

August 23, 2023

Nancy Rodriguez, PE  
US Environmental Protection Agency Region II  
Caribbean Environmental Protection Division  
Multimedia, Permits and Compliance Branch  
#48 Road 165 Km. 1.2  
City View Plaza II, Suite 7000  
Guaynabo, PR 00968-8069

Dear Ms. Rodriguez:

**NPDES PERMIT NO. PRR040001  
ANNUAL REPORT 2022-2023  
AUTONOMOUS MUNICIPALITY OF CAGUAS  
SMALL SEPARATE STORM SEWER SYSTEM (MS-4)**

As requested in the provisions of the Clean Water Act, as amended; we are submitting our NPDES Permit Annual Report corresponded to July 1, 2022 until June 30, 2023 period.

If you need any further information related to this matter, please contact Mr. Guillermo Rivera Cruz, Environmental Affairs Director at 787-653-6354.

Cordially,



William E. Miranda Torres  
Mayor

/GRC

Enclosure



PO Box 907 Caguas PR 00726-0907  
787-653-8833  
[www.caguas.gov.pr](http://www.caguas.gov.pr)



# EPA Region 2 Small MS4 General Permit Annual Report 2022-2023

**General Information:**

Small MS4 Annual Report for period: <b>JUL 2022- JUN 2023</b>		
MS4 Permit Number: <b>PR040001</b>		
Name of MS4: <b>Autonomous Municipality of Caguas</b>		
Primary Contact: <b>Guillermo Rivera Cruz</b>	Title: <b>Environmental Affairs Office Director</b>	
Phone number: <b>(787) 653-6354</b>	Email Address: <b><a href="mailto:guillermor@caguas.gov.pr">guillermor@caguas.gov.pr</a></b>	
Mailing Address: <b>PO Box 907</b>		
City: <b>Caguas</b>	State: <b>PR</b>	Zip Code: <b>00726-0907</b>

**Certification:**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system 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: William E. Miranda Torres

Title: Mayor

Date: August 25, 2022



**Summary:**

Permittees covered under the 2016 Small MS4 General Permit (this point forward, MS4-GP) must submit annual reports to the Federal Environmental Protection Agency (this point forward, EPA), as required by Part 3.4 of the Permit. This annual report, corresponding to the July 1, 2022 - June 30, 2023 period, is due on July 31, 2023.

**Annual Report Information Requirements:**

**I. Self-Assessment review of compliance with the permits terms and conditions (section 3.4.2.1)**

For this reporting period, Caguas used the updated Stormwater Management Plan (this point forward, SWMP), submitted to EPA in 2021. All the efforts and best management practices implanted during this reporting period was included in this SWMP as stated in the 2016 MS4-GP.

Chapter IV in this report, summarizes Caguas self-assessment of compliance based on the MS4 Permit.

**A) Requirements of Caguas's NPDES Permit and compliance with 2016 MS4-GP terms and conditions**

**1) Development of a Stormwater Management Program (SWMP) – Sections 1.11 & 2.3 of 2016 Small MS4-GP**

The Municipality reviewed and amended the 2007 SWMP to include the 2016 MS4-GP requirements. The Municipality submitted the updated SWMP to EPA on June 27, 2018. Caguas begin to implement the Best Management Practices (from this point forward, BMP's) included in the updated 2018 SWMP. On March 27, 2019, we submitted a letter to EPA soliciting the status of SWMP evaluation. On April 6, 2021, we received communication from EPA regarding the 2018 SWMP. EPA requested that the Municipality made changes to the 2018 SWMP and submitted again for further evaluation. The Municipality submitted an update SWMP on August 4, 2021. The 2016 NPDES permit expired on June 31, 2021. A draft for 2022 NPDES Permit was released for comments. The Municipality submitted comments dated May 13, 2022. Until further notices or the new permit is released, we continued to use the 2021 updated SWMP.

**2) Within the first year following the date of authorization of coverage under the permit, the permittee shall determine whether the small MS4 may be a source of the pollutants of concern. – Section 2.2.2(a) of 2016 Small MS4-GP**

The receiving waters in which Caguas MS4 discharges are Rio Bairoa, Rio Cagüitas, Rio Cañas, Rio Grande de Loíza and Rio Turabo. Based on the information obtained from the latest Puerto Rico's 303(d) & 305(b) Integrated Report from the Puerto Rico Environmental & Natural Resources Department (PRENRD) in 2020, the pollutants of more concerned in Caguas are: **total and fecal coliforms, turbidity, surfactants, chromium VI, phosphorus, lead, cadmium, and copper.** The table below indicates the impaired water bodies where Caguas' separate storm sewer system discharges, the cause of impairment and the probable source. This document was not updated or reviewed since 2020.

Based on this information, Caguas has determined that its MS4 may be a source of the pollutants of concern **Total Coliforms, Turbidity and Surfactants**, discharging to Rio Bairoa, Rio Cagüitas, Rio Turabo and Rio Grande de Loíza.

Total Coliforms are a group of bacteria that are widespread in nature. Some members of the coliform group can be present in pet waste (fecal coliforms), soil, and submerged wood and in other places outside the human body. During rain events, bacteria is wash down the drain. Sanitary sewer overflows (SSO) and sanitary pipes breakage of the Puerto Rico Aqueduct Sewer Authority's (PRASA) sanitary sewer system also wash bacteria down the drain. Turbidity is an optical determination of water clarity. It can be suspended sediment from soil erosion, runoff, discharges, stirred bottom sediments or algal blooms. Pollutants in urban runoff such as dissolved metals and pathogens can attach to suspended particles and enter the water.

Surfactants encompass a wide range of organic chemicals added to soaps, dishwashing liquids, laundry detergents and shampoos. Surfactants may enter the waterways when they are wash down the drain. Sanitary water contains surfactants and can access the storm drains when the system overflows. Vehicle washing and water from laundry machines can sometimes access the storm drains.



**LEFT BLANK INTENTIONALLY**

Table 1: Impaired Water Bodies Where Caguas MS4 discharges and the Probable Source of Impairment – 2020

Impaired water	Cause of Impairment	Probable source
Rio Bairoa	Surfactants	Collection system failure (including septic tanks), Urban runoff/ storm sewers
	Phosphorus	Collection system failure (including septic tanks)
	Pathogens	Collection system failure (including septic tanks), Urban runoff/storm sewers
	Nitrogen	Minor Industrial Point Source
	Chromium VI	Collection system failure (including septic tanks), Urban runoff/ storm sewers
Rio Caguïtas	Turbidity	Collection system failure (including septic tanks), Confined feeding operations
	Pathogens	Collection system failure (including septic tanks), Urban runoff/storm sewers
	Phosphorus	Collection system failure (including septic tanks)
	Nitrogen	Minor Industrial Point Source
	Chromium VI	Collection system failure (including septic tanks), Urban runoff/ storm sewers
	Surfactants	Collection system failure (including septic tanks), Urban runoff/ storm sewers
Rio Turabo	Turbidity	Collection system failure (including septic tanks), Confined feeding operations, agriculture
	Cyanide	Collection system failure (including septic tanks), confined feeding operations, agriculture, minor industrial point source
	Phosphorus	Collection system failure (including septic tanks)
	Pathogens	Collection system failure (including septic tanks), Confined feeding operations, Agriculture
	Cooper	Minor industrial point source, collection system failure (including septic tanks)
	Chromium VI	Minor industrial point source, Minor municipal point source
	Cadmium	Minor industrial point source
	Lead	Minor industrial point source, collection system failure (including septic tanks)
Rio Grande de Loïza	Lead	Minor industrial point source, collection system failure (including septic tanks)
	Phosphorus	Collection system failure (including septic tanks)
	Pathogens	Collection system failure (including septic tanks), Confined feeding operations, Minor industrial point source, urban runoff/storm sewer
	Turbidity	Collection system Failure (including septic tanks), Confined feeding operations, agriculture, minor industrial point source, urban runoff/storm sewer
	Chromium VI	Major industrial point source
	Pesticides	Agriculture, Minor industrial point source

*(Handwritten signature)*

## B) Best Management Practices (BMP's) Achievements

### 1) Public Education and Outreach – section 2.4.2 of 2016 Small MS4-GP

Caguas has effectively implemented a public education program:

- a) Caguas prepared and distributed educational material (brochures and other educational texts) during educational activities. The educational texts contain information about different initiatives to reduce storm water pollution.
- b) Caguas offered educational activities such as workshops, trainings and seminars to target audience such students from all educational levels and public in communities.
- c) The Environmental Affairs Office webpage offers educational material related to different initiatives to reduce storm water pollution, laws and regulation regarding stormwater pollution issues.
- d) Since 2006, Caguas developed informal trainings about illicit discharges detection and elimination and pollution prevention in municipal operations to employees and municipal police officer.

### 2) Public Involvement – section 2.4.3 of 2016 Small MS4-GP

- a) After the release of COVID-19 regulations, we celebrated a face-to-face meeting with the Municipal Land Use Community Board (MLUCB) to present stormwater issues and valuable information about SWMP implementation. Additional, in our Municipality website, NPDES information was available to them. Also, we printed reports for MLUCB members evaluation and feedback.
- b) Caguas continued to celebrate municipal clean up events and municipal services fairs in various wards involved communities and municipal employees to recollect recycling material and waste that could affect stormwater systems or provide educational materials and orientations about stormwater management, water conservation strategies and other environmental themes.

### 3) Illicit Discharge Detection and Elimination – section 2.4.4 of 2016 Small MS4-GP

- a) Caguas has an enforcement program to detect and eliminate illicit discharges into the MS4. It involves the Environmental Affairs Office, the Municipal Police, the Public Works Department, and the Permits Office.
- b) Caguas has not completed a storm sewer system map, showing the location of all outfalls, due to problems in the recruitment of specialized resources for this task and budget limitations. Nevertheless, we keep continuous advance towards the completion of this task in coordination with the Planning Office and Municipal Permits Office.
- c) Caguas had included articles into its Municipal Law Code, adopted state regulations and enforcement procedures to prohibit non-stormwater discharges to the MS4.
- d) Caguas is developing a formal plan, and the dry weather field screening to detect and address non-stormwater discharges to the MS4. However, situations related with employee's reduction, EPA requirements and budget situations, we need to reschedule to start these tasks during the next permit cycle.
- e) Caguas has developed an **informal** catchment prioritization using data available. However, our Office will implement a formal evaluation and information reviews to finalize catching prioritization in the next permit cycle. This task was suspended because of personnel reduction. However, we continued to do random inspections to these areas to validate their prioritization status.

**4) Construction Site Storm Water Runoff Control – section 2.4.5 of 2016 Small MS4-GP**

- a) Caguas had adopted a municipal ordinance that requires developers to obtain coverage under the **Permiso Único Incidental** from the Puerto Rico Permits Management Office (OGPe) and the PRENRD.
- b) Caguas had developed procedures for construction sites plan evaluation, through the Municipal Permits Office.
- c) Caguas had developed an informal inventory of all permitted active and public constructions that required a NOI, through the Municipal Permits Office, OGPe and EPA.
- d) Caguas had developed a standard operation procedure (SOP) for receipt and evaluation of information, submitted by the public regarding construction sites.
- e) Caguas had developed procedures for site inspection and enforcement of control measures for construction sites, which includes inspections and maintenance of records of the enforcement executed on construction sites.
- f) Caguas have created liaison efforts with PRENRD, EPA and OGPe to refer situations of environmental violations under their jurisdiction for further procedures.

**5) Post-Construction Storm Water Management in New Development and Redevelopment – section 2.4.6 of 2016 Small MS4-GP**



- a) We continue with no achievements in this area. Caguas has not developed a regulatory mechanism or a written procedure to address post- construction runoff from new developments and redevelopments because many regulations related to stormwater management in new development and redevelopment required by this permit, are responsibilities of State and Federal regulatory agencies. Caguas depends mainly in State regulations and actions to comply enforcement. Nevertheless, Caguas will make efforts towards complying with these permit conditions.
- b) Caguas had developed procedures for site inspection and enforcement of control measures for construction sites, which includes inspections and maintenance of records of the enforcement executed on construction sites.
- c) Caguas have created liaison efforts with PRENRD, EPA and OGPe refer situations of environmental violations under their jurisdiction for further procedures.

**6) Pollution Prevention and Good Housekeeping for Municipal Operations – section 2.4.7 of 2016 Small MS4-GP**

- a) Caguas performs operations and maintenance programs for preventing or reducing pollutant runoff from municipal operations. We developed a written document, that we reviewed every year to include new operational procedures.
- b) Caguas performed quarterly Stormwater Prevention Pollution Plan (SWPPP) inspections and corrective reports to the Center of Municipal Operations (CMO).
- c) Caguas performed storm sewer inspections required by the Municipal Public Works Department for system evaluation and the Puerto Rico Aqueduct and Sewer Authority in case of sanitary overflow or illegal connections.
- d) The current CMO-SWPPP needs amendments to fully comply with the updated 2021 SWMP. Due to personnel reduction, we can't perform this task. However, we implanted SWMP initiatives in the CMO-SWPPP inspections, according to the updated SWMP.



II. Assessment of the appropriateness of the selected BMP's (section 3.4.2.2) and changes in the identified BMPs or measurable goals (section 3.4.2.7)

The following tables includes the assessment of the BMP's included in the 2021 updated SWMP. As we used the 2021 update SWMP to address MS4 requirements this fiscal year, all the BMP's are appropriate and do not need to be modify until further implementation experiences. Due to COVID-19 regulations, all BMP's related to public education, outreach, public participation & involvement was performed through social media, internet tools and virtual meetings.

**Legal Authority and Enforcement**

BMP Description	Is the BMP Appropriate?	Modification(s) to BMP for next permit cycle and/or measurable goals
Evaluation of Regulatory Mechanism of Control Measures	Yes	BMP is appropriate and is update as needed to comply with permit's requirements.
Amendments of the Municipal Code Stormwater Workshops	Yes	BMP is appropriate and is update as needed to comply with permit's requirements.

**MCM Public Education and Outreach**

BMP Description	Is the BMP Appropriate?	Modification(s) to BMP for next permit cycle and/or measurable goals
Distribute Stormwater Education Materials	Yes	BMP is appropriate and is update as needed to comply with permit's requirements. The Municipality constantly update or include new information about stormwater.
Stormwater Workshops	Yes	BMP is appropriate and is update as needed to comply with permit's requirements. The Municipality participated in educational activities related to stormwater initiatives, by invitation from other organizations or as part of our educational program through the City. Also, we included social media, internet tools and virtual meetings to continue offering workshops.
Stormwater Workshops for Municipal Employees	Yes	BMP is appropriate and is update as needed to comply with permit's requirements. The Municipality celebrated informal trainings to the COM employees. However, we will be continued with our formal training sessions. It's important to address in fiscal year 2021-2022, one of our Environmental Specialist was certified as Stormwater Coordinator.
Educational Website	Yes	BMP is appropriate and is update as needed to comply with permit's requirements. The Municipality constantly update or include new information about stormwater in our website.

**MCM- Public Participation and Involvement**

BMP Description	Is the BMP Appropriate?	Modification(s) to BMP for next permit cycle
Conduct Public Hearings on Stormwater Issues	Yes	If not feasible a public hearing, the Land Use Community Boards meetings will be used instead, as their members represent citizens from all wards of the Municipality. After the release of COVID-19 restrictions, we can celebrate face to face meetings. Also, technological software and social media was used to contact some members for information and feedback.
Involve the public in municipal clean up events	Yes	The Municipality celebrates these events during the year.
Availability of SWMP to the public	Yes	The document is available in our webpage (digital) and in our Office (hard copy) for reviewing and information.

**MCM Illicit Discharge Detection and Elimination**

BMP Description	Is the BMP Appropriate?	Modification(s) to BMP for next permit cycle
Development of a written IDDE Program	Yes	Caguas will continue this project with the available resources.
Catchment Prioritization	Yes	This information is available online and will be use as part of the priority ranking of catchment requirements. Caguas will continue this project with the available resources.
Written Procedures for Outfall Screening and Sampling	Yes	Caguas will continue this project with the available resources.
Stormwater System Map of MS4	Yes	Caguas will continue this project with the available resources. The map has not been finished yet.
Outfall Inventory	Yes	Caguas will continue this project with the available resources. The inventory has not been finished yet.

**MCM Construction Site Stormwater Runoff Control**

BMP Description	Is the BMP Appropriate?	Modification(s) to BMP for next permit cycle
Construction Ordinance Review	Yes	No Modification needed. Caguas will continue this project with the available resources.
Construction Site Runoff Control Program	Yes	No Modification needed. Caguas will continue this project with the available resources.
Plan & Pre-Construction Review Procedures	Yes	No Modification needed. Caguas will continue this project with the available resources until the extent allowable by the Commonwealth of Puerto Rico.
Construction Site Inventory	Yes	No Modification needed.

Referrals to Environmental State Agencies and Permit Offices	Yes	No Modification needed.
--	-----	-------------------------

**MCM Stormwater Management in New Development and Redevelopment**

BMP Description	Is the BMP Appropriate?	Modification(s) to BMP for next permit cycle
Development of Written Development and Redevelopment Program	Yes	No Modification needed. Caguas will continue this project with the available resources until the extent allowable by the Commonwealth of Puerto Rico.
Development of a Regulatory Mechanism	Yes	No Modification needed. Caguas will continue this project with the available resources until the extent allowable by the Commonwealth of Puerto Rico.
Post Construction Controls Inspections	Yes	No Modification needed. Caguas will continue this project with the available resources.
Referrals to Environmental State Agencies and Permit Office	Yes	No Modification needed.

**MCM Pollution Prevention and Good Housekeeping for Municipal Operations**

BMP Description	Is the BMP Appropriate?	Modification(s) to BMP for next permit cycle
Development of Operations and Maintenance Procedures Manual	Yes	No modifications needed.
SWPPP Development and Update	Yes	No modifications needed. No SWPPP for other properties are required, until further evaluation.
SWPPP Inspections	Yes	No modifications needed.
Storm Sewer Inspections	Yes	No modifications needed.

*[Handwritten signature]*

**III. Status of plans or activities required by section 2.1 and/or 2.2 (section 3.4.2.3)**

- A. Compliance of Section 2.1: **Water Quality Standards Effluent Limitations:** Identification of all discharges determined to be causing or contributing to an exceedance of water quality standards and a description of the response, including all in section 2.1.1.c
  - 1. Caguas is studying all the available data at the State and Federal level including, but not limited to, list of contaminated water bodies and data available on the EPA Web pages (EPA Enforcement and Compliance History Online website) to assess whether the discharges cause or contributes to an exceedance on applicable water quality standards.
- B. Compliance of Section 2.2: **Discharges to Water Quality Impaired Waters:** The permittee shall identify all discharges in the SWMP and Annual Reports, including both outfalls and interconnections to other MS4 or other separate storm sewer systems, that:

1. Are subject to an approved Total Maximum Daily Load (TMDL) as identified in Section 2.2.1; or
2. Discharge to a water identified as impaired by the PRENRD pursuant to Section 303(d) of the Clean Water Act and for which TMDL development has been identified as necessary, but for which a TMDL has not yet been approved.
  - a. According to Puerto Rico 2020 Sections 305(b) and 303(d) Integrated Report; the following water bodies that pass-through Caguas was identified as impaired waters: **Rio Grande de Loiza, Rio Cagüitas, Rio Turabo and Rio Bairoa.** Nevertheless, Rio Grande de Loiza (PRER14A2), Rio Bairoa, and Rio Turabo assessment units have high priority to development of TMDL. Caguas has identified outfalls but not assign an ID number for reference. We identified them by water body name.

**IV. Assessment of the progress towards achieving the measurable goals and objectives of each control measure (section 3.4.2.4)**

The following tables summarizes the performance of Caguas MS4 program for each MCM for this permit cycle, as well as the progress towards achieving measurable goals of each control measure.

Legal Authority and Enforcement			
BMP	Measurable Goal	Target Audience Reached	Summary of Results
Evaluation of Regulatory Mechanism of Control Measures	Number of evaluation meetings celebrated	Target Audience Reached.	After the release of COVID 19 pandemic restrictions, <b>one (1)</b> face to face meeting was celebrated on <b>March 1 2023</b> with the Municipal Land Use Community Board members to share information and feedback about NPDES tasks.
Amendments of the Municipal Code Stormwater Workshops	Number of amendments included in the Municipal Law Code related to new policies in NPDES.	Multiple amendments	The latest amendments to the Municipal Code related to NPDES policies was approved on April 1, 2020.

Public Education and Outreach			
BMP	Measurable Goal	Target Audience Reached	Summary of Results
PE1-Develop, edit and distribute stormwater education materials targeting pollutants of concern	Amount of material distributed.	General Public (1,024 brochures)	Our Office distributed different educational materials in municipal offices, educational activities and virtual meetings.
	Revision of educational material and available new information.	Completed? YES	Our Office revised and updated the educational materials for the workshops provided and the Municipality Internet page.

Public Education and Outreach			
BMP	Measurable Goal	Target Audience Reached	Summary of Results
PE 2 Deliver Stormwater Workshops and other educational activities to educate general public	At least one workshop per audience per year. Amount and diversity of participants.	We held one (1) workshop.  Caguas Compite Entrepreneur Program Date: June 22, 2023	Our Office developed educational efforts in communities and food businesses about stormwater pollution prevention. After the release of COVID-19 pandemic, we can celebrate face to face workshops for education purposes.
PE3 Employee Training	Provide training at least once year to a group of employees.	Ornament and Beautification Brigades NPDES Compliance Workshop Date: August 30, 2022.	Our Office could offer one (1) workshop to our employees on how to prevent pollution prevention during daily operations. Our next workshop will be with the Municipal Police and maintenance employees in fiscal year 2023-24. However, NPDES information, SOP's and compliance policies are available in the Municipality webpage.
PE4 Maintain an Educational Page within the city's internet site	Electronic documentation of number of hits to Stormwater	1,115 hits	This year, our audience was significantly similar than the past year, due to continuous software improvements its capacity to register the proper number of interactions.

*(Handwritten mark)*

Public Involvement/ Participation			
BMP	Measurable Goal	Target Audience Reached	Summary of Results
P11 - Conduct Public Hearings or Municipal Land Use Community Board Meetings	The number of participants and the amount of input received.	Target Audience Reached	After the release of COVID 19 pandemic restrictions, we can celebrate <b>one (1)</b> face to face meeting with the Municipal Land Use Community Board members to share information and feedback about NPDES tasks.
P12 - Involve the public in municipal clean up events	Get as many people as possible involved in the activities.	<b>93</b> communities (12,774 housing units), <b>82</b> private and public schools, <b>158</b> commercial and industrial sites, <b>44</b> state and federal entities, <b>51</b> municipal offices and <b>6</b> community recycling recovery centers. The Municipality recollected <b>4,730.53</b> tons of recyclable	All these sectors participated in our Waste Reduction Program administered by the Municipal Recycling and Sanitation Department. We have an increasing of resident's participation, but we recovered less material than the last year report due to recycled materials market impact and situations related to big stores out of business. Also, we celebrated <b>twenty-seven (27) clean up events</b> in San Antonio, San Salvador, Beatriz, Turabo, Bairoa, Tomas de Castro, Pueblo, Borinquen, Cañaboncito, Cañabon and

Public Involvement/ Participation			
BMP	Measurable Goal	Target Audience Reached	Summary of Results
		materials for further process.	Rio Cañas wards and <b>fourteen (14) educational workshops</b> about recycled materials to schools, communities and private sector
PI3 - Availability of SWMP to the Public	Provide general access to the SWMP. The amount of public revision and recommendations.	General Public	The Municipality updated the SWMP in June 2018 and it is available in our Internet homepage for reviewing, comments, information, and feedback. We don't received requests for information or comments related to this document.

**LEFT BLANK INTENTIONALLY**

Illicit Discharge Detection and Elimination (IDDE)			
BMP	Measurable Goal	Status	Summary of Results
IDDE1 – Develop a written program in compliance with the MS4 permit requirements	Edit the current document to include new permits requirements	Reviewed annually	The Environmental Affairs Office received <b>22</b> complaints for regulated illicit discharges. Also, we referred to PRASA <b>33</b> illicit sewage discharges to MS4 or waterbodies for evaluation and repairs. The Municipal Police Department received <b>20</b> complaints and submitted fines for municipal ordinance violations, which <b>five (5)</b> are dismissed by our Municipal Administrative Court. The Public Works Department not found and referred any illicit discharges from PRASA to storm sewer system during inspections around the City. The Municipal Emergency Management Office handled <b>14</b> vehicle fluids spills on roads and pavement. In all cases, the Municipal Emergency Management Office personnel take control of the situations and developed mitigation procedures to avoid the spill discharges to the stormwater system.
IDDE2 - Catchment Prioritization	Prioritize catchments based on the assessment.	In progress	Evaluation of gathered information started.
IDDE3 – Outfall screening and sampling	Amount of dry and wet screenings performed during the reporting period.	In progress	Due to the lack of human resources and funds, no screening was made during this reporting period.
IDDE4 – Continue developing storm sewer map	Complete the map at the end of the permit period.	In progress	Due to budget restrictions, the Municipality canceled the digitalizing contract due to the higher cost. The rest of the project will be complete in-house with the available resources. Only <b>6.12mi<sup>2</sup></b> was completed, of the total of <b>21.93mi<sup>2</sup></b> to be digitalized. Due to the lack of funds & human resources, this task was suspended until further notice. However. The Planning Office continue to evaluate mechanisms to continue this task using federal funds from CDBG or other resources. No geographers are available in the Municipality.
IDDE5 – Develop an outfall inventory	The number of outfalls identified each year will be used as indicator.	In progress	This task depends on the digitalizing map progress. However, we identified almost five (5) important outfalls to be analyzed: <b>Los Muertos Creek</b> – Downtown, <b>Santo Domingo Creek</b> – Downtown, <b>Los Muertos Creek</b> – Villa del Rey Community, <b>Mundaca Creek</b> – Rio Grande de Loiza & <b>PR-788</b> – Rio Turabo

Construction Site Runoff Control			
BMP	Measurable Goal	Status	Summary of Results
CONS1 – Construction Ordinance Review	Review the ordinance by the end of the second year of the permit	In Progress	Scheduled for the next reporting period.
CONS2 - Construction site runoff control program	Fully develop and implement the program at the end of the permit term.	Completed	The Municipality, through our Permits Office, Recovery and Reconstruction Office & the Puerto Rico Permits Management Office received <b>two (2)</b> construction sites greater than one (1) acre for permits evaluation. Both sites were inspected and only one ( <b>Villa Nueva Stormwater Improvements</b> ), we find deficiencies or noncompliance issues caused by the contractor.
CONS3 – Plan review procedures and pre-construction review procedures	Revise and edit the plan to review procedures to seek compliance with PRENRD.	In progress	The written procedure has been under revision due to the recent regulation changes at local government level and the court decision related to the Permits regulatory process.
CONS4 – Develop a construction site inventory	Update the inventory annually.	Completed	During this reporting period, there were <b>two (2)</b> active constructions sites, greater than one (1) acre. <b>One has NOI submitted (Plaza Laderas – PPR1000G3)</b> . For the Villa Nueva Stormwater Improvements project, no information was available about a submission of a Notice of Intent.
CONS5 - Referrals to environmental state and permits office	Amount of cases referred to state.	Completed	Only one ( <b>Villa Nueva Stormwater Improvements</b> ), was referred to the Puerto Rico Permits Management Office and the Environmental Affairs Office for further procedures.

*[Handwritten signature]*

**LEFT BLANK INTENTIONALLY**



Post-Construction Storm Water Management in New Development and Redevelopment			
BMP	Measurable Goal	Status	Summary of Results
POST1 - Develop a written Development and Redevelopment Program	Complete written procedure to control stormwater discharges from private and public constructions sites.	In process	In process of determining Caguas legal authority over exclusive state jurisdiction, before developing the procedures.
POST2 – Develop a regulatory mechanism	Develop a regulatory mechanism to address post-construction runoff.	In process	In process of determining Caguas legal authority over exclusive state jurisdiction, before developing the procedures.
POST3 – Post-Constructions Controls Inspections	Develop a site inspection and enforcement program to require compliance in post-construction sites	Completed	There is <b>one (1)</b> redeveloped site inspected ( <b>Storm sewer System Improvements at Villa Nueva Community</b> ). All documentation related to this project are sent to OGPe for further environmental compliance evaluation.
POST4 – Referral to environmental state and permits office.	Amount of cases referred to state.	Completed	Our Office did not refer post-constructions developments or redevelopments projects to state environmental and permits offices during this reporting period. Because our Municipality don't have the jurisdiction to evaluate projects that exceeds some construction and zoning parameters, the state OGPe is the responsible for the evaluation and approval. OGPe don't submit documents related to these construction projects to the Municipality for endorsement or evaluation, no matter the Municipality requests to coordinate this process.

*[Handwritten signature]*

**LEFT BLANK INTENTIONALLY**

Pollution Prevention and Good House Keeping for Municipal Operations				
BMP	Measurable Goal	Status	Summary of Results	
PP1 – Develop an Operations and Maintenance Procedures Manual	Update the current manual.	Reviewed annually	Our Office continued the revision and edition of the existing manual, if necessary.	
PP2 – Facilities Stormwater Pollution Prevention Plan (SWPPP) development and update	Edit and update current SWPPP. Develop others as necessary.	In progress	During this year, our Office continued the revision and edition of the existing COM-SWPPP. Due to other operational situations, this task has been suspended until further notice. During this revision, we will continue to use the 2011 COM SWPPP, because no major changes occurred between the 2012 & 2016 NPDES Permit requirements.	
PP3 - SWPPP Inspections	Amount of stormwater inspections	Completed	<b>Three (3) inspections</b> in the Center for Municipal Operations using the current SWPPP (October 2022, February 2023, May 2023).	
PP4 – Storm sewer inspections	Amount or inspections during the reporting year	# Inspections	# Maintenance Efforts	# Replaced Damaged Stormwater Infrastructure
		338	277	<b>5 projects:</b> 2 at Sector La Mesa, 1 at Las Carolinas, 1 at Villa Cáliz II and 1 at Villa Del Rey I.

*(Handwritten signature)*

**V. Outfall screening and monitoring data collected by or on behalf of MAC - pursuant 2.4.4 and 3.3 (section 3.4.2.5)**

Caguas did not perform screening and monitoring during this reporting period, as required by this section.

**VI. Description of activities for the next reporting cycle (section 3.4.2.6)**

The following activities will be performed during the next reporting cycle:

**Public Education and Outreach**

- Continue educational activities in communities, schools, businesses and to municipal employees (Municipal Police, building maintenance employees and contractors) to educate them about the hazards associated with illegal discharges, improper disposal of waste, the impact that stormwater discharges can have on local waterways, as well as the steps that the public can take to reduce pollutants in stormwater; including social media and virtual meetings.



- Review and update educational material, as needed.

#### Public Involvement

- Continue to make SWMP available to the public to get input from them.
- Our personal will be available to explain the contents of the SWMP and final annual reports during the Municipal Land Use Community Boards, City Council or other community's meetings, to give members the opportunity for public comments, using social media, virtual meetings or emails.

#### Illicit Discharge Detection and Elimination

- Update the SSO inventory.
- Continue to develop the MS4 digitalized map.
- Continue to assessment and priority ranking of catchments in terms of their potential to have illicit discharges and SSOs and the related public health significance.
- Establish a formal dry weather screening and develop specialized company's bids and contracts for sampling.
- Continue our illicit discharges inspections to identify responsible parties and require discharge elimination

#### Construction Site Stormwater Runoff Control

- Continue to develop construction site inspections on all private and public construction sites to require state and federal compliance (if applicable).
- Continuing referrals to state environmental agencies and permit office if the Municipality find violations in NPDES regulations or other environmental issues

#### Stormwater Management in New Development and Redevelopment

- Continue the evaluation to develop, to the extent allowed under the Commonwealth of Puerto Rico and local law, a program to control stormwater discharges from new development and redevelopment sites that discharges to the MS4 and disturbs one acre or more.
- Continuing referrals to state environmental agencies and permit office if the Municipality find violations in NPDES regulations or other environmental issues

#### Pollution Prevention and Good Housekeeping

- Continue to update written operation and maintenance procedures for the municipal activities listed in the permit.
- Continue to perform SWPPP inspections in required municipal facilities
- Continuing the collaboration with PRASA and our Department of Public Works to detect situations with stormwater or sanitary system.

#### VII. Description of any changes in identified BMPs or measure goals.

As we used the 2021 update SWMP to address MS4 requirements this fiscal year, all the BMP's are appropriate and do not need to be modify until further implementation experiences.

VIII. Description of activities undertaken by any entity contracted for achieving any measurable goal or implementing any control measure.

The following table describes the activities undertaken by entities contracted by the Municipality of Caguas and the applicable measurable goals. These entities are obligated to comply with NPDES regulation through contract clauses.

Entity or person Contracted	Description of activities	Applicable measurable goal
EC Waste Corp.	In charge of residential solid waste collection and disposal, including materials from municipal cleanup activities and recyclable materials	Amount of residential solid waste recovered and properly disposed  Amount of recyclable material recuperated
Industrial Fibers Corp. (IFCO)	Recycling company in charge of receiving recyclable materials for reuse and recycling	Number of recyclable materials available for reuse and recycling
Vivo Recycling	Recycling company in charge of recovering vegetative waste for reuse or composting. The vegetable materials are pick up during public service requests or produced during maintenance of public areas.	Amount of vegetative waste recover for further procedures
E-cycling Puerto Rico	Recycling company in charge of recovering electronics and computer hardware. These materials are deposited by residents in a Recovery Center facility.	Amount of electronics and computer hardware recover for further procedures
Schnitzer Corp.	Recycling company in charge of recovering damaged white goods and scrap for recycling. These materials are pick up during public service requests or produced during maintenance of public areas	Amount of damaged white goods and scrap recovered for further procedures.
Lamp Recycling	Recycling company in charge of recovering damaged fluorescent lamp light bulbs for proper disposal. These materials are pick up during maintenance of public areas and other communities' buildings	Amount of damaged fluorescent lamp light bulbs recovered for further procedures.
Puerto Rico Textiles	Recycling company in charge of recovering unused or damaged clothing. These materials are deposited by residents in recovery boxes through the City.	Amount of unused or damaged clothing recover for further procedures
Landscaping (10 private contracts and 8 nonprofit organizations)	In charge of landscaping and maintenance of green areas on streets and recreational areas in specific sites throughout the Municipality. These companies are instructed in NPDES regulations and contractual consequences for no compliance with permit regulation, are included in the contracts.	Number of public areas and municipal buildings attended  Evaluating company's performance in compliance with NPDES regulation and stormwater system protection.

STORMWATER ILLEGAL DISCHARGES REPORT 2022-2023  
 NPDES PERMIT NO. PRR040001  
 AUTONOMOUS MUNICIPALITY OF CAGUAS

Case Number	Date of the Complaint	Inspection Date	Complaint Identification	Description of the discharge	Street	Sector	Ward	Type of Discharge	Inspector Name	Status
1849	08/04/2022	08/04/2022	Nelson Santiago Arroyo	Paint discharge in stormwater system from Shell Gas Station	Acuamarina Street	Villa Blanca	Pueblo	Illegal connections, septic tank, or other illegal discharges	Jose Ortiz	Completed (inspection, notice of violation, mitigation tasks)
1850	08/23/2022	09/01/2022	Teodoro Camacho	Sanitary illegal discharge from neighbor	11 Guaynabo Street	Bonneville Heights I	Cañaboncito	Illegal discharge	Jose Ortiz	Completed (inspection, notice of violation, mitigation tasks)
1851	10/06/2022	10/11/2022	Kevin Correa	Café La Criolla discharged sanitary waters by release of the sanitary register to the MS4	PR-798 & Cementery Road	La Guasabara	Rio Cañas	Illegal connections, septic tank, or other illegal discharges	Jose Ortiz	Completed (inspection, notice of violation, mitigation tasks)
1852	10/18/2022	10/19/2022	Saul Chaparro	Hogar Baker Mejias discharged illegal gray waters to the MS4	L-10 3 street	Valle Hermoso	Tomas de Castro	Illegal discharge	Jose Ortiz	Completed (inspection, notice of violation, mitigation tasks)
1853	10/18/2022	10/19/2022	Jose Reyes Sepulveda	Gustarticoño Grill discharged illegal gray waters to the MS4	PR-175 Km 1.0	Cuatro Calles	San Antonio	Illegal discharges	Jose Ortiz	Completed (inspection, notice of violation, mitigation tasks)

**STORMWATER ILLEGAL DISCHARGES REPORT 2022-2023**  
**NPDES PERMIT NO. PRR040001**  
**AUTONOMOUS MUNICIPALITY OF CAGUAS**

Case Number	Date of the Complaint	Inspection Date	Complaint Identification	Description of the discharge	Street	Sector	Ward	Type of Discharge	Inspector Name	Status
1854	12/07/2022	12/07/2022	Salvador Aponte	Truck discharged concrete and washed it with detergent on the street and water goes to the MS4	139 Honduras Street	Bunker	Pueblo	Illegal discharges	Jose Ortiz	Completed (inspection, notice of violation, mitigation tasks)
1855	12/09/2022	12/09/2022	Nannette Marquez	Truck discharged used cooking oil from Huertas College facilities until Ateno Building	PR-189	Jose Delgado community	Pueblo	Illegal discharges	Jose Ortiz	Completed (inspection, notice of violation, mitigation tasks)
1856	12/20/2022	12/20/2022	Yul Bermudez	Lormar Optical Lab left containers with some white substance and some of them fell on the floor and access MS4.	75 Vizcarrondo Street	El Pueblo	Pueblo	Illegal discharges	Jose Ortiz	Completed (inspection, notice of violation, mitigation tasks)
1857	12/21/2022	12/21/2022	Angelica Cruz Gomez	Oil Tec Ecologistics discharged gray waters with grease into the MS4	PR-183 Km 4.7	El Cinco	Tomás de Castro	Illegal discharges	Jose Ortiz	Completed (inspection, notice of violation, mitigation tasks). We also referred to PRENRD.

**STORMWATER ILLEGAL DISCHARGES REPORT 2022-2023**  
**NPDES PERMIT NO. PRR040001**  
**AUTONOMOUS MUNICIPALITY OF CAGUAS**

Case Number	Date of the Complaint	Inspection Date	Complaint Identification	Description of the discharge	Street	Sector	Ward	Type of Discharge	Inspector Name	Status
1870	06/28/2023	06/29/2023	Jose Reyes Sepulveda	Citizen indicated that neighbors discharge septic tank sanitary waters to the MS4. This water accumulates in the drainpipe causing decomposition odors.	PR-175 Km 1.0	Cuatro Calles	San Antonio	Illegal connections, septic tank, or other illegal discharges	Jose Ortiz	Completed (inspection, notice of violation, mitigation, mitigation tasks)

NOTE: These complaints are provided by citizens by phone or visit our Office.







SANITARY SEWER OVERFLOWS INVENTORY 2022-2023  
 NPDES PERMIT NO. PR0000001  
 AUTONOMOUS MUNICIPALITY OF CAGUAS

Date detected	Street	Sector	Ward	Discharging to	Receiving Water	Date eliminated	Suspected Cause of Discharge	Notes
Dec/22/2022	Calle Nazario	Centro Urbano	Bo. Pueblo	MS4	Rio Caguas	Eliminated by PRASA but date not available	Overloaded pipe	
Jan/24/2023	Calle Baldorioty	Centro Urbano	Bo. Pueblo	MS4	Rio Caguas	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation
Jan/26/2023	Calle Eugenio Maria de Hostos	Urb. Savarona	Bo. Pueblo	MS4	Unknown	Eliminated by PRASA but date not available	Overloaded pipe	
Feb/01/2023	Ave. Luis Muñoz Marín	Urb. Villa Carmen	Bo. Turabo	MS4	Unknown	Eliminated by PRASA but date not available	Overloaded pipe	
Feb/07/2023	Calle Violeta	Las Carolinas	Bo. Pueblo	MS4	Rio Barroa	Eliminated by PRASA but date not available	Overloaded pipe	
Feb/07/2023	Calle 23A	Urb. Villa del Rey Alta sección	Bo. Cañabonito	MS4	Quebrada los Muertos	Eliminated by PRASA but date not available	Overloaded pipe	
Feb/07/2023	Ave. Shifford Esquina Ave. Turabo	Urb. Turabo Gardens	Bo. Cañabonito	MS4	Unknown	Eliminated by PRASA but date not available	Overloaded pipe	
Mar/14/2023	Calle Alibbe	Urb. Parque Las Mercedes	Bo. Tomas de Castro	MS4	Rio Grande de Loiza	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation
Mar/17/2023	Calle Alibbe	Urb. Parque Las Mercedes	Bo. Tomas de Castro	MS4	Rio Grande de Loiza	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation
Mar/20/2023	Calle Cipres	Urb. Villa Turabo	Bo. Pueblo	MS4	Unknown	Eliminated by PRASA but date not available	Overloaded pipe	
Mar/27/2023	Calle Alibbe	Urb. Parque Las Mercedes	Bo. Tomas de Castro	MS4	Rio Grande de Loiza	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation
Mar/27/2023	Calle Laurel	Urb. Villa Turabo	Bo. Barroa	MS4	Unknown	Eliminated by PRASA but date not available	Overloaded pipe	
Mar/31/2023	Calle Alibbe	Urb. Parque Las Mercedes	Bo. Tomas de Castro	MS4	Rio Grande de Loiza	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation
Apr/18/2023	Calle Parque de La Fuente esquina Parque de Bolonia	Urb. Barroa Park	Bo. Barroa	MS4	Rio Barroa	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation
Apr/21/2023	Calle Parque de La Fuente esquina Parque de Bolonia	Urb. Barroa Park	Bo. Barroa	MS4	Rio Barroa	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation

SANITARY SEWER OVERFLOWS INVENTORY 2022-2023 NPDES PERMIT NO. PRR040001 AUTONOMOUS MUNICIPALITY OF CAGUAS									
Date detected	Street	Sector	Ward	Discharging to	Receiving Water	Date eliminated	Suspected Cause of Discharge	Notes	
Jul/08/2022	Calle Jorge Haddock	La Granja	Bo. Pueblo	M54	Quebrada Santo Domingo	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation	
Jul/ 13 /2022	Calle Nelson Millan Intersección calle Madeline Willensen	Valle Tolima	Bo. Cañabón	M54	Rio Caguitas	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation	
Ago/10/2022	Calle Padial	Centro Urbano	Bo. Pueblo	M54	Unknown	Eliminated by PRASA but date not available	Overloaded pipe		
Ago/11/2022	Calle Asturias	Villa del Rey 3ra sección	Bo. Turabo	M54	Quebrada los Muertos	Eliminated by PRASA but date not available	Overloaded Pipe		
Ago/11/2022	Calle Rafael Cordero	Savarona	Bo. Pueblo	M54	Unknown	Eliminated by PRASA but date not available	Overloaded pipe		
Sep/01/2022	Calle Betances esquina Calle Baldorioty	Pueblo	Bo. Pueblo	M54	Rio Caguitas	Eliminated by PRASA but date not available	Collapsed Pipe	Recurring situation	
Sep/15/2022	Calle Guaynabo	Urb. Bonneville Heights	Bo. Cañaboncito	M54	Quebrada Los Muertos	Eliminated by PRASA but date not available	Overloaded pipe		
Sep/27/2022	Calle 17 esquina Calle 18	Urb. Condado Moderno	Bo. Pueblo	M54	Rio Caguitas	Eliminated by PRASA but date not available	Overloaded pipe		
Sep/27/2022	Calle San Andres	Urb. Notre Dame	Bo. Pueblo	M54	Unknown	Eliminated by PRASA but date not available	Overloaded Pipe	Recurring situation	
Oct/04/2022	Calle San Andres	Urb. Notre Dame	Bo. Pueblo	M54	Unknown	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation	
Oct/06/2022	Calle 17 esquina Calle 18	Urb. Condado Moderno	Bo. Pueblo	M54	Rio Caguitas	Eliminated by PRASA but date not available	Overloaded pipe		
Oct/27/2022	Calle Jorge Haddock	La Granja	Bo. Pueblo	M54	Quebrada Santo Domingo	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation	
Nov/ 04 /2022	Calle Jorge Haddock	La Granja	Bo. Pueblo	M54	Quebrada Santo Domingo	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation	
Dec/19/2022	PR-156	Terralinda	Bo. Pueblo	M54	Rio Caguitas	Eliminated by PRASA but date not available	Overloaded pipe		
Dec/22/2022	Calle Carlos Osorio	Urb. Valle Tolima	Bo. Cañabón	M54	Rio Caguitas	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation	

SANITARY SEWER OVERFLOWS INVENTORY 2022-2023  
 NPDES PERMIT NO. PPR004001  
 AUTONOMOUS MUNICIPALITY OF CAGUAS

Date detected	Street	Sector	Ward	Discharging to	Receiving Water	Date eliminated	Suspected Cause of Discharge	Notes
May/09/2023	Calle Nelson Millian Intersección calle Madeline Willensen	Urb. Valle Tolima	Bo. Cañabón	MS4	Río Caguinas	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation
May/10/2023	Calle Padial Esquina Betances	Centro Urbano	Bo. Pueblo	MS4	Río Caguinas	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation
May/10/2023	Boulevard Cristóbal Colón	Urb. La Granja	Bo. Pueblo	MS4	Quebrada Santo Domingo	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation
May/24/2023	Calle 1	Urb. Villa Caliz II	Bo. Turabo	MS4	Río Cañabonco	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation
May/24/2023	Calle Parque Colón Esquina Parque Botomía	Urb. Baños Park	Bo. Bañora	MS4	Río Bañora	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation
May/25/2023	Calle Camino Macana	Parcelas Nuevas	Bo. Borinquen	MS4	Río Turabo	Eliminated by PRASA but date not available	Overloaded pipe	
June/02/2023	Calle 4	Urb. Villa Caliz II	Bo. Turabo	MS4	Río Cañabonco	Eliminated by PRASA but date not available	Overloaded pipe	Recurring situation

