

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
Notice of Intent (NOI) for coverage under the Small Municipal Separate
Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

Part A. General Information

1. Name of Municipality or Organization: Municipality of Manatí
2. Type: Federal State Municipality Other: _____
3. Existing Permittee: Yes No If yes, provide EPA NPDES Permit Number: PRR040042
4. Location Address:
 - a. Street: City Hall 10 Calle Quiñones
 - b. City: Manatí State: PR Zip Code: 00674
5. Mailing Address:
 - a. Street: City Hall 10 Calle Quiñones
 - b. City: Manatí State: PR Zip Code: 00674
6. Telephone Number: (787) 884-0742 Fax: _____
7. E-mail: planificacionmanati@gmail.com
8. Standard Industrial Classification (SIC) Code (see instructions for common codes): 9199
9. Latitude: (use the format provided.) Longitude: (use the format provided.)
Approximate center of the regulated portion of the MS4.
1 8 ° 2 6 ' 0 0 . 4 4 " N (degrees, minutes, seconds) 6 6 ° 2 8 ' 3 2 . 5 8 " W (degrees, minutes, seconds)
Or
_____ ° N (degrees decimal) _____ ° W (degrees decimal)

2018 MAY 21 AM 8:58
RECEIVED

Part B. Primary MS4 Program Manager Contact Information

1. Name: Leslie M. Rosado Sanchez
2. Position Title: Director, Office of Planning, Environment, Development, and Urbanism
3. Stormwater Management Program (SWMP) Location (web address or physical location): City Hall 10 Calle Quiñones, Manatí, PR 00674
4. Mailing Address:
 - a. Street: City Hall 10 Calle Quiñones
 - b. City: Manatí State: PR Zip Code: 00674

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
Notice of Intent (NOI) for coverage under the Small Municipal Separate
Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

5. Telephone Number: (787) 884-0742

6. E-mail: planificacionmanati@gmail.com

Part C. Eligibility Determination

1. Endangered Species Act (ESA) determination complete? Yes No
a. Eligibility Criteria (check all that apply): A B C D E
2. National Historic Preservation Act (NHPA) determination complete? Yes No
a. Eligibility Criteria (check all that apply): A B C D

Part D. Map/Boundaries

1. MS4/Organization Description of regulated boundaries (narrative):

The Municipality of Manatí is located in the northern coastal region of Puerto Rico and has a territorial extension of 45.96 square miles. It is bounded to the north by the Atlantic Ocean, to the south by the municipalities of Ciales and Morovis, to the east by the Municipality of Vega Baja, and to the west by the municipalities of Barceloneta and Florida. Urbanized areas (UA) within the municipality extends to approximately 25 square miles segregated into four portions or sectors. The main UA is located within the northern and central portions of the municipality and includes the city town and adjacent urban areas in the central part of the Municipality. The other areas are comprised of smaller urban sectors located towards the south and west portions of the Municipality.

2. Location Map/Boundaries. A location map must be attached showing the pertinent city, town, wards, or boundaries, the boundaries of the Small MS4, including surface water body(s), and the "urbanized area" (UA) when applicable.

Is map attached? Yes No

Part E. MS4 Infrastructure (if covered under the 2006 general permit)

1. Estimated Percent of Outfall Map Complete? (Part 4.2.3 of 2006 general permit): 0 %
a. If 100% of 2006 requirements are not met, enter an estimated date of completion: 03/30/2018
(MM/DD/YYYY)
b. Web address where MS4 map is published: _____
If outfall map is unavailable on the internet an electronic or paper copy of the outfall map must be included with NOI submission.

Part F. Bylaw/Ordinance Development (if covered under the 2006 general permit)

1. Illicit Discharge Detection and Elimination (IDDE) authority adopted? Yes No
a. Effective Date or Estimated Date of Adoption: 12/31/2017
(MM/DD/YYYY)
2. Construction/Erosion and Sediment Control authority adopted? Yes No
a. Effective Date or Estimated Date of Adoption: 12/31/2017
(MM/DD/YYYY)

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
 Notice of Intent (NOI) for coverage under the Small Municipal Separate
 Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

3. Post-Construction Stormwater Management adopted? Yes No
 a. Effective Date or Estimated Date of Adoption: 12/31/2017
(MM/DD/YYYY)

Part G. Receiving Waters

List the names of all surface waterbody segments to which your MS4 discharges. For each waterbody segment, please report the number of outfalls discharging into it and, if applicable, any impairments. You may attach additional information.

Waterbody Segment that receives flow from the MS4	Number of Outfalls into receiving waterbody segment	Have any monitoring been performed to outfalls? (Yes/No)	List of Pollutant(s) causing impairment (if applicable)	List of TMDL Pollutant (s) (if any)
Río Grande de Manatí (PRNR8A)	Information not available	No	Total Phosphorus	Fecal Coliforms
Océano Atlántico (PRNC05 Punta Manatí to Punta Chivato)	Information not available	No	Low Dissolved Oxygen	
Caño de Los Nachos	Information not available	No		
Laguna Tortuguero (PRNN0006)	Information not available	No		

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
 Notice of Intent (NOI) for coverage under the Small Municipal Separate
 Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

Part H. Summary of Stormwater Management Program (SWMP) under the 2006 Small MS4 General Permit

For every measurable goal and associated Best Management Practice (BMP) listed in the adopted program, provide the following information (You may include additional pages):

BMP Description or BMP ID (e.g. MCM-1)	Goal Achieved? (Yes/No)	Continued in next permit cycle? (Yes/No)	Who was the targeted audience? Explain reason for not achieving goal.	Modification(s) to goals or BMP for next permit cycle
See attached table				

**United States Environmental Protection Agency
National Pollutant Discharge Elimination System**
Notice of Intent (NOI) for coverage under the Small Municipal Separate
Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

Part I. 2016 Stormwater Management Program (SWMP) Summary

Public Education and Outreach (See Part 2.4.2 for detailed information of required BMPs):

BMP Description or BMP ID (e.g. MCM-1)	Education Topic (Identify the issue your BMP is educating the public about.)	Outreach Method (Describe the method used to convey this topic, e.g. mailing, events, school, etc.)	Measurable Goal (What is the end result of this program? What indicator will determine the goal has been met? (e.g., number mailing sent, people at event, class participation, etc.)
BMP 1.1 Distribution of Educational Material	Stormwater pollution, water quality, and pollution reduction measures. Focus on pollutants of concerns in regulated areas.	Distribute educational material at special events and meetings.	Number of materials distributed; Number of residents/businesses/institutional facilities/ public employees attending events
BMP 1.2 Educational Outreach for Students	Stormwater pollution, water quality, and pollution reduction measures. Focus on pollutants of concerns in regulated areas.	Conferences and lectures at schools and summer camps.	Number of schools and students attending events
BMP 1.3 Make educational material available through municipality's web page and social media	Stormwater pollution, water quality, and pollution reduction measures. Focus on pollutants of concerns in regulated areas.	Web page and social media	Number of web visits/views/downloads
BMP 1.4 Sponsoring environmental educational activities by other entities or civic organizations	Environmental protection and management with focus on watershed and pollution control	Support and assistance in activities organized by other entities	Number of activities/events; number of people attending events

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
 Notice of Intent (NOI) for coverage under the Small Municipal Separate
 Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

Part I. 2016 Stormwater Management Program (SWMP) Summary (continued)

Public Involvement and Participation (See Part 2.4.3 for detailed information of required BMPs):

BMP Description or BMP ID (e.g. MCM-1)	Program Description (Describe the program and how it will inspire public participation, e.g. special events, volunteer sampling and monitoring efforts, household hazardous waste recycling, etc.)	Measurable Goal (What is the end result of this program? What indicator will determine the goal has been met? (e.g., participation, amount of sampling performed, waste collected, etc.)
BMP 2.1 Clean-up activities	Organize municipal clean-up campaigns in coordination with communities, environmental groups or civic organizations	Number of clean-up events; number of participants; volume of wastes collected
BMP 2.2 Provide support to civic organizations and environmental groups in clean-up and environmental activities	Provide support and assistance in clean-up activities organized by other entities (e.g., Scuba Dogs, Boy Scouts, civic and environmental groups)	Number of activities/events; number of people attending events; volume of wastes collected
BMP 2.3 Make SWMP and annual reports available online	Create and maintain a website to posts SWMP related documents. Promote the website through social media, radio, regional newspaper.	Number of web visits/views/downloads
BMP 2.4 Municipal recycling program	Ongoing municipal recycling program. Promote the program through community meetings and public notices.	Sectors participating of the recycling program/ Volume of materials collected
BMP 2.5 Environmental Award Program	Environmental Award Program to recognize schools/students stewardship towards environmental protection initiatives.	Awards given

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
 Notice of Intent (NOI) for coverage under the Small Municipal Separate
 Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

Part I. 2016 Stormwater Management Program (SWMP) Summary (continued)

Illicit Discharge Detection and Elimination (See Part 2.4.4 for detailed information of required BMPs):

BMP Description or BMP ID (e.g. MCM-1)	Program Description (Describe the program and how it will identify and remove illicit connections from the MS4, e.g. new regulations, investigation practices, removal of illicit connections, etc.)	Measurable Goal (What is the end result of this program? What indicator will determine the goal has been met? (e.g., adoption of bylaws/ordinances, amount of investigation performed, identified and removed illicit connections, etc.)
BMP 3.1 Inspection and maintenance of the stormwater system	The Municipal Infrastructure Maintenance Brigade will continue conducting inspection and clean-up of the stormwater system	Number/frequency of inspections
BMP 3.2 Inventory of Sanitary Sewer Overflows (SSOs)	Develop and maintain an inventory of all identified SSOs as required in section 2.4.4.4 of 2016 GP. This task will be coordinated with PRASA. The inventory will be updated annually.	Percent of the regulated area investigated for SSOs / Number of SSOs identified and eliminated
BMP 3.3 MS4 System Map	Develop a detailed MS4 Infrastructure Map as a planning tool for the implementation and phasing of the IDDE program as required in section 2.4.4.6 of the 2016 GP.	Map completion for regulated area
BMP 3.4 Outfall Inventory	Inventory of each outfall and interconnection discharging from the MS4 including its location and condition as required in section 2.4.4.7 of the 2016 GP.	Number of outfalls identified / percent of regulated area inspected
BMP 3.5 Sinkholes	Identifying the location, extension and condition of all sinkholes	Number of sinkholes mapped and assessed
BMP 3.6 Illicit Discharge Detection and Elimination (IDDE) Program	Develop a detailed written IDDE Program to detect, investigate, and eliminate illicit discharges (ID). The IDDE Program will include the new requirements and protocols set forth in the 2016 GP, including an assessment and ranking of catchments and written procedures for locating and removing ID.	Completion of written IDDE Program and required protocols
BMP 3.7 Ordinance to prohibit and prevent illicit connections (SSOs) and discharges to the MS4	Regulatory mechanism to provide legal authority to prohibit ID, investigate suspect discharges and implement enforcement procedures and actions to prevent and eliminate ID. Revised the municipal IDDE ordinance and regulation to incorporate new permit requirements.	Ordinance or regulatory mechanism in effect
BMP 3.8 Implementation and Enforcement of IDDE Program	Implementation of IDDE protocols, screening and sampling investigations, and catchment investigation procedures.	Number of inspections/surveys to identify ID Number of SSOs and ID identified/removed Percentage of the catchment area served
BMP 3.9 Label all MS4 outfall pipes	Label all MS4 outfall pipes (excluding interconnections) with their unique identifier within five (5) years after coverage under this permit.	Number of outfalls labeled
BMP 3.10 Training to public employees	Provide training to employees involved in the IDDE program. Topics: IDDE program and protocols and how to recognize illicit discharges and SSOs	Number of trainings and number of employees attending the trainings

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
 Notice of Intent (NOI) for coverage under the Small Municipal Separate
 Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

Part I. 2016 Stormwater Management Program (SWMP) Summary (continued)

Construction Site Stormwater Runoff Control (See Part 2.4.5 for detailed information of required BMPs):

BMP Description or BMP ID (e.g. MCM-1)	Program Description (Describe the program and how it will help control stormwater runoff at construction sites, e.g. new regulations, construction practices, inspection protocols, etc.)	Measurable Goal (What is the end result of this program? What indicator will determine the goal has been met? (e.g., adoption of bylaws/ordinances, amount of inspections performed and sites actively regulated, etc.)
BMP 4.1 Adopt a regulatory mechanism to implement the construction sites SW runoff control program	Adopt an ordinance in order to require the use of sediment and erosion control practices at construction sites (discharging to the MS4) that disturbs one acre or more; control wastes and prohibit discharges into the MS4 from construction sites; implement pre-construction review processes, site inspections, and enforcement actions.	Adoption of ordinance or regulatory mechanisms
BMP 4.2 Pre-Construction Site Plan Review	Establish procedures for pre-construction site plan review and planned BMPs	Number of site plans reviewed
BMP 4.3 Construction Site Inspections and Enforcement	Establish written procedures for site inspections and conduct inspections of construction sites.	Number of inspections conducted
BMP 4.4 Construction Site Inventory	Maintain an inventory of all permitted active public or private construction sites (one acre or more)	Updated inventory of active construction sites

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
 Notice of Intent (NOI) for coverage under the Small Municipal Separate
 Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

Part I. 2016 Stormwater Management Program (SWMP) Summary (continued)

Post-Construction Stormwater Management in New Development and Redevelopment (See Part 2.4.6 for detailed information of required BMPs):

BMP Description or BMP ID (e.g. MCM-1)	Program Description (Describe the program and how it will control stormwater runoff from properties after they are developed, e.g. new regulations, practices, or resources for contractors to use Low Impact Development (LID), etc.)	Measurable Goal (What is the end result of this program? What indicator will determine the goal has been met? (e.g., adoption of bylaws/ordinances, amount of implemented practices, development of capacity building resources, etc.)
BMP 5.1 Ordinance or regulatory mechanism to control post-construction stormwater	Develop an ordinance or other regulatory mechanism to address post construction runoff from new development and redevelopment projects. Through this mechanism the municipality will implement, and enforce a requirement, that owners or operators of new development and redeveloped sites design, install, implement, and maintain a combination of structural and non-structural BMPs appropriate for the community and to protect water quality.	Adoption or ordinance or applicable regulatory mechanism
BMP 5.2 Develop written procedures	Develop written procedures for implementation of the post-construction stormwater management in new development and redevelopment program in accordance with section 2.4.6 of the 2016 GP.	Availability of written program procedures
BMP 5.3 Inspections	Develop and implement an inspection program to ensure that all post construction stormwater control measures are operating correctly and are being maintained as required consistent with its applicable maintenance plan.	Inspection reports and enforcement actions

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
 Notice of Intent (NOI) for coverage under the Small Municipal Separate
 Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

Part I. 2016 Stormwater Management Program (SWMP) Summary (continued)

Good Housekeeping and Pollution Prevention in Municipal Operations (See Part 2.4.7 for detailed information of required BMPs):

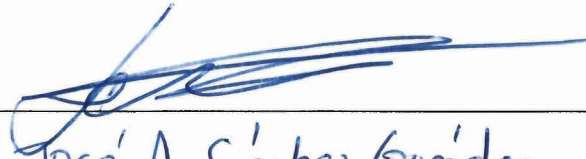
BMP Description or BMP ID (e.g. MCM-1)	Program Description (Describe the program and how it will mitigate stormwater runoff at municipal properties or through municipal activities, e.g. installation of structural stormwater controls on the municipal properties, new practices to reduce pollutant exposure to rain events, runoff management, trainings, etc.)	Measurable Goal (What is the end result of this program? What indicator will determine the goal has been met? (e.g., structural BMPs installed, SOPs developed and implemented, etc.)
BMP 6.1 Employee Education and Training	Provide training to municipal employees on best management practices and good housekeeping to reduce contaminants from municipal operations.	Number of employees attending training events
BMP 6.2 Inventory of all municipal facilities	Develop an inventory of municipal facilities, where pollutants are exposed to stormwater runoff. Review inventory annually	Availability of updated inventory
BMP 6.3 Operation and maintenance program procedures (SOPs)	Develop written operation and maintenance procedures for municipal activities or facilities and for maintenance of the MS4 system infrastructure.	Written procedures or SOPs
BMP 6.4 Implementation of O&M program	Routine site inspections, cleaning and maintenance of catch basins, sweeping and/or cleaning of streets and public parking lots, and inspection and maintenance of stormwater treatment structures. Keep written record of all required activities.	Number of inspections/areas covered/number of cleaned catch basins/volume of material removed
BMP 6.5 Stormwater Pollution Prevention Plan (SWPPP)	Develop and implement a SWPPP for conventional/ non-conventional municipal operations, such as, maintenance of public garages, public work yards, and waste handling facilities where pollutants may be exposed to stormwater.	SWPPP

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
Notice of Intent (NOI) for coverage under the Small Municipal Separate
Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

Part J. Application Certification and Signature

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 on 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.

Signature of Mayor/Elected Official: _____



Print Name of Mayor/Elected Official: _____

José A. Sánchez González

Title: _____

Alca de

Date: _____

9-Mayo-2018

APPENDIX A

Part H Summary of Stormwater Management Plan (SWMP)
under the 2006 small MS4 General Permit

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
Notice of Intent (NOI) for coverage under the Small Municipal Separate
Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

Part H. Summary of Stormwater Management Program (SWMP) under the 2006 small MS4 General Permit

BMP Description or BMP ID (e.g. MCM-1)	Goal Achieved (Yes/No)	Continued in next cycle? (Yes/No)	Who was the targeted audience? Explain reason for not achieving goal	Modification(s) to goals or BMP for next permit cycle
BMP 1: Public Education Program				
Community Environmental Education: Develop and distribute educational material on storm water pollution control (bulletins, flyers, brochures, etc.)	Yes	Yes	General public	It will be part of BMP 1.1 (Distribution of Education Material) for next permit cycle. Materials will be updated as needed.
Establish and improve preventive controls of contamination in water, air and soil through environmental education.	Yes	No	General public	Environmental education will be provided through BMPs 1.1 to 1.3 for next permit cycle
Community Environmental Education: Orientation campaign on water quality, storm water control measures, and the Municipal Ordinance Num. 14 of Citizen Norms at Urban Setting and Environmental Code (hereinafter referred as the Environmental Code)	Yes	Yes	General public	It will be part of BMP 1.1 in next permit cycle.
Education campaign in public and private schools on the Municipality's Recycling Program, environmental education, and the Environmental Code (Ord. Num. 14)	Yes	Yes	Public and private schools students	BMP 1.2 in next permit cycle. Materials will be updated as needed.
Seek funds (state, federal or private) to implement educational program	No	No	General public and municipal staff Lack of resources to accomplish the task.	Administrative task; would not be included as a BMP/MCM in next permit cycle. Municipality will continue to seek funding opportunities to implement the educational program, as

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
Notice of Intent (NOI) for coverage under the Small Municipal Separate
Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

BMP Description or BMP ID (e.g. MCM-1)	Goal Achieved (Yes/No)	Continued in next cycle? (Yes/No)	Who was the targeted audience? Explain reason for not achieving goal	Modification(s) to goals or BMP for next permit cycle
				part of its overall administrative responsibilities.
Celebration of Environmental Family Day	Yes	No	General public	
BMP 2: Community Involvement and Participation				
Establish "Adopt a Water Body" Program" for the private sector	No	No	Private sector (commercial, institutional and industrial) Lack of resources to implement the program.	
Provide support to communities groups (i.e. Los Caimanes del Ojo de Agua)	Yes	Yes	Civic groups and non-profit organizations	BMP 2.1 (Clean-up Activities) in next permit cycle
Establish a community-based reforestation program in urban areas	No	No	General public and communities A formal reforestation program was not established but the municipal Department of Sanitation and Environmental Control has conducted reforestation works in selected areas of the municipality.	
Identify and label runoff drains	No	No	General public and municipal employees Stencil was prepared but labeling could not be completed due to lack of resources and funding.	
Establish a community program to reforest mangrove	No	No	General public and communities The Conservation Trust of PR at Hacienda La Esperanza has implemented a mangrove reforestation program in selected sectors of the municipality.	
Delegate responsibilities to community leaders to improve water quality	No	No	Community leaders Lack of resources	

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
Notice of Intent (NOI) for coverage under the Small Municipal Separate
Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

BMP Description or BMP ID (e.g. MCM-1)	Goal Achieved (Yes/No)	Continued in next cycle? (Yes/No)	Who was the targeted audience? Explain reason for not achieving goal	Modification(s) to goals or BMP for next permit cycle
Develop a community campaign to clean-up water bodies (rivers, streams, beached, wetlands, lagoons, and others)	Yes	Yes	General public	It will be part of BMP 2.1 (Clean-up Activities) for next permit cycle.
Develop community campaign to clean-up sinkholes	Yes	Yes	General public and communities	Consolidated with BMP 2.1 (Clean-up Activities) for next permit cycle.
Carry out a community program to remove debris from the streets	Yes	Yes	General public and communities	Consolidated with BMP 2.1 (Clean-up Activities) for next permit cycle.
Carry out community meetings for the implementation of the recycling program	Yes	No	General public	
Maintain a recycling program in the private sector	Yes	Yes	Private sector	BMP 2.4 (Municipal Recycling Program) in next permit cycle
Maintain a recycling program in municipal offices and agencies	Yes	Yes	Municipal offices	BMP 2.4 (Municipal Recycling Program) in next permit cycle
Create the "Protect your Community" Program	No	No	Communities	
Create the "Scholastic Environmental Award" Program	No	Yes	Schools	
BMP 3: Detection and Elimination of Illicit Discharges				
Maintenance of the stormwater system: Create the Infrastructure Maintenance Brigade for inspection and clean-up of drains to prevent floods	Yes	Yes	N/A	BMP 3.1 (Inspection and maintenance of SW system) for next permit cycle.
IDDE: Detection and elimination of sanitary discharges to the stormwater system	No	Yes	Lack of specialized resources and funding to accomplish the task	It will be part of BMP 3.2 (Inventory of Sanitary Sewer Overflows). Modified as required by section 2.4.4.4 of 2016 GP.

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
Notice of Intent (NOI) for coverage under the Small Municipal Separate
Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

BMP Description or BMP ID (e.g. MCM-1)	Goal Achieved (Yes/No)	Continued in next cycle? (Yes/No)	Who was the targeted audience? Explain reason for not achieving goal	Modification(s) to goals or BMP for next permit cycle
Equipment: Acquisition of technical equipment (GIS and software) to assist in the development of the MS4 map and database through the use of a GIS.	Yes	Yes	Municipal employees	It will be part of BMP 3.3 (MS4 System Map) and BMP 3.4 (Outfall Inventory) in new permit cycle
Inventory: Develop a map using a GIS to identify all illicit discharges into the MS4s, illegal dump sites, and any other source that may affect the water quality of the MS4	No (partially completed)	Yes	Municipal staff, regulatory agencies and general public The municipality completed a map for approximately 40% of its MS4. The task could not be completed due to loss of equipment and lack of resources.	BMP 3.3 (MS4 System Map) in new permit cycle. Updated to comply with section 2.4.4.6 of the 2016 GP.
Inventory: Identifying the location of regulated recharge areas, wells, water intakes (communal and non-communal), and potential sources of contamination	No (partially completed)	Yes	Municipal staff, regulatory agencies and general public The municipality completed a map for approximately 40% of its MS4. The task could not be completed due to loss of equipment and lack of resources.	Consolidated with BMP 3.8 (Implementation and Enforcement of IDDE Program) in new permit cycle
Inventory: Identifying the location, extension and condition of all sinkholes	No (partially completed)	Yes	Municipal staff, regulatory agencies and general public Partially completed; 25 sinkholes have been identified.	BMP 3.5 (Sinkholes) in next permit cycle.
Inventory and Elimination of illegal Dump Sites	Yes	Yes	General public	Consolidated with BMP 3.8 (Implementation and Enforcement of IDDE Program) in new permit cycle
Detect and eliminate all illegal discharges to the stormwater system.	No	Yes	Due to lack of resources and funding the IDDE program has not been fully implemented.	Consolidated with BMP 3.8 (Implementation and Enforcement of IDDE Program) in new permit cycle
Establish procedures to enforce compliance and impose penalties for violations	Yes	Yes	General public	It will be part of BMP 3.7 (Ordinance to prohibit and prevent illicit connections (SSOs) and discharges to the MS4) in next permit cycle.
Contract specialized personnel to assists in the identification of illicit	No	No	Due to lack of resources and funding the IDDE program has not been fully implemented.	Consolidated with BMP 3.8 (Implementation and Enforcement of IDDE

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
Notice of Intent (NOI) for coverage under the Small Municipal Separate
Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

BMP Description or BMP ID (e.g. MCM-1)	Goal Achieved (Yes/No)	Continued in next cycle? (Yes/No)	Who was the targeted audience? Explain reason for not achieving goal	Modification(s) to goals or BMP for next permit cycle
discharges (dye studies, smoke, cameras, etc.).				Program) in next permit cycle
Maintenance of stormwater system: Create Brigade	Yes	Yes	N/A	BMP 3.1
Establish through an ordinance the necessary mechanisms to prohibit and manage illicit discharges.	Yes	Yes	General public and enforcement personnel	BMP 3.7 (Ordinance to prohibit and prevent illicit connections (SSOs) and discharges to the MS4)
Promote investigation and supervision: Establish a Research and Monitoring Program of Superfund Sites	No	No	Not completed due to lack of resources	
BMP 4: Stormwater Controls in Construction Projects				
Require all new projects to demonstrate that existing stormwater and sanitary systems has the capacity to connect and service the proposed project.	No	No	Developers and planners Unfeasible since the Municipality lack jurisdiction in the initial planning phase of new projects; state regulatory agencies (Planning Board and the Permits Management Office (OGPe)) oversees compliance with this requirement.	
Require projects of over 1-acre apply for a special permit provided by the EPA.	No	Yes	Mechanism of implementation has not been determined.	Modified as described in BMP 4.1 (Adopt a Regulatory Mechanism) in next permit cycle
Establish (by ordinance) a procedure for inspection of all new construction to detect: earth movement activities, impacts to sewer and stormwater systems, water runoff measures to control sediments, control of fugitive dust, control of mud, control of sedimentation and erosion, accumulation of garbage, land spills,	No	Yes	General public and enforcement personnel Draft ordinance and regulation for the implementation of a IDDE program and inspection of projects have been developed.	Modified as described in BMP 4.1 (Adopt a Regulatory Mechanism) in next permit cycle

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
Notice of Intent (NOI) for coverage under the Small Municipal Separate
Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

BMP Description or BMP ID (e.g. MCM-1)	Goal Achieved (Yes/No)	Continued in next cycle? (Yes/No)	Who was the targeted audience? Explain reason for not achieving goal	Modification(s) to goals or BMP for next permit cycle
drainage system capacity etc., and impose penalties for noncompliance.				
Require all new project to submit storm water and sewer systems as-built drawings (hardcopy and digital (shape file)).	No	Yes	Developers/Designers/Contractors	Pre-construction design plans submittal and review procedures as described in BMP 4.2 (Pre-construction Site Plan Review) in next permit cycle. As built drawings review procedures will be incorporated as part of BMP 5.2 in next permit cycle.
Prior to issue an endorsement to new projects, a list of best management practices to be implemented during construction will be required.	Yes	Yes	Developers and construction managers	It will be incorporated in BMP 4.2 (Pre-construction Site Plan Review) in next permit cycle
BMP 5: Post-Construction Runoff Control				
Review, approve and ensure implementation of runoff control plans required for each project.	No	Yes	Developers/contractors	Incorporated in BMP 5.3 in next permit cycle
Any project impacting more than 5,000 square feet would be required to implement runoff control measures.	No	No	Mechanism for implementation has not been determined. Permitting processes for new developments/projects are under the jurisdiction of state agencies.	Updated to comply with 2016 GP requirements.

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
Notice of Intent (NOI) for coverage under the Small Municipal Separate
Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

BMP Description or BMP ID (e.g. MCM-1)	Goal Achieved (Yes/No)	Continued in next cycle? (Yes/No)	Who was the targeted audience? Explain reason for not achieving goal	Modification(s) to goals or BMP for next permit cycle
Evaluate the need to develop municipal ordinances as a mechanism for implementation of the Stormwater Management Program	Yes	Yes	General public	BMP 5.1 in next permit cycle Development of new ordinance or update actual ordinance to comply with new program requirements under 2016 GP.
BMP 6: Pollution Prevention and Good House Keeping				
Create a Municipal Commission for Stormwater Management responsible for implementation of the SWMP	Yes	Yes	Municipality	
Provide a seminar to municipal employees on best management practices and good housekeeping to reduce contaminants.	Yes	Yes	Municipal employees	BMP 6.1 (Employee Education and Training) in new permit cycle
Provide training to municipal employees on water quality control	Yes	Yes	Municipal employees	Consolidated with BMP 6.1 (Employee Education and Training)
Evaluate municipal operations to identify practices that may result in contamination of water bodies.	No	Yes	Municipality The task could not be attained due to lack of resources	It will be part of BMP 6.4 (Implementation of O&M program) in next permit cycle
Identify a resource to search for federal, state or private funding	No	No	Municipality	
Establish a rapid response plan to attend emergency spills	No	Yes	Municipal operations The task could not be accomplished due to lack of resources	It will be part of BMP 6.5 (SWPPP) in next permit cycle
Establish a procedure between the DNER and the Municipality of Manati to clean-up sinkholes,	Yes	No	N/A	

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
Notice of Intent (NOI) for coverage under the Small Municipal Separate
Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

BMP Description or BMP ID (e.g. MCM-1)	Goal Achieved (Yes/No)	Continued in next cycle? (Yes/No)	Who was the targeted audience? Explain reason for not achieving goal	Modification(s) to goals or BMP for next permit cycle
according to Law 111, July 12, 1985 as amended.				
Establish a reforestation program	No	No	General public and communities A formal reforestation program was not established but the municipal Department of Sanitation and Environmental Control has conducted reforestation works in selected areas of the municipality.	
Create a Stormwater Maintenance Brigade	Yes	No	N/A	
Implement runoff control measures in municipal construction projects	Yes	No	Municipal public works	Duplicate BMP. It is included as part of the Construction Site Stormwater Runoff Control Program
BMP 7: SW Infrastructure Improvement and Maintenance Projects				
Improvements to Caño Nachos	No	No	Hydraulic and hydrologic study completed but improvements could not be completed due to lack of funding	SW infrastructure improvement and maintenance projects will be identified/worked as part of BMP 6.3 (Operation and maintenance program SOPs) in the next permit cycle.
Stormwater System Improvements (in front of Patheon Pharmaceutical)	No	No		
Boquillas tank and pumping system	No	No		
Flood control at PR-685 el Horno sector	No	No		
Improvements to the central urban district system	No	No		
Improvements to the SW system near Vendig Park to control floods	No	No		
Improvement at Monte Verde Community sinkhole (contention wall)	No	No		
Stormwater and sanitary system extension at	No	No		

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
Notice of Intent (NOI) for coverage under the Small Municipal Separate
Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

BMP Description or BMP ID (e.g. MCM-1)	Goal Achieved (Yes/No)	Continued in next cycle? (Yes/No)	Who was the targeted audience? Explain reason for not achieving goal	Modification(s) to goals or BMP for next permit cycle
Tierras Nuevas Poniente and Saliente				
BMP 8: Evaluation and Reporting Processes				
Annual compliance report	Yes	No	Municipality, regulatory agency, and general public	Permittee will comply with reporting requirements as required in the 2016 GP and SWMP, although it will not be identified as an individual BMP.
Report illicit discharges to EPA within 24 hours of detection	No	Yes	A complete IDDE Program has not been implemented	It will be part of BMP 3.8 (Implementation and Enforcement of IDDE Program) in next permit cycle
BMP 9: Inspection Process				
Location of potential contaminations sources	No (partially completed)	No	Municipal staff, regulatory agencies and general public The municipality completed a map for approximately 40% of its MS4. The task could not be completed due to loss of equipment and lack of resources.	Duplicate BMPs. All of these BMPs are part of the IDDE program. BMPs 3.1 to 3.8 in next permit cycle.
Inspection of potential contamination sources	Yes	No	Municipality Accomplished through Municipal Environmental Police preventive patrols and inspections in response to citizens' complaints	
Establish ordinances to address spills	No	No	General public and enforcement personnel In progress, draft ordinance has been prepared	
Establish ordinances to prevent, detect and eliminate illicit discharges	No	No	General public and enforcement personnel In progress, draft ordinance has been prepared	
Implement an inspection program for drinking water wells, including a buffer	No	No	N/A Partially accomplished through Municipal Environmental Police	

United States Environmental Protection Agency
National Pollutant Discharge Elimination System
Notice of Intent (NOI) for coverage under the Small Municipal Separate
Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico

BMP Description or BMP ID (e.g. MCM-1)	Goal Achieved (Yes/No)	Continued in next cycle? (Yes/No)	Who was the targeted audience? Explain reason for not achieving goal	Modification(s) to goals or BMP for next permit cycle
zone within a 1,500 feet radius from each well			preventive patrols and inspections throughout the municipality.	
BMP 10: SWMP Record Keeping				
Develop and establish record keeping procedures	Yes	No	Municipal employees	Permittee will comply with record keeping requirements as established in the 2016 GP and SWMP, although it will not be identified as an individual BMP.




APPENDIX B

Maps

Municipality of Manatí

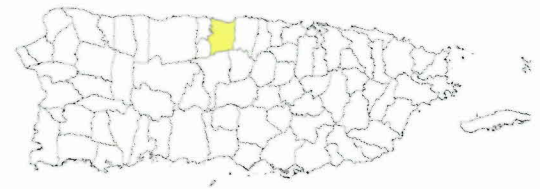
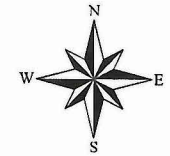
Figure 1. Location Map

Legend

-  Municipality of Manatí
-  Wards
-  Urban Areas (US Census)

0 0.4 0.8 1.6 2.4 3.2 Miles

1:3,000,000



Sources: Orthophoto (2010) from UPR-Graduate School of Planning, PR Planning Board, VITO Belgium, FugroEarth Data Inc. Urban areas from 2010 U.S. Census



SALO Engineering, PSC



Municipality of Manatí

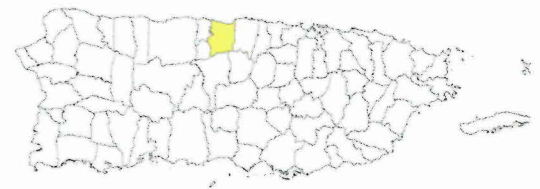
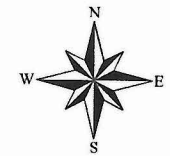
Figure 2. Hydrography

Legend

- Municipality of Manatí
- Hydrography
- Urban Areas (US Census)



1:3,000,000

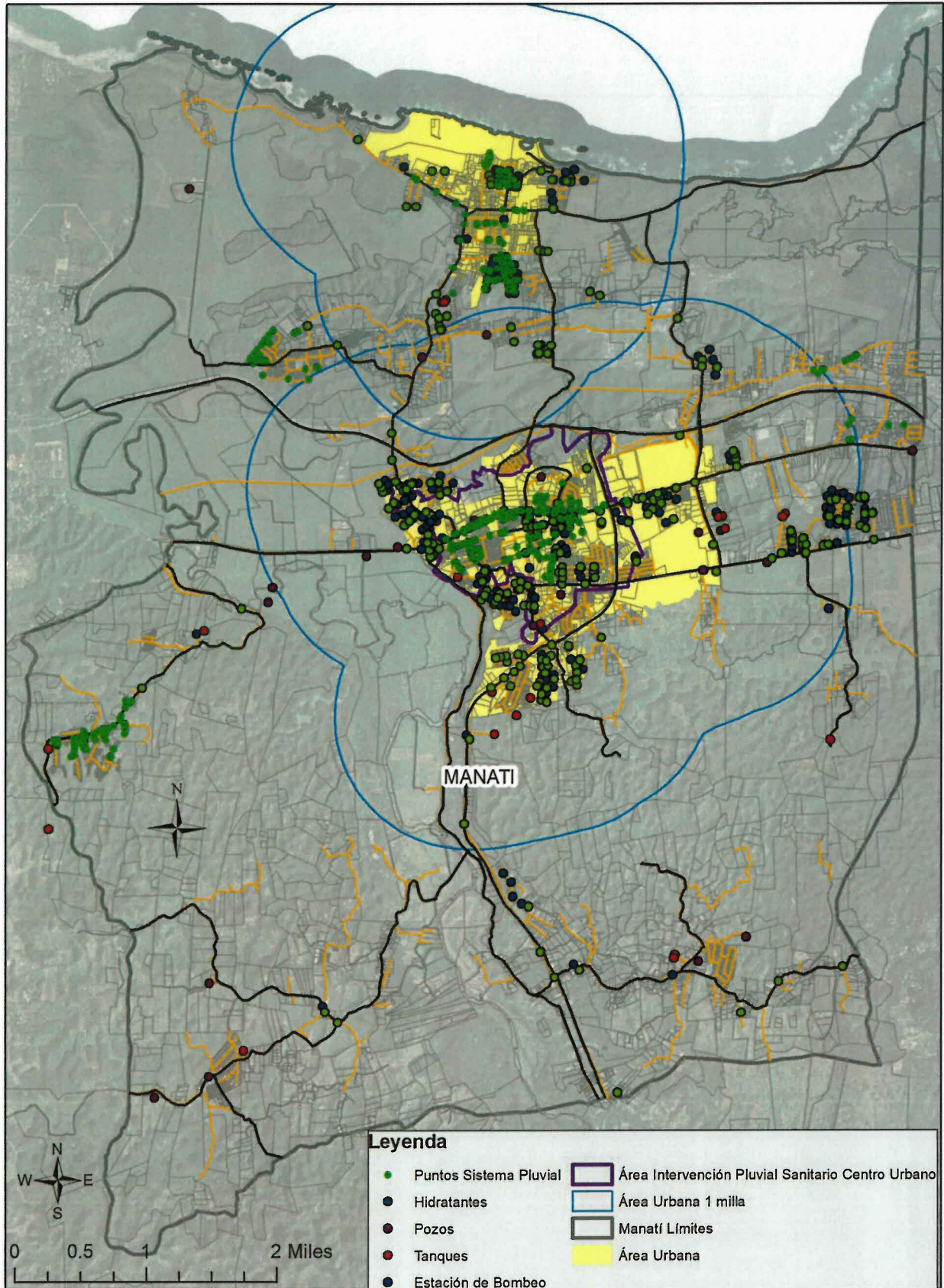


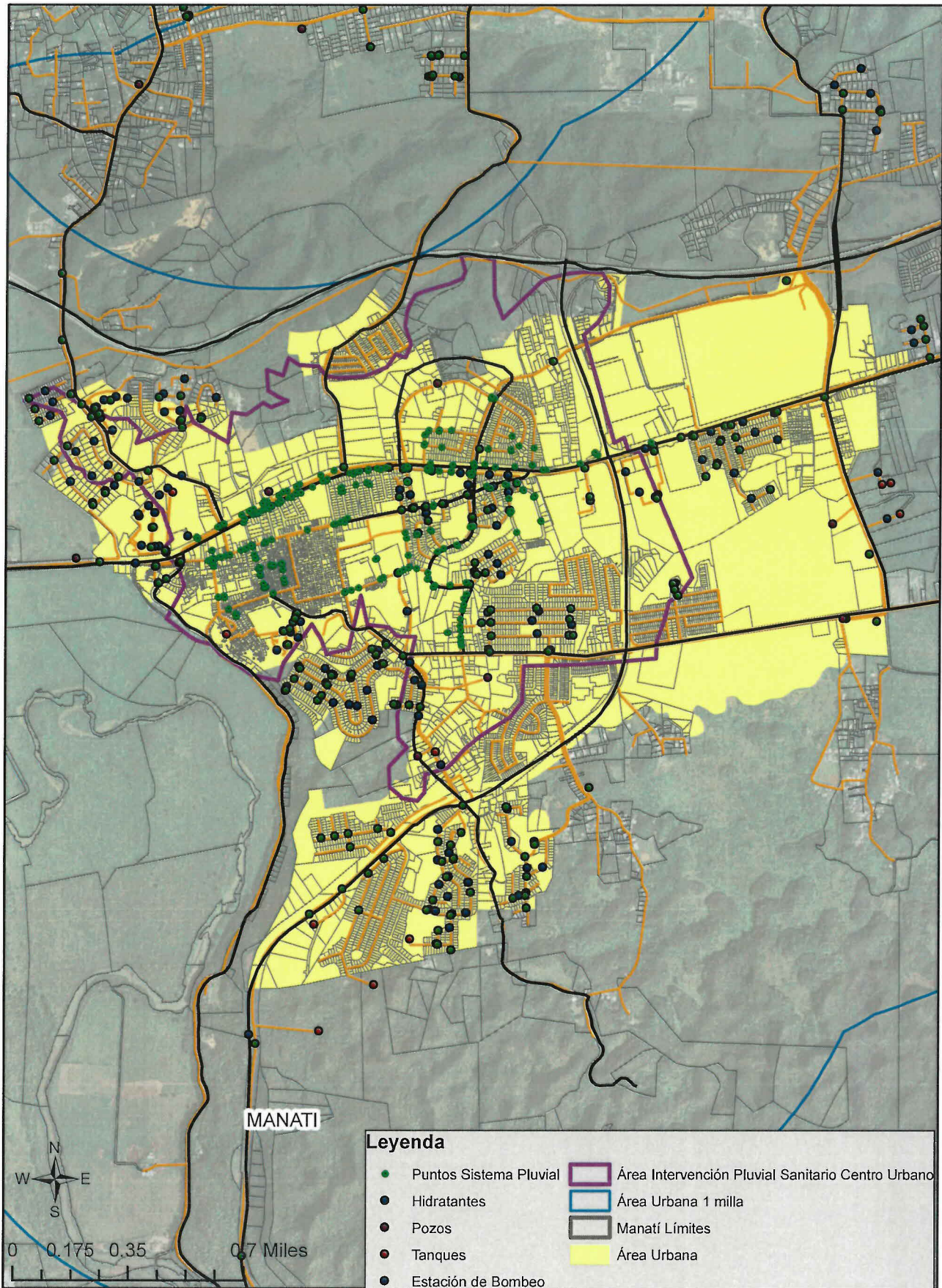
Sources: Orthophoto (2010) from UPR-Graduate School of Planning, PR Planning Board, VITO Belgium, FugroEarth Data Inc. Urban areas from 2010 U.S. Census



SALO Engineering, PSC

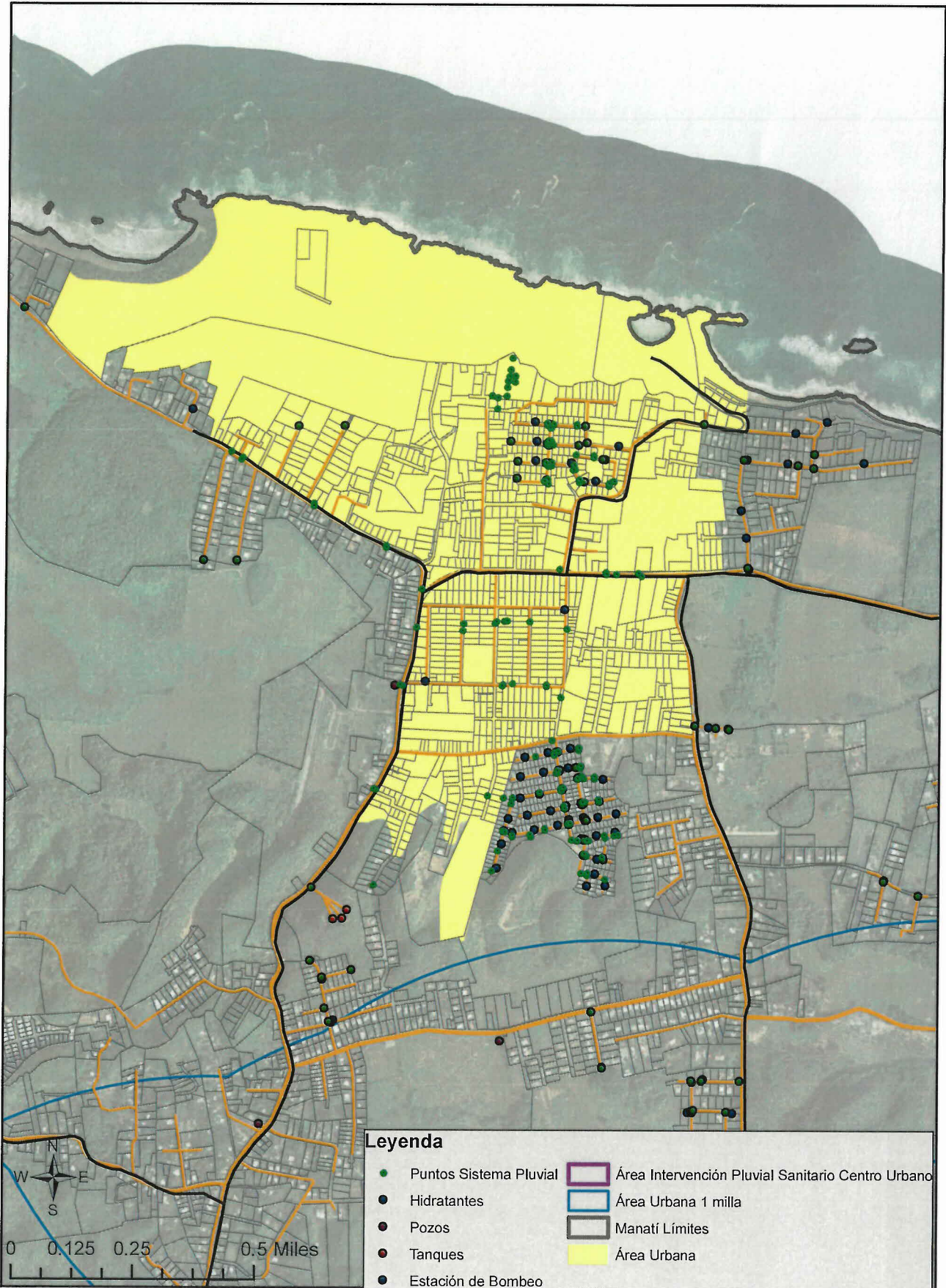






Leyenda

- Puntos Sistema Pluvial
- Hidratantes
- Pozos
- Tanques
- Estación de Bombeo
- Área Intervención Pluvial Sanitario Centro Urbano
- Área Urbana 1 milla
- Manatí Límites
- Área Urbana



Leyenda

- Puntos Sistema Pluvial
- Hidrantes
- Pozos
- Tanques
- Estación de Bombeo
- Área Intervención Pluvial Sanitario Centro Urbano
- Área Urbana 1 milla
- Manatí Límites
- Área Urbana

NUM.	CONDICION	TIPO	BARRIO	SECTOR	POINT_X	POINT_Y
1	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193600.47	265862.50
2	Deteriorada	Canales	PUEBLO	Pueblo	193580.75	265852.79
3	Buena	Cunetas	PUEBLO	Pueblo	193605.52	265865.71
4	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193607.16	265857.02
5	Buena	Cunetas	PUEBLO	Pueblo	193600.29	265856.66
6	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193596.13	265859.88
7	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193633.93	265870.30
8	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193641.50	265869.74
9	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193666.51	265879.32
10	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193681.47	265880.41
11	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193686.73	265882.19
12	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193738.88	265904.20
13	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193759.84	265909.92
14	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193769.35	265915.45
15	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193797.47	265920.05
16	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193791.59	265929.65
17	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193797.66	265926.11
18	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193854.92	265939.26
19	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193857.41	265943.16
20	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193862.10	265943.92
21	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193890.85	265955.44
22	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	194065.36	266004.09
23	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	194193.55	266031.35
24	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	194202.71	266033.38
25	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	194226.66	266041.30
26	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194246.73	266050.34
27	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	194248.31	266042.03
28	Buena	Alcantarilla Drenaje	PUEBLO	Res. Zorrilla	194543.23	265991.40
29	Buena	Cunetas	PUEBLO	Urb. Flamboyan	194550.79	265964.47
30	Buena	Cunetas	PUEBLO	Urb. Flamboyan	194559.75	265880.16
31	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyan	194565.89	265825.55
32	Buena	Alcantarilla Drenaje	PUEBLO	Res. Zorrilla	194561.84	265821.13
33	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	194537.36	265810.25
34	Buena	Cunetas	PUEBLO	Pueblo	194518.87	265800.29
35	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	194437.16	265772.83
36	Deteriorada	Alcantarilla Drenaje	PUEBLO	Pueblo	194405.50	265864.52
37	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	194400.21	265861.76
38	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	194423.96	265766.19
39	Buena	Cunetas	PUEBLO	Pueblo	194318.30	265722.50
40	Buena	Alcantarilla Drenaje	PUEBLO	Sector Abra Vendig	194282.20	265710.34
41	Buena	Alcantarilla Drenaje	PUEBLO	Sector Abra Vendig	194250.36	265703.96
42	Buena	Cunetas	PUEBLO	Sector Abra Vendig	194250.20	265698.47
43	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Pueblo	193899.40	265693.67
44	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193899.75	265697.73
45	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193856.15	265721.88
46	Buena	Cunetas	PUEBLO	Pueblo	193603.84	265852.24

47	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193604.73	265833.22
48	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193607.55	265830.91
49	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193607.15	265825.85
50	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193599.00	265903.04
51	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Pueblo	193864.02	265725.78
52	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Pueblo	193857.95	265724.30
53	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193859.53	265728.56
54	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193851.77	265744.09
55	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193836.11	265783.28
56	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Pueblo	193956.82	265748.81
57	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193946.98	265812.45
58	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Pueblo	193952.42	265765.60
59	Buena	Cunetas	PUEBLO	Pueblo	193839.28	265784.13
60	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193835.16	265790.07
61	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193827.22	265813.54
62	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193827.47	265816.82
63	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193830.48	265820.45
64	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193837.11	265820.42
65	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193890.11	265827.60
66	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Pueblo	193887.29	265834.98
67	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193901.55	265832.76
68	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193938.89	265839.57
69	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Pueblo	193943.11	265840.50
70	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193816.70	265864.49
71	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193811.70	265865.72
72	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193805.90	265883.11
73	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	194151.88	266241.48
74	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194160.87	266245.91
75	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194160.87	266251.07
76	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	194138.85	266241.85
77	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193791.05	265923.92
78	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193751.96	266039.97
79	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193753.89	266039.79
80	Deteriorada	Alcantarilla Drenaje	PUEBLO	Pueblo	193760.24	266056.21
81	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193757.77	266056.76
82	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193808.31	266081.28
83	Falta Manten.	Cunetas	PUEBLO	Pueblo	193798.63	266078.88
84	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193815.36	266082.01
85	Buena	Cunetas	PUEBLO	Pueblo	193817.65	266083.12
86	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193821.52	266084.04
87	Buena	Cunetas	PUEBLO	Pueblo	193826.45	266089.94
88	Falta Manten.	Cunetas	PUEBLO	Pueblo	193843.71	266097.50
89	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193856.57	266103.59
90	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193861.14	266108.38
91	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Villa Maria	193875.76	266108.19
92	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193659.22	265683.04
93	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193661.91	265674.90

94	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193632.63	265675.86
95	Buena	Alcantarilla Drenaje	PUEBLO	Bda. Acueducto	193683.50	265618.47
96	Buena	Alcantarilla Drenaje	PUEBLO	Bda. Acueducto	193681.74	265617.36
97	Deteriorada	Alcantarilla Drenaje	PUEBLO	Bda. Miranda	193718.05	265598.57
98	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Bda. Miranda	193720.37	265595.49
99	Deteriorada	Cunetas	PUEBLO	Bda. Miranda	193715.38	265595.13
100	Falta Manten.	Cunetas	PUEBLO	Bda. Miranda	193721.08	265582.69
101	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Villa Maria	193973.50	266160.92
102	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Villa Maria	193987.58	266162.58
103	Falta Manten.	Cunetas	PUEBLO	Urb. Villa Maria	193919.61	266136.03
104	Falta Manten.	Cunetas	PUEBLO	Urb. Villa Maria	193892.14	266122.39
105	Falta Manten.	Cunetas	PUEBLO	Urb. Villa Maria	193889.85	266119.26
106	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Villa Maria	193891.08	266117.59
107	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Villa Maria	193888.62	266118.70
108	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Villa Maria	193886.15	266120.55
109	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Villa Maria	193927.36	266134.19
110	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Villa Maria	193935.63	266141.38
111	Deteriorada	Alcantarilla Drenaje	PUEBLO	Urb. Villa Maria	193934.05	266145.07
112	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Villa Maria	193936.52	266143.78
113	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Villa Maria	194009.95	266177.51
114	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Villa Maria	194005.72	266182.13
115	Buena	Cunetas	PUEBLO	Pueblo	194032.31	266182.67
116	Buena	Cunetas	PUEBLO	Pueblo	194088.84	266213.09
117	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194271.45	266280.92
118	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194288.71	266284.61
119	Buena	Cunetas	PUEBLO	Urb. San Salvador	194290.99	266275.38
120	Buena	Cunetas	PUEBLO	Urb. San Salvador	194302.25	266223.73
121	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194229.52	266189.80
122	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194239.38	266192.20
123	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194232.34	266212.68
124	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194227.76	266209.73
125	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194260.82	266061.77
126	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194355.42	266230.72
127	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194354.37	266234.96
128	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194370.04	266226.29
129	Buena	Cunetas	PUEBLO	Urb. San Salvador	194420.59	266297.30
130	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194404.74	266304.68
131	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194446.83	266307.62
132	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194538.38	266302.80
133	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194538.38	266307.78
134	Deteriorada	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194547.72	266302.80
135	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194549.48	266304.64
136	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194548.25	266311.47
137	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194550.54	266314.42
138	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194553.88	266311.46
139	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194551.92	266237.49
140	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194303.67	266285.89

141	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194305.26	266287.19
142	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194319.34	266289.03
143	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194360.72	266292.52
144	Buena	Alcantarilla Drenaje	PUEBLO	Urb. San Salvador	194361.96	266299.71
145	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194598.86	265982.90
146	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194599.39	265979.03
147	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194602.91	265983.64
148	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194702.20	265898.01
149	Buena	Alcantarilla Drenaje	PUEBLO	Manatí	194600.40	265817.06
150	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Manatí	194657.61	265771.29
151	Buena	Alcantarilla Drenaje	PUEBLO	Manatí	194653.21	265765.21
152	Buena	Alcantarilla Drenaje	COTO NORT	Manatí	194820.40	265438.64
153	Buena	Alcantarilla Drenaje	PUEBLO	Manatí	194817.41	265452.11
154	Buena	Canales	PUEBLO	Manatí	194817.06	265464.47
155	Buena	Canales	PUEBLO	Manatí	194815.83	265481.25
156	Buena	Zanja	PUEBLO	Manatí	194754.56	265504.14
157	Falta Manten.	Zanja	PUEBLO	Manatí	194750.33	265503.22
158	Buena	Canales	PUEBLO	Manatí	194815.49	265514.64
159	Falta Manten.	Canales	PUEBLO	Manatí	194812.85	265536.04
160	Falta Manten.	Canales	PUEBLO	Manatí	194813.57	265571.46
161	Buena	Alcantarilla Drenaje	PUEBLO	Manatí	194825.20	265615.73
162	Falta Manten.	Canales	PUEBLO	Manatí	194830.49	265638.98
163	Falta Manten.	Canales	PUEBLO	Manatí	194832.08	265671.63
164	Buena	Calle con Drenaje	PUEBLO	Manatí	194842.65	265691.55
165	Buena	Alcantarilla Drenaje	COTO NORT	Manatí	194841.96	265748.55
166	Falta Manten.	Zanja	COTO NORT	Manatí	194762.72	265736.77
167	Falta Manten.	Zanja	PUEBLO	Manatí	194690.18	265735.68
168	Falta Manten.	Zanja	PUEBLO	Manatí	194682.08	265726.64
169	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Manatí	194681.72	265728.30
170	Falta Manten.	Zanja	PUEBLO	Manatí	194655.33	265796.75
171	Deteriorada	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194672.64	265998.93
172	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194665.78	266004.28
173	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194730.20	265912.76
174	Buena	Alcantarilla Drenaje	COTO NORT	Urb. Flamboyán	194798.17	265925.84
175	Falta Manten.	Alcantarilla Drenaje	COTO NORT	Urb. Flamboyán	194794.47	265932.49
176	Deteriorada	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194871.97	266020.64
177	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194860.87	266018.99
178	Deteriorada	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	195051.93	266085.53
179	MALA CONDICI ^{LN}	Alcantarilla Pluvial Drenaje	PUEBLO	Urb. Flamboyán	195051.58	266093.28
180	Buena	Alcantarilla Drenaje	PUEBLO	Res. Los Murales	195058.27	266096.78
181	Falta Manten.	Canales	PUEBLO	Res. Los Murales	195046.14	266157.85
182	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	195035.24	266224.82
183	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	195028.73	266225.37
184	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194938.75	266214.70
185	Falta Manten.	Cunetas	PUEBLO	Urb. Flamboyán	194936.81	266218.94
186	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194937.34	266219.12
187	Deteriorada	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyán	194956.00	266206.76

188	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyan	194679.72	266118.47
189	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyan	194680.95	266124.92
190	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyan	194856.72	266278.55
191	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyan	194871.33	266285.00
192	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyan	194862.35	266270.43
193	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Jardines de Manati	195087.01	266234.76
194	Buena	Alcantarilla Drenaje	PUEBLO	Jardines de Manati	195113.76	266201.37
195	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Jardines de Manati	195116.40	266197.31
196	Falta Manten.	Alcantarilla Drenaje	COTO NORT	Res. Los Murales	195166.75	266165.38
197		Canales	COTO NORT	Res. Los Murales	195166.05	266164.83
198	Deteriorada	Alcantarilla Drenaje	COTO NORT	Jardines de Manati	195171.68	266169.44
199	Falta Manten.	Alcantarilla Drenaje	COTO NORT	Res. Los Murales	195201.24	266050.26
200		Canales	COTO NORT	Res. Los Murales	195202.12	266046.02
201	Falta Manten.	Canales	COTO NORT	Res. Los Murales	195084.48	265992.55
202	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	194719.42	266407.90
203	Deteriorada	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	194636.67	266424.16
204	Deteriorada	Alcantarilla Drenaje	PUEBLO	Manati	194634.20	266417.52
205	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	194637.91	266468.06
206	Deteriorada	Alcantarilla Drenaje	PUEBLO	Manati	194657.11	266487.24
207	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Hospital de Area	194708.70	266489.07
208	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	194706.94	266486.31
209	Buena	Cunetas	PUEBLO	Hospital de Area	194766.45	266489.79
210	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	194874.87	266328.53
211	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	194873.46	266328.53
212	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyan	194766.04	266285.58
213	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyan	194767.10	266292.04
214	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyan	194707.94	266291.68
215	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Flamboyan	194664.80	266295.57
216	Buena	Calle con Drenaje	PUEBLO	Urb. Flamboyan	194664.98	266303.13
217	Buena	Alcantarilla Drenaje	PUEBLO	Manati Plaza Apart.	194651.42	266295.20
218	Buena	Calle con Drenaje	PUEBLO	Manati Plaza Apart.	194650.72	266303.32
219	Buena	Alcantarilla Drenaje	PUEBLO	Pueblo	193629.56	265676.16
220	Buena	Alcantarilla Drenaje	PUEBLO	Sector Abra Vendig	194252.78	265702.82
221	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	195168.05	266404.65
222	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	195161.86	266318.13
223	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	195157.81	266321.08
224	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	195073.65	266313.72
225	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	194929.45	266324.64
226	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	194973.72	266643.59
227	Deteriorada	Cunetas	PUEBLO	Manati	194962.11	266648.76
228	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Hospital de Area	194958.41	266643.23
229	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Manati	194960.35	266651.34
230	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	195061.01	266461.68
231	Deteriorada	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	194943.55	266398.80
232	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	195055.88	266390.10
233	Buena	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	195055.71	266397.48
234	Deteriorada	Alcantarilla Drenaje	PUEBLO	Urb. Atenas	195094.45	266414.81

235	Buena	Alcantarilla Drenaje	PUEBLO	Manati	193524.79	265967.18
236	Buena	Alcantarilla Drenaje	PUEBLO	Manati	193531.31	265962.20
237	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Manati	193529.02	265959.25
238	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191940.28	268067.30
239	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191942.04	268062.68
240	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191961.05	268067.84
241	Deteriorada	Cunetas	TIERRAS NU	Cantito	191845.03	267919.67
242	Falta Manten.	Cunetas	TIERRAS NU	Manati	191286.83	267966.92
243	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191170.58	268110.43
244	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191327.81	268142.27
245	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191304.92	268143.76
246	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191272.71	268145.43
247	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191280.10	268143.59
248	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191240.31	268146.37
249	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191206.51	268149.34
250	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191204.05	268146.57
251	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191166.19	268149.73
252	Deteriorada	Alcantarilla Drenaje	TIERRAS NU	Cantito	191160.21	268149.56
253	Buena	Cunetas	TIERRAS NU	Cantito	191140.40	268148.45
254	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191134.51	268152.51
255	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191137.71	268169.66
256	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191134.47	268176.00
257	Buena	Alcantarilla Drenaje	TIERRAS NU	Cantito	191183.45	268233.94
258	Buena	Alcantarilla Drenaje	TIERRAS NU	Cantito	191215.47	268281.85
259	Buena	Alcantarilla Drenaje	TIERRAS NU	Cantito	191217.19	268276.50
260	Buena	Alcantarilla Drenaje	TIERRAS NU	Cantito	191242.46	268218.87
261	Deteriorada	Alcantarilla Drenaje	TIERRAS NU	Cantito	191227.83	268193.79
262	Buena	Alcantarilla Drenaje	TIERRAS NU	Cantito	191280.71	268353.03
263	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191274.57	268346.29
264	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191313.66	268393.43
265	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191317.96	268398.88
266	Deteriorada	Alcantarilla Drenaje	TIERRAS NU	Cantito	191315.93	268410.38
267	Buena	Alcantarilla Drenaje	TIERRAS NU	Cantito	191358.06	268465.09
268	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191408.74	268523.00
269	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191410.66	268525.97
270	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191366.11	268361.78
271	Buena	Calle con Drenaje	TIERRAS NU	Cantito	191808.40	268045.77
272	Buena	Cunetas	TIERRAS NU	Cantito	191713.95	268512.61
273	Buena	Alcantarilla Drenaje	TIERRAS NU	Cantito	191672.68	268494.97
274	Buena	Alcantarilla Drenaje	TIERRAS NU	Cantito	191668.61	268484.45
275	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Cantito	191596.37	267921.80
276	Buena	Cunetas	TIERRAS NU	Boquillas	194115.12	269847.14
277	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Boquillas	194237.19	269823.01
278	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Boquillas	194170.60	269631.30
279	Deteriorada	Alcantarilla Drenaje	TIERRAS NU	Boquillas	194170.66	269636.55
280	Deteriorada	Alcantarilla Drenaje	TIERRAS NU	Boquillas	194170.55	269637.92
281	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU	Boquillas	194059.26	269640.66

282	Falta Manten.	Cunetas	TIERRAS NU Boquillas	194028.40	269637.49
283	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Boquillas	194025.28	269633.96
284	Buena	Alcantarilla Drenaje	TIERRAS NU Boquillas	194001.91	269840.91
285	Buena	Cunetas	TIERRAS NU Boquillas	194005.42	269847.15
286		Zanja	TIERRAS NU Boquillas	194031.86	269848.49
287		Alcantarilla Drenaje	TIERRAS NU Boquillas	194034.67	269849.03
288		Alcantarilla Drenaje	TIERRAS NU Boquillas	194040.72	269849.25
289	Buena	Cunetas	TIERRAS NU Boquillas	193897.71	269840.13
290		Canales	TIERRAS NU Boquillas	193896.30	269816.71
291	Buena	Alcantarilla Drenaje	TIERRAS NU Ocean View	193986.50	270591.48
292	Buena	Alcantarilla Drenaje	TIERRAS NU Ocean View	194004.27	270584.65
293	Buena	Alcantarilla Drenaje	TIERRAS NU Ocean View	194033.85	270590.17
294	Buena	Alcantarilla Drenaje	TIERRAS NU Ocean View	194036.50	270619.69
295	Buena	Alcantarilla Drenaje	TIERRAS NU Ocean View	194038.26	270640.17
296	Buena	Alcantarilla Drenaje	TIERRAS NU Ocean View	194043.02	270656.03
297	Buena	Alcantarilla Drenaje	TIERRAS NU Ocean View	194047.08	270677.06
298	Buena	Alcantarilla Drenaje	TIERRAS NU Ocean View	194052.02	270717.09
299	Buena	Alcantarilla Drenaje	TIERRAS NU Ocean View	194061.51	270657.32
300	Buena	Alcantarilla Drenaje	TIERRAS NU Ocean View	194060.97	270636.65
301	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Sector El Alto	194003.56	270549.41
302	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194320.90	270396.20
303	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194321.60	270389.19
304	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194262.99	270397.88
305	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194256.29	270364.86
306	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194260.33	270349.73
307	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194253.64	270348.63
308	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194182.70	270362.48
309	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194183.24	270372.08
310	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194172.14	270360.09
311	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194164.22	270366.36
312	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194162.99	270371.16
313	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194167.55	270315.63
314	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194170.54	270317.11
315	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194172.12	270302.72
316	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194158.75	270309.92
317	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194169.17	270430.19
318	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194167.94	270438.12
319	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194188.01	270430.55
320	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194184.84	270436.09
321	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194180.44	270445.13
322	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194173.05	270444.39
323	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194181.69	270486.27
324	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194177.11	270486.27
325	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194167.60	270494.76
326	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194166.73	270501.22
327	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194188.91	270497.89
328	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194266.01	270498.60

329	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194265.13	270492.52
330	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194275.11	270307.11
331	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194274.93	270315.78
332	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194372.28	270294.91
333	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194372.45	270302.29
334	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194382.49	270310.96
335	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Porto Fino	194388.30	270310.22
336	Falta Manten.	Zanja	TIERRAS NU Mar Chiquita	194211.65	270020.82
337	Buena	Cunetas	TIERRAS NU Boquillas	194219.65	269595.99
338	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194191.59	269453.57
339	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194197.64	269412.90
340	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194198.61	269405.97
341	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194211.20	269416.97
342	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194367.85	268997.67
343	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194308.35	269010.60
344	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194309.94	269018.90
345	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194288.10	269017.62
346	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194305.55	269074.06
347	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194303.62	269079.23
348	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194297.63	269081.26
349	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194357.48	269069.81
350	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194408.73	269144.32
351	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194397.99	269141.92
352	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194367.71	269134.37
353	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194364.72	269142.86
354	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194314.19	269125.35
355	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194307.15	269123.87
356	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194276.17	269125.36
357	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194257.68	269126.84
358	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194345.39	269253.36
359	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194344.34	269259.82
360	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194299.97	269251.72
361	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194291.70	269250.19
362	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194330.42	269328.17
363	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194330.56	269335.01
364	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194295.59	269329.75
365	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194289.96	269336.85
366	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194284.85	269330.06
367	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194276.43	269328.41
368	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194283.97	269362.50
369	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194286.37	269369.84
370	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194284.86	269369.84
371	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194244.51	269179.97
372	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194251.55	269181.44
373	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194167.91	269165.24
374	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194168.79	269158.41
375	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194123.01	269136.47

376	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194119.84	269143.60
377	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194061.98	269136.49
378	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194061.65	269141.10
379	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194030.82	269155.21
380	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194037.47	269153.27
381	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194014.55	269091.12
382	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	193995.69	269024.51
383	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194058.04	269246.04
384	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194231.50	269238.46
385	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194233.19	269230.85
386	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194220.50	269296.70
387	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194221.72	269289.20
388	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194228.39	269299.11
389	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194150.83	269282.72
390	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194063.08	269265.30
391	Buena	Canales	TIERRAS NU Urb. Brisas de MarCl	194032.10	269264.73
392	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194205.15	269346.93
393	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194210.32	269347.55
394	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194208.81	269355.30
395	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194278.49	269422.18
396	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194277.33	269428.84
397	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194280.04	269429.19
398	Buena	Alcantarilla Drenaje	TIERRAS NU Urb. Brisas de MarCl	194137.17	269401.19
399	Buena	Otros	TIERRAS NU Sector Jacobo Cubar	193980.77	269271.86
400		Calle Municipales	TIERRAS NU Sector Brisas del Noi	193604.89	268978.74
401	Falta Manten.	Calle con Drenaje	TIERRAS NU Sector Brisas del Noi	193611.47	269292.70
402	Buena	Zanja	TIERRAS NU Tierras Nuevas	193604.42	269294.18
403	Falta Manten.	Calle con Drenaje	TIERRAS NU Boquillas	193697.49	269634.14
404	Falta Manten.	Zanja	TIERRAS NU Tierras Nuevas	193690.30	269636.79
405		Calle Municipales	TIERRAS NU Boquillas	193742.79	269826.90
406	Deteriorada	Calle con Drenaje	TIERRAS NU Tierras Nuevas	193759.73	269955.11
407	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Sector Shangai	193640.07	270096.27
408	Buena	Canales	TIERRAS NU Sector Shangai	193639.72	270090.55
409	Falta Manten.	Canales	TIERRAS NU Sector La Mona	193400.00	270235.63
410	Falta Manten.	Zanja	TIERRAS NU Sector La Mona	193400.00	270226.59
411	Falta Manten.	Zanja	TIERRAS NU Sector Shangai	193165.22	270386.61
412	Buena	Zanja	TIERRAS NU Sector Shangai	193159.94	270379.79
413		Calle Municipales	TIERRAS NU Sector Shangai	193127.38	270406.92
414		Zanja	TIERRAS NU Mar Chiquita	194482.57	269998.79
415	Falta Manten.	Zanja	TIERRAS NU Mar Chiquita	194470.42	270007.84
416		Zanja	TIERRAS NU Valle Verde	194398.60	270004.35
417		Zanja	TIERRAS NU Mar Chiquita	194364.09	270010.45
418		Zanja	TIERRAS NU Mar Chiquita	194364.62	270004.91
419	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	188759.05	263428.59
420	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	188768.38	263429.69
421	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	188764.51	263436.33
422	Buena	Cunetas	BAJURA ADI Sector CortOs	188768.04	263442.79

423	Buena	Cunetas	BAJURA ADI Sector CortOs	188766.81	263452.01
424	Buena	Cunetas	BAJURA ADI Sector CortOs	188768.22	263457.36
425	Buena	Cunetas	BAJURA ADI Sector CortOs	188766.12	263464.37
426	Buena	Cunetas	BAJURA ADI Sector CortOs	188717.35	263491.15
427	Falta Manten.	Cunetas	BAJURA ADI Sector CortOs	188734.26	263491.69
428	Buena	Cunetas	BAJURA ADI Sector CortOs	188756.80	263493.71
429	Falta Manten.	Cunetas	BAJURA ADI Sector CortOs	188767.36	263491.67
430	Falta Manten.	Zanja	BAJURA ADI Sector CortOs	188768.95	263499.79
431	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189091.62	263599.77
432		Cunetas	BAJURA ADI Sector CortOs	189096.73	263598.30
433	Falta Manten.	Zanja	BAJURA ADI Sector CortOs	188934.02	263297.51
434	Buena	Cunetas	BAJURA ADI Sector CortOs	188978.93	263309.29
435	Buena	Cunetas	BAJURA ADI Sector CortOs	188981.09	263391.56
436	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	188976.02	263453.18
437	Buena	Cunetas	BAJURA ADI Sector CortOs	188967.95	263514.43
438	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189041.57	263529.33
439	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189112.72	263543.31
440	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189113.43	263546.82
441		Otros	BAJURA ADI Sector CortOs	189121.53	263544.23
442	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189209.77	263570.19
443	Falta Manten.	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189261.02	263592.67
444	Falta Manten.	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189323.21	263629.35
445	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189355.26	263635.60
446	Falta Manten.	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189393.12	263638.72
447	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189456.71	263669.30
448	Buena	Alcantarilla Drenaje	BAJURA ADI C. Prieto	189537.22	263732.17
449	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189537.06	263752.09
450	Buena	Alcantarilla Drenaje	BAJURA ADI C. Prieto	189538.64	263751.53
451	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189551.70	263795.99
452	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189602.46	263891.70
453	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189655.50	263956.24
454	Buena	Zanja	BAJURA ADI Sector CortOs	189674.71	263979.10
455	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189600.57	263976.38
456	Buena	Alcantarilla Drenaje	BAJURA ADI C. Prieto	189591.90	263571.64
457	Buena	Alcantarilla Drenaje	BAJURA ADI C. Prieto	189594.02	263584.92
458	Buena	Alcantarilla Drenaje	BAJURA ADI C. Prieto	189598.98	263630.30
459	Buena	Alcantarilla Drenaje	BAJURA ADI C. Prieto	189596.89	263673.84
460	Falta Manten.	Alcantarilla Drenaje	BAJURA ADI C. Prieto	189594.08	263699.48
461	Buena	Alcantarilla Drenaje	BAJURA ADI C. Prieto	189592.67	263695.43
462	Buena	Alcantarilla Drenaje	BAJURA ADI C. Prieto	189584.39	263693.58
463	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189359.59	263495.95
464	Deteriorada	Calle con Drenaje	BAJURA ADI Sector CortOs	189419.88	263290.04
465	Falta Manten.	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189426.04	263285.24
466	Falta Manten.	Calle con Drenaje	BAJURA ADI Sector CortOs	189420.41	263297.79
467	Buena	Calle con Drenaje	BAJURA ADI Sector CortOs	189410.54	263294.84
468	Buena	Zanja	BAJURA ADI Sector CortOs	189458.50	263388.53
469	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189237.02	263494.36

470	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189226.30	263528.86
471	Buena	Cunetas	BAJURA ADI Sector CortOs	189217.15	263552.85
472	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189331.27	263558.50
473	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189331.10	263566.25
474	Falta Manten.	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189333.03	263562.74
475	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189346.59	263565.50
476	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189364.92	263581.54
477	Falta Manten.	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189359.65	263611.06
478	Falta Manten.	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189359.30	263610.14
479	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189128.83	263378.57
480	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189092.39	263399.99
481	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189109.67	263436.32
482	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189028.50	263462.01
483	Buena	Cunetas	BAJURA ADI Sector CortOs	189055.27	263466.05
484	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189072.53	263472.68
485	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189090.15	263481.34
486	Buena	Alcantarilla Drenaje	BAJURA ADI Sector CortOs	189108.32	263549.77
487	Falta Manten.	Cunetas	TIERRAS NU Boquillas	194170.55	269634.04
488	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Sector Guayaney	198044.52	268021.63
489	Falta Manten.	Canales	COTO NORT Sector Guayaney	198100.33	267978.64
490	Buena	Alcantarilla Drenaje	TIERRAS NU Sector Guayaney	198141.88	268030.66
491	Buena	Alcantarilla Drenaje	TIERRAS NU Sector Guayaney	198169.70	268030.28
492	Buena	Zanja	TIERRAS NU Sector Guayaney	198168.12	268028.07
493	Falta Manten.	Alcantarilla Drenaje	TIERRAS NU Sector Guayaney	198435.38	268132.46
494	Buena	Alcantarilla Drenaje	COTO NORT Sector Guayaney	198491.02	268158.65
495	Falta Manten.	Alcantarilla Drenaje	COTO NORT Sector Guayaney	198572.36	268205.69
496	Falta Manten.	Alcantarilla Drenaje	COTO NORT Sector Guayaney	198564.79	268202.00
497	Falta Manten.	Alcantarilla Drenaje	COTO NORT Sector Guayaney	198557.39	268196.28
498	Deteriorada	Alcantarilla Drenaje	COTO NORT Sector Cantera	198974.60	267347.48
499	Falta Manten.	Alcantarilla Drenaje	COTO NORT Sector Cantera	199164.40	267353.00
500	Deteriorada	Cunetas	COTO NORT Sector Cantera	198518.41	267170.60
501	Buena	Alcantarilla Drenaje	COTO NORT Sector Cantera	198480.90	267164.33
502	Buena	Alcantarilla Drenaje	COTO NORT Sector Cantera	198492.35	267165.06
503	Falta Manten.	Alcantarilla Drenaje	COTO NORT Sector Cantera	198499.21	267170.60
504	Falta Manten.	Alcantarilla Drenaje	COTO NORT Sector Cantera	198472.29	267355.08
505	Falta Manten.	Alcantarilla Drenaje	COTO NORT Sector Cantera	198512.62	267426.28
506	Deteriorada	Alcantarilla Drenaje	COTO NORT Doctors Center Hosp	195739.76	266432.00
507	Buena	Alcantarilla Drenaje	COTO NORT Reparto Mejias	195478.45	266369.15
508	Deteriorada	Alcantarilla Drenaje	COTO NORT Reparto Mejias	195468.77	266376.90
509	Buena	Alcantarilla Drenaje	COTO NORT Reparto Mejias	195463.84	266380.96
510	Buena	Alcantarilla Drenaje	COTO NORT Apart.Villas de Mana	195392.17	266328.96
511	Buena	Alcantarilla Drenaje	PUEBLO Plaza Pitusa & Natio	195227.53	266298.19
512	Buena	Alcantarilla Drenaje	PUEBLO Plaza Pitusa & Natio	195210.98	266296.16
513	Falta Manten.	Alcantarilla Drenaje	PUEBLO Urb. Atenas	194978.92	266309.87
514	Buena	Alcantarilla Drenaje	PUEBLO Urb. Atenas	194876.80	266316.91
515	Buena	Alcantarilla Drenaje	PUEBLO Urb. Atenas	194772.57	266322.66
516	Buena	Alcantarilla Drenaje	PUEBLO Urb. Atenas	194665.69	266328.96

517	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Manati	194194.16	266293.31
518	Deteriorada	Alcantarilla Drenaje	PUEBLO	Manati	194129.71	266270.08
519	Buena	Alcantarilla Drenaje	PUEBLO	Manati	194027.22	266226.21
520	Buena	Alcantarilla Drenaje	PUEBLO	Manati	194015.60	266218.65
521	Deteriorada	Alcantarilla Drenaje	PUEBLO	Manati	194011.37	266214.59
522	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Manati	193966.29	266193.57
523	Buena	Alcantarilla Drenaje	PUEBLO	Manati	193946.74	266188.05
524	Buena	Alcantarilla Drenaje	PUEBLO	Manati	193925.43	266169.61
525	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Manati	193868.73	266141.77
526	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Manati	193854.47	266144.72
527	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Manati	193847.59	266132.74
528	Buena	Alcantarilla Drenaje	PUEBLO	Manati	193800.57	266106.55
529	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Manati	193780.15	266094.20
530	Buena	Alcantarilla Drenaje	PUEBLO	Manati	193744.40	266077.79
531	Buena	Alcantarilla Drenaje	PUEBLO	Manati	193745.10	266075.58
532	Falta Manten.	Alcantarilla Drenaje	PUEBLO	Manati	193625.88	266016.77
533	Buena	Alcantarilla Drenaje	PUEBLO	Manati	193658.28	266031.89

APPENDIX C

Endangered Species Act Determination

U.S. Fish and Wildlife Service



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Caribbean Ecological Services

Field Office

P.O. Box 491

Boqueron, PR 00622

AUG 22 2017

In Reply Refer To:

FWS/R4/CESFO/72-091-GEN

Mrs. Brenda guzmán
Consultant, SALO Engineering
Calle 38 SO, #1712
Las Lomas, San Juan, PR
00921

Re: Manatí NPDES MS4-2014
Permit

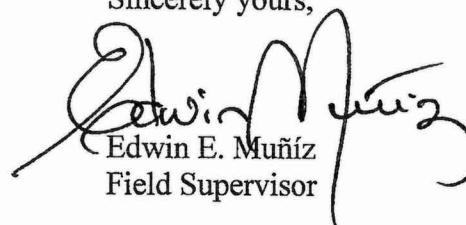
Dear Mrs. Guzmán:

We have reviewed your request for information about endangered and threatened species and their habitats for the above referenced project. Our comments are provided under the Endangered Species Act (Act) of 1973, as amended (87 Stat. 884, as amended; 16 United States Code 1531 et seq.).

The Municipality of Manatí, Puerto Rico is requesting coverage under the 2014 NPDES (National Pollutant Discharge Elimination System) General Permit for the MS4 (Municipal Separate Storm Sewer System).

Based on the information provided and the nature of the permit we believe that the storm water discharge is not likely to adversely affect federally listed threatened or endangered species or their designated critical habitat(s) under our purview. Therefore, no further consultation is required. Nevertheless, if the project is modified or if information on impacts to listed species becomes available this office should be contacted concerning the need for the initiation of consultation under section 7 of the Act.

Sincerely yours,


Edwin E. Muñiz
Field Supervisor

cc
EPA, San Juan