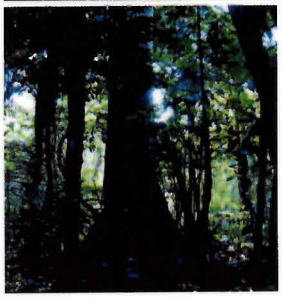


EDS

USDA
OFFICE
RECEIVED
2016 DEC -9 PM 1:4

Autonomous Municipality of Guaynabo

National Pollutant Discharge Elimination System (NPDES)

Notice of Intent (NOI)

for coverage under the Small Municipal Separate Storm Sewer System (MS4) General Permit (PRR040000) for Puerto Rico (Revision)

Septiembre, 2016

ENVIRONMENTAL DEVELOPMENT & SUSTAINABILITY, Inc.

PO Box : 1367, Guaynabo,
PR 00970
Telf.:+787- 708.2774
www.edspuertorico.com

Contents

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: Autonomous Municipality of Guaynabo
2. Type: ◯ Federal ◯ State ● Municipality ◯ Other: _____
3. Existing Permittee: ● Yes ◯ No If yes, provide EPA NPDES Permit Number: P R R 0 4 0 0 1 6
4. Location Address:
   a. Street: Casa Alcaldia Third Floor, Land Planning Department.
   b. Jose de Diego St with Herminio Diaz Navarro St.
   c. City: Guaynabo
      State: PR Zip Code: 00970
5. Mailing Address:
   a. Street: P.O. Box 7885
   b. City: Guaynabo State: PR Zip Code: 00970
6. Telephone Number: 787-740-2020 x 6196 Fax: 787-720-4180
7. E-mail: abones@guaynabocity.gov.pr
8. Standard Industrial Classification (SIC) Code (see instructions for common codes): 9199
9. Latitude: (use the format provided.) Longitude: (use the format provided.)
   2.2.4.2 *Approximate center of the regulated portion of the MS4.*
   18° 21′ 26.8200 N (degrees, minutes, seconds) 66° 6′ 39.6000 W (degrees, minutes, seconds)

Part B. Primary MS4 Program Manager Contact Information

1. Name: Planif. Ada Bones
2. Position Title: Planning Director
3. Stormwater Management Program (SWMP) Location (web address or physical location): Casa Alcaldia Third Floor, Land Planning Department, Jose de Diego St with Herminio Diaz Navarro St Guaynabo, PR 00970.

4. Mailing Address:

   a. Street: P.O.Box 7885

   b. City: Guaynabo State: PR Zip Code: 00970

5. Telephone Number: 787-740-2020 Ext 1311 & 1310

6. E-mail: abones@guaynabocity.gov.pr

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 ○ F

2. National Historic Preservation Act (NHPA) determination complete? ● Yes ○ No

   a. Eligibility Criteria (check all that apply): ○ A ● B ○ C ○ D

   (See **Attachment A**. State Historic Preservation Office Letter SHPO 10-18-16-01)

Part D. Map/Boundaries

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

The Autonomous Municipality of Guaynabo (AMG) is a municipality in the northern part of Puerto Rico located in the northern coastal plain of the island, bounded by the San Juan Bay and Cataño to the north, Aguas Buenas to the south, Bayamón to the west and San Juan to the east. Guaynabo Municipality, Guaynabo, is located to the central-north coast of Puerto Rico, and its part of the Metropolitan Area. Guaynabo is defined by EPA as an urbanized area based on the 2010 Census. Guaynabo Municipality has an estimated population of 97,924 persons, and 39,825 housing units, based on the 2010 Census. Guaynabo is componed by ten wards: Pueblo Viejo, Frailes, Pueblo, Santa Rosa, Camarones, Rio, Guaraguao, Mamey, Hato Nuevo, and Sonadora. Frailes has the highest population density with 7,863.10 persons per square mile. Guaynabo Municipality serves approximately 27,76 square miles.

The Autonomous Municipality of Guaynabo operates a Municipal Stormwater Sewer System (MS4) which includes the Pueblo Ward, urban centers and developed rural areas within the municipality. The Municipality of Guaynabo MS4 in the urban areas, in general, consist of a series of catch basins, typically located within the right-of-way of municipal and commonwealth roads, interconnected by underground concrete or PVC pipes which normally discharge to the Guaynabo River and various streams and ditches which in turn discharge to the Bayamón River, and the San Juan Bay Estuary. The Bayamón River which runs thru the Bayamón Municipality discharges in the Atlantic Ocean.

In the rural areas, the MS4 typically consists of a series of interconnected open channel concrete culverts, which run parallel to municipal and commonwealth roads, and usually discharges to lands and with laminar flow reaches surface waterbodies. Interconnected to the MS4 are the stormwater sewer systems owned and operated by the Puerto Rico Department of Transportation and Public Works. Also, interconnected to the MS4

are the discharges from NPDES (Stormwater) permitted facilities and permitted industrial and commercial facilities. One of those is Fort Buchanan facility in Pueblo Viejo Ward which has its own MS4 permit
Guaynabo is part of two main watersheds. The west side drains into Rio Bayamon River and most of the northern part drains towards Rio Piedras River. There is a small part of the north area that drains into the San Juan Bay. These areas are Amelia, Sabana and Vietnam sectors located in Pueblo Viejo Ward. These are areas below sea level and storm waters are collected in pits and discharge to the San Juan Bay estuary by means of two pump stations which are Sabana and San Fernando under the Department of Natural Resources (DNRA) management. San Fernando pump also receives part of the stormwater that runs from the Municipality of Cataño, located to the north of Guaynabo, as mentioned before.
There are other water bodies, part of these watersheds: Margarita Creek, El Toro Creek, Cucharillas Channel, Guaynabo River, Camarones Creek, Limones Creek, Damiana Creek, Sonadora Creek, and Frailes Creek.
At the date of the submission of this document there are 198 outfalls identified (See **Attachment B**. Guaynabo MS4 Maps: Outfalls and Inltes and Outlets).

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

(See **Attachment C.** Urbanized area of the Municipality of Guaynabo and coordinates).

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

1. Estimated Percent of Outfall Map Complete? (*Section 4.2.3 of 2006 general permit*): 75%

   a. If 100% of 2006 requirements are not met, enter an estimated date of completion: 06/30/2020 (MM/DD/YYYY)

   b. Web address where MS4 map is published: See attached map (Attachment C)
   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: 11/3/2011 (MM/DD/YYYY)

2. Construction/Erosion and Sediment Control authority adopted? ● Yes ○ No

   a. Effective Date or Estimated Date of Adoption: 11/3/2011 (MM/DD/YYYY)

3. Post-Construction Stormwater Management adopted? ● Yes ○ No

a. Effective Date or Estimated Date of Adoption: 11/3/2011
(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)
Rio Guaynabo	198	No	Total Coliforms (1700) Turbidity (2500)	To be developed
San Juan Bay Estuary	8 (Including two Department of Natural Resources Puerto Rico (DNR-PR) Pump stations)	Yes (by EPA)	Enterococcus Bacteria (1700) Low Dissolved Oxygen (1200) Oil & Grease (1900) pH (1000) Thermal Modifications (1400) Turbidity (2500)	To be developed

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
Public Education and Outreach				

Developed a website, www.guaynabo city.com with links to view the SWMP and EPA website Phase II NPDS MS4 permit	Yes	Yes	General public, regulated community	No
Copy of the SWMP was sent to the Municipal Public Library	Yes	Yes	General Public, regulated community	No
Conduct municipality personnel training on SWMP and include training requirements in the Human Resources Office training program	Yes	Yes	Municipal Personnel	No
Distribution of educational material on SWMP in public and private schools	Yes	Yes	Grammar, junior and high school students in public and private schools	No
Use the municipal newspaper and radio program for SWMP outreach	No	No	General Public. The radio program was eliminated. One article was included in the newspaper. Lack of resources to provide an article weekly.	Yes. It will be replaced by the use of internet based social networks.
Public Participation and Involvement				
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
Celebrate Public Hearing to present the SWMP to the community	Yes	Yes	General Public, Regulated Community	Yes. It will be replaced by community meetings.

Establish a follow-up system on complaints to the Phase II NPDES Permit filed at the Urban Permit Office	Yes	Yes	Regulated Community	No
Give public acknowledgement of outstanding employees in the implementation of BMP in their work area	No	No	Municipal personnel. It was not possible to develop the guidelines to implement the program together with the municipal human resources organization	Yes. It will be replaced by using successful BMPs as examples to other areas.
Illicit Discharge Detection and Elimination Program				
Established an inspection plan to detect illicit connections or discharges to the storm water system.	Yes	Yes	Regulated community	No
Established a process to investigate reported illicit discharges and develop an action plan to eliminate all illicit discharge reported.	Yes	Yes	Regulated Community	No
Prepared a survey to be sent to all commercial and industrial facilities regarding waste water disposal, permits and other matters concerning SWMP.	No	No	Regulated Community. Lack of resources to manage this database.	Yes. It was replaced by inspections.
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
Construction Site Storm Water Runoff				

An ordinance was approved to established penalties and fines to construction sites found in non-compliance with Phase II NPDES permit requirements	Yes	Yes	Regulated community	Yes. Development of regulations is under way.
Incorporate as requirement of the construction permit application process or during municipal inspections the regulatory documents related to soil erosion and sedimentation control for projects (SWMP, PPSEC)	Yes	Yes	Regulated Community	No
Establish a notification system to regulatory agencies to report violations related to erosion and sedimentation control and storm water management in construction projects	Yes	Yes	Regulated Community	Yes. It will be modified as per new MS42016 permit requirement
Post Construction				
Evaluate during the environmental document approval process the effects and impacts of the new development with the SWMP compliance and the effects due to the increase of stormwater runoff.	Yes	Yes	Regulated Community	No
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
Pollution Prevention /Good housekeeping				

Implement a system to clean critical segments of the municipality stormwater sewer system on a regular basis	Yes	Yes	General community	No
Cleaning and debris removal at Guaynabo water bodies	Yes	Yes	General community	No
Sweep the street of down town Guaynabo on a regular basis.	Yes	Yes	General community	No
Maintain a recordkeeping system to include material inventory, hazardous waste inventory, inspections/audits, sampling/analysis, equipment calibration/maintenance, employee's trainings and other records.	No	No	Municipal Operations. Lack of resources to build and maintain this database	Yes. It will be eliminated
Train the municipal operation personnel in good housekeeping practices during routine activities such as oil/used oil management, painting, gardening, waste management	Yes	Yes	Municipal personnel	No
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
Implement a system to clean residential septic tanks in low income areas.	Yes	Yes	General community	No

Part I. 2016 Stormwater Management Program (SWMP) Summary

Public Education and Outreach (See Section 2.4.2 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.)
Public Education and Outreach	An educated and informed population is crucial for successful implementation and success of this program. If the public understands the importance of the program the municipality will have the support to achieve compliance. Public participation is vital to develop support and a sense of responsibility, to implement the plan according to the itinerary, to provide economic benefits, and to increase the participation in others municipal programs.	

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

Public Education and Outreach	Maintain all documents pertaining the SWMP in the Municipal Public Library for public access, and notify this on the website	At least two copies of the SWMP hard copy on the Municipal Public Library and or pdf electronic files.
Public Education and Outreach Training Program	Municipality personnel training on SWMP	Train 100% of required personnel.
Public Education and Outreach	Continue with workshops targeted at school children as well as participants of the summer camps sponsored by the municipal government.	Number of participants attending summer camps to be identify by year of attendance and place were the workshop was offered. Number of summer camp offered every year.
Public Education and Outreach	Include information regarding the storm water program on Guaynabo website, www.guaynabocity.gov.pr, links to view the SWMP, and links to access EPA website Phase II NPDES MS4 permit	Changes in website Number of visits to the website

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

Public Participation and Involvement	Public participation is vital to develop support and a sense of responsibility, to implement the plan according to the itinerary, to provide economic benefits, and to increase the participation in others municipal programs.	
Public Participation and Involvement	Sponsor a booth with information on SWMP in at least one major event such as Earth Day and health fairs, among others.	Number of visitors to the booth Number of events
Public Participation and Involvement	Post news and articles related to SWMP Program in the Municipality web page and social media networks as Facebooks, Twitter, among others.	Number of visits/followers/likes in the social network sites.

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

Illicit Discharge Detection and Elimination (See Section 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.)
Illicit Discharge Detection and Elimination	Illicit discharges are considered "illicit" because MS4s are not designed to accept, process, or discharge such non-storm water wastes. By reducing illicit discharges storm waters are protected from pollutants.	
Illicit Discharge Detection and Elimination	Focus on lowering the load of fecal coliforms carried by storm waters; field inspections will be continued in those areas that lack a sanitary sewer system and use septic tanks for wastewater disposal.	Reduce waste water discharge to the storm water system 20% per year.
Illicit Discharge Detection and Elimination	Continue to update the list of the establishments in Guaynabo and perform periodic inspections of them to assure no illicit connections exist	Inspect 20% of business per year
Illicit Discharge Detection and Elimination	Mark ID's to all outfalls and record any discharge during dry weather	Mark 100% of the outfalls
Illicit Discharge Detection and Elimination	Continue with the training to the municipality police and another personnel assign to the DRAAS. Continue to investigate and carry out an action plan to eliminate all illicit discharges reported.	Closing more than 60% of reported illicit discharges per year.

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

Construction Site Stormwater Runoff Control (See Section 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.)
Construction Sites Run-Off Control	Polluted storm water runoff from construction sites often flows to MS4s and ultimately is discharged into local rivers and streams. The resulting contribution of other pollutants from construction sites can cause physical, chemical, and biological harm to waterways. The Program focus on preventing pollutants from reaching storm waters.	
Construction Sites Run-Off Control	Establish a system to notify regulatory agencies in case of any violation. Such as PREQB related to erosion and sedimentation control, DNER regarding soil extraction activities, EPA Storm water construction activities permit, etc.	Notify more than 50% of allege cases. Maintain adequate recordkeeping
Construction Sites Run-Off Control	Continue to request the regulatory documents related to soil erosion and sedimentation control for those construction projects developed in Guaynabo, such as an Erosion and Sediment Control Plan, as part of the construction permit application or during inspections	Perform a site visit to 20% the projects requesting permits, concentrate and large developments where significant earth movement activities are conducted.
Construction Sites Run-Off Control	Provide training to those contractors retained by the municipal government on SWMP and best management practices	Number of training offered

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

Construction Sites Run-Off Control	Carry out field inspections to those construction projects in the municipality of Guaynabo	Inspect 100% of the projects at least once during the phase of construction.

Post-Construction Stormwater Management in New Development and Redevelopment (See Section 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.)
Post-Construction Run-Off Control	By developing, implementing, and enforcing a program to address discharges of post-construction storm water runoff from new development and redevelopment areas pollutants reaching storm water can be reduce. Applicable controls could include preventative actions such as protecting sensitive areas (e.g., wetlands) or the use of structural controls	
Post-Construction Run-Off Control	Enforce Ordinance 86 approved in Nov/2011 and its' amendments that establishes penalties and fines to the construction sites found in non-compliance with the Phase II NPDES permit requirements.	Inspect 100% of the projects at least once during the phase of construction.
Post-Construction Run-Off Control	Implement a process where the storm water drainage patterns before and after the construction project can be evaluated versus the proposed storm sewer system and controls, during the construction permit process.	Keep record of those complaints presented against already built new projects.

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

Good Housekeeping and Pollution Prevention in Municipal Operations (See Section 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 ort 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.)
Pollution Prevention/ Good Housekeeping	By implementing a program focus on reducing the amount and type of pollution that collects on streets, parking lots, open spaces, storage and vehicle maintenance areas privation is achieved in discharging pollutants into local waterways; and on cleaning and adequate maintenance to municipality outdoors.	
Pollution Prevention/ Good Housekeeping	Clean critical portions of the Guaynabo storm sewer system at least once per year.	Clean 75% of storm sewer near creeks.
Pollution Prevention/ Good Housekeeping	Sweep the streets of the Guaynabo downtown once per month.	Cleaning once per month Increase areas already served by 10 %.
Pollution Prevention/ Good Housekeeping	Continue to receive the community calls for debris disposal	Number of services provided compared to received calls. Establish a route and public schedule for debris collection
Pollution Prevention/ Good Housekeeping	Assure adequate permitting for waste management and disposal. Evaluate the contract for landfill operation to assure the contractor complies with all the regulatory requirements.	Recordkeeping and report a summary in the annual report.

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

Pollution Prevention/ Good Housekeeping	Develop an SOP for the handling of wastes, oil, debris and sediments generated during the Municipality operations (Public Works)	Number of SOP developed
Pollution Prevention/ Good Housekeeping	Cleaning and debris removal at the Guaynabo water bodies.	Cleaning at least once per year each water body, and at least twice to those in flooding areas.
Pollution Prevention/ Good Housekeeping	Train the municipal operations personnel in good housekeeping practices during routine activities such as oil/used oil management, painting, gardening, waste management, cleaning, etc.	Number of trainees per year Train 100% of the municipal operations on the SOP for material and waste storage, handling, and disposal.

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

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: Acting Mayor

Title: Guaynabo Center Date: December 8, 2016

Attachment A. SHPO Letter 10-18-16-01

ESTADO LIBRE ASOCIADO DE
PUERTO RICO
Oficina Estatal de Conservación Histórica
State Historic Preservation Office

November 18, 2016

Ada E. Bones Berrios, PPL
Director
Planning Office
Municipality of Guaynabo
PO Box 7885
Guaynabo, PR 00970

SHPO 10-18-16-01 STORM WATER MANAGEMENT PROGRAM, MUNICIPALITY OF GUAYNABO, PUERTO RICO

Dear Ms. Bones:

Our Office received correspondence regarding the above referenced project. We are providing comments and recommendations as a technical assistance. Please be advised that, should Federal assistance be identified or Federal permits be required for this project, similar comments will be emitted. However, this technical assistance does not replace consultation that would otherwise be required under 54 U.S.C. 306108 (commonly known as Section 106 of the *National Historic Preservation Act*) and its implementing regulation 36 CFR Part 800.

We believe that implementation of this project will not affect historic properties. However, if historic properties are discovered during project implementation, you should notify the SHPO immediately.

If you have any questions regarding this matter, please contact Miguel Bonini at (787) 721-3737 or mbonini@prshpo.pr.gov.

Sincerely,

Cariangeli León Moraza, Esq.
State Historic Preservation Officer

CLM/NPT/BRS/MB

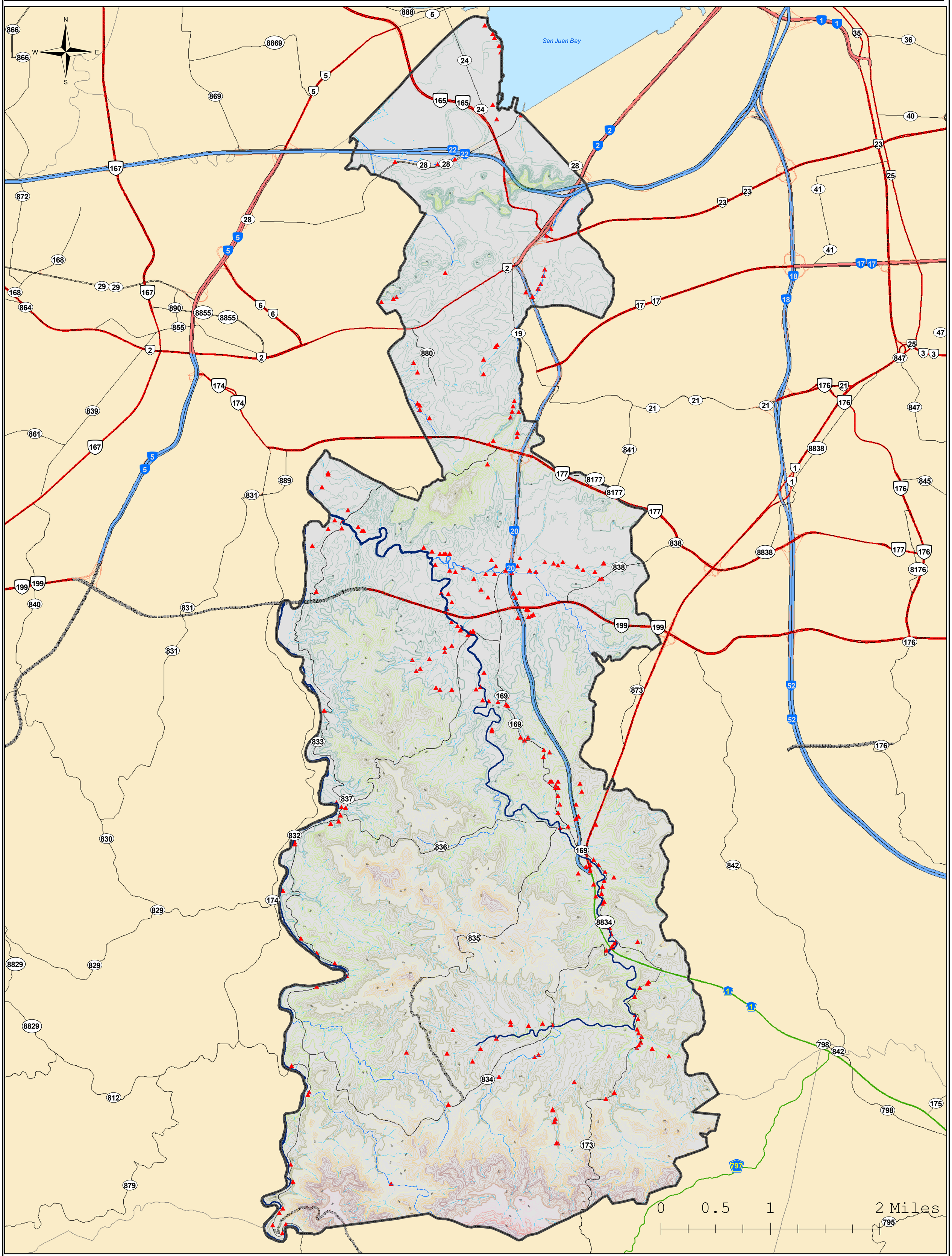
Cuartel de Ballajá (Tercer Piso),
Calle Norzagaray, Esquina Beneficencia, Viejo San Juan, P.R. 00901

PO Box 9023935, San Juan, P.R. 00902-3935
Tel: 787-721-3737 Fax: 787-721-3773
www.oech.gobierno.pr

Attachment B. MS4 Maps of the Municipality of Guaynabo (outfalls and inlets & outlets)

Outfalls

Municipality of Guaynabo



Legend

Elevation (meters)

- 0 - 50
- 51 - 100
- 101 - 150
- 151 - 200
- 201 - 250
- 251 - 300
- 301 - 350
- 351 - 400
- 401 - 450
- 451 - 500

Hydrology

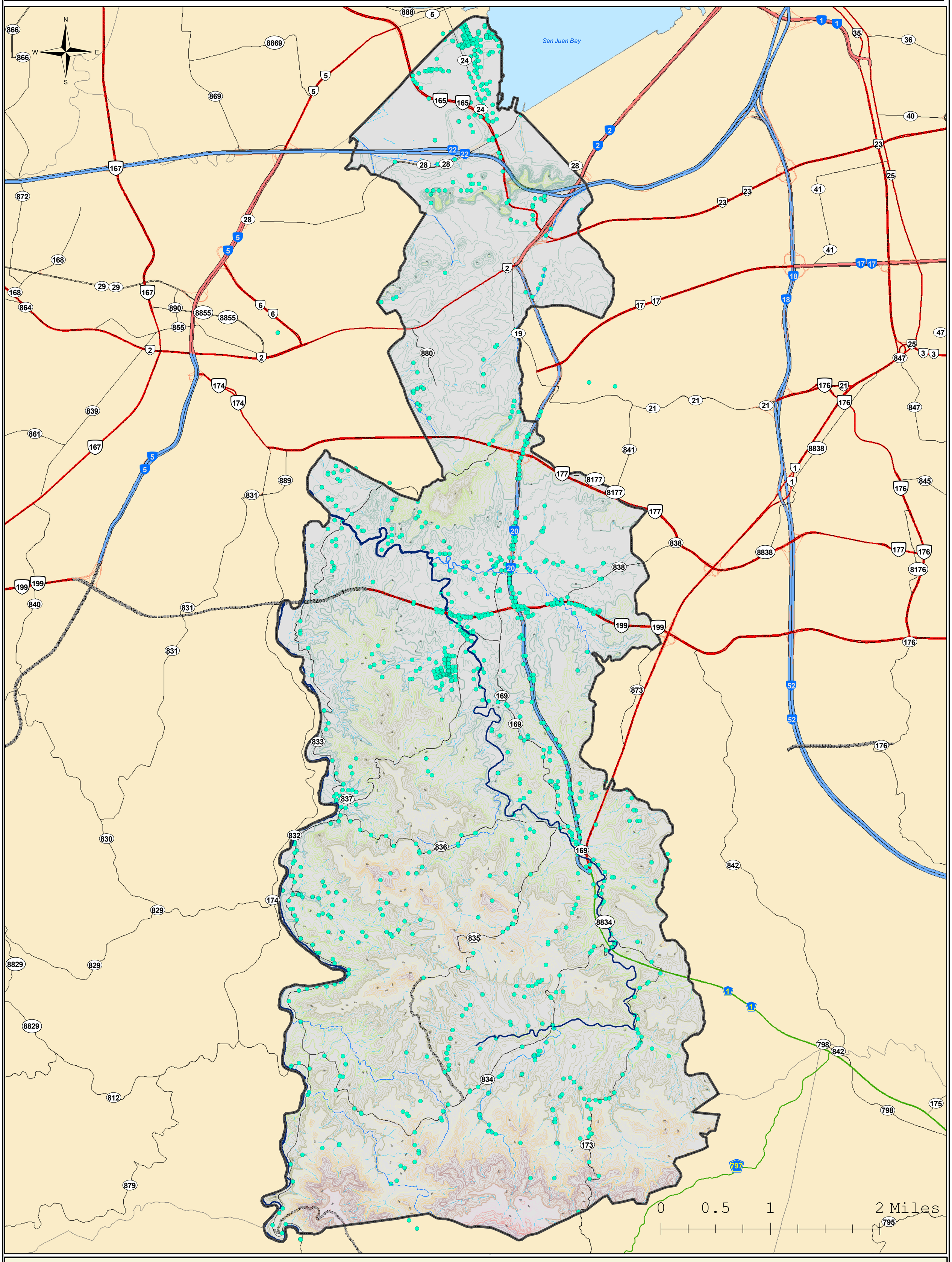
- Intermittent Creek
- Perennial Creek
- River

- Outfalls
- Guaynabo
- Counties

Source: Municipality of Guaynabo
Projection: Nad 83 State Plane Lambert Conformal Conic
Prepared by: Marilia Valdés
Date: September 27, 2016

Outfalls and Inlets

Municipality of Guaynabo



Legend

Elevation (meters)

- 0 - 50
- 51 - 100
- 101 - 150
- 151 - 200
- 201 - 250
- 251 - 300
- 301 - 350
- 351 - 400
- 401 - 450
- 451 - 500

Hydrology

- Intermittent Creek
- Perennial Creek
- River

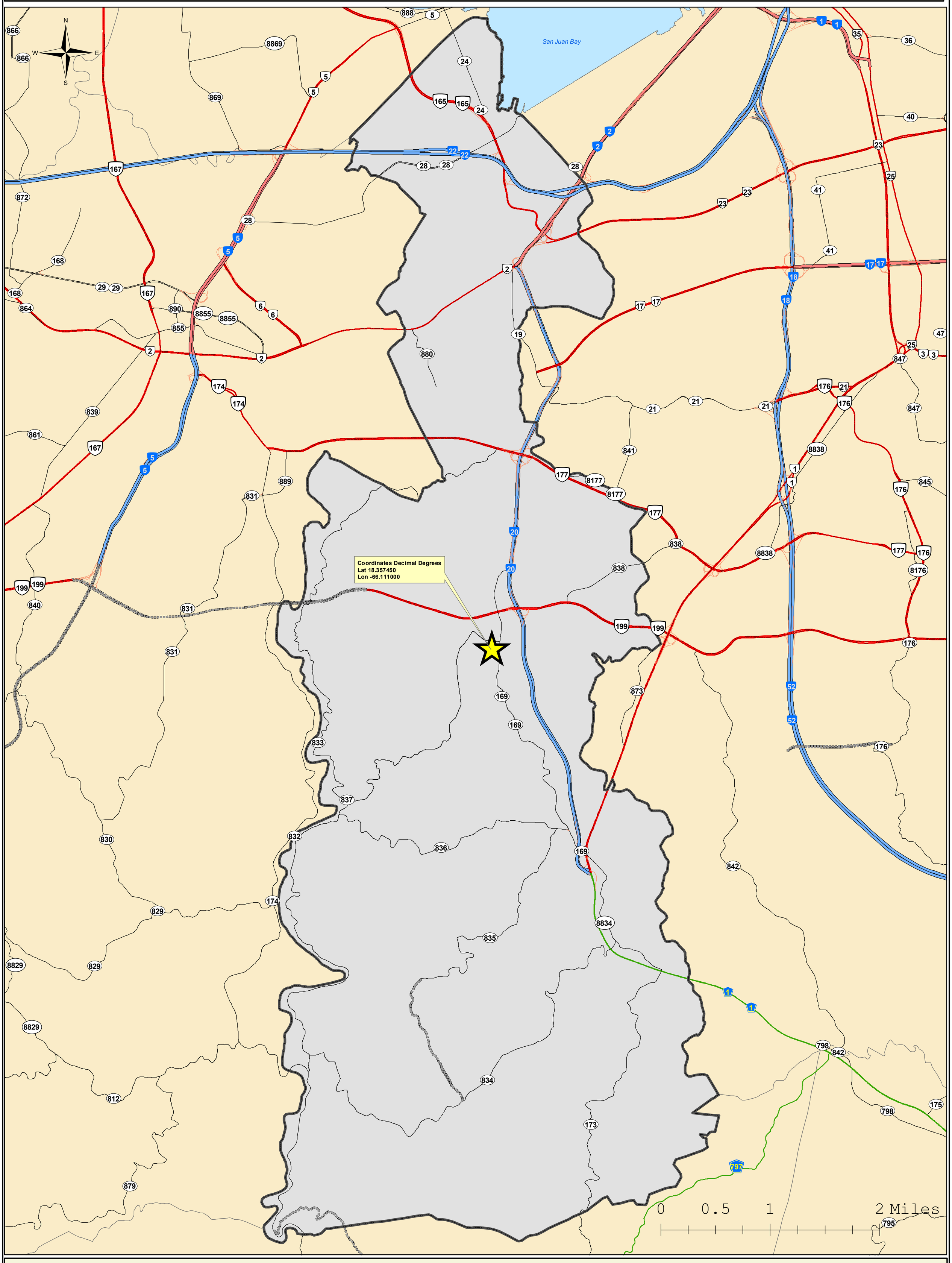
- Outfalls and Inlets
- Guaynabo
- Counties

Source: Municipality of Guaynabo
Projection: Nad 83 State Plane Lambert Conformal Conic
Prepared by: Marilia Valdés
Date: September 27, 2016

Attachment C. Map of the urbanized areas and coordinates of the Municipality of Guaynabo

Urbanized Area

Municipality of Guaynabo



Legend

- Primary Roads
- Tertiary Roads
- Urbanized Areas
- Guaynabo
- Counties

Source: US Census Bureau, 2010
Projection: Nad 83 State Plane Lambert Conformal Conic
Prepared by: Marilia Valdés
Date: November 28, 2016