United States Environmental Protection Agency
Region 2
Caribbean Environmental Protection Division
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Guaynabo, Puerto Rico 00968-8069

FACT SHEET

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
Aguadilla RWWTP
PERMIT No. PR0023736

This Fact Sheet sets forth the principle facts and technical rationale that serve as the legal basis for the requirements of the accompanying draft permit. The draft permit has been prepared in accordance with Clean Water Act (CWA) section 402 and its implementing regulations at Title 40 of the *Code of Federal Regulations* (CFR), Parts 122 through 124, and the **Water Quality Certificate (WQC)** issued by the Puerto Rico Department of Natural and Environmental Resources (DNER) pursuant to CWA section 401 requirements.

Pursuant to 40 CFR 124.53, the Commonwealth of Puerto Rico must either grant a certification pursuant to CWA section 401 or waive this certification before the U.S. Environmental Protection Agency (EPA) may issue a final permit. On **September 29, 2023,** the DNER provided in the WQC that the allowed discharge will not cause violations to the applicable water quality standards at the receiving water body if the limitations and monitoring requirements in the WQC are met. In accordance with CWA section 401, EPA has incorporated the conditions of the WQC into the draft permit. The WQC conditions are discussed in this Fact Sheet and are no less stringent than allowed by federal requirements. Additional requirements might apply to comply with other sections of the CWA. Review and appeals of limitations and conditions attributable to the WQC were made through the applicable procedures of the Commonwealth of Puerto Rico and not through EPA procedures.

PART I. BACKGROUND

A. Permittee and Facility Description

The Puerto Rico Aqueduct and Sewer Authority (PRASA) (referred to throughout as the Permittee) has applied for renewal on its **Aguadilla RWWTP** National Pollutant Discharge Elimination System (NPDES) permit. The Permittee is discharging pursuant to NPDES Permit No**. PR0023736.** The Permittee submitted Application Form 1, and 2A dated May 29, 2020**,** and applied for an NPDES permit to discharge treated wastewater from Aguadilla RWWTP, Aguada**,** called the facility. The facility is classified as a **major** discharger by EPA in accordance with the EPA rating criteria.

The Permittee **owns** and **operates** the **wastewater treatment plant which provides primary treatment**. Attachment A of this Fact Sheet provides a map of the area around the facility and a flow schematic of the facility.

The treatment system consists of the following:

> **The Aguadilla RWWTP is a publicly owned treatment works (POTW) that treats sanitary wastewater through the primary treatment of the domestic sewage from the municipalities of Aguadilla, Aguada, Moca, and Rincón. It has a capacity of 8 MGD (monthly average) and provides primary treatment and discharge its effluent to the Atlantic Ocean**.
>
> Sanitary wastewater is processed through the following units:

- Mechanical Bar Screens
- Grit Removal System
- Primary Clarifier
- Gravity Thickener
- Chlorination System
- Dechlorination System
- Belt Filter Press Building

Sludge is thickened, dewatered and disposed in the Mayagüez Composting Facility.

Summary of Permittee and Facility Information

Permittee	Puerto Rico Aqueduct and Sewer Authority (PRASA)
Facility contact, title, phone	Mrs. Marichu Valentín, Executive Director Compliance, Health and Safety (787) 620-2270, ext. 2893 and 2427
Permittee (mailing) address	Puerto Rico Aqueduct and Sewer Authority P.O. Box 7066 Barrio Obrero Station Santurce, Puerto Rico 00916-7066
Facility (location) address	PR Road 115, Km 25.0 Int Aguada , PR 00602
Type of facility	Publicly-Owned Treatment Works
Pretreatment program	Yes
Facility monthly average flow	8 MGD (in million gallons per day)
Facility design flow	16 MGD (in million gallons per day)
Facility classification	Major

B. Discharge Points and Receiving Water Information

Wastewater is discharged from Outfall 001 to the Atlantic Ocean, a water of the United States.

The draft permit authorizes the discharge from the following discharge point(s):

Outfall	Effluent description	Outfall latitude	Outfall longitude	Receiving water name and classification
001	Primary municipal wastewater.	18°, 24', 14" N	67°, 11', 06" W	Atlantic Ocean, Class SB waters

As indicated in the Puerto Rico Water Quality Standards (PRWQS) Regulations, the designated uses for Class SB receiving waters include:

- Identified segments of coastal water identified for:
  - Primary and secondary recreation; and
  - Propagation and preservation of desirable species, including threatened and endangered species.

CWA section 303(d) requires the Commonwealth of Puerto Rico to develop a list of impaired waters, establish priority rankings for waters on the list, and develop Total Maximum Daily Loads (TMDLs) for those waters. The receiving water has not been determined to have water quality impairments for one or more of the designated uses as determined by section 303(d) of the CWA.

C. Modification of Secondary Treatment Requirements

PRASA has requested a modification, under section 301(h) of the CWA, 33 U.S.C. section 1311(h), of the secondary treatment requirements contained in section 301(b)(1)(B) of the CWA, 33 U.S.C. section 1311(b)(1)(B) to discharge wastewater receiving less than-secondary treatment from the Aguadilla RWWTP to the Atlantic Ocean. Secondary treatment requirements are defined in regulations at 40 CFR Part 133 in terms of effluent quality for five-day measure of biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH.

In 2000, the EPA approved PRASA's first modification of secondary treatment requirements for the facility and subsequently issued a modified permit that became effective on April 1, 2003, and expired on March 31, 2008.

The permit included modified effluent limitations for BOD_5 and TSS. Pursuant to 40 CFR 122.21, the terms and conditions of the modified permit have been administratively extended until issuance of a new permit.

As part of renewal of the modified permit, the EPA is required to review all available information on the Aguadilla RWWTP discharge to determine whether the discharge meets or will meet the requirements of CWA section 301(h) and its implementing regulations during the next permit term. Based upon review of information provided by PRASA and other supporting documents, the EPA has approved PRASA's request for renewal of its modification of secondary treatment requirements for the Aguadilla RWWTP, described in a 2014 Tentative Decision document accompanying the public notice of the draft permit. The Tentative Decision is based on the EPA's evaluation of information provided in PRASA's **2020 re-applications** for permit renewal with a 301(h) modification from secondary treatment requirements, and a mixing zone; Discharge Monitoring Reports (DMRs); receiving water monitoring reports; and other information deemed necessary for the determining whether to grant or deny a modification from secondary treatment requirements.

The permit establishes effluent limitations and conditions that are consistent with the requirements of the CWA and PRWQS. For additional information on the Tentative Decision, please refer to EPA Region 2's 2014 *Tentative Decision Document - Analysis the Section 301(h) Modification of Secondary Treatment Application for the Aguadilla Regional Wastewater Treatment, NPDES No. PR0023736*.

D. Mixing Zone/Dilution Allowance

As part of its CWA section 401 certification of the modified permit application, the DNER has authorized a mixing zone or dilution allowance for this discharge in accordance with Rule 1305 of PRWQS Regulations. The mixing zone or dilution allowance is defined as both the critical initial dilution (CID) ratio of seawater-to-wastewater and a geometric size. **In 2020**, PRASA submitted an application for a mixing zone to the DNER. No action was taken by DNER on this application. As a result, PRASA determined a **CID of 212:1** using the UDKHDEN model based on the new diffuser configuration with 20 ports open and updated current speed and effluent flow rates. This is an increase from the dilution authorized in the existing permit where 191:1 was estimated by PRASA in its 2012 mixing zone application. For the mixing zone size, PRASA determined a larger mixing zone in the 2012 revised application than estimated in its 2012 mixing zone application. For the next permit term, the total width of the mixing zone is estimated at 175 m and the total length is estimated at 67.

Under PRWQS Regulations, mixing zones are authorized for specific parameters and do not apply to the entire effluent discharged. Therefore, as indicated in its CWA 401 certification, DNER has authorized a mixing zone for the following parameters for the next permit term:

- Conventional pollutants (pH and dissolved oxygen);
- Non-conventional pollutants (total nitrogen, color, cyanide, surfactants, turbidity, and sulfide (as H_2S) ;
- Metals (copper, nickel, mercury, silver and zinc); and
- Acute and chronic toxicity.

Water quality-based effluent limitations have been developed for the parameters listed above based on a CID of 212:1. All other parameters limited in the permit have been established with no dilution allowances. Additional information on the basis of these limitations is provided in Part II.A of this Fact Sheet.

As part of authorizing a mixing zone, DNER requires that PRASA conduct a one year monitoring program to obtain the necessary data to validate the Mixing Zone and ensure that water quality standards are met at the edge of the mixing zone. Consistent with DNER's CWA 401 certification on this permit action, in addition to CWA section 301(h) requirements, receiving water monitoring on an annual basis has been established in the permit.

E. Compliance Orders/Consent Decrees

The Permittee has a Consent Decree with the Agency (civil action no 06-16-24 (sec)) in which the facility is included. This consent decree does not affect this permit action.

F. Summary of Basis for Effluent Limitations and Permit Conditions - General

The effluent limitations and permit conditions in the permit have been developed to ensure compliance with the following, as applicable:

- Clean Water Act (CWA) section 401 certification requirements;

- NPDES regulations (40 CFR Part 122);
- Modifying Secondary Treatment Requirements Under Section 301(h) of the CWA(40 CFR Part 125, Subpart G);
- PRWQS Regulations (2022);
- Biosolids (Sewage Sludge) Requirements (40 CFR Part 257, 258, and 503); and
- Pretreatment Requirements (40 CFR Part 403).

PART II. RATIONALE FOR EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

CWA section 301(b) and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable technology-based requirements where necessary to achieve applicable water quality standards. In addition, 40 CFR 122.44(d)(1)(i) requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that cause, have the reasonable potential to cause, or contribute to an exceedance of a water quality criterion, including a narrative criterion. The process for determining reasonable potential and calculating water quality-based effluent limits (WQBELs) is intended to protect the designated uses of the receiving water, and achieve applicable water quality criteria. Where reasonable potential has been established for a pollutant, but there is no numeric criterion for the pollutant, WQBELs must be established using (1) EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

The effluent limitations and permit conditions in the permit have been developed to ensure compliance with all federal and state regulations, including PRWQS Regulations. The basis for each limitation or condition is discussed below.

A. Effluent Limitations

The permit establishes **both Technology-based Effluent Limitations (TBELs) and WQBELs** for several pollutants and the basis for these limitations are discussed below**.**

1. **Flow:** An effluent limitation for flow has been established in the permit for **16 MGD** as a Daily Maximum. Monitoring conditions are applied pursuant to 40 CFR 122.21(j)(4)(ii) and DNER's WQC.

   The frequency monitoring for flow shall be continuous with a flow meter.

2. **5-Day Biochemical Oxygen Demand (BOD_5):** The effluent concentration and percent removal limitations are based on the federal definition of primary or equivalent treatment at 40 CFR 125.60, EPA's 2014 Tentative Decision document, and an evaluation of existing effluent quality performed by EPA. In addition, PRWQS Regulations provide a narrative water quality criterion for BOD that states the allowable level of BOD will be determined based on a cases-by-case basis with consideration of the assimilative capacity of the receiving water and compliance with the dissolved oxygen standard. The EPA has carried over the effluent limitations for BOD_5 from the existing permit. A mass-based limitation of **1,872.76** kg/day has been established based on an average monthly design flow of **8 MGD**. An average monthly limit of 30% removal has also been established in accordance with 40 CFR 125.60. Between 2020 and 2022, monthly average removal rates for BOD_5 ranged between 52 (April/2022) and 85 percent (October/2021 and December/2021). These limitations combined with a monitoring and reporting only requirement for dissolved oxygen will assure attainment of the narrative water quality criterion for BOD.

   The permit also requires influent monitoring and reporting in accordance with 40 CFR 122.44(i) to meet the requirement of the percent removal limitation (see Part II C.1.—Monitoring Requirements— of this Fact Sheet).

   The monitoring frequency of twice per week with a 24-hour composite sample type has been carried over from the existing permit.

3. **Total Suspended Solids (TSS):** The effluent concentration and percent removal limitations are based on the federal definition of primary or equivalent treatment at 40 CFR 125.60, EPA's 2014 Tentative Decision document, and an evaluation of existing effluent quality performed by EPA. In addition, PRWQS Regulations provide a narrative water quality criterion for TSS that states that solids from wastewater sources shall not cause deposition in or be deleterious to the existing or designated uses of the water body. The EPA has carried over the effluent limitations for BOD_5 from the existing permit. The permit establishes an average monthly limitation of 70 mg/l and a monitoring and reporting only requirement for an average weekly. A mass-based limitation of **2,116.8** kg/day has been established based on an

average monthly design flow of **8** MGD. An average monthly limit of 50% removal for TSS has been carried over from the existing permit and is based on Best Professional Judgment. This is a higher removal rate than required by section 301(h) regulations at 40 CFR 125.60 since the facility has the ability to achieve a higher removal rate through the addition of polymers. Removal rates for TSS ranged between 76% (April/2022 and October/2022) and 97% (September/2021).

The permit also requires influent monitoring and reporting in accordance with 40 CFR 122.44(i) to meet the requirement of the percent removal limitation (Part II C.1.—Monitoring Requirements— of this Fact Sheet).

The monitoring frequency of twice per week with a 24-hour composite sample type has been carried over from the existing permit.

4. **pH:** The permittee has not requested a modification from secondary treatment standards at 40 CFR 133 for pH. Therefore, the exiting permit established effluent limitations for **pH** based on the secondary treatment standards of **6.0 to 9.0** pH standard units. Review of effluent data indicates that PRASA will generally be able to meet these effluent limitations at the Aguadilla RWWTP. An instantaneous minimum limitation of 6.0 pH standard units and an instantaneous maximum limitation of 9.0 pH standard units have been carried over from the existing permit.

   The monitoring frequency of once per day with a grab sample type has been carried over from the existing permit.

5. **Temperature:** The effluent limitation for temperature is based on the water quality criterion for all waters in Puerto Rico as specified in Rule 1303.1 D of PRWQS Regulations, and the WQC.
6. **Enterococci Density**: The discharge consists of domestic sewage that is a source of pathogens. To ensure that the recreational use of the water body is met, a compliance schedule for the first 3 years of the permit and an effluent limitations for fecal coliform were developed in the permit and are based on the water quality criterion for **Class SB** waters as specified in Rule 1303.2 B. 2.c of PRWQS Regulations, and the WQC. EPA establishes a monitoring frequency of the enterococci density in terms of geometric mean of at least five representative samples taken sequentially shall not exceed 35 colonies/100 mL. No single sample should exceed the upper confidence limit of 75% using 0.7 as the log standard deviation until sufficient site data exist to establish a site specific log standard deviation.
7. **Dissolved Oxygen (DO):** The effluent limitation is based on the water quality criterion for **Class SB** waters as specified in Rule 1303.2. B.2.a. of PRWQS Regulations, and the WQC.
8. **Total Residual Chlorine (TRC):** TRC has been identified as a contaminant of concern since the facility uses chlorination to disinfect the effluent to minimize the discharge of pathogens. Rule 1303.1.I.1 of PRWQS Regulations establishes a water quality criterion for **Class SB** waters of **500** µg/L.
9. **Color:** The effluent limitation is based on the water quality criterion for **Class SB** waters as specified in Rule 1303.2.B.2.e of PRWQS Regulations, and the WQC.
10. **Turbidity:** The effluent limitation is based on the water quality criterion for **Class SB** waters as specified in Rule 1303.2.B.2 f of PRWQS Regulations, and the WQC.
11. **Taste and Odor Producing Substances**: The effluent limitation is based on the water quality criterion for **Class SB** waters as specified in Rule 1303.2.B.2.g of PRWQS Regulations, and the WQC.
12. **Surfactants**: The effluent limitation, not to exceed 500 µg/L at the edge of the mixing zone, is based on the water quality criterion for **Class SB** waters as specified in Rule 1303.2 B.2.i of PRWQS Regulations, and the **WQC**.
13. **Oil and Grease:** The effluent limitation is based on the water quality standards as specified in Rule 1303.1.H of PRWQS Regulations, and the WQC.
14. **Suspended Colloidal or Settleable Solids**: The effluent limitation is based on the water quality standards as specified in Rule 1303.1.E of PRWQS Regulations, and the WQC.
15. **Solids and Other Matters**: The effluent limitation is based on the water quality standards as specified in Rule 1303.1.A of PRWQS Regulations, and the WQC.

16. **TKN:** The monitoring requirement for this parameter is needed for the assessment of Fairfield dissolved oxygen demand in a mixing zone discharge.

17. **Copper, Mercury, Nickel, Free Cyanide, Residual Chlorine, Silver, Sulfide, and Zinc**: The effluent limitation is based on the water quality standards as specified in Rule 1303.1.I.1 of PRWQS Regulations; Rule 1305 Mixing Zones, and the WQC.

18. **Other Pathogenic Organisms.** The effluent limitation for Other Pathogenic Organisms is based on the water quality criterion for all waters in Puerto Rico as specified in Rule 1303.1 I of PRWQS, and the WQC.

B. Effluent Limitations Summary Table

1. Outfall Number 001

Parameter	Units	Effluent limitations					
		Averaging period	Highest Reported Value (1)	Existing limits	Interim limits	Final limits	Basis
BOD_5	mg/L	Daily maximum Average monthly	-- *(maximum daily)*	Monitor only 16.0	n/a	61.93	TBEL
BOD_5 percent removal	%	Monthly minimum	85 *(lowest reported value)*	30	n/a	30	TBEL
Color	Pt-Co	Daily maximum	30	65	n/a	Monitor only	WQBEL
Copper	µg/L	Daily maximum	24	505.05	n/a	36.03	WQBEL
Free Cyanide	µg/L	Daily maximum	5.76	10.70	n/a	7.5	WQBEL
Dissolved Oxygen	mg/L	Daily Minimum	4.93 *(lowest reported value)*	Monitor only	n/a	Monitor only	WQBEL
Enterococci Density	col/100 mL	Daily maximum	2,420	35/100 mL	n/a	35/100 mL	WQBEL
Mercury	µg/L	Daily maximum	0.03	0.344	n/a	0.19	WQBEL
Flow	MGD	Daily maximum Average monthly	12.58	16.0 8.0	n/a	16.0	WQBEL
Nickel	µg/L	Daily maximum	37.1	9.22	n/a	28.04	WQBEL
Oil and Grease	Mg/L	Daily maximum	22.8	Monitor only	n/a	Monitor only	WQBEL
pH	SU	Daily maximum Daily minimum	6.49-7.66	Shall always lie between 6.0 – 9.0	n/a	Shall always lie between 6.0 – 9.0	WQBEL
Residual Chlorine	µg/L	Daily maximum	--	0.5 mg/L	n/a	500	WQBEL
Silver	µg/L	Daily maximum	5	13.8	n/a	4.42	WQBEL
Sulfide	µg/L	Daily maximum	36.1	107	n/a	158.6	WQBEL
Surfactants	µg/L	Daily maximum	3,100	8,305	n/a	4,760	WQBEL
Temperature	°C	Daily maximum	30.8	32.2	n/a	31.8	WQBEL
TKN	µg/L	Daily maximum	28,700	Monitor only	n/a	Monitor only	TBEL
Total Nitrogen	µg/L	Daily maximum	--	--	n/a	55,400	WQBEL

Parameter	Units	Effluent limitations					
		Averaging period	Highest Reported Value (1)	Existing limits	Interim limits	Final limits	Basis
TSS	mg/L	Average monthly Daily maximum	-- *(daily maximum)*	70 Monitor only	n/a	Monitor only	TBEL
TSS percent removal	%	Monthly minimum	97 *(lowest reported value)*	50	n/a	50	TBEL
Turbidity	NTU	Daily maximum	65	176	n/a	98	WQBEL
Suspended, Colloidal or Settleable Solids	mL/L	Daily maximum	--	Monitor only	n/a	Monitor only	WQBEL
Zinc (Zn) (µg/L) [2,3,4]	µg/L	Daily maximum	159	151.06	n/a	249.66	WQBEL
Whole Effluent Toxicity (WET)	TUa	--	--	Monitor only	24-hr Composite	Monitor only	WQBEL

Notes, Footnotes and Abbreviations

Note: Dashes (--) indicate there are no effluent data, no limitations, or no monitoring requirements for this parameter.
(1) Wastewater data from DMRs dated November 30, 2020, to October 31, 2022.

2. Outfall 001 Narrative Limitations

a. **Color** – Shall not be altered by other than natural causes.
b. **Oil and Grease** – The waters of Puerto Rico shall be substantially free from floating non-petroleum oils and greases as well as petroleum derived oils and greases.
c. **Solids and Other Matter** – The waters of Puerto Rico shall not contain floating debris, scum, or other floating materials attributable to discharges in amounts sufficient to be unsightly or deleterious to the existing or designated uses of the water body.
d. **Suspended, Colloidal or Settleable Solids** – Solids from wastewater sources shall not cause deposition in or be deleterious to the existing or designated uses of the waters.
e. **Taste and Odor-producing Substances** – Shall not be present in amounts that will interfere with primary contact recreation or will render any undesirable taste or odor to edible aquatic life.

C. Monitoring Requirements

NPDES regulations at 40 CFR 122.48 require that all permits specify requirements for recording and reporting monitoring results. The Part III of the Permit establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements for this facility.

1. **Influent Monitoring Requirements**

   To calculate percent removal values, influent monitoring is required for BOD_5 and TSS in accordance with 40 CFR 133.102. Influent monitoring must be conducted before any treatment, other than de-gritting, and before any addition of any internal waste stream.

2. **Effluent Monitoring Requirements**

   Effluent monitoring frequency and sample type have been established in accordance with the requirements of 40 CFR 122.44(i) and recommendations in EPA's TSD. Consistent with 40 CFR Part 136 monitoring data for toxic metals must be expressed as total recoverable metal. Effluent monitoring and analyses shall be conducted in accordance with EPA test procedures approved under 40 CFR Part 136, Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, as amended. For situations where there may be interference, refer to Solutions to Analytical Chemistry Problems with Clean Water Act Methods (EPA 821-R-07-002). A licensed chemist authorized to practice

the profession in Puerto Rico shall certify all chemical analyses. All bacteriological tests shall be certified by a microbiologist or licensed medical technologist authorized to practice the profession in Puerto Rico.

The sampling point for Outfall 001 shall be located immediately after the primary flow measuring device of the effluent of the treatment system.

D. Compliance with Federal Anti-Backsliding Requirements and Puerto Rico's Anti-Degradation Policy

Federal regulations at 40 CFR 131.12 require that state water quality standards include an anti-degradation policy consistent with the federal policy. The discharge is consistent with the anti-degradation provision of 40 CFR 131.12, 72 Federal Register 238 (December 12, 2007, pages 70517-70526) and DNER's *Anti-Degradation Policy Implementation Procedure* in Attachment A of PRWQS Regulations. In addition, CWA sections 402(o)(2) and 303(d)(4) and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. Further, the Region 2 Antibacksliding Policy provides guidance regarding relaxation of effluent limitations based on water quality for Puerto Rico NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit with some exceptions where limitations may be relaxed.

- The effluent limitations in the permit are at least as stringent as the effluent limitations in the existing permit, with the exception of effluent limitations for **Color, Nickel, Sulfide and Zinc**. The effluent limitations for these pollutants are **less stringent** that those in the existing permit. This relaxation of effluent limitations is consistent with the anti-backsliding requirements of CWA section 401(o), 40 CFR 122.44(l), EPA Region 2's Anti-backsliding Policy dated August 10, 1993, and Puerto Rico's Anti-Degradation Policy Implementation Procedure established in PRWQS Regulations. **CWA Sec. 402(o**)(2)(B)(i) allows backsliding if information is available which was not available at the time of permit issuance and would have justified a less stringent effluent limitation at the time of permit issuance. EPA has determined that it is appropriate to relax the effluent limitation for these parameters without violating anti-backsliding provisions of the CWA, in accordance with section 402(o)(2), since one of the exceptions to the provisions has been satisfied; and section 402(o)(3) since it complies with DNER's WQS which include antidegradation requirements. The DNER WQC constitutes a determination that the limit is sufficient to assure that the water quality standards are or will be attained.

- Existing effluent limitations for **Nitrogen and Fecal Coliforms** have been **removed** based on CWA section 402(o)(2)(B)(i). CWA section 402(o)(2)(B)(i) authorizes the backsliding of effluent limitations if information is available which was not available at the time of permit issuance that would have justified the application of a less stringent effluent limitation at the time of permit issuance. Based on review of effluent data since issuance of the existing permit, the modified discharge does not show a reasonable potential for the exceedance of water quality criteria for these parameters.

- The proposed NPDES permit contains water quality-based effluent limitations for **Enterococci Density and Total Nitrogen** which were **not included** in the previous NPDES permit. Pursuant to Section 401 (d) of the Act and 40 C.F.R. 122.44 (d) and 124.55, all State certified limitations and requirements contained in a Section 401 certification must be incorporated into a NPDES permit issued by EPA. The water quality-based limitations referenced in this paragraph have been included in the NPDES permit, based on DNER's Water Quality Certificate.

- The water quality-based effluent limitation from the previous permit for **Effluent BOD (5-day), Cyanide Free, Copper, Mercury, Silver, Surfactants, Temperature and Turbidity** have been replaced with a **more stringent** water quality-based limitation in the WQC issued by the DNER. Pursuant to Section 401 (d) of the Act and 40 C.F.R. 122.44 (d) and 124.55, all State certified limitations and requirements contained in a Section 401 certification must be incorporated into a NPDES permit issued by EPA. The water quality-based effluent limitations referenced in this paragraph have been included in the draft NPDES permit, based on DNER's Water Quality Certificate.

PART III. RATIONALE FOR STANDARD AND SPECIAL CONDITIONS

A. Standard Conditions

In accordance with 40 CFR 122.41, standard conditions that apply to all NPDES permits have been incorporated by reference in Part IV.A.1 of the permit and expressly in Attachment B of the permit. The Permittee must comply with all standard conditions and with those additional conditions that are applicable to specified categories of permits under 40 CFR 122.42 and specified in Part IV.A.2 of the Permit.

B. Special Conditions

In accordance with 40 CFR 122.42 and other regulations cited below, special conditions have been incorporated into the permit. This section addresses the justification for special studies, additional monitoring requirements, Best Management Practices, Compliance Schedules, and/or special provisions for POTWs as needed. The special conditions for this facility are as follows:

1. **Special Conditions from the Water Quality Certificate**

In accordance with 40 CFR 124.55, EPA has established Special Conditions from the WQC in the permit that DNER determined were necessary to meet PRWQS Regulations. The Special Conditions established in this section are only those conditions from the WQC that have not been established in other parts of the permit.

a. The flow of discharge 001 shall not exceed the limitation of **60,566.40 m^3/day (16.0 MGD)** as daily maximum. No increase in flow of discharge 001 shall be authorized without a recertification from the Department of Natural and Environmental Resources (DNER).

b. The permittee shall require that any industrial user of the treatment system, to comply with the requirements of Section 307 and 308 of the CWA, by requiring to each user to provide pretreatment to all industrial wastewater prior to the discharge to such system as determined by the Environmental Protection Agency (EPA) and the DNER. The permittee shall require to each industrial user to comply with Section 308 of the CWA by requiring each user to perform the necessary monitoring to verify compliance with the level of pretreatment required. Each industrial user shall establish and maintain good records in relation to their pretreatment and shall allow the entry to their facilities to EPA and the DNER personnel at any time for any appropriate inspection.

c. The Permittee shall provide written notice to the DNER's Water Quality Area and the Municipal Water Programs Branch of EPA's Region 2 Caribbean Environmental Protection Division of the following changes that may affect the treatment system:

   1. Any new introduction of pollutants to the treatment system, not exclusively sanitary, coming from an industrial facility. If the industrial facility is an existing significant industrial user, shall notify only when the new introduction of pollutants exceeds 1,000 gallons/day.

   2. Any significant change in volume or character of pollutants being introduced into the treatment system by an existing source that may cause a variation in the quality of the effluent to be discharged.

   Such notice shall include information of the quality and quantity of the effluent to be introduced into such treatment system and the anticipated impact of such change in quantity and/or quality of the effluent to be discharged from the system.

d. Prior to the construction of any additional treatment system or the modification of the existing one, the permittee shall obtain the approval from the DNER of the engineering report, plans and specifications.

e. The permittee shall install, maintain, and operate all water pollution control equipment in such manner as to be in compliance with the Applicable Rules and Regulations.

f. No toxic substances shall be discharged, in toxic concentrations, other than those allowed as specified in the NPDES permit. Those toxic substances included in the permit renewal application, but not regulated by the NPDES permit, shall not exceed the concentrations as specified in the applicable regulatory limitations.

g. The waters of Puerto Rico shall not contain any substance attributable to discharge 001, at such concentration which, either alone or as result of synergistic effects with other substances, is toxic or produces undesirable physiological responses in human, fish or other fauna or flora.

h. The discharge 001 shall not cause the presence of oil sheen in the receiving water body.

i. All sample collection, preservation, and analysis shall be carried out in accordance with the Title 40 of the Code of Federal Regulations (40 CFR), Part 136. A licensed chemist authorized to practice the profession in Puerto Rico shall certify all chemical analyses. All bacteriological tests shall be certified by a microbiologist or licensed medical technologist authorized to practice the profession in Puerto Rico.

j. The permittee shall use the analytical method approved by the Environmental Protection Agency (EPA), with the lowest possible detection limit, in accordance with the 40 CFR, Part 136 for **Sulfide** (as S). Also, the permittee shall complete the calculations specified in Method 4500-S-2 F, Calculation of Un-ionized Hydrogen Sulfide, of Standards Methods 18th Edition, 1992, to determine the concentration of undissociated H_2S. If the sample results of Dissolved Sulfide are below the detection limit of the EPA approved method established in the 40 CFR, Part 136, then, the concentration of undissociated H_2S shall be reported as "below detection limit".

k. The samples taken for the analysis of free **Cyanide** and **Mercury** shall be analyzed using the analytic method approved by the EPA with the lowest possible detection level, in accordance with Rule 1306.8 of the Puerto Rico Water Quality Standards Regulation (PRWQSR), as amended.

l. The flow-measuring device for the discharge 001, shall be periodically calibrated and properly maintained. Calibration and maintenance records must be kept in compliance with the applicable Rules and Regulations.

m. The sampling point for discharge 001 shall be located immediately after the primary flow-measuring device of the effluent.

n. The sampling point for discharge 001 shall be labeled with an 18 inches per 12 inches (minimum dimension) sign that reads as follows:

"Punto de Muestreo para la Descarga 001"

o. All water or wastewater treatment facilities, whether publicly or privately owned, must be operated by a person licensed by the Examination Board of Water and Wastewater Treatment Plants Operators of Puerto Rico.

p. The solid waste such as sludge, screenings and grit, generated due to the operation of the Aguadilla Regional Wastewater Treatment Plant (RWWTP) shall be:

1. Disposed in compliance with the applicable requirements established in the 40 CFR, Part 257. A semiannual report shall be submitted to the Water Quality Area and the Land Pollution Control Area of the DNER and to the Municipal Water Programs Branch of EPA's Region 2 Caribbean Environmental Protection Division, notifying the method or methods used to dispose the solid waste generated in the facility. Also, copy of the approval or permit applicable to the disposal method used shall be submitted, if any.

2. Transported adequately in such way that access is not gained to any water body or soil. In the event of a spill of solid waste on land or into a water body, the permittee shall notify the Point Sources Permits Division of the DNER's Water Quality Area in writing within a term no longer than twenty-four (24) hours after the spill to the following electronic address: bypass@drna.pr.gov.

   This notification shall include the following information:

   i. spilled material,
   ii. spilled volume,
   iii. measures taken to prevent the spilled material to gain access to any water body.

This special condition does not relieve the permittee from its responsibility to obtain the corresponding permits from the DNER's Land Pollution Control Area and other state and federal agencies, if any.

q. A log book must be kept for the material removed from the RWWTP, such as sludge, screenings and grit, detailing the following items:

1. removed material, date and source of it;
2. approximate volume and weight;
3. method by which it is removed and transported;
4. final disposal and location;
5. person that performs the service.

A copy of the Non-Hazardous Solid Waste Collection and Transportation Services Permit issued by the authorized official from the DNER must be attached to the log book.

r. The sludge produced within the facility due to the operation of the treatment system shall be analyzed and all constituents shall be identified as required by “Standards for the Use or Disposal of Sewage Sludge” (40 CFR, Part 503). The sludge shall be disposed properly in such manner that water pollution or other adverse effects to surface waters or to ground water do not occur.

s. If any standard or prohibition to the sanitary sludge disposal is promulgated and said prohibition or standard is more stringent than any condition, restriction, prohibition or standard contained in the NPDES permit, such permit shall be modified accordingly or revoked and reissued to be adjusted with regard to such prohibition or standard.

t. The DNER has defined and authorized an Interim Mixing Zone (IMZ) pursuant to Rule 1305 of the PRWQSR.

1. The IMZ is delineated by the following points (See Diagram I):

	Geographic Coordinates*
Point 1	Lat. 18º 24' 26.805” Long. 67º 11' 21.530”
Point 2	Lat. 18º 24' 28.917” Long. 67º 11' 20.982”
Point 3	Lat. 18º 24' 27.979” Long. 67º 11' 16.969”
Point 4	Lat. 18º 24' 31.508” Long. 67º 11' 15.123”
Point 5	Lat. 18º 24' 30.541” Long. 67º 11' 13.081”
Point 6	Lat. 18º 24' 25.424” Long. 67º 11' 15.729”

* NAD 83 State Plane Coordinates

The diffuser is a one hundred (100) degree “Y” shaped structure with two three hundred seventy four (374) foot long legs, each consisting of three sections of 30 inches, 24 inches, and 18 inches in diameter; decreasing toward the offshore ends of the structure. Each leg of the diffuser has 15 risers spaced 24 feet apart, with the exception of the last riser that is 12 feet from the next closest port. The risers are 12 inches diameter and extend upward approximately 4 feet above the seafloor. Each riser contains a port or ports that discharge effluent horizontally. The last riser on each leg of the diffuser

has a single 7 inches diameter port, discharging seaward and parallel to the diffuser. The remaining 14 risers each have two ports of the same diameter, discharging back-to-back (180 degrees from each other) perpendicular to the diffuser.

Each leg of the diffuser has 29 ports (a single port on the end riser and two ports on the remaining 14 risers), with diameters of 4, 4.5, 4.75, 5, and 7 inches, increasing toward the seaward ends of the structure. The port centerlines are 47 to 49 feet below the water surface. There are three pairs of each of the 5, 4.75, and 4.5 inches ports and five pairs of the 4 inch ports. The 5 inches ports are located in the 18 inches diffuser section, the 4.75 and 4.5 inches ports are located in the 24 inches diffuser section and the 4 inches ports are located in the 30 inches diffuser section.

A total of 10 ports along each leg of the diffuser shall be opened: the 7 inches port, three 5 inches ports, three 4.75 inches ports, and three 4.5 inches ports, with one port open on each riser and alternating ports discharging in opposite directions.

2. The mixing zone sampling stations shall be located at the six (6) points described in Part “a” of this special condition.

3. The background sampling station shall be located one hundred (100) meters from Point 2 or Point 4 of the mixing zone, depending on the current direction at the time of sampling. The background stations shall be located at the following geographic coordinates:

	Geographic Coordinates*
BGW	Lat. 18° 24’ 29.699” Long. 67° 11’ 24.289”
BGE	Lat. 18° 24’ 34.421” Long. 67° 11’ 13.608”

* NAD 83 State Plane Coordinates

4. The permittee shall maintain records of the equipment used to situate at the mixing zone boundaries. Such records shall include the date when the equipment was obtained or leased, calibration date, serial number, model, etc.

   To identify the location of the sampling points of the mixing zone and the background, the permittee shall use the procedure established in the EPA-QA/QC for 301(h) Document (Table D-1 Example ZID Boundary Stations Locations).

   If the permittee determines to use another method to identify the sampling points of the mixing zone, the permittee shall, prior to the utilization of such method, obtain written approval from the DNER.

5. The IMZ is defined for the following parameters:

Parameter	**Daily Maximum DischargeLimitation at Outfall Serial Number 001**	**Daily Maximum Limitation at the Edge of the MZ**
Color	Monitoring Only	Ω
Copper (Cu) (µg/L)	36.03	3.73
Cyanide, Free (CN) (µg/L)	7.5	1.0
Dissolved Oxygen (mg/L)	Monitoring Only	≥5.0
Mercury (Hg) (µg/L)	0.19	0.051
Nickel (Ni) (µg/L)	28.04	8.28
pH (SU)	6.0 – 9.0	7.3 – 8.5
Residual Chlorine (µg/L)	500	7.5
Silver (Ag) (µg/L)	4.42	2.24
Sulfide (undissociated H_2S) (µg/L)	158.6	2.0
Surfactants (as MBAS) (µg/L)	4,760	500

Parameter	Daily Maximum DischargeLimitation at Outfall Serial Number 001	Daily Maximum Limitation at the Edge of the MZ
Temperature °F (°C)	89.2 °F (31.8 °C)	86 °F (30 °C)
Total Nitrogen (NO_3, NO_2, TKN) (mg/L)	55,400	5,000
Turbidity (NTU)	98	10
Zinc (Zn) (µg/L)	249.66	85.62

Ω The color at the edge of the mixing zone shall not exceed the color of the receiving water body (background monitoring station).

6. Monitoring samples for these parameters shall be taken at the sampling point for discharge 001, the background monitoring stations and at the sampling stations of the IMZ. The discharge shall comply with the water quality standards as effluent limitations at sampling point for discharge 001 for all the other substances.

7. The monitoring samples at the six (6) stations in the boundaries of the IMZ and the background monitoring stations shall be taken at three (3) depths in each station: 10%, 50%, 90% of the depth.

8. Solids from wastewater sources shall not cause deposition in or be deleterious to the existing or designated uses of the receiving water body.

9. The discharge shall not cause the growth or propagation of organisms that negatively disturb the ecological equilibrium in the areas adjacent to the mixing zone.

10. The mixing zone shall be free of debris, scum, floating oil and any other substances that produce objectionable odors.

11. The permittee shall maintain in good operating conditions the discharge system [discharge outfall (land and submarine), diffuser, ports, etc.]. The discharge system shall be inspected during the third year of the effectiveness of the NPDES permit. This inspection should be performed to determine if any repairs, replacements, etc. are necessary in the system. A report of such inspection shall be submitted to the DNER's Water Quality Area and the Municipal Water Programs Branch of the EPA's Region 2 Caribbean Environmental Protection Division no later than sixty (60) days after the performance of the inspection.

12. The DNER can require that the permittee conduct bioaccumulation studies, dye studies, water quality studies or any other pertinent studies. If the DNER require one or more of the aforementioned studies, the permittee will be notified to conduct such study(ies). One hundred and twenty (120) days after the notification of the DNER, the permittee shall submit, for evaluation and approval of the DNER, a protocol to conduct such study(ies). Sixty (60) days after the DNER approval, the permittee shall initiate such study(ies). Ninety (90) days after conducting such study(ies), the permittee shall submit a report that includes the results of such study(ies).

15. The permittee shall implement a one-year monitoring program to obtain the necessary data to validate the IMZ. The monitoring program shall consist of the sampling of the parameters included in Part "e" of this special condition to verify compliance with the applicable provisions of the PRWQSR and a dye study to validate the mathematical model used to determine the critical initial dilution and verify the behavior of the plume within the mixing zone. The monitoring program shall be conducted as follows:

    i. The permittee shall conduct two (2) sampling events at the six (6) stations at the boundaries of the IMZ, at the background sampling station and at the sampling point of discharge 001, during two (2) seasons (summer and winter). One sampling event shall be conducted during each season.

    ii. The dye study shall be conducted once, at the same time as one of the sampling events of such season.

16. A Protocol and Quality Assurance Project Plan (QAPP) for the monitoring program described in Part "**t**" of this special condition, shall be submitted to the Water Quality Area of the DNER for its approval, no

later than ninety (90) days after the EDP. The monitoring program shall be conducted during the third year of the effectiveness of the NPDES permit (the period beginning on EDP + 24 months and lasting through EDP + 36 months.

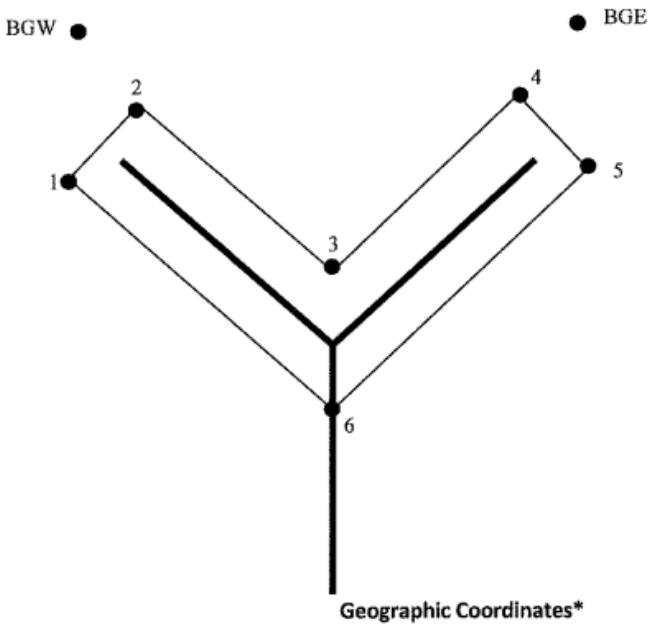
17. If the mathematical model is validated as established in the applicable provisions of the PRWQSR and in the Mixing Zone and Bioassays Guidelines, a final mixing zone authorization will be issued by DNER. Nevertheless, if the mathematical model is not validated, the DNER may revoke the IMZ authorization in accordance with Rule 1305.14 of the PRWQSR. In such case, the permittee must submit a compliance plan according to Rule 1305.16 of the PRWQSR; and the NPDES permit shall be modified in accordance with this determination.

18. The DNER can allow that the permittee use alternative methods for the mixing zone validation if such methods comply with the applicable federal and state regulations or when new technology is developed that produce results technically and environmentally more reliable than those produced by the methods described in this special condition.

19. The authorization for the mixing zone will not be transferable and does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, or any infringement of Federal or State laws or regulations.

DIAGRAM-I

Aguadilla RWWTP Mixing Zone



Geographic Coordinates*

Point 1	Lat. 18° 24' 26.805” Long. 67° 11' 21.530”
Point 2	Lat. 18° 24' 28.917” Long. 67° 11' 20.982”
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Point 6	Lat. 18° 24' 25.424″ Long. 67° 11' 15.729″

*NAD 83 State Plane Coordinates

2. **Whole Effluent Toxicity Testing**
EPA has imposed the quarterly testing requirement to collect data necessary to determine whether this discharge has the reasonable potential to cause or contribute to an exceedance of Puerto Rico's water quality standards for toxicity, pursuant to water quality based permitting requirements at 40 CFR 122.44(d)(1), which requires EPA and delegated states to evaluate each National Pollutant Discharge Elimination System (NPDES) permit for the potential to exceed state numeric or narrative water quality standards, including those for toxics, and to establish effluent limitations for those facilities with the "reasonable potential" to exceed those standards. These federal regulations require both chemical specific limits, based on the state numeric water quality standards or other criteria developed by EPA, and whole effluent toxicity effluent limits.

3. **Best Management Practices (BMP) Plan**

In accordance with 40 CFR 122.2 and 122.44(k), BMPs are schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution to waters of the United States. The Permittee is required to develop a BMP Plan in Part IV.B.3.a of the permit to control or abate the discharge of pollutants.

4. **Compliance Schedules**

This permit does not authorize any compliance schedules.

5. **Other Special Conditions**

The permit establishes additional special conditions for biosolids management and pretreatment requirements.

PART IV. COMPLIANCE WITH APPLICABLE PROVISIONS OF OTHER FEDERAL LAWS OR EXECUTIVE ORDERS

A. Coastal Zone Management Act

Under 40 CFR 122.49(d), and in accordance with the Coastal Zone Management Act of 1972, as amended, 16 *United States Code* (U.S.C.) 1451 *et seq*. section 307(c) of the act and its implementing regulations (15 CFR Part 930), EPA may not issue an NPDES permit that affects land or water use in the coastal zone until the Permittee certifies that the proposed activity complies with the Coastal Zone Management Program in Puerto Rico, and that the discharge is certified by the Commonwealth of Puerto Rico to be consistent with the Commonwealth's Coastal Zone Management Program. As this activity has been permitted in the past, a reopener clause has been established that allows the permit to be modified or revoked based on the consistency determination requested by the permittee as part of this renewal process.

B. Endangered Species Act

Under 40 CFR 122.49(c), EPA is required pursuant to section 7 of the Endangered Species Act (ESA), 16 U.S.C. 1531 *et seq*. and its implementing regulations (50 CFR Part 402) to ensure, in consultation with the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) that the discharge authorized by the permit is not likely to jeopardize the continued existence of any endangered or threatened species or

adversely affect its critical habitat**.** On April 16, 2009, EPA designated PRASA (a non-Federal representative) to conduct informal consultations or prepare a biological assessment for Section 7 Consultations, according to 50 CFR 402.8. In the past, no federally listed endangered or threatened species, or critical habitat, are in the vicinity of the discharge. Therefore, it has been determined that the discharge is not likely to affect species or habitat listed under the ESA.

C. Coral Reef Protection

Under Executive Order 13089, Coral Reef Protection, EPA is required to ensure that discharge authorized under the permit will not degrade any coral reef ecosystem. No corals or coral ecosystems are in the vicinity of the discharge.

D. National Historic Preservation Act – Not applicable since this is a renovation.

E. Magnuson-Stevens Fishery Conservation and Management Act

Under 40 CFR 122.49, EPA is required to ensure that the discharge authorized by the permit will not adversely
Under 40 CFR 122.49, EPA is required to ensure that the discharge authorized by the permit will not adversely affect Essential Fish Habitat (EFH) as specified in section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), 16 U.S.C. 1801 *et seq*. As this activity has been permitted in the past, a reopener clause has been established that allows the permit to be modified or revoked based on the consistency determination. Therefore, a reopener clause has been established that allows the permit to be modified or revoked based on the findings of the Endangered Species Act consultation as it relates to the Magnuson-Stevens Fishery Conservation and Management Act.

F. Clean Water Act, Section 403 Ocean Discharge.

CWA Section 403 requires EPA to consider guidelines for determining potential degradation of the marine environment when issuing NPDES permits. These Ocean Discharge Criteria (40 CFR 125, Subpart M) are intended to “prevent unreasonable degradation of the marine environment and to authorize imposition of effluent limitations, including a prohibition on discharge, if necessary, to ensure this goal”. Based on the available information, EPA has determined that the discharge will not cause unreasonable degradation of the marine environment. A reopener provision has been included in the permit Part IV.B.5 that provides EPA the right to modify or revoke the permit based on any new data.

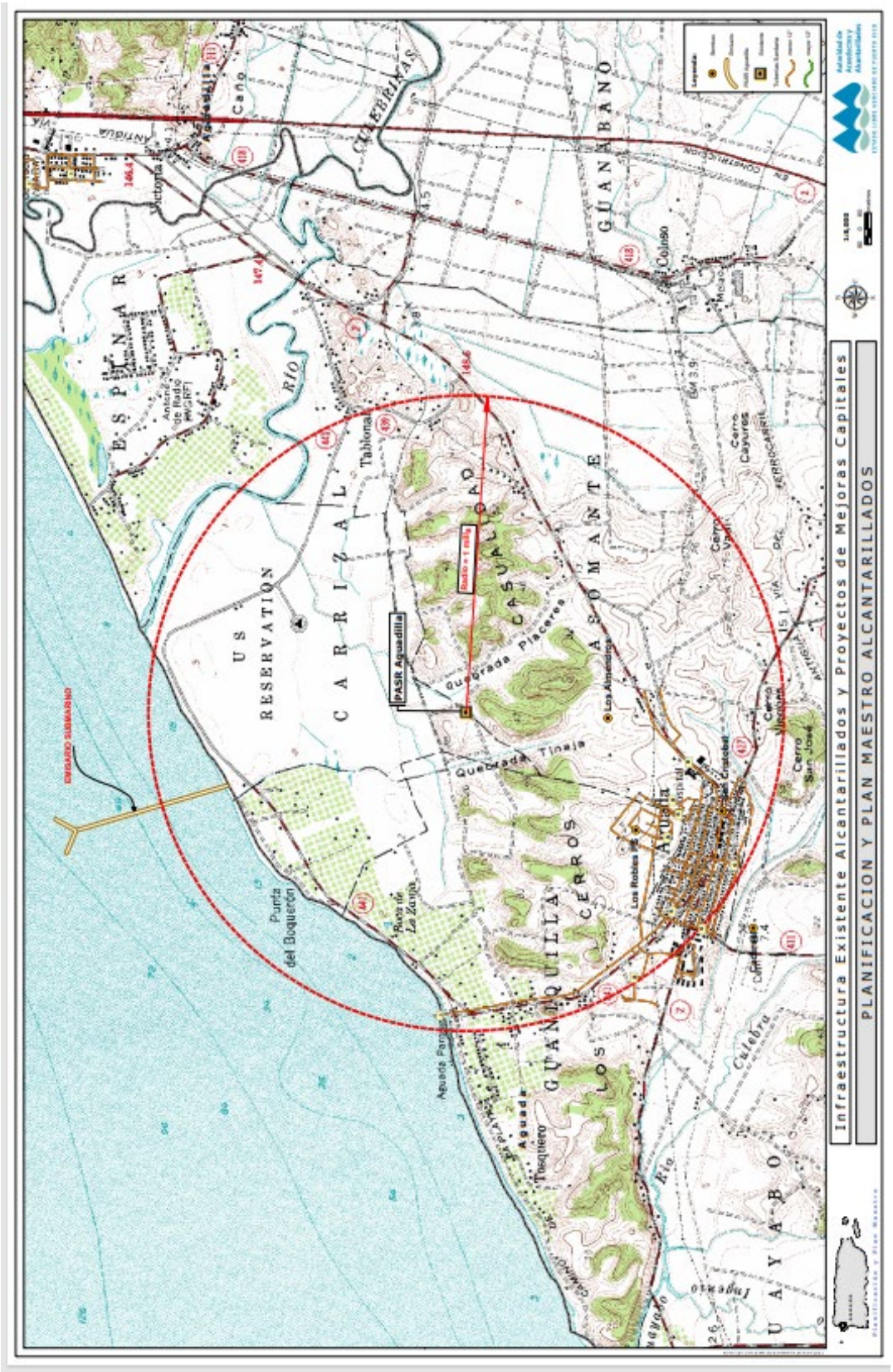
PART V. PUBLIC PARTICIPATION

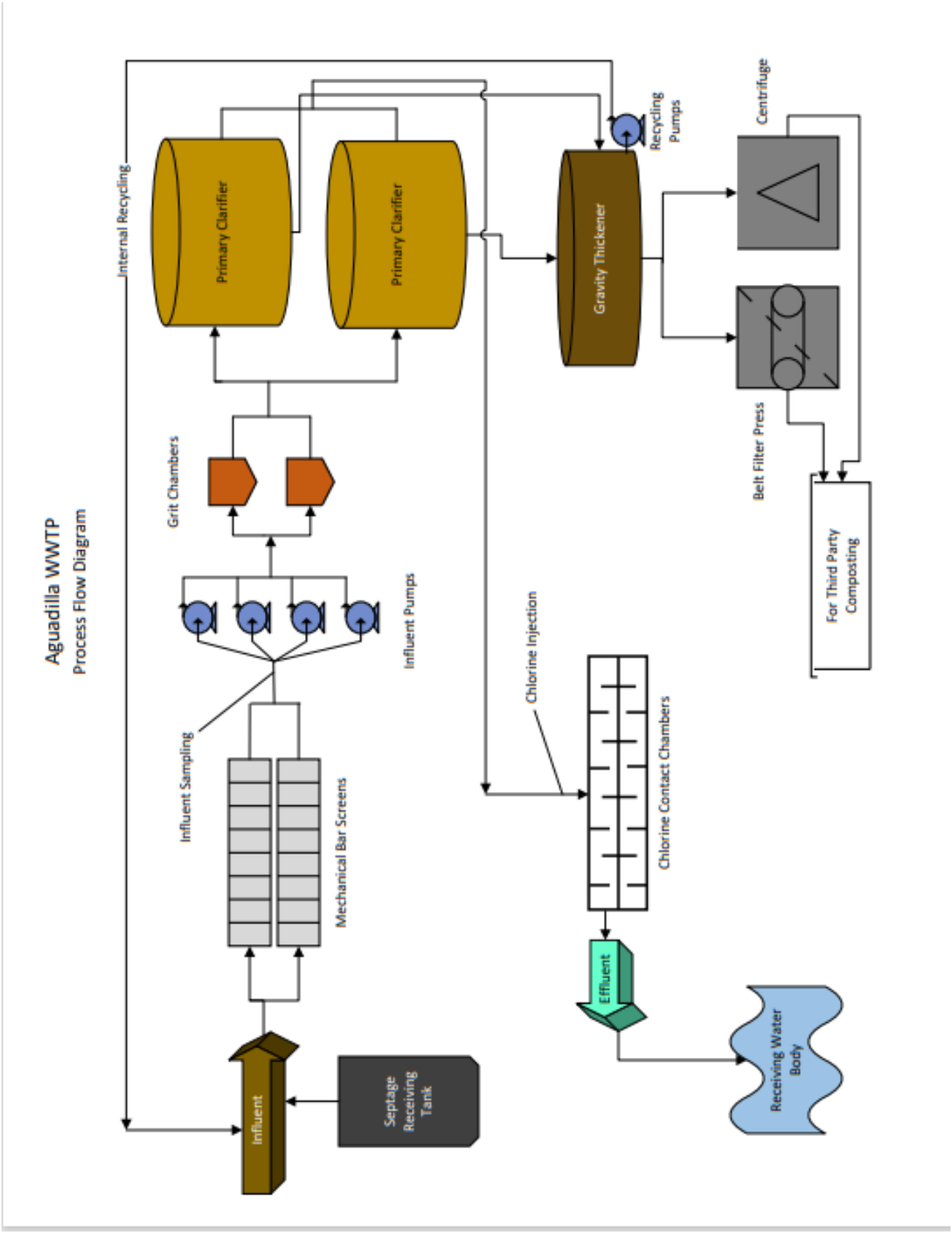
The procedures for reaching a final decision on the draft permit are set forth in 40 CFR Part 124 and are described in the public notice for the draft permit, which is published which is published on EPA’s website at https://www.epa.gov/npdes-permits/puerto-rico-npdes-permits. Included in the public notice are requirements for the submission of comments by a specified date, procedures for requesting a hearing and the nature of the hearing, and other procedures for participation in the final agency decision. EPA will consider and respond in writing to all significant comments received during the public comment period in reaching a final decision on the draft permit. Requests for information or questions regarding the draft permit should be directed to

Lalitssa López
EPA Region 2, Caribbean Environmental Protection Division
Permit Writer Phone: 787-977-5857
Permit Writer Email: lopez.lalitssa@epa.gov

ATTACHMENT A — FACILITY MAP AND FLOW SCHEMATIC

The facility map and flow schematic are attached as provided by the discharger in the application.




Aguadilla WWTP
Process Flow Diagram
Internal Recycling
Primary Clarifier
Primary Clarifier
Recycling Pumps
Gravity Thickener
Centrifuge
Belt Filter Press
For Third Party Composting
Grit Chambers
Influent Pumps
Influent Sampling
Mechanical Bar Screens
Chlorine Injection
Chlorine Contact Chambers
Effluent
Receiving Water Body
Influent
Septage Receiving Tank