



---

**NATIONAL POLLUTANT DISCHARGE ELIMINATION  
SYSTEM (NPDES) PHASE II, REGULATED SMALL MUNICIPAL  
SEPARATE STORM SEWER SYSTEMS (MS4's)**

**PERMIT (NOTICE OF INTENT) APPLICATION**

U.S. ENV. PROT. AGENCY  
2009 OCT 30 AM 10:47  
CEPD-DIRECTOR OFFICE

**MUNICIPALITY OF COROZAL**

9-Cervantes Street  
Corozal, P.R. 00783

**U.S. ENVIRONMENTAL PROTECTION AGENCY – REGION II  
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION**

Centro Europa Building, Suite 417  
1492 Ponce de León Avenue  
San Juan, Puerto Rico 00907-4127

October 2009

## TABLE OF CONTENT

1.0	NPDES (Notice of Intent) Permit Application	1
1.1	Background	1
1.2	Municipality of Corozal	1
1.3	Activities Subject to NPDES Permit Applicability	2
1.4	Name, Mailing Address, and Location of Facility for which the Application is Submitted	2
1.4.1	NPDES (MS4s) Program Point of Contact of Municipality of Corozal	2
1.5	Standard Industrial Classification (SIC) Code	3
1.6	Operators Name, Mailing Address, Telephone, Ownership Status, and as Federal, State, Local, Tribal or Other Public Entity	3
1.7	Permits or Construction Approvals Received or Applied Under EPA	3
1.7.1	Municipal Permits or Construction Approvals	3
1.7.2	Federal Permits issued within the Municipality	4
1.7.3	Municipal State Permits or Construction Approvals	5
1.8	Storm Water Sewer Map	5
1.9	Description of the Municipal Stormwater Sewer System	6
1.10	Estimated Square Mileage Served by the MS4s System	7
1.11	Proposed Storm Water Management Plan	7
1.11.1	Proposed Work Plan	8
1.12	Description of the Best Management Practices to be Implemented for each MCM	9
1.12.1	Minimum Control Measure 1 – Public Education and Outreach	9
1.12.2	Minimum Control Measure 2 – Public Involvement and Participation	9
1.12.3	Minimum Control Measure 3 – Illicit Discharge Detection and Elimination	9
1.12.4	Minimum Control Measure 4 – Construction Site Storm Water Runoff Control	10
1.12.5	Minimum Control Measure 5 – Post-Construction Storm Water Management in Development and Redevelopment	10
1.12.6	Minimum Control Measure 6 – Pollution Prevention (Good Housekeeping for Municipal Operations)	11
1.13	BMP Implementation Schedule	12
1.14	Person Responsible for Implementing or Coordinating the Applicant's Storm Water Management Program	12
1.15	Eligibility Criteria for Endanger Species, Historic Properties and Marine Fisheries	12
1.15.1	Eligibility Criteria for Endanger Species	12
1.15.2	Eligibility Criteria for Historic Properties	13
1.16	Signatories to Permit Application and reports	14
1.16.1	Certification	14

## APPENDICES

### APPENDIX A – FIGURES

FIGURE 1- 2000 CENSUS OF SAN JUAN, PR URBANIZED AREA MAP

FIGURE 2- LOCATION MAP

FIGURE 3- URBANIZED AREA WARDS

FIGURE 4- SURFACE WATER BODIES WITHIN THE MUNICIPAL BOUNDARIES

FIGURE 5A- MAP ABRAS WARD

FIGURE 5B- MAP CIBUCO WARD

FIGURE 5C- MAP CUCHILLAS WARD

FIGURE 5D- MAP DOS BOCAS WARD  
FIGURE 5E- MAP MANÁ WARD  
FIGURE 5F- MAP MAGUELLES WARD  
FIGURE 5G- MAP NEGROS WARD  
FIGURE 5H- MAP PADILLA WARD  
FIGURE 5I- MAP PALMAREJO WARD  
FIGURE 5J- MAP PALMARITO WARD  
FIGURE 5K- MAP POLOS BLANCOS

## 1.0 NPDES (NOTICE OF INTENT) PERMIT APPLICATION

### 1.1 BACKGROUND

In 1972, Congress amended the Federal Water Pollution Control Act, commonly referred as the Clean water Act (CWA) to prohibit the discharge of any pollutant to waters of the United States from point sources unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. Initial efforts under the NPDES program focused on reducing pollutants in discharges of industrial process wastewater and municipal sewage. As pollution control measures have been implemented, it has become evident that diffuse sources or non-point sources are also contributors of water quality degradation. In 1990, the US Environmental Protection Agency (USEPA) promulgated rules establishing Phase I of the NPDES storm water program. The Phase I program for MS4s requires operators of "medium" and "large" MS4s, that is, those that generally serve populations of 100,000 or greater, to implement a storm water management program as a means to control polluted discharges from these MS4s. USEPA published the Storm Water Phase II Rule on December 9, 1999. Since the USEPA has not delegated the NPDES permitting program to the Puerto Rico Environmental Quality Board (PREQB). Thus, on November 6, 2006 USEPA Region 2 issued the National Pollutant Discharge Elimination System General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4 GP PRR040000) for Puerto Rico.

Based on the 2000 Census, the USEPA published the San Juan Northwest Urbanized Area Storm Water Map; which updates the Appendix 6 and 7 of the Preamble to the Final Phase II Regulations. As such, the Municipality of Corozal is required to submit a Notice of Intent (NOI) to seek coverage of the said permit<sup>1</sup>.

The twelve wards that compose the Municipality of Corozal fall within an Urbanized Area (See Figure 1 of Appendix A), as defined in Section 9 of the National Pollutant Discharge Elimination System General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (PRR040000).

### 1.2 MUNICIPALITY OF COROZAL

The Municipality of Corozal is positioned in the inner-oriental region of Puerto Rico. It is located North of Vega Alta and Toa Alta; East of Naranjito; West of Morovis and Orocovis; and South of Orocovis, Barranquitas and Naranjito (see Figure 2 of Appendix A). Its surface area includes a total of 110.4 km<sup>2</sup> (42.6 mi<sup>2</sup>) and has a population of 36,867 inhabitants<sup>2</sup>, according to the 2000 Census. It is composed of 12 wards and all of them falls within the Urbanized Area, as defined in Section 9 of the National Pollutant Discharge Elimination System General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (PRR040000).

<sup>1</sup> National Pollutant Discharge Elimination System Regulations of Water Pollution Control Program Addressing Storm Water Discharge Final Rule - Federal Register Vol. 64 Num. 23; pages 60721-61851 (December 8, 1999).

<sup>2</sup> Based Census 2000 Population, Housing Units, Area, and Density Table of Corozal, Puerto Rico.  
[http://factfinder.census.gov/servlet/GCTTable?\\_bm=y&-geo\\_id=04000US72&-\\_box\\_head\\_nbr=GCT-PH1&-ds\\_name=DEC\\_2000\\_SF1\\_U&-format=ST-2](http://factfinder.census.gov/servlet/GCTTable?_bm=y&-geo_id=04000US72&-_box_head_nbr=GCT-PH1&-ds_name=DEC_2000_SF1_U&-format=ST-2)

- Abras
- Cibuco
- Cuchillas
- Dos Bocas
- Magueyes
- Maná
- Negros
- Padilla
- Palmarejo
- Palmarito
- Palos Blancos
- Pueblo

The main access to Corozal is through secondary and tertiary roads. State Road PR-159 connects Corozal with Toa Alta through the North and Morovis to the Northwest. In addition, the deviation of PR-159, that connect to the State Roads PR-165 and 164, communicates Corozal with Naranjito.

The Municipality of Corozal has two surface water resources of importance: Río Grande de Manatí and Río Cibuco. Río Grande de Manatí flows in direction East-West. Río Cibuco and its tributaries (Río Maravilla, Río Corozal, Río Dos Bocas and Río Los Negros) occupy two thirds of the municipality surface area. Figure 4 of Appendix A shows the superficial water resources of the Municipality of Corozal. Salto Grande is a waterfall formed by a tributary of Río Grande de Manatí and is located in Palmarito Ward.

The municipal operations are mostly categorized as administrative and community service. Some of the mayor responsibilities of the Municipality of Corozal are monitor budget, draft local legislation, develop local policy, and execute legally mandated government activities design to provide services to its residents. The most important municipal operations include the creation of local policies, strategies and plans aimed to develop our future growth; design, organize and develop projects, programs and activities for the general welfare and public service; construct, improve, repair, rebuild and/or rehabilitate facilities for the better service of their communities; organize and supervise the Municipal Police Force; establish programs to prevent incidents, including assisting the community in emergencies or natural disasters, catastrophic accidents or disasters and civil protection in general; protect and preserve our resources and promote the protection of health and safety of our citizens by giving maintenance to all the municipal facilities, regulate and administer the program concerning stray domestic animals; provide services and programs for the collection of waste and provide ongoing maintenance to the storm sewer system.

### **1.3 ACTIVITIES SUBJECT TO NPDES PERMIT APPLICABILITY**

Municipal separate storm water sewer system located in Corozal, Puerto Rico

### **1.4 NAME, MAILING ADDRESS, AND LOCATION OF FACILITY FOR WHICH THE APPLICATION IS SUBMITTED**

Municipio de Corozal  
9-Cervantes Street  
Corozal, P.R. 00783

#### **1.4.1 NPDES (MS4s) Program Point of Contact of Municipality of Corozal**

Municipio de Corozal  
Attn: Ing. Johanna Vazquez  
9 Calle Cervantes

Corozal, P.R. 00783  
 Telephone: (787) 859-4491  
 Fax: (787) 859-2268

**1.5 STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODE**

Standard Industrial Classification (SIC) Code for the Municipality of Corozal is 9199.

**1.6 OPERATORS NAME, MAILING ADDRESS, TELEPHONE, OWNERSHIP STATUS, AND AS FEDERAL, STATE, LOCAL, TRIBAL OR OTHER PUBLIC ENTITY.**

Municipio de Corozal  
 9 Calle Cervantes  
 Corozal, P.R. 00783

**1.7 PERMITS OR CONSTRUCTION APPROVALS RECEIVED OR APPLIED UNDER EPA**

**1.7.1 MUNICIPAL PERMITS OR CONSTRUCTION APPROVALS**

**1.7.1.1 Resource Conservation and Recovery Act**

NUMBER	OWNER/OPERATOR NAME	APPLICATION TYPE	LAST UPDATED
PRR000001875	Municipality of Corozal	Unspecified (inactive)	06/06/2007
Source: RCRA Info <a href="http://oaspub.epa.gov">http://oaspub.epa.gov</a>			

**1.7.1.2 Underground Injection Control**

Information Not Available

**1.7.1.3 NPDES Program under the Clean Water Act**

None

**1.7.1.4 Nonattainment Program under the Clean Air Act**

None

**1.7.1.5 National Emissions Standards for Hazardous Air Pollutants Preconstruction Approvals under the Clean Air Act**

None

**1.7.1.6 Ocean Dumping Permits under the Marine Protection Research and Sanctuaries Act**

None

**1.7.1.7 Dredge or Fill Permits under Section 404 of the Clean Water Act**

None

**1.7.2 FEDERAL PERMITS ISSUED WITHIN THE MUNICIPALITY****1.7.2.1 Resource Conservation and Recovery Act**

NUMBER	OWNER/OPERATOR NAME	APPLICATION TYPE	LAST UPDATED
PRR000019679	Amigo Supermarket	SQG	10/01/2008
PRD000689455	Corozal STP.	SQG	06/06/2007
PRR000021113	ESSO Standard Oil Co PR 2P-066	SQG	12/10/2007
PRR000013268	Farmacia El Amal	SQG	06/06/2007
PRR000020008	Transporte Sonnell	SQG (ACTIVE)	07/04/2007

Source: RCRA Info <http://oaspub.epa.gov>**1.7.2.2 Underground Injection Control**

Information Not Available

**1.7.2.3 NPDES Program under the Clean Water Act**

NUMBER	OWNER/OPERATOR NAME	APPLICATION TYPE	LAST UPDATED
PR0020451	Corozal STP.	NPDES Major	08/24/2007

Source: RCRA Info <http://oaspub.epa.gov>**1.7.2.4 Nonattainment Program under the Clean Air Act**

None

**1.7.2.5 National Emissions Standards for Hazardous Air Pollutants  
Preconstruction Approvals under the Clean Air Act**

NUMBER	OWNER/OPERATOR NAME	APPLICATION TYPE	LAST UPDATED
7204700001	Angel Perez Incorporated	Air Minor	10/15/2003
7204700005	Consolidated Knittin	Air Minor	10/16/2003
7204700010	Corozal Dry Cleaners	Air Minor	4/15/2009
7204700004	Empire Textile Corp.	Air Minor	10/15/2003
7204700002	Fabrica Bandas Top Bond	Air Minor	10/15/2003
7204700003	G.T. Bonded Backe DT	Air Minor	7/12/2004

Data Source AIRS/AFS: <http://oaspub.epa.gov>

**1.7.2.6 Ocean Dumping Permits under the Marine Protection Research and Sanctuaries Act**

None

**1.7.2.7 Dredge or Fill Permits under Section 404 of the Clean Water Act**

None

**1.7.3 MUNICIPAL STATE PERMITS OR CONSTRUCTION APPROVALS**

**1.7.3.1 Puerto Rico Environmental Quality Board**

NUMBER	OWNER/OPERATOR NAME	APPLICATION TYPE	LAST UPDATED
PGC-09-24-0202	Municipality of Corozal	Permiso Consolidado	07/23/2009

Source: Municipality of Corozal

**1.7.3.2 Puerto Rico Department of Natural Resources and the Environment**

Information not Available

**1.8 STORM WATER SEWER MAP**

Included in Figure 3 of Appendix A is a map depicting the geographical extension of the Municipality of Corozal and the urbanized wards. Figure 4 illustrates the surface water bodies within the municipal boundaries (lakes, rivers, creeks, ocean). Figure 5 illustrates the municipal owned and operated roads, water filtration plants owned and operated by the

Puerto Rico Aqueduct and Sewer Authority (PRASA), waste water treatment plants owned and operated by the Puerto Rico Aqueduct and Sewer Authority, hazardous waste treatment, storage and disposal facilities, non-hazardous solid waste treatment, storage and disposal facilities, NPDES permitted industrial facilities, drinking, irrigation or commercial groundwater wells.

At the present time, the municipality lacks the required information and resources needed to develop a detail storm sewer map for the municipal operated MS4, as required by the MS4 GP PRR40000. As part of the implementation phase of the NPDES it is the intention of the Municipality of Corozal to develop such map.

It is anticipated that at a minimum the map will include information related to:

- **Municipal Storm Sewer System, including conveyance or system of conveyances and outfall locations.**
- **Municipal Owned and Operated Roads Storm Sewer Systems interconnected with the Municipal Storm Sewer System;**
- **State Owned and Operated Roads Storm Sewer Systems interconnected with the Municipal Storm Sewer System;**
- **Surface water bodies (lakes, rivers, creeks, ocean);**
- **Water Filtration Plants Owned and Operated by the Puerto Rico Aqueduct and Sewer Authority (PRASA), including intakes and outfalls;**
- **Waste Water Treatment Plants Owned and Operated by the Puerto Rico Aqueduct and Sewer Authority, including outfalls;**
- **Hazardous Waste Treatment, Storage and Disposal Facilities;**
- **Non-Hazardous Solid Waste Treatment, Storage and Disposal Facilities;**
- **NPDES permitted industrial facilities interconnected with the Municipal Storm Sewer System;**
- **NPDES permitted industrial facilities discharging to a surface water body;**
- **Commercial Facilities (Regulated under the PRASA Pretreatment Program) interconnected with the Municipal Storm Sewer System or discharging to a surface water body;**
- **Drinking, Irrigation or Commercial Groundwater Wells;**
- **Underground Injection Systems (including residential septic tanks)**
- **Illegal/Illicit Discharges to MS-4**

- Gas Stations

## **1.9 DESCRIPTION OF THE MUNICIPAL STORMWATER SEWER SYSTEM**

The Municipality of Corozal Storm Water Sewer System (MS4s) in the urban areas, in general, consist of a series of catch basins, typically located within the right-of-way of municipal and state roads, interconnected by underground concrete or PVC pipes, which normally discharge rivers and creeks that finally discharge to the Atlantic Ocean. In the rural areas, the Municipal MS4 system typically consists of a series of interconnected open channel culverts, which run parallel to municipal and state roads, and usually discharge to a surface water body. Interconnected to the Municipal MS4s system are the storm water sewer systems owned and operated by the Puerto Rico Department of Public Works and Transportation and the Puerto Rico Highway and Transportation Authority. Also, interconnected to the Municipal MS4s systems are the discharges from NPDES (Storm water) permitted facilities and PRASA Pre-treatment permitted industrial and commercial facilities.

As the Municipality of Corozal implements the proposed Storm Management Plan a more accurate description (capacity, operation, etc.) of the Municipal MS4s system can be provided.

## **1.10 ESTIMATED SQUARE MILEAGE SERVED BY THE MS4S SYSTEM**

The estimated square mileage served by the MS4s System is 88.32 Km<sup>2</sup> (34.10 mi<sup>2</sup>). However, it must be noted that a more accurate estimate can be provided as the Municipality implements the proposed Storm Management Plan.

## **1.11 PROPOSED STORM WATER MANAGEMENT PLAN**

The Municipality of Corozal has many regulatory and public responsibilities. One of these is the development of a Comprehensive Storm Water Management Plan (SWMP). The SWMP was developed to meet the regulatory requirements of the National Pollutant Discharge Elimination System (NPDES) Phase II Rule and to assist the municipality in maintaining and improving the municipality drainage facilities which include pipelines, structures, basins, ditches, swales, ponds, under drains and drainage wells, to ensure that they perform to design capacity and that all receiving bodies meet state and federal standards for water quality. It will also be an important tool for use in the day-to-day operations and as a public reference document. Along with regulatory issues, this plan will addresses protection of property from flooding and erosion, identifies health and safety issues related to water resources, and will make recommendations for the preservation of environmental and aesthetic benefits to the community.

Through the use of field observations, results of past and future studies, hydrologic/hydraulic computer modeling, and input from Municipality staff and a proposed Citizens Advisory Committee, the plan will identify existing problems and potential future problems within the municipality. A combination of regulatory requirements, public education, increased maintenance activities, and capital improvements will be recommended to solve identified problems. The major plan elements include the following:

- Development of a proposed storm water ordinance that, among other things, establishes minimum requirements for new development and redevelopment, prohibits illicit discharges into surface waters, and requires maintenance of privately owned storm water facilities.
- Development of public education opportunities to inform the community of water quality issues, and, specifically, the new ordinance and its requirements.
- Develop a Storm Water Assistance Program, to assist businesses and persons in their efforts to comply with NPDES storm water regulations and will educate citizens about storm water runoff and associated concerns.
- Hydrologic and hydraulic computer modeling analysis of the major drainage basins in the Municipality to simulate existing flows, project future flows, and evaluate system requirements.
- Analysis of localized flooding and water quality problems and solutions, and development of a prioritized list of recommended drainage system improvements.
- Development of a Capital Improvements Program.
- Development of a Maintenance and Operations Program.
- Development of a Public Education.
- Development of a Compliance Management Program to among other things, monitor illicit discharges into surface waters, storm water discharges associated with industrial activity and construction sites.
- Description of the overall program costs.
- Analysis of funding options and the creation of a storm water utility.

The Stormwater Management Plan will be develop, under the direction of the Planning Office. The SWMP will focus initially on community education, dissemination of storm water pollution prevention information, system inventory and analysis of drainage and water quality issues followed by a facilities maintenance program, and a comprehensive storm and surface water code and policy. As envisioned, the SWMP will address the drainage network base map, hydrologic and hydraulic analysis and modeling, if required, for the principal surface water bodies (creeks and rivers), environmental and water quality issues, capital improvement program, storm water facilities maintenance program and a comprehensive Storm Water Management Code and Policy.

Semiannual meetings will be hold to update all partnership members and Citizens Advisory Committee on the status of the planned activities. A written annual report will be prepared, submitted to USEPA and distributed each year.

### **1.11.1 PROPOSED WORK PLAN**

Under the direction of the Planning Office, a work plan will be developed at the beginning of each year based on priorities. Semiannual meetings will be held to update all partnership members on the status of the planned activities. A written annual report will be prepared and distributed at the end of each year. The anticipated activities are currently divided into six major tasks:

### **1.12 DESCRIPTION OF THE BEST MANAGEMENT PRACTICES TO BE IMPLEMENTED FOR EACH MCM**

Next is a description of the preliminary Best Management Practices (BMPs) that the Municipality of Corozal is planning to undertake to meet the requirements of the permit.

#### **1.12.1 MINIMUM CONTROL MEASURE 1 – PUBLIC EDUCATION AND OUTREACH**

The Municipality of Corozal is planning to implement a public education program that would include the distribution of educational materials within the general community regarding the potential impacts of storm water discharges on water bodies. It would also include the measures that the community may take to reduce pollutants in storm water. The program will include the preparation and distribution of written materials as well as the coordination of public meetings. The following BMP's will be implemented:

- Storm Water-Related Public Service Announcements
- Development and Distribution of Storm Water-Related Materials
- Storm Water Web Page
- Storm Water Pamphlets, Booklets, and Flyers

#### **1.12.2 MINIMUM CONTROL MEASURE 2 – Public Involvement and Participation**

The Municipality of Corozal is planning to implement a public involvement and participation program. Public participation meetings are planned to obtain input from the community. Functionaries responsible for the program would coordinate the meetings to assure the participation of the community. The following BMP's will be implemented:

- Storm Drain Stenciling Program
- Annual Cleanup
- Public Involvement Program
- Community Hotline

#### **1.12.3 MINIMUM CONTROL MEASURE 3 – Illicit Discharge Detection and Elimination**

To meet the requirements of this measurement the Municipality of Corozal is planning to develop a map of the storm sewer system showing the location of all outfalls, inflows, manholes, and waters of the United States that receive discharges from the outfalls. The Municipality of Corozal is planning to implement a program for the detection of possible illegal non-storm water discharges into the system. The program may include visual assessments, connectivity testing, dye testing and/or smoke tests. Allowable discharges, as

included in Section 1.4 of the permit, will be addressed as part of this control measure only if the Municipality of Corozal identifies them as significant contributors of pollutants to the small MS4. As part of the SWMP development the Municipality of Corozal will list occasional incidental non-stormwater discharges that will not be addressed as illicit discharges such as non-commercial or charity car washes. A prohibition of any non-storm water discharge that it is determined to be contributing significant amounts of pollutants to the MS4 would be included in the SWMP. The following BMP's will be implemented:

- Storm Sewer System Map - Develop a storm sewer system map.
- Implement Regulations to Enforce Nonstorm Water Discharges
- Educational Outreach
- Program to Detect, Identify, and Eliminate Illicit Discharges
- Program to Detect, Identify, and Eliminate Illegal Dumping
- Program to Detect, Identify, and Eliminate Wastewater Connections to the Storm Drain System
- Program to Detect and Eliminate Sanitary Sewer Overflows -
- Program to Detect and Eliminate Failing Septic Systems

#### **1.12.4 MINIMUM CONTROL MEASURE4 – Construction Site Storm Water Runoff Control**

The Municipality of Corozal is planning to develop, implement and enforce a program to reduce pollutants in any storm water runoff to their MS4 from construction activities. For construction activities covering one acre or more of land or covering less than one acre that are part of a larger common plan, the Municipality of Corozal will require that the construction activity be implemented in accordance to the NPDES General Permit for Storm Water Discharges from Construction Activities issued by the EPA in July 1,2003. To ensure that this requirement is met the Municipality of Corozal will develop an administrative procedure or guideline to assure that the requirement for the request of compliance with the NPDES General Permit for construction activities is met.

By implementing the requirement of meeting the conditions of the Construction Activities General Permit Municipality of Corozal will assure that adequate erosion and sedimentation controls are implemented and inspected during the project construction phase. The following BMP's will be implemented:

- Ordinances or Other Regulatory Mechanisms
- General Construction Site Waste Controls
- Information Submitted by the Public
- Construction Site Inspection and Enforcement

#### **1.12.5 MINIMUM CONTROL MEASURE 5 – Post-Construction Storm Water Management in Development and Redevelopment**

The Municipality of Corozal is planning to develop a post construction runoff control management program for areas within the Municipality that would undergo new development or redevelopment. The program would be aimed to reducing pollutants in post construction runoff from these areas. BMP's that may be considered during the development of the SWMP could include:

- Development of administrative procedures and ordinances that require the implementation of post-construction runoff control measures
- Development of administrative procedures or guidelines to ensure the inspection and maintenance of the runoff control measures
- Development of administrative procedures or guidelines to ensure that new development or redevelopment plans are reviewed and verified for the inclusion of post-construction runoff control measures
- Development of administrative procedures or guidelines to ensure that one or more of the following general BMPs are included in the design plans of any new or redeveloped project: innovative BMPs, infiltration systems, filtration systems or retention/detention ponds. The Best Management Practices are

#### Structural

- (a) Porous Pavement Program
- (b) Vegetative Practices (Stormwater Wetland Program)
- (c) Vegetative Practices (Grassed Swale Program)
- (d) Runoff Pretreatment Practices

#### Nonstructural

- (a) Develop a regional growth planning process to contain sprawl development and direct new growth into previously developed areas, discouraging excessive low-density development.
- (b) Develop green parking techniques to reduce the contribution of parking lots to the total impervious and, consequently, the amount of storm water runoff. All of the green parking techniques shall be applied in new developments and some redevelopment projects, depending on the extent and parameters of the project.
- (c) Develop an alternative paver program that can replace asphalt and concrete and can be used for driveways, parking lots, and walkways. Alternative pavers shall replace impervious surfaces, creating less storm water runoff.

#### Inspection and Maintenance Program

- (a) Develop an inspection and repair program to maintain the effectiveness of post-construction storm water control BMPs.

### **1.12.6 MINIMUM CONTROL MEASURE 6 – Pollution Prevention (Good Housekeeping for Municipal Operations)**

The Municipality of Corozal is planning to develop and implement a pollution prevention/good housekeeping program to minimize or to reduce potential pollutants from reaching the storm sewer system. The program will consist of the following BMP's:

#### **a) Source Controls**

Pet Waste Collection Program  
 Vehicle Maintenance Program  
 Vehicle Washing Program

Parking Lot and Street Cleaning Program  
Roadway and Bridge Maintenance Program  
Storm Drain System Cleaning Program

**b) Materials Management**

Alternative Products -  
Hazardous Materials Storage Program  
Spill Response and Prevention Program  
Used Oil Recycling Program  
Materials Management Program

**1.13 BMP IMPLEMENTATION SCHEDULE**

BMP Implementation Schedule and MCM 1 Performance Measures will begin in 2009 and ends in 2011. A detail implementation schedule will be included in the Stormwater Management Plan.

**1.14 PERSON RESPONSIBLE FOR IMPLEMENTING OR COORDINATING THE APPLICANT'S STORM WATER MANAGEMENT PROGRAM**

Municipio de Corozal  
Attn: Ing. Johanna Vazquez  
9 Calle Cervantes  
Corozal, P.R. 00783  
Telephone: (787) 859-4491  
Fax: (787) 859-2268

**1.15 ELIGIBILITY CRITERIA FOR ENDANGER SPECIES, HISTORIC PROPERTIES AND MARINE FISHERIES**

**1.15.1 ELIGIBILITY CRITERIA FOR ENDANGER SPECIES**

This section discussed the eligibility and screening procedures relating to species and critical habitat designated under the Endanger Species Act (ESA). The MS4 operated by the Municipality of Corozal meets **Criterion E: Storm water discharges associated with industrial activity and allowable non-storm water discharges are not likely to adversely affect any federally listed endangered and threatened (listed) species or designated critical habitat.**

The threatened and endangered species that have been reported for the Municipality of Corozal are identified in the table below:

SCIENTIFIC NAME	COMMON SPANISH NAME	GROUP	STATUS*	DISTRIBUTION
<i>Accipiter striatusvenator</i>	Falcon de Sierra	Bird	E	Forested Areas
<i>Buteo platypterus brunnescens</i>	Guaraguao de Bosque	Bird	E	Forested Areas
<i>Columba (Patagioenas inornata wetmorei)</i>	Paloma sabanera	Bird	E	Lower Montane Forest and Riparian Habitats
<i>Epicrates inornatus</i>	Boa de PR	Reptile	E	Forested Volcanic and Limestone (Karst) Hills
<i>Pelecanus occidentalis</i>	Pelicano pardo	Bird	E	Inland waterbodies (Lago La Plata) No Nesting
E= Endanger; T=Threatened; CH=Critical Habitat				

This information was reviewed with the official List of Endangered Species of the US Fish & Wildlife Service<sup>3</sup>. The Best Management Practices proposed to control storm water pollutants in the MS4 operated by the Municipality of Corozal will not affect these species or their habitat.

#### 1.15.2 ELIGIBILITY CRITERIA FOR HISTORIC PROPERTIES

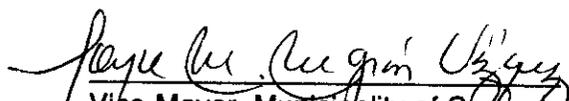
In this section is discussed the eligibility and screening procedures relating to historic properties and National Historic Preservation Act. The MS4 operated by the Municipality of Corozal meets **Criterion B: Stormwater discharges related activities (i.e. construction and/or installation of stormwater best Management practices that involve subsurface disturbance) would not affect historic properties.**

<sup>3</sup> <http://www.fws.gov/caribbean/es/PDF/Map.pdf>

**1.16 SIGNATORIES TO PERMIT APPLICATION AND REPORTS**

**1.16.1 CERTIFICATION**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who managed 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.

  
Vice-Mayor, Municipality of Corozal

October 26, 2009  
Date

**APPENDIX A**

**FIGURES**



Figure 1 - San Juan, PR Urbanized Area Map-Northwest Portion  
NPDES MS4 PRR40000, Municipality of Corozal

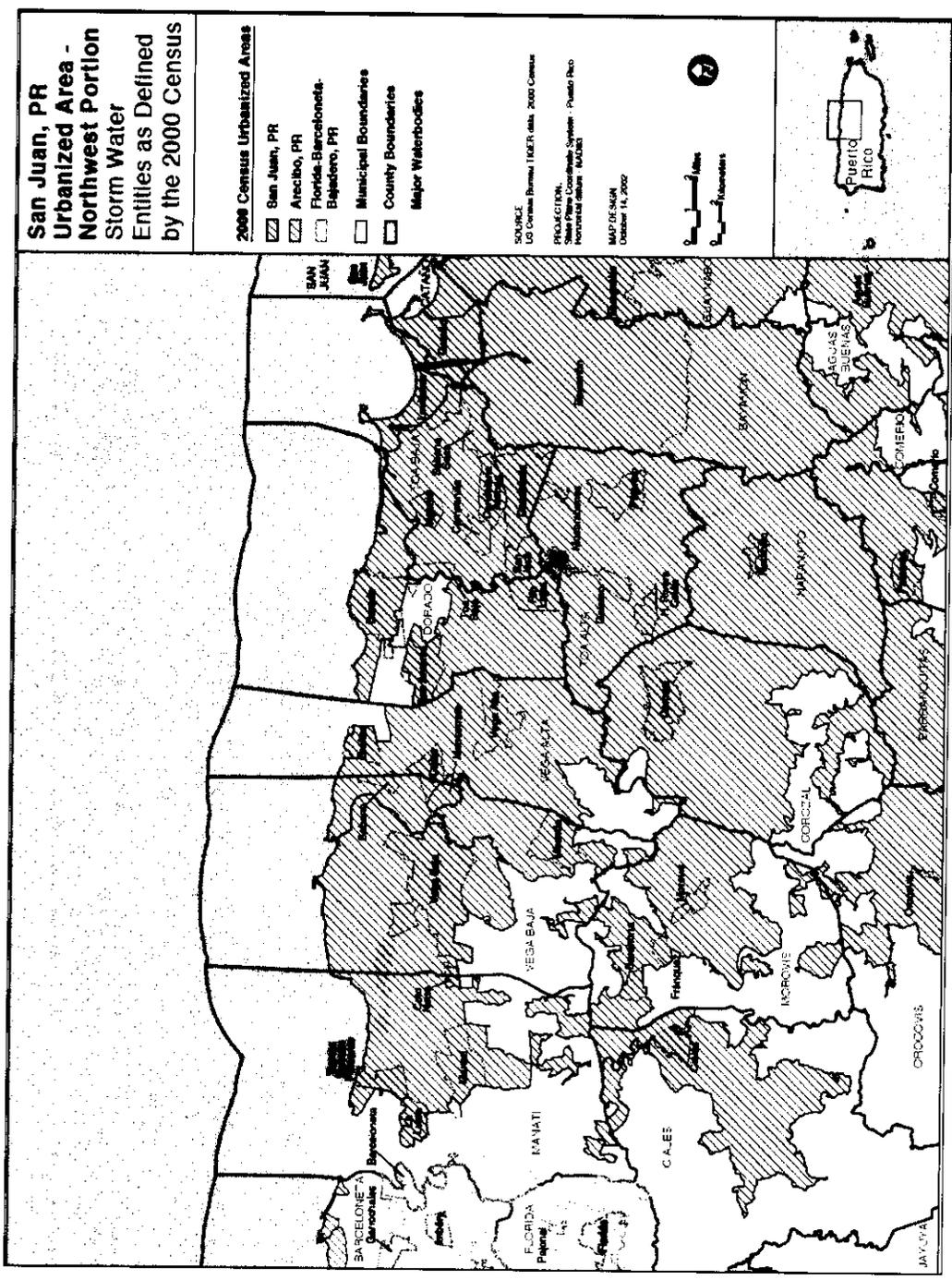


Figure 2 - Location Map  
NPDES MS4 PRR40000, Municipality of Corozal

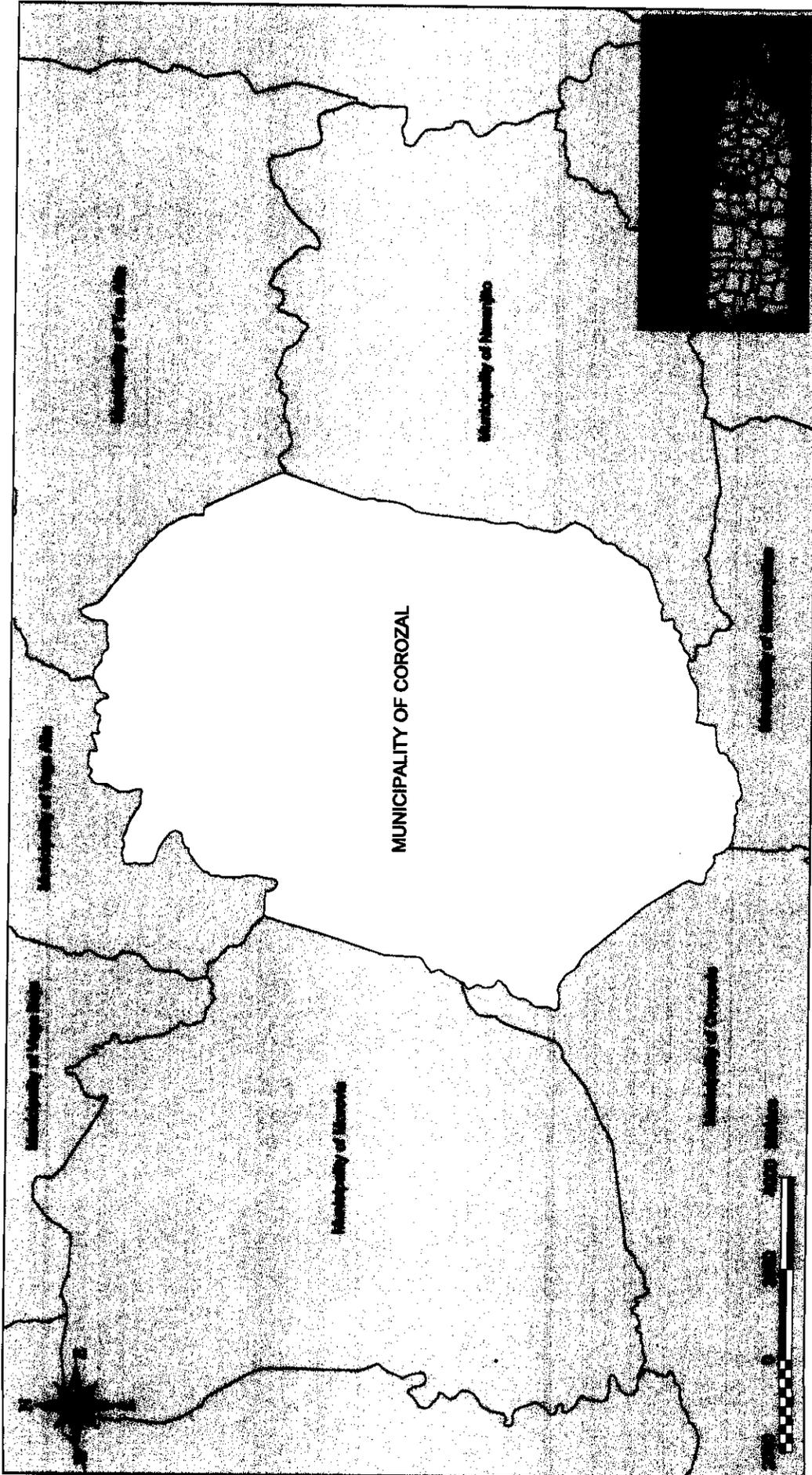
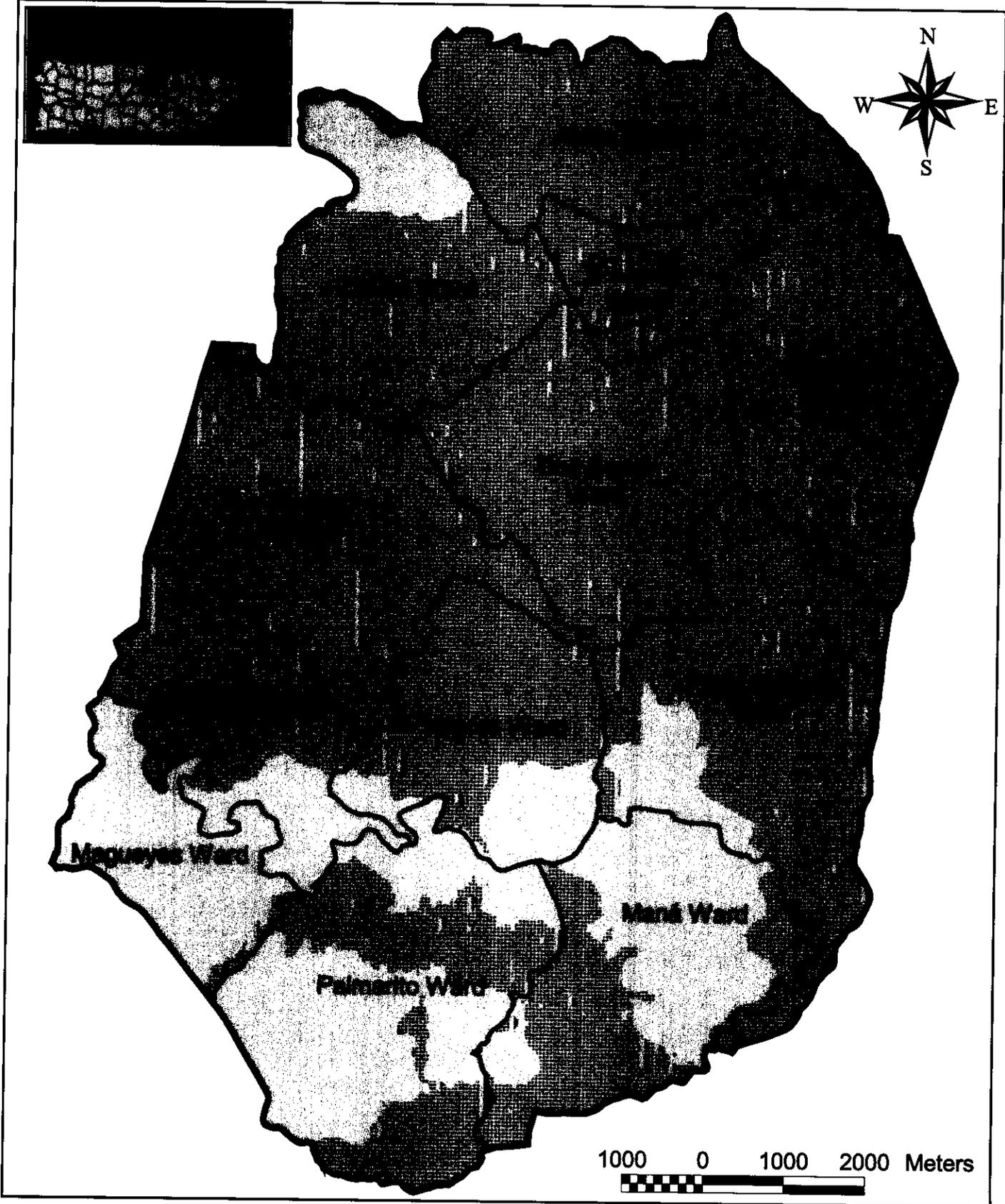


Figure 3 - Urbanized Areas with Wards  
Notice of Intent, NPDES MS4 PRR40000, Municipality of Corozal



Legend:

	Municipality of Corozal		Wards		Urbanized Areas
-------------------------------------------------------------------------------------	-------------------------	-------------------------------------------------------------------------------------	-------	--------------------------------------------------------------------------------------	-----------------

