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

FACT SHEET

DRAFT 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 Environmental Quality Board (EQB) 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 November 26, 2013**,** EQB 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 October 3, 2007**,** 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 **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 work (POTW) that treats sanitary wastewater through secondary treatment of the domestic sewage from **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 a Mayaguez Composting Facility.

Summary of Permittee and Facility Information

Permittee	Puerto Rico Aqueduct and Sewer Authority (PRASA)
Facility contact, title, phone	Mrs. Irma Lopez, Executive Director Compliance and Quality Control (787) 620-2270
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	8 / 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 SC waters

As indicated in the Puerto Rico Water Quality Standards (PRWQS) Regulations, the designated uses for Class SC 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 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 2007 and 2012 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 *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 EQB has authorized a mixing zone or dilution allowance for this discharge in accordance with Rule 1305 of PRWQS. 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 2008, PRASA submitted an application for a mixing zone to the EQB. No action was taken by EQB on this application. In 2012, PRASA submitted a revised mixing zone application due to redefined and updated critical condition values and a revised 30-port diffuser configuration. As a result, PRASA determined a CID of 191:1 using the UDKHDEN model based on the new diffuser configuration from 30 to 20 ports open and updated current speed and effluent flow rates. This is an increase from the dilution authorized in the existing permit where 151:1 was estimated by PRASA in its 1989 mixing zone application. For the mixing zone size, PRASA determined a larger mixing zone than estimated in its 2007 mixing zone application. For the next permit term, the total width of the mixing zone is estimated at 60.7 m and the total length is estimated at 125.9 m.

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

- Non-conventional pollutants (nitrogen, cyanide, surfactants, turbidity, sulfide (as H_2S), and thallium) ;
- Metals (copper, nickel, mercury, and silver); and
- Acute and chronic toxicity.

Water quality-based effluent limitations have been developed for the parameters listed above based on a CID of 191:1. 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, EQB requires that PRASA conduct annual receiving water monitoring to ensure that water quality standards are met at the edge of the mixing zone. Consistent with EQB'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 (see Part II.B.4 and 5 of this Fact Sheet).

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 (March 2010).
- 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. 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 EQB'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 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. The permit also carries over the monitoring and reporting only requirement for an average weekly. A mass-based limitation of 3,213 kg/day has been established based an average monthly design flow of 16 MGD. An average monthly limit of 30% removal has also been established in accordance with 40 CFR 125.60. Between 2011 and 2014, monthly average removal rates for BOD_5 ranged between 62 (March 2012) and 98 percent (February 2014). 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 section 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 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 2,121.84 kg/day has been established based on an average monthly design flow of 10

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 is ability to achieve a higher removal rate through the addition of polymers. Removal rates for TSS ranged between 79% (March, 2012) and 100% (October 2013 & May 2014).

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 section 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 effluent limitation for pH is based on technology-based secondary treatment standards for POTWs specified for Class SC 2.c. of PRWQS, and the WQC. In no case the pH will lie outside of 6 - 9, standard pH units, except when it is altered by natural causes.

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, and the WQC.

6. **Fecal Coliform:** The discharge consists of domestic sewage that is a source of pathogens. To ensure that the recreational use of the water body is met, effluent limitations for fecal coliform are established in the permit and are based on the water quality criterion for **Class SC** waters as specified in Rule 1303.2 C. 2.b of PRWQS, and the WQC. Consistent with the expression of the water quality criteria for fecal coliform, EPA establishes a monitoring frequency of 5 grab samples per month to calculate a geometric mean and to monitor and report the single sample result of each of the 5 samples to comply with the effluent limitation of no more than 20 percent of the single samples must be above the single-sample maximum of 400 colonies per 100 mL.

7. **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 SC** waters as specified in Rule 1303.2 C. 2.c of PRWQS, 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.

8. **Dissolved Oxygen (DO):** The effluent limitation is based on the water quality criterion for **Class SC** waters as specified in Rule 1303.2 C.2.a of PRWQS, and the WQC.

9. **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. PRWQS do not have a numeric water quality criterion for TRC. Instead, Rule 1303(I) of PRWQS establishes a narrative water quality criterion that prohibits the discharge of toxic pollutants in toxic amounts. To protect aquatic life from the impact of TRC, the EPA has translated the narrative water quality criterion using EPA's CWA 304(a) National Recommended Water Quality Criteria for TRC and has conducted a reasonable potential analysis based on the chronic criterion of 11 ug/L and acute criterion of 19 µg/L for chlorine. The existing permit did not establish a water quality-based effluent limitation for TRC and instead established an effluent limitation of 500 ug/l (0.50 mg/l) based on the level of treatment needed to ensure that the fecal coliform water quality criteria would be met at the end-of-pipe.

10. **Whole Effluent Toxicity (WET):** Special Condition 21 was included as written in the IWQC issued by the Puerto Rico EQB, with the following additions/clarifications:

EPA has included an effluent limitation for **Whole Effluent Toxicity (WET)** for the Aguadilla RWWTP discharge on Special Condition 21. As well as a final limit for Chronic Toxicity in Table A-1. The data obtained by PRASA shows evidence of toxicity in the Carolina RWWTP discharge. For this reason, EPA has included final chronic limitation of **156** in the permit. Additional information is included in Attachment II of this document.

11. **Color:** The effluent limitation is based on the water quality criterion for **Class SC** waters as specified in Rule 1303.C.2.e of PRWQS, and the WQC.
12. **Turbidity:** The effluent limitation is based on the water quality criterion for **Class SC** waters as specified in Rule 1303.C.2 f of PRWQS, and the WQC.
13. **Taste and Odor Producing Substances**: The effluent limitation is based on the water quality criterion for **Class SC** waters as specified in Rule 1303.C.2.g of PRWQS, and the WQC.
14. **Sulfates:** The effluent limitation is based on the water quality criterion for **Class SC** waters as specified in Rule 1303.2.C.h of PRWQS, and the WQC.
15. **Surfactants**: The effluent limitation is based on the water quality criterion for **Class SC** waters as specified in Rule 1303.2 C.2.i of PRWQS, and the WQC.
16. **Oil and Grease:** The effluent limitation is based on the water quality standards as specified in Rule 1303.1.H of PRWQS, and the WQC.
17. **Suspended. Colloidal or Settleable Solids**: The effluent limitation is based on the water quality standards as specified in Rule 1303.1.E of PRWQS, and the WQC.
18. **Solids and Other Matters**: The effluent limitation is based on the water quality standards as specified in Rule 1303.1.A of PRWQS, and the WQC.
19. **TKN:** The monitoring requirement for this parameter is needed for the mathematical models in a mixing zone discharge.
20. **Copper, Mercury, Nickel, Free Cyanide, Nitrogen, Silver, Sulfide, and Zinc**: The effluent limitation is based on the water quality standards as specified in Rule 1303.1.I.1 of PRWQS; Rule 1305 Mixing Zones, 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	kg/day	Daily maximum	2,320	3,213.07 6,426.14	n/a	3,213.07 6,426.14	TBEL
BOD_5 percent removal	%	Average monthly	62	30	n/a	30	TBEL
Color	Pt-Co	Daily maximum	40	48	n/a	62	WQBEL
Copper	µg/L	Daily maximum	74.6	--	n/a	505.05	WQBEL
Free Cyanide	µg/L	Daily maximum	8.3	--	n/a	10.70	WQBEL
Dissolved Oxygen	mg/L	Daily Maximum	6.4	Monitor only	n/a	Monitor only	WQBEL
Enterococci Density	col/100 mL	Daily maximum	--	--	Monitor only*	35/100 mL	WQBEL
Fecal Coliform	col/100 mL	Daily maximum	1,795	2000 col / 100 mL	n/a	200 col / 100 mL	WQBEL
Mercury	µg/L	Daily maximum	0.1189	0.6	n/a	0.344	WQBEL
Flow	MGD	Daily maximum	8.339	16	n/a	16.0	WQBEL
NIckel	µg/L	Daily maximum	5.99	49	n/a	9.22	WQBEL
Nitrogen (NO_3, NO_2, NH_3)	µg/L	Daily maximum	26,500	65	n/a	43.769	WQBEL

Parameter	Units	Effluent limitations					
		Averaging period	Highest Reported Value (1)	Existing limits	Interim limits	Final limits	Basis
Oil and Grease	Mg/L	Daily maximum	12.2	10 - 15	n/a	Monitor only	WQBEL
pH	SU	Daily maximum	6.42-7.11	6.0 – 9.0	n/a	6.0 – 9.0	WQBEL
Residual Chlorine	mg/L	Daily maximum	0.50	0.50	n/a	0.50	WQBEL
Silver	µg/L	Daily maximum	2	85.0	n/a	13.8	WQBEL
Sulfide	mg/L	Daily maximum	18	2	n/a	107	WQBEL
Surfactants	µg/L	Daily maximum	6,994	6,300	n/a	7,994	WQBEL
TKN	µg/L	Daily maximum	28,700	Monitor only	n/a	Monitor only	TBEL
TSS	kg/day	Daily maximum	2453	2,121.84 4,243.68	n/a	2,121.84 4,243.68	TBEL
TSS percent removal	%	Average monthly	79	30	n/a	30	TBEL
Turbidity	NTU	Daily maximum	90	84	n/a	117	WQBEL
Suspended, Colloidal or Settleable Solids	mL/L	Daily maximum	2	Monitor only	n/a	Monitor only	WQBEL
Temperature	℃	Daily maximum	30.9	32.2	n/a	32.2	WQBEL
Zinc (Zn) (µg/L) [2,3,4]	µg/L	Daily maximum	82.2	128.00	n/a	131.42	WQBEL
Chronic Whole Effluent Toxicity	TU_c	Daily maximum	n/a	n/a	n/a	156	TBEL

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 May 31, 2011 to May 31, 2014.
(*) It has a Compliance Schedule with an Interim limits for the first 36 months.

2. Outfall 001 Narrative Limitations

a. The waters of Puerto Rico shall not contain any substance, attributable to the discharge at such concentration which, either alone or as result of synergistic effects with other substances, is toxic or produces undesirable physiological responses in humans, fish, or other fauna or flora.
b. The discharge shall not cause the presence of oil sheen in the receiving water body.
c. 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. 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.
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 specified in the applicable regulatory limitations.

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 EQB's *Anti-Degradation Policy Implementation Procedure* in Attachment A of PRWQS. 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 **Total Nitrogen and Surfactants**. 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. **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 EQB's WQS which include antidegradation requirements. The EQB 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 **Arsenic, Cadmium, Lead, Manganese, and Total Coliform** 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.

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 EQB determined were necessary to meet PRWQS. 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.

2. **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.

3. **Compliance Schedules**

   The Permittee's effluent data indicate that the facility might not be able to consistently comply with the final effluent limitation for Enterococci; therefore, a schedule of compliance has been authorized in the permit in accordance with 40 CFR 122.47 and Special Condition 20 of the WQC, which includes interim deadlines for progress or reports of progress toward compliance with the conditions of the permit. The compliance schedule for Enterococci is established at for 36 months after the effective date of the permit to allow the Permittee sufficient time to achieve compliance with the newly established effluent limitation. This schedule is provided in consideration of the time it would require for the Permittee to undertake steps needed to modify or install treatment facilities, operations, or other required measures.

4. **Other Special Conditions**

   Biosolids: Pursuant to the authority under Section 309 of the Act, 33 U.S.C. § 1345, EPA promulgated 40 C.F.R. Part 503 – Standards for the Use or Dispose of Sewage Sludge. This part establishes standards, which consist of general requirements, pollutant limits, management practices, and operational standards, for the final use or disposal of sewage sludge generated during the treatment of domestic sewage in treatment works. This part include standards for sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. It requires pathogen and alternative vector attraction reduction requirements for sewage sludge applied to the land or placed on a surface disposal site.

   Pre-treatment: Pursuant to the authority under Section 307 of the Act, 33 U.S.C. § 1317, EPA promulgated 40 C.F.R. Part 403 - General Pretreatment Regulations for Existing and New Sources of Pollution ("Pretreatment Regulations"). This Part establishes responsibilities of federal, state and local government, industry and the public to implement National Pretreatment Standards to control pollutants which pass through or interfere with treatment processes in publicly owned treatment works or which may contaminate sewage sludge. It requires that the POTW develop and implement procedures to identify industrial users who contribute pollutants to the POTW and monitor their compliance with pretreatment standards.

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 (CZMP), and that the discharge is certified by the Commonwealth of Puerto Rico to be consistent with the Commonwealth's CZMP. The Permittee has indicated the outfall is in a coastal area managed by the Commonwealth's CZMP which has been consistent with the program. The Puerto Rico Planning Board granted a Certificate of Consistency with the CZMP on March 26, 2015.

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 a letter dated **August 13, 2013**, NIMFS confirms that since the coral species proposed for listing are not present in the areas of the Aguadilla RWWTP the continued operation of the Outfall will have **no effect** on the species. Also in another letter dated **November 3, 2014**, USFWS concurs with their previous determination that the only species in the area is the Antillean manatee (*Trichechus manatus manatus*) **is not** affected by the discharge of the Aguadilla RWWTP 301(h) waiver.

C. Environmental Justice

In July 2000, EPA did an EJ document for communities surrounding the Aguadilla RWWTP with the most recent data available for 2000, document attached. In order to be consistent and conservative in our analysis of the communities surrounding the above mentioned facility we are using our conclusion form the previous EJ document prepared in 2000. For this reason, we feel comfortable stating that the community of concern is considered a Low Income Community but it does not have a disproportional environmental burden on the municipality of Aguada where the facility is located.

D. 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. Corals or coral ecosystems are in the vicinity of the discharge. In a letter dated August 13, 2013 from National Marine Fisheries Services (NMFS) concluded that the project is not likely to adversely affect corals in critical habitat. Also, coral species proposed for listing in PR are not presence in the area of the outfall discharge. Therefore, the continued operation of the outfalls will have no effect in the species.

E. Climate Change

EPA has considered climate change when developing the conditions of the permit. This is in accordance with the draft *National Water Program 2012 Strategy: Response to Climate Change* that identifies ways to address climate change impacts by NPDES permitting authorities (77 Federal Register 63, April 2, 2012, 19661-19662). Climate change is expected to affect surface waters in several ways, affecting both human health and ecological endpoints. As outlined in the draft National Water Program 2012 Strategy, EPA is committed to protecting surface water, drinking water, and ground water quality, and diminishing the risks of climate change to human health and the environment, through a variety of adaptation and mitigation strategies. These strategies include encouraging communities and NPDES permitting authorities to incorporate climate change strategies into their water quality planning, encouraging green infrastructure and recommending that water quality authorities consider climate

change impacts when developing water load and load allocations for new TMDLs, identifying and protecting designated uses at risk from climate change impacts. The 2010 *NPDES Permit Writers' Manual* also identifies climate change considerations for establishing low-flow conditions that account for possible climatic changes to stream flow. The conditions established in the permit are consistent with the draft National Water Program 2012 Strategy.

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

G. 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 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*. 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. On a letter dated August 7, 2013, in relation to the NMFS responsibilities under Section 7, determines that the outfall is and will be insignificant in the a area of the discharge.

PART V. PUBLIC PARTICIPATION

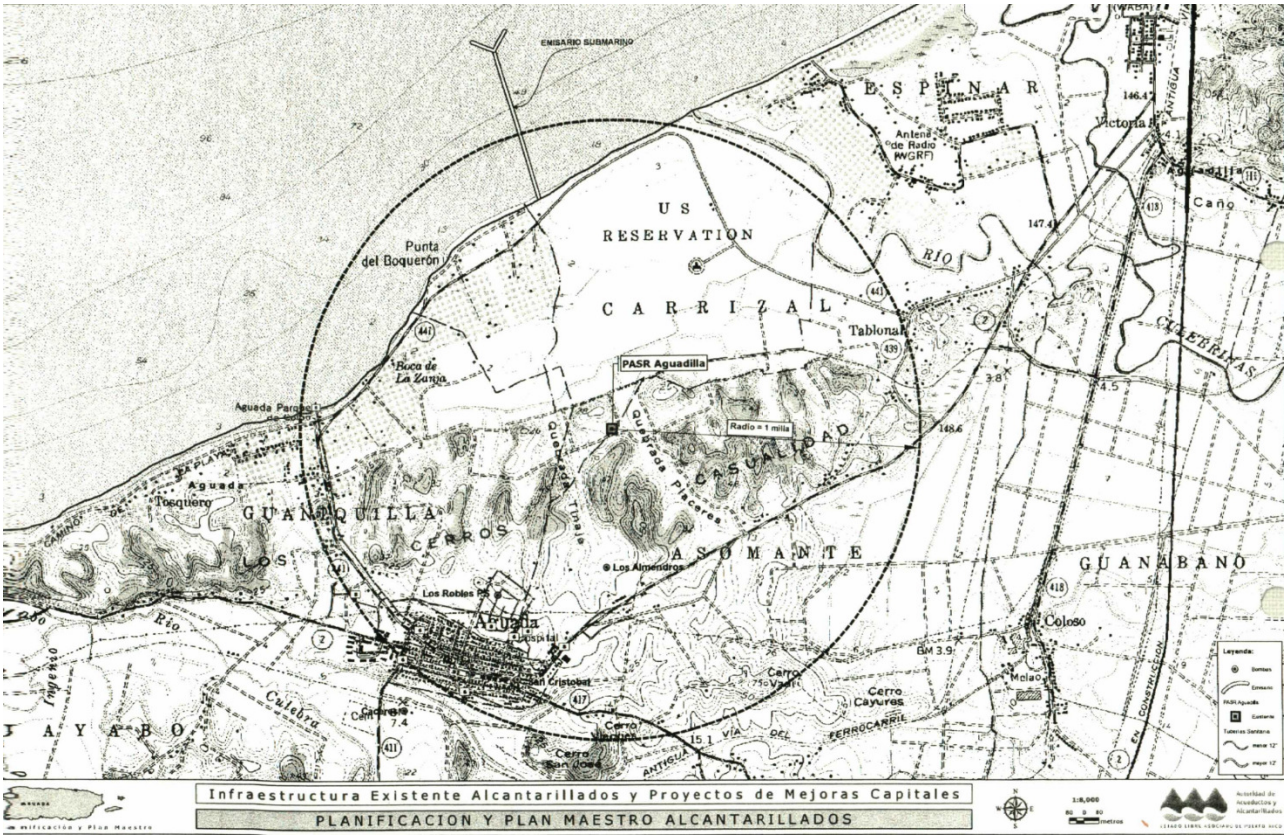
The procedures for reaching a final decision on the draft permit are set forth in 40 CFR Part 124 and are described in the public notice for the draft permit, which is published in **El Vocero**. Included in the public notice are requirements for the submission of comments by a specified date, procedures 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

Yasmin T. Laguer-Díaz
EPA Region 2, Caribbean Environmental Protection Division
Permit Writer Phone: 787-977-5848
Permit Writer Email: laguer.yasmin@epa.gov

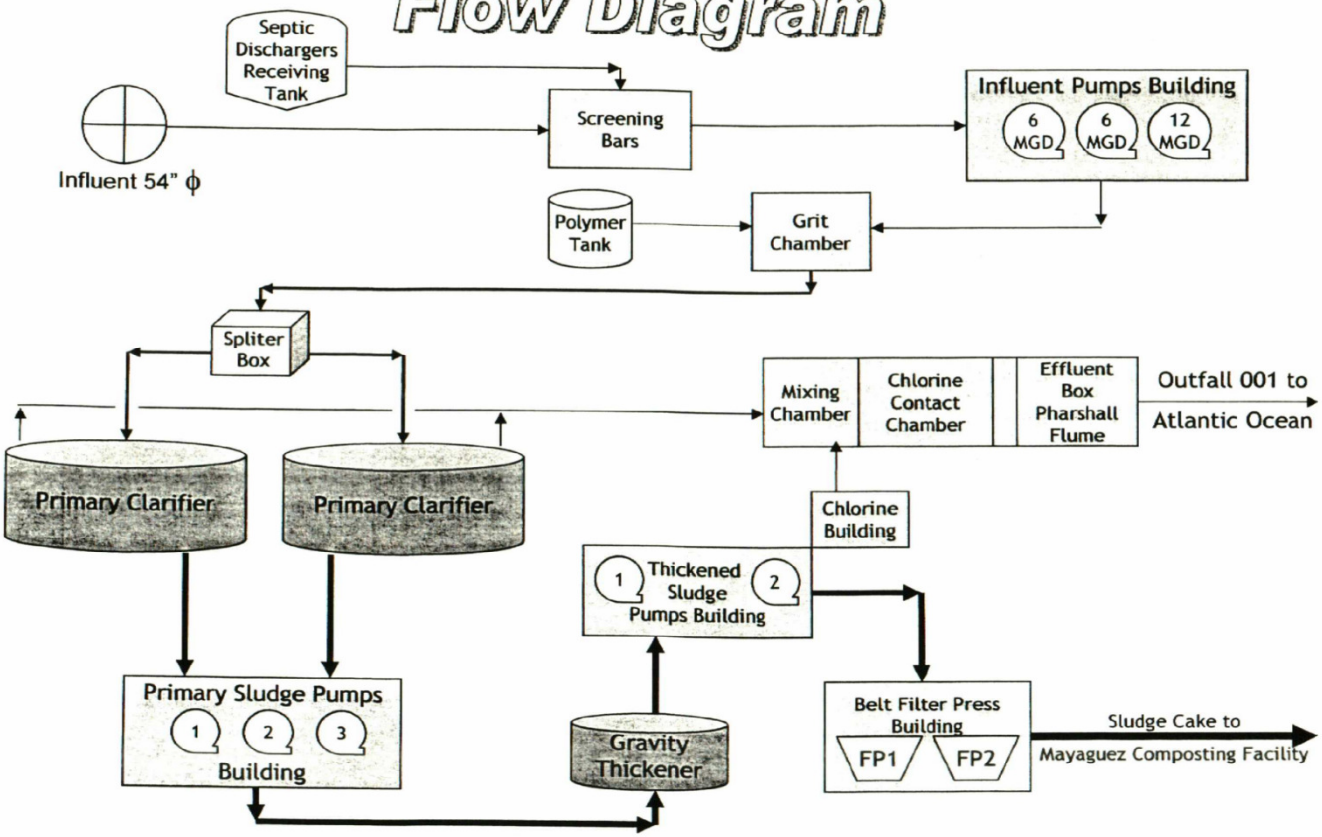
A copy of the draft permit is also available on EPA's website at www.epa.gov/region02/water/permits.html.

ATTACHMENT A — FACILITY MAP AND FLOW SCHEMATIC

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



Aguadilla RWWTP (PR0023736) Flow Diagram



ATTACHMENT B — FACILITY MAP AND FLOW SCHEMATIC

Special condition No. 21: Whole Effluent Toxicity Requirements

Water quality based permitting requirements at 40 CFR 122.44(d)(1) require 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. Federal regulations require both chemical specific limits, based on the state numeric water quality standards and other criteria developed by EPA, and whole effluent toxicity effluent limits if reasonable potential to exceed water quality standards is determined.

Where Reasonable Potential exists for a parameter to exceed a water quality criterion, EPA must include a limitation in the NPDES permit for that discharge. It is clear to EPA from the above analysis that both the NOEC values and IC25 values for fertilization indicate reasonable potential to exceed the water quality criterion of 1.0 TUc at the edge of the mixing zone. The toxicity data also indicates toxicity levels above the numeric interpretation of EQB's water quality standard of "no toxics in toxic amounts" at the discharge. Additionally, this facility has been granted a mixing zone conditioned upon the absence of a toxic condition at the edge of the mixing zone, and EPA's Clean Water Act §301(h) Determination is also conditioned on the absence of a toxic condition after mixing.

Calculation of Waste Load Allocation (WLA)

The WLA is used to determine the level of effluent concentration that will comply with water quality standards in receiving waters. Using the information available for dilution, WLAs were calculated for WET using the complete mix equation:

$WLA\ (C_d) = ([C_r(Q_d + Q_s)] - [(C_s)(Q_s)]) / Q_d$

Which simplifies to WLA = C_r x Dilution Ratio

where C_r = the water quality criterion concentration. In Puerto Rico, a criterion continuous concentration of 1.0 TUc, and a criterion maximum concentration (CMC) of 0.3 TUa is used as the numeric interpretation of the water quality standard for toxicity.

PRASA has calculated the critical initial dilution (CID) to afford a dilution ratio of 191:1. Therefore, the chronic WLA would be

$WLA_c = C_r x\ 191 = 1.0 \times 191 = 191.0\ TU_c$

$WLA_a = 0.3 \times 191 = 57.3\ TU_a$

$WLA_{a,c} = WLA_a \times ACR = 57.3 \times 10 = 573\ TU_{a,c}$

Calculate Long-term Averages (LTAs).

To calculate the long term average (LTA):

$LTA = WLA \times e^{[0.05 - 2 - z]}$

$LTA_{a,c} = 573 \times 0.321 = 183.933$ TU where:

0.321 is the acute WLA multiplier for Cv = 0.6 at the 99th percentile (from Table 5-1, pg. 102 of the TSD)

$$LTA_c = WLA_c \times e^{[0.5\sigma_4^2 - z\sigma_4]}$$

$LTA_c = 191 \times 0.527 = 100.657$ where:

0.527 is the chronic WLA multiplier at the 99th percentile (from Table 5-1, pg. 102 of the TSD)

Select the minimum LTA.

The LTA based on the chronic WLA more limiting and will be used to develop permit limits.

Limit Calculation:

Using the 95th percentile and monthly sampling, the effluent limit is calculated as:

LTA × $e^{[z\ \square_n \square\square\square 0.\square\square \square\ ]}$ where $e^{[z\square_n \square\square\square 0.\square\square \square\ ]}$ = AML LTA multiplier

z = 1.645 for the 95th percentile occurrence probability for the AML is recommended

n = number of samples/month (the TSD recommends that a minimum n of 4 be used, even if monitoring is less frequent).

From Table 5-2, on pg. 102 of the TSD, for Cv = 0.6 and n=4,

AML = 100.657 × 1.55 = **156 TUc**