback & open space requirements
Open Space	**OS**	See Section 4.4.22													
Open Space and Recreation	**OSR**	See Section 4.4.27													
Conservation	**CD**	See Section 4.4.23													
Special Activities District	**SAD**	0	0	0	0	(1) (3)	N/A	15	(1)	(1)	(1)	(1)	48	(1)	
Mixed Residential/Office/Commercial	**MROC**	0	N/A	N/A	N/A	75% (3)	4,000	(1)	(1)	(1)	(1)	(1)	85	3 ACRES (6)	Refer to Section 4.4.29 for additional regulations

NOTES:

(1) = Refer to individual district regulations.

(2) = When there is no dedicated access to the rear of any structure a 10' side yard setback shall be provided.

(3) = In addition to lot coverage restrictions, a minimum of 25% non-vehicular open space shall be provided. Interior and perimeter landscaping may be applied toward meeting this requirement.

(4) = Minimum rear yard setback is ten feet (10') and then one additional foot for each foot in building height above ten feet (10').

(5) = Refer to individual district regulations "Development Standards" section for special setbacks in the North Federal Corridor.

(6) = Waivers to this minimum size may be granted during the Master Plan approval process

Flood Damage Control Districts:

The City of Delray Beach has established special Overlay and Environmental Management Districts to regulate land uses and to minimize and/or mitigate potential adverse impacts stemming from such development. Contained within Section 4.5.3 of the LDR's, it is the purpose of this Overlay Zone District to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas that may be especially prone to or vulnerable to flooding issues.

Landscape Regulations:

With recent revisions completed as of February 2012, Delray Beach has now amended and adopted landscaping regulations that adhere to the principles of the Florida Yards and Neighborhoods program. The focused revisions, found in Section 4.6.16 of the LDR's, were constructed and produced with the intention of providing for: the conservation of potable and non-potable water; the implementation of Florida-friendly landscaping principles, proper tree selection adjacent to or within utilities to mitigate damages which may be caused by trees; encouraging the creation or preservation of open space; maintaining permeable land areas essential to surface water management and aquifer recharge; encouraging the preservation of existing plant communities; encouraging the planting of site specific, native and drought tolerant plant materials; establishing guidelines for the installation and maintenance of landscape materials and irrigation systems; reducing air, noise, heat and chemical pollution through

the biological filtering capacities of trees; reducing the temperature of the microclimate through the process of evapotranspiration; and promoting energy conservation through the creation of shade.

Design Standards and Requirements:

The standards contained within Section 6.1 of the regulations provided for the necessary minimum obligations and specifications pertaining to infrastructure development whether it is publically or privately maintained. In particular the design standards and requirements pertaining to roadways and requisite drainage systems are addressed within this section.

Changes to the Florida Building Code in 2010 have prompted local governments to assess and revise existing floodplain management regulations. To ensure consistency with the National Flood Insurance Program, Delray Beach has begun to exam its current code and regulations. The model Floodplain Management Ordinance and Model Local Code Amendments For Communities with Inland and Coastal High Hazard Areas are being utilized as guidance documents to identify inconsistencies and coordinate the re-development of the local program.