



# Stormwater Management Program Template for Compliance with the Puerto Rico General Permit for Stormwater Discharges from Small MS4s

## Purpose

*This template has been developed to assist permittees in the development of their written stormwater management program (SWMP) to comply with the requirements in the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in the Commonwealth of Puerto Rico (Permit Number PRR040000) <LINK TO PERMIT AFTER FINAL IS ISSUED>. Permittees are not required to use this template. Permittees may use or add segments of this template to a new or updated SWMP. Permittees are responsible for compliance with the General Permit and should refer to the permit requirements to ensure a compliant SWMP has been developed and submitted, rather than only relying on instructions within this template. This template was developed as a guide. Using this template does not ensure that EPA will not provide comments to the submitted SWMP or grant authorization to a small MS4.*

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## Organization

All SWMP template text that does not need to be modified is found in this font.

Text in this font can be changed as deemed appropriate by the permittee. Always verify that text in this font is correct and accurate, as it is provided as example text only. In addition, within this provided text there are individual words and sentences that need to be changed to tailor the text to a particular permittee. This text is indicated by [gray highlighting and brackets].

*Template instructions for the initial written SWMP submittal are written in this font. Placement of these directions is directly underneath the heading of the referenced directory.*

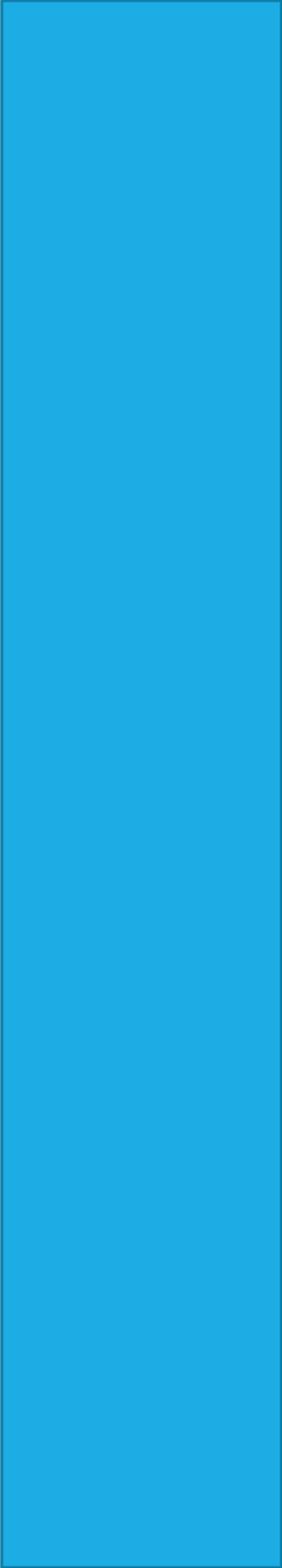
*Template instructions for subsequent years are written in this font. Submittal deadlines can be found in the General Permit.*

Useful resources and tips to assist the permittee in developing the written SWMP have been cited throughout the template and are identified in a text box.

**Prior to submittal all red and green text and all text boxes should be deleted.**

## Additional Information

For additional information or questions about this template, contact: Sergio Bosques at [bosques.sergio@epa.gov](mailto:bosques.sergio@epa.gov).



# Stormwater Management Program

Written description submitted as required per the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in the Commonwealth of Puerto Rico (PR)

*[Insert Permittee logo]*

*[Insert Permittee name]*

*[Insert Permittee permit number]*

*[Insert submittal date]*

*[UPON COMPLETION OF WRITING THIS SWMP: RIGHT-CLICK on the text below and choose UPDATE FIELD to regenerate with correct pages and specific attachments. Include additional attachments as necessary. For additional attachments, be sure to apply the Heading 1 style to the title of the attachment.]*

## CONTENTS

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Acronyms .....	3
Definitions .....	3
1 Basic SWMP Information .....	4
1.1 Staff Organization .....	4
1.2 Receiving Waters and Drinking Water Sources .....	4
2 Endangered and Threatened Species and Critical Habitat .....	5
3 Historic Properties .....	6
4 Map of Separate Storm Sewer System .....	7
5 Controls for Targeting Pollutants of Concern .....	7
5.1 Controls for Existing Discharges to Impaired Waters with TMDLs .....	7
5.1.1 [Insert Pollutant of Concern] Targeted Controls & Associated Measurable Goals .....	8
5.1.2 Assessing Progress Toward Meeting [Insert Pollutant of Concern (e.g., Oil and Grease)] Benchmark Goals .....	9
5.2 Controls for Existing Discharges to Impaired Waters without TMDLs.....	9
6 Legal Authority and Enforcement .....	9
7 Controls to Reduce Pollutants to the Maximum Extent Practicable .....	11
7.1 Public Education and Outreach.....	11
7.2 Public Involvement.....	12
7.3 Illicit Discharge Detection and Elimination .....	14
7.3.1 Overall IDDE Program .....	14
7.3.2 Sanitary Sewer Overflow.....	16
7.3.3 Storm Sewer System Map.....	16
7.3.4 Outfall Inventory .....	16
7.3.5 Employee Training .....	18
7.3.6 IDDE Program Indicators.....	18
7.4 Construction Site Stormwater Runoff Control.....	18
7.4.1 Overall Construction Site Stormwater Management Program.....	18
7.4.2 Employee Training .....	20

7.4.3 Construction Site Inventory ..... 20

7.5 Stormwater Management in New Development and Redevelopment..... 20

7.6 Pollution Prevention and Good Housekeeping for Municipal Operations ..... 22

7.6.1 Operations and Maintenance Programs..... 22

7.6.2 Stormwater Pollution Prevention Plans..... 24

7.6.3 Employee Training ..... 24

8 Program Evaluation..... 24

8.1 Annual Compliance Evaluation ..... 24

8.2 BMP Modification ..... 25

Attachment I MS4 Stormwater Infrastructure Maps..... 26

Attachment II SSO Management Process Flowchart ..... 28

Attachment III [Insert Title]..... 29

## ACRONYMS

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*[Insert acronyms used in the written SWMP.]*

## DEFINITIONS

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*[Insert definitions used in the written SWMP.]*

# 1 BASIC SWMP INFORMATION

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This stormwater management program planning document was developed by [insert Municipality] to describe the activities and measures that will be implemented in urbanized areas to meet the terms and conditions of the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in urbanized areas of the Commonwealth of Puerto Rico (PR) (General Permit).

## 1.1 STAFF ORGANIZATION

*[Insert a narrative description and an organization chart which identifies the names and titles of people responsible for SWMP implementation. If a position is currently unfilled, list the title of the position and modify the SWMP with the name once the position is filled.]*

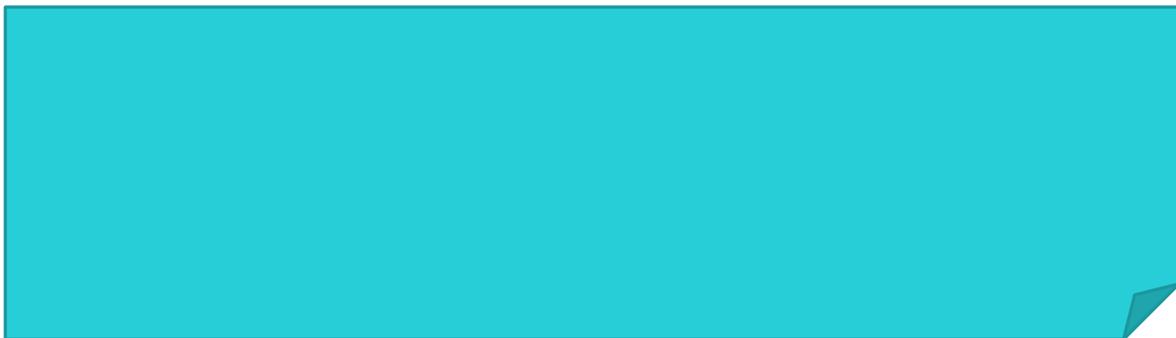


Figure 1 SWMP Staff Organization Chart

## 1.2 RECEIVING WATERS AND DRINKING WATER SOURCES

The waterbodies identified in Table 1 receive stormwater discharges from [insert Municipality] MS4.

*[Complete the tables below. If the permittee's MS4 does not discharge into any interconnected MS4s and/or drinking water sources, delete only the/those applicable section (s) below.]*

Table 1 Receiving Water Data Summary Table

Receiving Waterbody Segments	WQS Classification	Impairment/Pollutant of Concern	TMDLs	Applicable WLAs	No. of Discharging Outfalls

Applicable water quality standards are compiled at <http://www.epa.gov/waterscience/standards/wqslibrary/>.

[Insert Municipality]'s MS4 also discharges into a number of interconnected MS4s as identified in [Table(s) 2a, 2b, etc.]

*[For each interconnected MS4 receiving discharge from the permittee’s MS4, complete Table 2 below. If more than one such table is completed, include letters following Table 2 (e.g., Table 2a, Table 2b).]*

Table 2a *[Insert Interconnected MS4 Name]* receiving Water Data Summary Table

Receiving Waterbody Segments	WQS Classification	Impairment/Pollutant of Concern	TMDLs	Applicable WLAs	No. of Inter-connections

Table 2b *[Insert Interconnected MS4 Name]* receiving Water Data Summary Table

Receiving Waterbody Segments	WQS Classification	Impairment/Pollutant of Concern	TMDLs	Applicable WLAs	No. of Inter-connections

The following public drinking water sources also may be impacted by *[insert name of permittee]* MS4 discharges:

- *[Insert]*
- *[Insert]*

## 2 ENDANGERED AND THREATENED SPECIES AND CRITICAL HABITAT

*[Insert a narrative that provides the documentation to support the permittee’s eligibility determination with regard to federal Endangered and Threatened Species and Critical Habitat Protection (Part 1.9 and Appendix C of the General Permit). If any species or habitats have been determined to be present, include a description of the measures the permittee will implement as part of their SWMP implementation to protect the species or habitat in this section, or refer to them in another appropriate portion of the SWMP document.]*

An official list of Threatened & Endangered Species (pursuant to 50 CFR 402.12) that should be considered are compiled at the USFWS’ website, specifically at: <http://ecos.fws.gov/ipac/>.

The MS4 operated by *[insert name of permittee]* evaluated if listed threatened or endangered species and critical habitat are present within the MS4 urbanized area. The United States Fish and Wildlife Service (USFWS) official List of Threatened and Endangered Species reports *[insert the amount of species identified]* species of flora and fauna, which were found to have significant population within the *[insert name of facility]*. The listed threatened and endangered species are presented in Table 3.

Table 3 [Insert name of Permittee] Threatened and Endangered Species

Scientific Name	Common Name (English/Spanish)	Group	Status USFWS	Status DRNA	Areas within the MS4 where are present

To determine eligibility, the [insert name of permittee] assessed the potential effects of the MS4 known storm water discharges and discharge-related activities on listed species or critical habitat and followed the steps outlined in Appendix C of the General Permit. The [insert name of permittee] determined that it meets eligibility under Criterion [insert eligibility determination Criterion A, B, C, D, or E as apply]

### 3 HISTORIC PROPERTIES

*[Insert a narrative that provides the documentation necessary to support the permittee’s eligibility determination with regard to historic properties protection (Part 1.10 and Appendix D of the General Permit). If any property that is listed or eligible for listing on the National Register of Historic Properties have been determined to be effected by the permittee’s MS4 discharge, insert a description of the measures the permittee will implement to protect the historic properties in this section, or refer to them in another appropriate portion of the SWMP document.]*

The Puerto Rico State Historic Preservation Office Website is:  
<http://www.oech.pr.gov/>.

The properties listed in the National Historic Properties List (NHPL) located within the MS4’s urbanized are included in Table 4. An evaluation of the information gathered from NHPL, previous earth disturbances, surveys or other activities conducted within the MS4’s urbanized area and the best management practices that include construction or installation of any stormwater control measures requiring ground disturbing activities of less than one acre, within the MS4 operated by [insert name of permittee] was conducted.

Table 4 [Insert name of permittee] National Historic Properties List within the MS4 Urbanized Area

National Historic Properties	Location	Stormwater Control Measures (Potential Impact)

To determine eligibility, [insert name of permittee] assessed the potential effects of the MS4 known storm water discharges and discharge related activities on the properties listed in the National Register of Historic Properties List and followed the steps outlined in Appendix D of the General Permit. [Insert name of permittee] determined that it meets eligibility under Criterion [insert eligibility determination Criterion A, B, C, or D as apply]

## 4 MAP OF SEPARATE STORM SEWER SYSTEM

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As required by the General Permit, a copy of the [existing/revise] storm sewer system map is included in Attachment I.

*[Include a copy of the permittee’s existing storm sewer system map as Attachment I. If map is not complete, describe its current status and a schedule for completing it.]*

*[Within two years for existing permittees and four years for new permittees, per Part 2.4.4.6 of the General Permit, include a copy of the permittee’s revised storms sewer system map as Attachment I.]*

## 5 CONTROLS FOR TARGETING POLLUTANTS OF CONCERN

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*[Section 5 of this SWMP must be completed if the permittee is discharging to impaired water(s). Complete section 5.1 if a TMDL has been developed for impaired water(s), and complete section 5.2 if a TMDL has not yet been developed for the impaired water(s).]*

### 5.1 CONTROLS FOR EXISTING DISCHARGES TO IMPAIRED WATERS WITH TMDLS

*[New non-conventional MS4 permittees are subject to additional requirements if they are considered a “new discharger” per Part 4.1.4 of the General Permit. If the permittee is a new discharger and has provided the necessary justification for coverage to EPA with the NOI per Parts 4.1.4.2, 5.4, or 6.4 insert that documentation below.]*

*[Insert a description of any controls required in all applicable and targeted TMDLs.]*

*[If any or all of the impaired receiving waters into which the permittee’s MS4 discharges have existing TMDLs but the TMDLs do not require any specific controls, insert a description of the targeted controls that will be implemented to reduce discharge of pollutants of concern. These controls should be BMPs that specifically will address the pollutants of concern. For each control, insert a description of a measurable goal that will allow the permittee to evaluate the control’s effectiveness in making progress towards achieving benchmark goals. Benchmark goals are based on one of the three options listed in the General Permit Part 2.2.1.c. If the pollutant of concern is bacteria, Part 2.2.1.e. lists required targeted controls. In the example provided below, in Part 5.1.1 the BMPs listed also would be considered public education and illicit discharge detection and elimination controls. Insert a narrative below or use the tables provided. Insert as many targeted controls as are necessary.]*

Refer to the EPA [Measurable Goals Guidance for Small MS4s](#) for information regarding the selection of BMPs and development of appropriate measurable goals.

*The following is an example of a Targeted Control & Associated Measured Goal for Bacteria.*

*Bacteria Targeted Controls & Associated Measures Goals*

**Control Measure**

**BMP TMDL1 – Control Description**

*[Municipality will target educational efforts to homeowners within the MS4 boundary served by aging septic tanks. The Municipality will provide these residents education on proper construction, management and maintenance of the septic tank.]*

**Measurable Goal:** *[A home owner septic systems proper management and maintenance PowerPoint presentation will be developed during the first year of the SWMP implementation period. Starting in the second year, 50 percent of septic system owners will be educated on proper septic sanitary tanks management and maintenance per each consecutive year.]*

**Person(s) or Department Responsible:** *[Juan del Pueblo, MS4 Coordinator]*

5.1.1 **[Insert Pollutant of Concern] Targeted Controls & Associated Measurable Goals**

**Control Measure** **BMP TMDL1 – Control Description**  
*[Insert description of procedures to be developed.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation as well as endpoint quantity or quality associated with meeting the goal. Each goal must have an associated measure of assessment to ensure results are being met even if it is phased in process]*

**Person(s) or Department Responsible:** *[Insert]*

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**Control Measure** **BMP TMDL2 – Control Description**  
*[Insert description of procedures to be developed.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation as well as endpoint quantity or quality associated with meeting the goal. Each goal must have an associated measure of assessment to ensure results are being met even if it is phased in process]*

**Person(s) or Department Responsible:** *[Insert]*

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**Control Measure** **BMP TMDL3 – Control Description**  
*[Insert description of procedures to be developed.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation as well as endpoint quantity or quality associated with meeting the goal. Each goal must have an associated measure of assessment to ensure results are being met even if it is phased in process]*

**Person(s) or Department Responsible:** *[Insert]*

When developing and describing planned controls and related measurable goals, it might be helpful to assign an alpha-numeric identifier to discrete BMPs to allow for easier tracking and reporting. Examples are provided, but using the example identifiers is not required.

5.1.2 Assessing Progress Toward Meeting [Insert Pollutant of Concern (e.g., Oil and Grease)] Benchmark Goals

*[Insert a description of how the permitted will monitor or assess progress towards achieving the benchmark goals established in the TMDL(s) per the options given in Part 2.2.1.f. of the General Permit. Note that progress towards benchmark goals must be assessed at the end of the third year of the permit term and BMPs revised if no progress is observed.]*

5.2 CONTROLS FOR EXISTING DISCHARGES TO IMPAIRED WATERS WITHOUT TMDLS

*[New non-conventional MS4s dischargers to impaired waters, which are considered a “new discharger” per Part 4.1.4 of the General Permit, are not eligible for coverage under the General Permit. These MS4s must apply for coverage under an individual permit.]*

*[The permittee must determine whether the MS4 is a source of pollutants of concern to an impaired water per Part 2.2.2.a.1 of the General Permit. Insert a description of all receiving waters into which the permittee has determined the MS4 discharges and may be a source at levels of concern.]*

*[If permittee determines that it discharges pollutants of concern to an impaired water without a TMDL, within two years of authorization permittee must develop targeted controls that will be implemented to reduce the discharge of the pollutants of concern. These controls should be BMPs that specifically will address the pollutants of concern. For each control, insert a description of a measurable goal that enables the permittee to evaluate the control’s effectiveness in reducing the discharge of the pollutant of concern.]*

Existing TMDLs will identify whether stormwater from urban areas is a cause of existing impairments. If there is no TMDL, pollutants commonly found in stormwater runoff include: sediment, bacteria, nutrients, pesticides, metals, organic pollutants, and oil and grease. If the water is impaired for one of these types of pollutants, then it should be assumed that stormwater has the potential to cause or contribute to the impairment.

6 LEGAL AUTHORITY AND ENFORCEMENT

*[Insert description of existing ordinances or other regulatory mechanisms providing the legal authority necessary to implement and enforce the requirements of this permit, including information on any limitations to the legal authority. In the table below, include description of the schedule to adopt ordinances or regulatory mechanisms which will comply with Part 2.3.3 of the General Permit. Insert a narrative below or in the table provided of the legal authority. Non-conventional MS4s should refer to*

*Parts 4.1.2, 5.2 and 6.2 of the General Permit for guidance regarding the development of ordinances, by-law, contract agreements, or other regulatory mechanisms.]*

**Control Measure**                      **BMP LA1 – Develop Adequate Legal Authority**  
*[Insert description of ordinance/regulatory mechanism.]*

**Measurable Goal:**                      *[Insert milestones and timeframes for implementation.]*

**Person or Department Responsible:**                      *[Insert]*

Example and model ordinances can be found at:  
<http://www.epa.gov/polluted-runoff-nonpoint-source-pollution/urban-runoff-model-ordinances-prevent-and-control-nonpoint>

*[Insert description of the enforcement standard operating procedure (SOP) per Part 2.3.5 of the General Permit developed to respond to violations to the existing ordinance or regulatory mechanism. For SOP developed by non-conventional MS4s without enforcement authority, the SOP should specify how and when interlocal agreements will be utilized and when adjacent MS4s, EPA and PREQB will be notified of noncompliance. If interlocal agreements are not feasible, indicate this in description. Insert a narrative below or use the table provided.]*

**Control Measure**                      **BMP LA2 – Develop Enforcement SOP**  
*[Insert description of procedures to be developed.]*

**Measurable Goal:**                      *[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:**                      *[Insert]*

The IDDE Manual including information on developing effective stormwater management regulatory mechanisms and enforcement tools. The Legal Authority chapter is available at: [http://www3.epa.gov/npdes/pubs/idde\\_chapter-4.pdf](http://www3.epa.gov/npdes/pubs/idde_chapter-4.pdf)

*[Insert description of the ordinances or regulatory mechanism that were developed that meets the requirements of Part 2.3.3 of the General Permit.]*

*[Insert description of the SOP that was developed to respond to violations to MS4 ordinances or regulatory mechanisms. If interlocal agreements for non-traditional MS4s are used in lieu of an ordinance, describe each.]*

## 7 CONTROLS TO REDUCE POLLUTANTS TO THE MAXIMUM EXTENT PRACTICABLE

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The following sections describe [insert Municipality]’s program to reduce pollutants from the discharge of pollutants from the MS4 to the maximum extent practicable. As necessary, the sections describe partnerships that [insert Municipality] is using to implement various BMPs, as allowed in Part 2.4.1.b. of the General Permit.

*[The controls described in this section will comprise the majority of the permittee’s SWMP. Due to the nature of stormwater management, many of the controls may help to achieve the goals of more than one minimum measure. For example, an educational program for dog owners about picking up waste at the local pet store would achieve both public education and illicit discharge detection and elimination goals. Where this occurs, the written SWMP can reference other sections of this document as necessary. In addition, the permit requires that measurable goals include, as appropriate the months and years in which the permittee will undertake required actions, including interim milestones. If an activity will be recurring, rather than have a deadline of development or implementation, please indicate the date the activity will begin and the frequency of the actions.]*

Refer to the EPA [Measurable Goals Guidance for Small MS4s](#) for information regarding the selection of BMPs and development of appropriate measurable goals.

### 7.1 PUBLIC EDUCATION AND OUTREACH

*[Insert a description of how the permittee will educate public employees, businesses, and the general public using a program which complies with Part 2.4.2 of the General Permit and reduces the discharge of pollutants of concern in stormwater. The description must include measurable goals of the program, identified target audience(s), a schedule which shows full implementation of all new program elements (i.e. programmatic BMPs) within the permit term and the person(s) or department responsible for implementing each element of the program. Audiences for non-conventional MS4s can be found at Part 4.1.1, 5.1 and 6.1 of the General Permit. The program should focus on stormwater issues of significance within the MS4 area, including targeted education programs to address potential sources of pollutants of concern for impaired waters and priority waters. The program description should describe how appropriate educational materials will be developed and distributed in a cost-effective manner to target audiences at least annually. Insert a narrative below or use the tables provided. The program must include a component to educate residents about identification and reporting of illicit discharges.]*

**Control Measure**                      **BMP PE1 – Employee IDDE Detection & Response Training**

*[Insert description of procedures to be developed.]*

**Measurable Goal:**                      *[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:**      *[Insert]*

**Control Measure**                      **BMP PE2 – [Insert program element description.]**

**Measurable Goal:** *[Insert description of procedures to be developed.]*  
*[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:** *[Insert]*

**Control Measure** **BMP PE3 – [Insert program element description.]**

**Measurable Goal:** *[Insert description of procedures to be developed.]*  
*[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:** *[Insert]*

EPA’s [Getting In Step: A Guide to Effective Outreach in Your Watershed](#) guidance is a useful resource when developing public education programs.

EPA’s [Nonpoint Source Outreach Toolbox](#) is a searchable catalog of outreach products.

## 7.2 PUBLIC INVOLVEMENT

*[Insert a description of how the permittee will involve the public in SWMP planning and implementation activities using a program which complies with Part 2.4.3 of the General Permit. The description must include measurable goals of the program, a schedule which shows full implementation of all new program elements (i.e. programmatic BMPs) within the permit term and the person(s) or department responsible for implementing each element of the program. The program must ensure that the location of the written SWMP and annual reports are provided as to be available to the public, preferably (but not required) online. In addition, the program must allow for at least an annual opportunity for the public to participate in the review and implementation of the SWMP. The program must include the development of a mechanism for the public to report illicit discharges, including discharges from active construction projects. Note: Correctional facilities are not required to implement this minimum measure.]*

An example of a control measure, measurable goal, responsible staff, and implementation milestone, & timeframes is included below:

**Control Measure** **BMP PI1 – [Storm Drain Labeling Program]**

*[The Municipality has identified that most residents don’t understand that stormwater is collected and transported through the stormwater sewer system and directly discharged to surface waters without any treatment. The Municipality will develop and implement a volunteer storm drain labeling program to create awareness. The Planning and Development Department will coordinate with the local residents, municipal schools, and environmental community groups to affix a metal*

**Measurable Goal:** storm drain marker near key storm drain inlets educating people that the untreated water discharges directly to surface waters (e.g., No Dumping, Drains to the River).  
[This BMP will be implemented in three phases; Phase I—Development of Art for the Storm Drain Markers to be completed by June 2016. Phase II—Development of the Storm Drain Labeling Program to be completed by September 2016. Phase III—Implementing the Storm Drain Labeling Program to start December 2016 and be completed by June 2019. Each year, storm drains in one of the three urban areas will be labeled]

**Person(s) or Department Responsible:** [The Planning and Development Departments, in collaboration with the Municipal Emergency Management Department Staff, will be responsible to implement this control measure]

**Control Measure** **BMP PI1 – [Insert program element description.]**  
*[Insert description of procedures to be developed.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:** *[Insert]*

**Control** **BMP PI2 – [Insert program element description.]**  
*[Insert description of procedures to be developed.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:** *[Insert]*

**Control** **BMP PI3 – [Insert program element description.]**  
*[Insert description of procedures to be developed.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:** *[Insert]*

*[As planned components are developed per schedule listed above, insert a description of how the permittee involves public employees, businesses, and the general public using a program that complies with Part 2.4.3 of the General Permit.]*

## 7.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION

### 7.3.1 Overall IDDE Program

*[Insert a description of how the permittee will develop a written illicit discharge detection and elimination program which includes all elements found at Part 2.4.4.8(a-h) of the General Permit. The description must include a schedule of development and implementation indicating how the program will be completed within one year for existing permittees and three years for new permittees and will meet the goals and milestones specified at Part 2.4.4.9 of the General Permit. The legal authority requirement of Part 2.4.4.8.a. can be addressed in the Legal Authority section of the written SWMP. BMP identification below can be combined or otherwise customized by the permittee to best describe the goals, schedules and person(s) or department departments responsible for the development of the comprehensive IDDE program.]*

IDDE Program Development Tools to assist Municipalities in developing effective IDDE Programs are available on the EPA Website at: <http://www.epa.gov/npdes/stormwater-discharges-municipal-sources#developing>

An example of a control measure, measurable goal, responsible staff, implementation milestones and timeframes is included below:

<b>Control Measure</b>	<b>BMP IDDE3 – [Outfall Screening and Sampling]</b>
	<i>[The Municipality will develop screening and sampling procedures that clearly describe how the municipality will conduct outfall screening, including thresholds that trigger an action when a sample exceeds a certain value.]</i>
<b>Measurable Goal:</b>	<i>[The screening and sampling procedures will be developed within one year. During years 2-5 of the permit, the Municipality will screen at least 20% of all outfalls each year during dry weather.]</i>
<b>Person(s) or Department Responsible:</b>	<i>[The Planning and Development Department will be responsible for this measure.]</i>
<b>Control Measure</b>	<b>BMP IDDE1 – Statement of Program Responsibilities</b>
	<i>[Insert description of the statement to be developed. Program responsibilities and contacts must be kept up-to-date]</i>
<b>Measurable Goal:</b>	<i>[Insert milestones and timeframes for implementation.]</i>
<b>Person(s) or Department Responsible:</b>	<i>[Insert]</i>
<b>Control Measure</b>	<b>BMP IDDE2 – Catchment Prioritization</b>

*[Insert description of assessment and prioritization procedures to be developed.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:** *[Insert]*

**Control Measure** **BMP IDDE3 – Outfall Screening and Sampling**

*[Insert description of screening and sampling procedures to be developed.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:** *[Insert]*

**Control Measure** **BMP IDDE4 – Catchment Investigation Procedure**

*[Insert description of investigation procedures to be developed.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:** *[Insert]*

**Control Measure** **BMP IDDE5 – Removal and Confirmation Procedure**

*[Insert description of procedures to be developed.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:** *[Insert]*

**Control Measure** **BMP IDDE6 – Follow Up Screening Procedure**

*[Insert description of procedures to be developed.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:** *[Insert]*

**Control Measure** **BMP IDDE7 – Permittee Spill Response Procedures**

*[Insert description of procedures to be developed.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:** *[Insert]*

*[Insert or attach a copy of the completed IDDE program documentation developed per the implementation schedule previously submitted – within one year for existing permittees and three years for new permittees.]*

### 7.3.2 Sanitary Sewer Overflow

*[Insert a description of how the permittee will notify PRASA and any other pertinent agency on how the MS4 will collaborate, eliminate and clean up SSOs per the General Permit.]*

*[Insert a description of how the permittee will comply with the EPA and PRASA notification requirements described in Part 2.4.4.4.c of the General Permit. Attachment II provides an example SSO Management Process Flowchart]*

*[Insert a description of how the permittee will track all known locations of SSOs from the previous five years.]*

*[Complete Table 5 per the General Permit Part 2.4.4.4.b, or provide required information in narrative or table form below or as an attachment]*

### 7.3.3 Storm Sewer System Map

*[As required by Part 2.4.4.6 of the General Permit, insert a description of the existing storm sewer system map below. Insert a description of how the permittee will develop a revised, updated map of the storm sewer system within two years of permit authorization for existing permittees or within four years for new permittees. Even though maps may be produced by hand or through computer-aided methods (e.g., GIS), the use of GIS format using NAD83 datum is encouraged. Refer to Attachment I for a copy of example maps. Replace these maps with your MS4's maps in .pdf format and include a copy of the shapefiles in digital format.]*

**Control Measure**

**BMP IDDE1 – Develop/Revise Storm Sewer Map**

*[Insert description of the MS4 map, including the status of current mapping information and a plan to complete MS4 mapping within the required timeframe.]*

**Measurable Goal:**

*[Insert schedule of development]*

**Person(s) or Department Responsible:**

*[Insert]*

### 7.3.4 Outfall Inventory

*[Insert a description of how the permittee will develop an outfall inventory per Part 2.4.4.7 of the General Permit within one year of permit authorization for existing permittees or within four years for new permittees.]*

**Control Measure**

**BMP IDDE2 – Develop an Outfall Inventory**

*[Insert description of proposed inventory development.]*

**Measurable Goal:**

*[Insert schedule of development]*

**Person(s) or Department Responsible:**

*[Insert]*



### 7.3.5 Employee Training

*[Insert a description of the annual training that all employees involved in the IDDE program will receive. Training topics for Public Employees can include “General Requirements of the IDDE Program”, “How to identify potential illicit discharges and SSOs”, “Permitting, plan review, construction site inspection and enforcement”, New development/redevelopment program requirements”, “Municipal Operations Operation and Maintenance Program”, “General good housekeeping and pollution prevention at Municipal Facilities”, and “MS4 documentation requirements.”]*

### 7.3.6 IDDE Program Indicators

*[Insert a description of the indicators that the permittee will use to document program success per Part 2.4.4.10 of the General Permit. At a minimum, indicators shall include measures that demonstrate efforts to locate illicit discharges, the number of SSOs and illicit discharges identified and removed, the percentage and area in acres of the catchment area served by the MS4 evaluated using the catchment investigation procedure, and volume of sewage removed.]*

## 7.4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

### 7.4.1 Overall Construction Site Stormwater Management Program

*[Insert a description of all existing construction site runoff control program components. Insert a description of how the permittee will develop a construction site runoff control program to include all elements found at Part 2.4.5 of the General Permit. The description must include a schedule of development and implementation that indicates how the program will be completed within the permit term (individual program component deadlines are described below). The legal authority requirement of Part 2.4.5.3.a can be addressed in the Legal Authority section of the written SWMP. The requirement to receive information from the public can be addressed in the Public Involvement section of the written SWMP. BMP identification below can be combined or otherwise customized by the permittee to best describe the goals, schedules and person(s) or department responsible for the development of the comprehensive construction site stormwater management program. Puerto Rico Department of Natural and Environmental Resources should refer to Part 6.3 of the General Permit.]*

The permittee shall not approve any plans unless the plans contain appropriate site specific construction site control measures that, at a minimum, meet the Puerto Rico Environmental Quality Board (EQB) Sediment and Erosion Control Plan (SEC Plan) Regulation and the PUERTO RICO EROSION AND SEDIMENT CONTROL HANDBOOK FOR DEVELOPING AREAS developed by the Puerto Rico Environmental Quality Board and USDA – Natural Resources Conservation Services, March 2005.

SEC Plan applies to construction activities, including construction and demolition, in areas of equal or more than 900 square meters, in which the total volume of the Earth's crust components that will be used as filler or extracted, stored, prepared, dismantled, stacked or removed are equal or exceed 40 cubic meters or where the components of the Earth's crust gain access to water bodies. More information is available at: <http://www.jca.pr.gov/>

EPA resources on developing construction SWPPPs, including guidance, examples, and a construction SWPPP templates is available at: <http://www.epa.gov/npdes/stormwater-discharges-construction-activities#swppp>

**Control Measure** **BMP CONS1 – Erosion and Sediment Control BMP Standards**  
*[Insert description of the minimum requirements and/or standards.]*  
**Measurable Goal:** *[Insert milestones and timeframes for implementation.]*  
**Person(s) or Department Responsible:** *[Insert]*

**Control Measure** **BMP CONS2 – Pollution Prevention BMP Standards**  
*[Insert description of the minimum requirements and/or standards.]*  
**Measurable Goal:** *[Insert milestones and timeframes for implementation.]*  
**Person(s) or Department Responsible:** *[Insert]*

**Control Measure** **BMP CONS3 – Plan Review Procedures**  
*[Insert description of plan review procedure to be developed. Description must include a mechanism to evaluate low impact design and green infrastructure opportunities.]*  
**Measurable Goal:** *[Insert milestones and timeframes for implementation – no later than one year after permit authorization.]*  
**Person(s) or Department Responsible:** *[Insert]*

**Control Measure** **BMP CONS4 – Pre-Construction Review Procedures**  
*[Insert description of pre-construction plan review procedures to be developed.]*  
**Measurable Goal:** *[Insert milestones and timeframes for implementation – no later than one year after permit authorization.]*  
**Person(s) or Department Responsible:** *[Insert]*

**Control Measure** **BMP CONS5 – Inspection and Enforcement Procedures**  
*[Insert description of procedures to be developed. If the MS4 has no jurisdiction to enforce then the procedure on how to contact the corresponding agencies to report non-compliance construction activities shall be described]*  
**Measurable Goal:** *[Insert milestones and timeframes for implementation – no later than one year after permit authorization.]*

Person(s) or Department Responsible: *[Insert]*

Minnesota has published a *Stormwater Construction Inspection Guide* that helps municipal inspectors understand how to conduct a stormwater inspection at a construction site and is available at:  
<https://www.pca.state.mn.us/sites/default/files/wq-strm2-10.pdf>

**Control Measure**                      **BMP CONS6 – Receipt of Info from Public**  
*[Insert description of procedures to be developed.]*  
**Measurable Goal:**                      *[Insert milestones and timeframes for implementation.]*  
**Person(s) or Department Responsible:**                      *[Insert]*

*[As planned components are developed per the schedule listed above, insert a description of how the permittee manages stormwater on active construction projects using a program that complies with Part 2.4.5 of the General Permit.]*

**7.4.2 Employee Training**

*[Insert a description of the training that all employees whose primary job duties are related to implementing the construction stormwater program will receive. Training topics can include “Construction site erosion and sediment control requirements”, “Permitting and plan review procedures”, “Construction site inspection and enforcement”, New development/redevelopment program requirements” and “MS4 documentation requirements.”]*

**7.4.3 Construction Site Inventory**

*[Insert a description of how the permittee will develop and maintain a construction site inventory per Part 2.4.5.4 of the General Permit.]*

**Control Measure**                      **BMP CONS7 – Develop a Construction Site Inventory**  
*[Insert description of how the inventory will be developed.]*  
**Measurable Goal:**                      *[Insert schedule of development]*  
**Person(s) or Department Responsible:**                      *[Insert]*

**7.5 STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT**

The action of developing a site, can result in replacing existing permeable areas with impervious surfaces, such as buildings, parking lots, and sidewalks. Increasing impervious surfaces have the effect of increasing stormwater runoff and consequently can increase the potential of carrying pollutants into surface waters if no compensation or mitigation measures are implemented. *Green Infrastructure* is an approach to water management that protects, restores, and mimics the natural water cycle and includes

techniques that can be implemented to mitigate or compensate for increased impervious surfaces. Green Infrastructure techniques include increasing infiltration with onsite measures, such as vegetated swales, increasing landscape to paved area ratios, stormwater planter boxes, vegetated curb extensions, and using pervious surfaces for parking lots and walkways.

*[Insert a description of all existing new development and redevelopment project runoff control program components, including Green Infrastructure techniques, and how the permittee will develop a written new development and redevelopment project runoff control program that includes all elements found at Part 2.4.6 of the General Permit. The description must include a schedule of development and implementation, which indicates how the program will be completed within the first year after permit authorization for existing permittees and within five years for new permittees. The legal authority requirement of Part 2.4.6.1 can be addressed in the Legal Authority section of the written SWMP. Non-conventional MS4s should refer to Parts 4.1.3, 5.3 and 6.3 of the General Permit for guidance regarding post-construction controls requirements. Federal facilities should refer to Part 4.2 for additional Stormwater Control Standards requirements. BMP identification below can be combined or otherwise customized by the permittee to best describe the goals, schedules and person(s) or department responsible for the development of the comprehensive construction site stormwater management program.]*

The Center for Watershed Protection developed “Managing Stormwater in Your Community: A Guide for Building an Effective Post-Construction Program” which is available at:  
<http://www.cwp.org/online-watershed-library/>.

EPA developed the fact sheet “Incorporating Environmentally Sensitive Development Into Municipal Stormwater Programs” that is available at:  
[http://www.epa.gov/sites/production/files/2015-11/documents/region3\\_factsheet\\_lid\\_esd.pdf](http://www.epa.gov/sites/production/files/2015-11/documents/region3_factsheet_lid_esd.pdf)

**Control Measure**

**BMP POST1 – Stormwater Control Standards**

*[Insert description of the procedures/standards that will be required to prevent or minimize water quality impacts from new development and redevelopment. Procedures/standards should include infiltration techniques or other green infrastructure controls.]*

**Measurable Goal:**

*[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:**

*[Insert]*

**Control Measure**

**BMP POST2 – Long-Term Maintenance of Post-Construction Controls**

*[Insert description of the approach to be used to ensure long-term operation and maintenance of control measures, including procedures to maintain infiltration and other green infrastructure controls.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:** *[Insert]*

**Control Measure** **BMP POST3 – Post-Construction Controls Inspections**

*[Insert description of inspection program for post-construction controls.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation – no later than one year after permit authorization.]*

**Person(s) or Department Responsible:** *[Insert]*

**BMP POST4 – Enforcement and Tracking**

**Control Measure**

*[Insert description of the enforcement program for maintenance of post-construction controls.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation.]*

**Person(s) or Department Responsible:** *[Insert]*

*[Insert or attach a copy of the completed new and redevelopment stormwater management program documentation developed per the implementation schedule previously submitted – within one year for existing permittees and five years for new permittees.]*

## 7.6 POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

*[Insert a description of all existing municipal operations pollution prevention (i.e. operation and maintenance) program components. Insert a description of how the permittee will develop a program that includes all elements found at Part 2.4.7 of the General Permit. The description must include a schedule of development and implementation, which indicates how the program will be completed within the permit term (individual program component deadlines are described below). BMP identification below can be combined or otherwise customized by the permittee to best describe the goals, schedules and the person(s) or department responsible for the development of the comprehensive pollution prevention program. DNER should refer to Part 6.3 of the General Permit.]*

The Center for Watershed Protection developed a “Municipal Pollution Prevention/Good Housekeeping Practices Manual” that is available at:

<http://www.cwp.org/online-watershed-library/>

### 7.6.1 Operations and Maintenance Programs

**Control Measure** **BMP PP1 – MS4 Conventional or Non-Conventional Facility Inventory**

*[Insert description of inventory procedures.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation – to be completed within 6 months of authorization.]*

**Person(s) or Department Responsible:** *[Insert]*

**Control Measure** **BMP PP2 – MS4 Conventional or Non-Conventional Parks and Open Space O&M Procedures**  
*[Insert description of the process to be used to develop O&M procedures for parks and open space.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation – no later than one year after permit authorization.]*

**Person(s) or Department Responsible:** *[Insert]*

**Control Measure** **BMP PP3 – MS4 Conventional or Non-Conventional Buildings and Facilities O&M Procedures**  
*[Insert description of the process to be used to develop O&M procedures for permittee buildings and facilities where pollutants are exposed to runoff.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation – no later than one year after permit authorization.]*

**Person(s) or Department Responsible:** *[Insert]*

**Control Measure** **BMP PP4 – MS4 Conventional or Non-Conventional Vehicles and Equipment O&M Procedures**  
*[Insert description of the process to be used to develop O&M procedures for permittee vehicles and equipment.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation – no later than one year after permit authorization.]*

**Person(s) or Department Responsible:** *[Insert]*

**Control Measure** **BMP PP5 – MS4 Conventional or Non-Conventional Infrastructure O&M Procedures**  
*[Insert description of the process to be used to develop O&M procedures for permittee infrastructure to include streets and parking lots.]*

**Measurable Goal:** *[Insert milestones and timeframes for implementation – no later than one year after permit authorization.]*

**Person(s) or Department Responsible:** *[Insert]*

*[Insert or attach a copy of the completed O&M programs documentation developed per the implementation schedule previously submitted – within one year for existing permittees and five years for new permittees.]*

### 7.6.2 Stormwater Pollution Prevention Plans

*[Insert description of existing facility SWPPPs which have been developed for the following permittee-owned or -operated facilities: maintenance garages, public works yards, transfer stations and other waste handling facilities where pollutants are exposed to stormwater. Insert a description of the schedule to develop SWPPPs that meets the requirements at Part 2.4.7.2 of the General Permit for those facilities that do not currently have a SWPPP and are required to by that section.]*

A guide on “Building a Local Program to Maintain your Stormwater Practices and Prevent Pollution from Municipal Operations (2006)” is available at:  
<http://www.epa.gov/npdes/npdes-stormwater-webcasts#municipal>

**Control Measure**

**BMP PP6 – SWPPP Development**

*[Insert description of process to identify facilities and develop SWPPPs.]*

**Measurable Goal:**

*[Insert milestones and timeframes for implementation – no later than two years after permit authorization]*

**Person(s) or Department Responsible:**

*[Insert]*

### 7.6.3 Employee Training

*[Insert a description of the training that all employees whose primary job duties are related to implementing the operation and maintenance programs will receive. Training topics for Public Employees can include “General good housekeeping and pollution prevention at Municipal Facilities”, “MS4 maintenance including catch basin cleaning procedures”, “Integrated Pest Management and proper pesticide/herbicide application”, “Vehicle/equipment maintenance procedures”, “vehicle/equipment washing procedures” and “MS4 documentation requirements.”]*

## 8 PROGRAM EVALUATION

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### 8.1 ANNUAL COMPLIANCE EVALUATION

*[Insert a narrative describing the process the permittee will use to self-evaluate compliance with the permit.]*

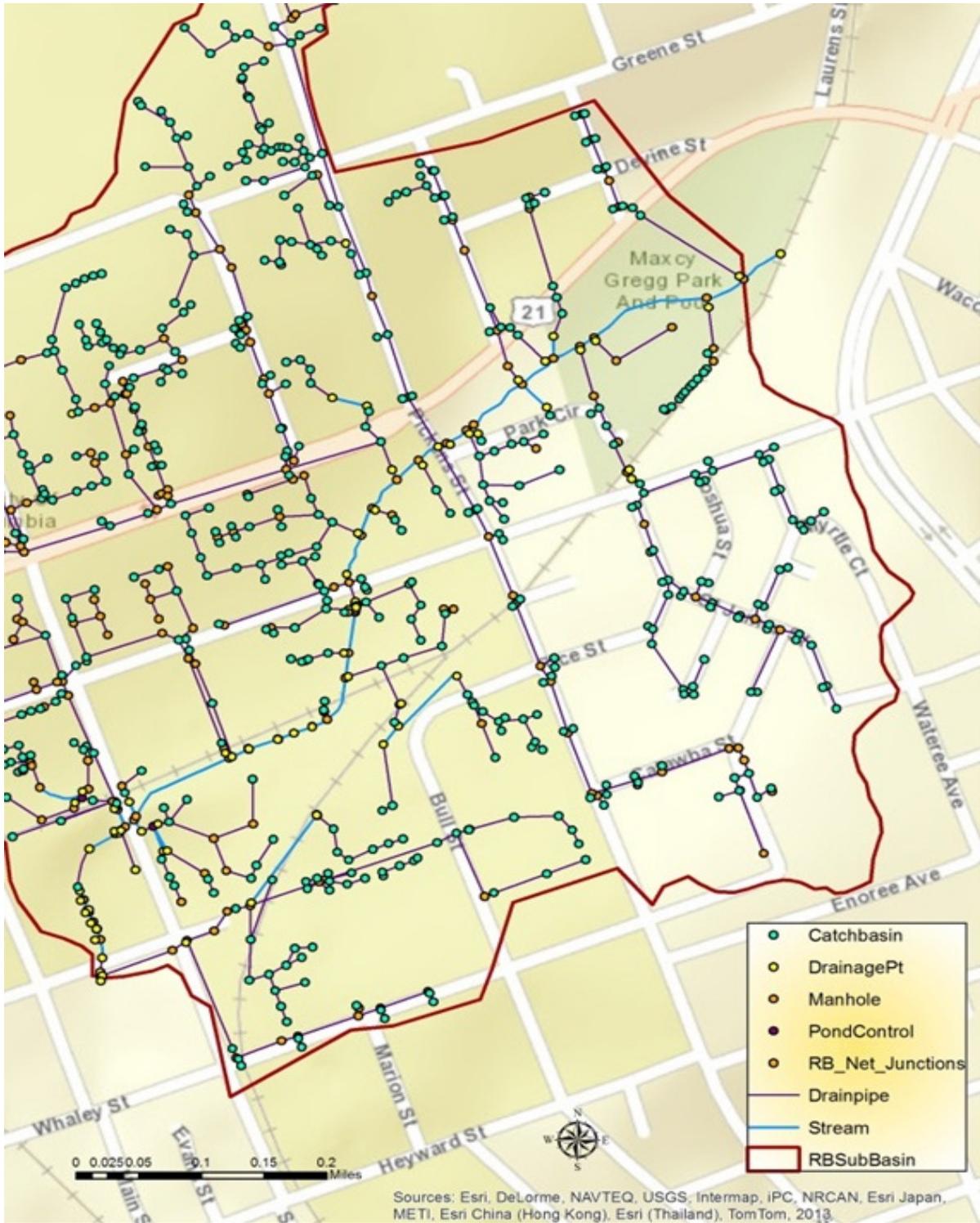
A fact sheet on municipal stormwater program evaluation is available at:  
[http://www.epa.gov/sites/production/files/2015-11/documents/region3\\_factsheet\\_swmp.pdf](http://www.epa.gov/sites/production/files/2015-11/documents/region3_factsheet_swmp.pdf)

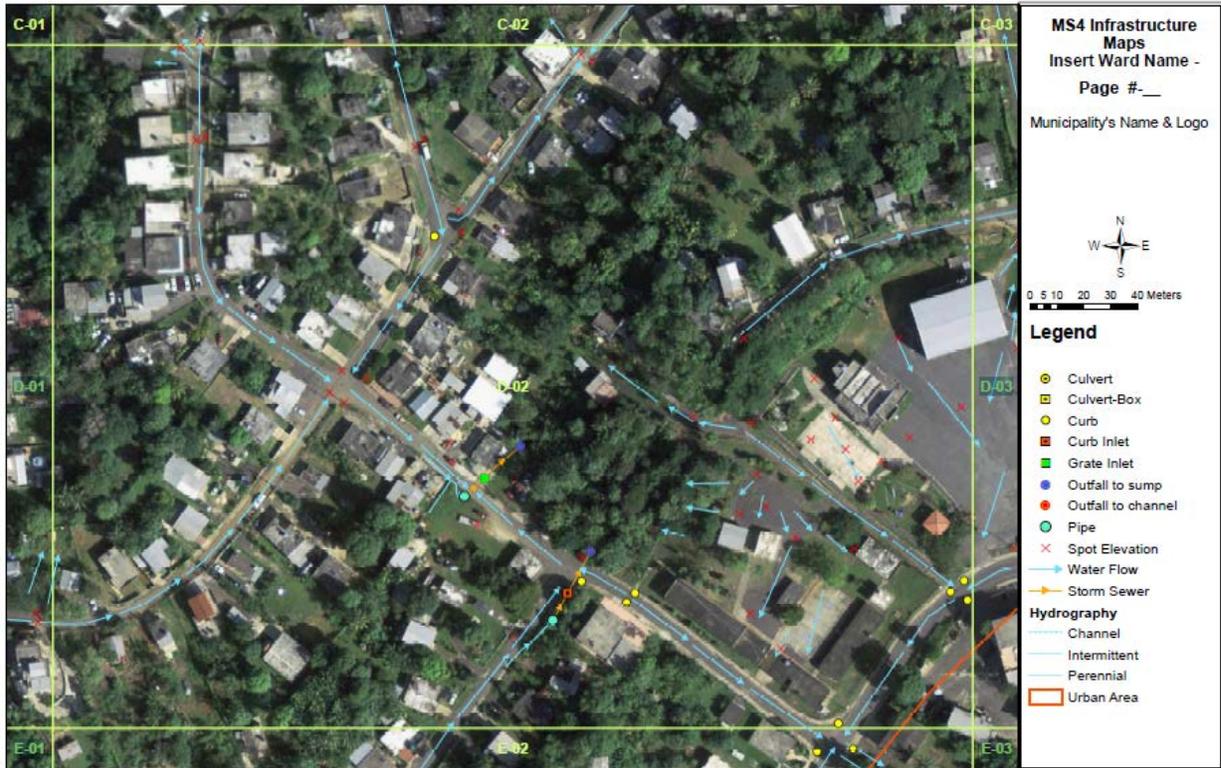
## 8.2 BMP MODIFICATION

*[Each time the permittee decides that a planned BMP should be modified, insert a narrative description to provide the required justification per Part 3.1.3 of the General Permit.]*

# ATTACHMENT I MS4 STORMWATER INFRASTRUCTURE MAPS

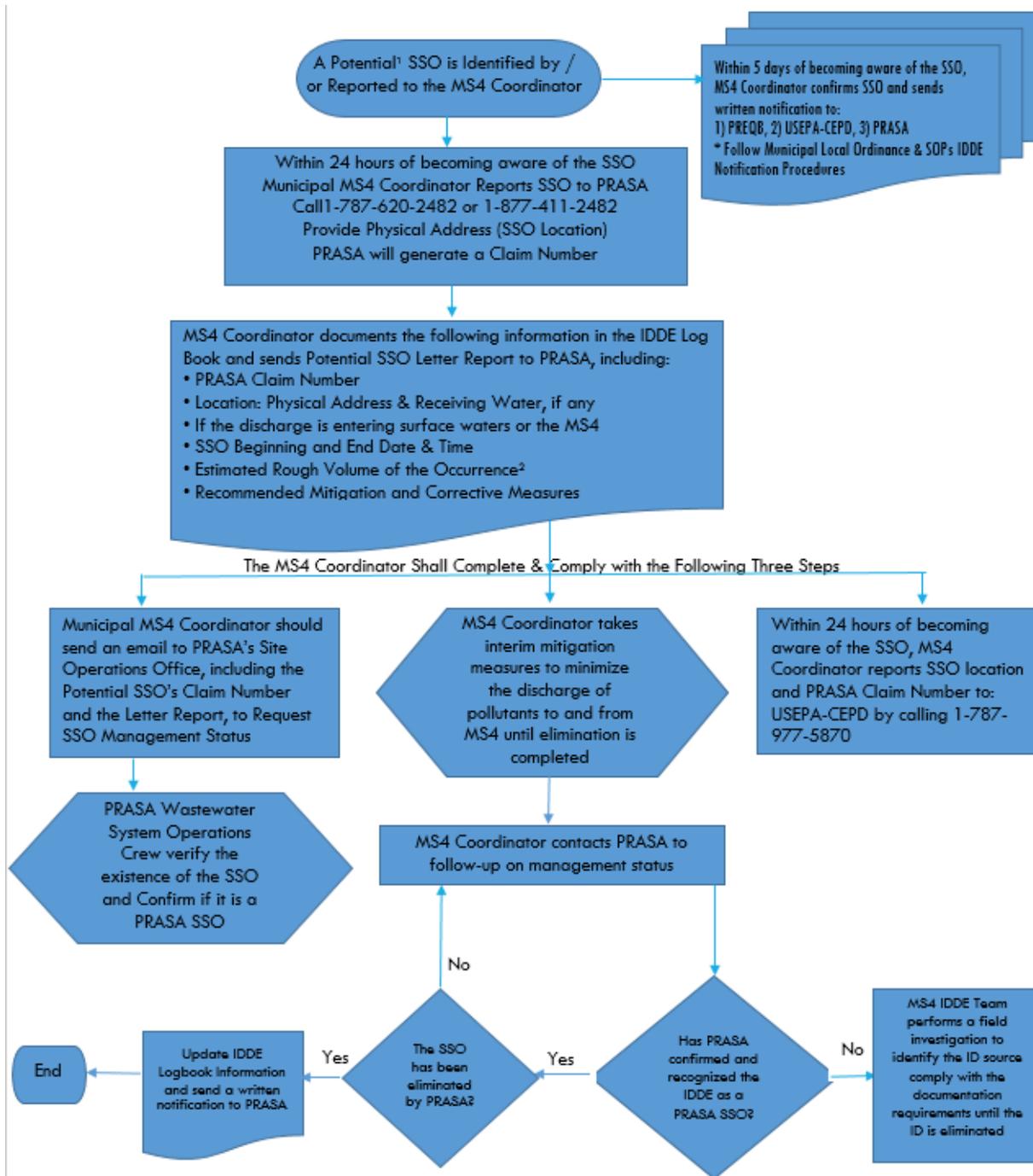
*[The following figures are examples of MS4 Stormwater Infrastructure Maps. Replace with your system-specific maps move before submitting your SWMP]*





# ATTACHMENT II SSO MANAGEMENT PROCESS FLOWCHART

[The following SSO Management Process Flowchart below could be used or a new one could be developed.]



<sup>1</sup> The Suspected or Potential Sanitary Sewer Overflow (SSO) is considered an Illicit Discharge caused by PRASA once PRASA Operations Crew confirms its existence.

<sup>2</sup> Estimated Rough Volume Calculation Method is under development due 2018.

**ATTACHMENT III [INSERT TITLE]**

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*[Insert additional attachments.]*