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
Puerto Nuevo RWWTP
PERMIT No. PR0021555

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 **March 5, 2021**, *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 of its **Puerto Nuevo RWWTP** National Pollutant Discharge Elimination System (NPDES) permit. The Permittee is discharging pursuant to NPDES Permit No**. PR0021555.** The Permittee submitted Application Forms 1, and 2A dated **May 31, 2016,** and applied for an NPDES permit to discharge treated wastewater from Puerto Nuevo RWWTP, Puerto Nuevo, 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 Puerto Nuevo RWWTP is a publicly owned treatment works (POTW) with advanced primary treatment process. The Puerto Nuevo RWWTP treats sanitary and industrial wastewaters for the Municipalities of San Juan, Rio Piedras, Trujillo Alto and some portions of Bayamón, Carolina and Guaynabo. The plant discharges its effluent to the Atlantic Ocean.

Sanitary wastewater is processed through the following units:

- Screening Channels.
- Grit Tanks.
- Polymer Addition.
- Primary Sedimentation Tanks.
- Sludge Thickeners.
- Chlorination.

Wastewater treatment processes at the plant include screening, grit removal, sedimentation, and chlorination before discharging to the Atlantic Ocean. Sludge is pumped to a dewatering system. Then, sludge is filtered-press and it is finally incinerated.

Summary of Permittee and Facility Information

Permittee	Puerto Rico Aqueduct and Sewer Authority (PRASA)
Facility contact, title, phone	Mrs. Irma M. López, 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	Road 2, Km 2 John F. Kennedy Avenue San Juan, PR 00916
Type of facility	Publicly-owned Treatment Works
Pretreatment program	Yes
Facility monthly average flow	80.0 MGD (million gallons per day)
Facility design flow	144.0 MGD (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	Advanced Primary treatment wastewater.	18°, 29', 13" N	66°, 08', 21" W	Atlantic Ocean, Class SB waters

As indicated in the Puerto Rico Water Quality Standards (PRWQSR) 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 Puerto Nuevo 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.

As part of renewal permit, the EPA is required to review all available information on the Puerto Nuevo 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 Puerto Nuevo 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 2016 re-application 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 PRWQSR. 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 Puerto Nuevo Regional Wastewater Treatment, NPDES No. PR0021555.*

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 PRWQSR. 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 2019, PRASA submitted an application for a mixing zone to the DNER. The CID on which the current WQC and NPDES permit is based is **150:1**. The existing mixing zone geometry was also developed in the 1999 MZA. Based on recent remotely operated vehicle (ROV) inspections of the outfall and diffuser, conducted after the existing WQC and NPDES permits were issued, the coordinates were recalculated and are slightly different than those specified in the existing WQC and NPDES permit. The overall mixing zone shape, size, and distance from the diffuser to the EOMZ remains the same as in the existing WQC and NPDES permit.

Under PRWQSR, 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:

- Non-conventional pollutants (color, total nitrogen, free cyanide, surfactants, turbidity, pH, temperature and dissolved oxygen;
- Metals (cadmium, lead, nickel, silver, copper, mercury, sulfide, thallium 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 **150:1**. 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 3:15-CV-02283(JAG)** 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 section 401 certification requirements;
- NPDES regulations (40 CFR Part 122);

- Modifying Secondary Treatment Requirements Under Section 301(h) of the CWA (40 CFR 125, Subpart G);
- PRWQSR (April 2019);
- Biosolids (Sewage Sludge) requirements (40 CFR Parts 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 PRWQSR. 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 **144.0 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, PRWQSR 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 **70,930 kg/day** has been established based an average monthly design flow of **80.0 MGD**, as established in DNER's final WQC. An average monthly limit of 30% removal has also been established in accordance with 40 CFR 125.60. Between 2018 and 2020, monthly average removal rates for BOD_5 ranged between **23** (**December 2018**) and **81** percent (**September 2018**). 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, PRWQSR 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 TSS from the existing permit. The permit establishes an average monthly limitation of **68 mg/L** and a monitoring and reporting only requirement for

an average weekly. A mass-based limitation of **24,460 kg/day** has been established based on an average monthly design flow of **80.0 MGD**, as established in DNER's final WQC. An average monthly limit of 60% 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 **42% (December 2018)** and **90% (July 2019).**

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.

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 Puerto Nuevo 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 PRWQSR, 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 effluent limitations for enterococci 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 PRWQSR, and the WQC. EPA establishes a monitoring frequency of the enterococci density in terms of geometric mean of at least six representative samples taken sequentially shall not exceed 35 colonies/100 mL during a 90-days interval. A compliance schedule was granted to this parameter.

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 PRWQSR, 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.J.1 of PRWQSR establishes a water quality criterion for **Class SB** waters of 7.5 **µg/L**. A compliance schedule was granted to this parameter.

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 PRWQSR, 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 PRWQSR, 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 PRWQSR, 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 PRWQSR, 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 PRWQSR, 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 PRWQSR, and the WQC.

15. **Solids and Other Matter**: The effluent limitation is based on the water quality standards as specified in Rule 1303.1.A of PRWQSR, and the WQC.

16. **TKN:** The effluent limitation is needed in order to calculate total nitrogen and to provide data used to validate the mathematical model used to assess the farfield dissolved oxygen demand as required in the PR Mixing Zone and Bioassay Guidelines
17. **Cadmium, Copper, Nickel, Silver, Free Cyanide, Sulfide, Thallium, Lead, Mercury, and Zinc**: The effluent limitation is based on the water quality standards as specified in Rule 1303.1.I.1 of PRWQSR, Rule 1305 Mixing Zones, and the WQC.
18. **Nitrogen, Total (as NO_3, NO_2, TKN):** An effluent limitation has been established for total nitrogen based on the water quality criterion of 5.00 mg/l for **Class SB** waters as specified in Rule 1303.2.b.2.k of PRWQSR. Effluent data show that total nitrogen concentrations exceed the water quality criterion.
19. **Whole Effluent Toxicity:** See ATTACHMENT B

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	Average monthly	154	117	n/a	117	TBEL
BOD_5 percent removal	%	Daily Minimum	81	30	n/a	30	TBEL
Cadmium	µg/L	--	0.5	Monitor only	n/a	Monitor only	
Color	Pt-CO	Maximum Daily	60	70	n/a	60	WQBEL
Copper	µg/L	Daily maximum	51	207.7	n/a	60.0	WQBEL
Cyanide, Free	µg/L	Daily maximum	12.9	32.2	n/a	29.3	WQBEL
Dissolved Oxygen	mg/L	Daily Minimum	5.35	Monitor only	n/a	Monitor only	WQBEL
Enterococci Density	col/100 mL	--	13	≤ 35	MR	≤ 35/100 mL	WQBEL
Flow	MGD	Average monthly Daily maximum	96.4	80.0 144.0	n/a n/a	-- 144.0	WQBEL
Lead	µg/L	Daily maximum	15	15.1	n/a	Monitor only	WQBEL
Mercury	µg/L	Daily maximum	0.436	0.117	n/a	0.29	WQBEL
Nickel	µg/L	Daily maximum	24.9	12.5	n/a	Monitor only	WQBEL
Oil and grease	mg/L	Average monthly Maximum Daily	20.2	Monitor only	n/a n/a	Monitor only	WQBEL
pH	SU	Daily Minimum Daily maximum	6.21 – 8.22	6.0 – 9.0	n/a	6.0 – 9.0	WQBEL
Residual Chlorine	µg/L	Daily maximum	0.48 mg/L	0.50 mg/L	500	7.5	WQBEL
Silver	µg/L	--	3.0	3.3	n/a	Monitor only	
Solids and Other Matters	--	--	--	Monitor only	n/a	Monitor only	WQBEL
Sulfide	µg/L	Daily maximum	52.1	84	n/a	221.0	WQBEL
Surfactants	µg/L	Daily maximum	3,340	7,020	n/a	4,634	WQBEL

Parameter	Units	Effluent limitations					
		Averaging period	Highest Reported Value (1)	Existing limits	Interim limits	Final limits	Basis
Suspended, Colloidal or Settleable Solids	mL/L	Daily maximum	--	Monitor only	n/a	Monitor only	WQBEL
Taste and Odor-producing Substances	--	--	--	Monitor only	n/a	Monitor only	WQBEL
Temperature	Degrees Celsius	Instantaneous Maximum	31.15	32.2	-- --	32.2	WQBEL
Thallium	µg/L	Daily maximum	2.0	4.3	n/a	1.92	WQBEL
Total Nitrogen	µg/L	Daily maximum	24 mg/L	--	n/a	41,193	WQBEL
TSS	mg/L	Average monthly	146	68	n/a	68	TBEL
TSS percent removal	%	Daily Minimum	90	60	n/a	60	TBEL
Turbidity	NTU	Daily maximum	56.8	119	n/a	78	WQBEL
Zinc	µg/L	Daily maximum	118	129.20	n/a	163.60	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 August 31, 2018 to September 30, 2020.

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 DNER's *Anti-Degradation Policy Implementation Procedure* in Attachment A of PRWQSR. 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.

- Existing effluent limitations for **Fecal Coliforms and Nitrogen** 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 DNER determined were necessary to meet PRWQSR. 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 Standard and

Special Conditions; B. Special Condition (3) Best Management Practices and Pollution Prevention 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 and TRC; therefore, a schedule of compliance has been authorized in the permit in accordance with 40 CFR 122.47 and Special Condition 1.u (under PART IV.B) 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 and TRC 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**

Prohibited Discharge Standards: 40 CFR 403.5 forbids the discharge of any pollutant(s) to a POTW that cause pass through or interference. These national standards apply to all IUs to a POTW, regardless of whether or not the POTW has an approved pretreatment program or whether the industrial user has been issued a control mechanism or permit. These standards are intended to provide general protection for POTWs. However, their lack of specific pollutant limitations creates the need for additional controls, namely Categorical Pretreatment Standards and Local Limits.

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.

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 includes 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.

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 February 11, 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 **November 3, 2014**, USFWS concludes that their July 14, 2008 determination that the 301(h) waiver would not likely adversely affect the Antillean manatee (*Trichechus manatus manatus*).

C. Environmental Justice

EPA has performed an Environmental Justice (EJ) Analysis for the discharge in accordance with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Population and Low-Income Populations*, and EPA's Plan EJ 2014. EJ is the right to a safe, healthy, productive and sustainable environment for all, where "environment" is considered in its totality to include the ecological, physical, social, political, aesthetic and economic environments. In the NPDES permitting program, the public participation process provides opportunities to address EJ concerns by providing appropriate avenues for public participation, seeking out and facilitating involvement of those potentially affected.

In December, 2020 EPA did an EJ document for communities surrounding the Puerto Nuevo RWWTP with the most recent data available, document attached. Such document shows the community of concern, 1.5-mile radius from the Puerto Nuevo RWWTP, is considered a Low-Income Community and has a disproportional environmental burden on the municipality of Puerto Nuevo where the facility is located. EPA is very well aware of the facilities surrounding this facility and has issues enforcement actions to address when there are problems.

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

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 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: www.epa.gov/region02/water/permits.html. 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

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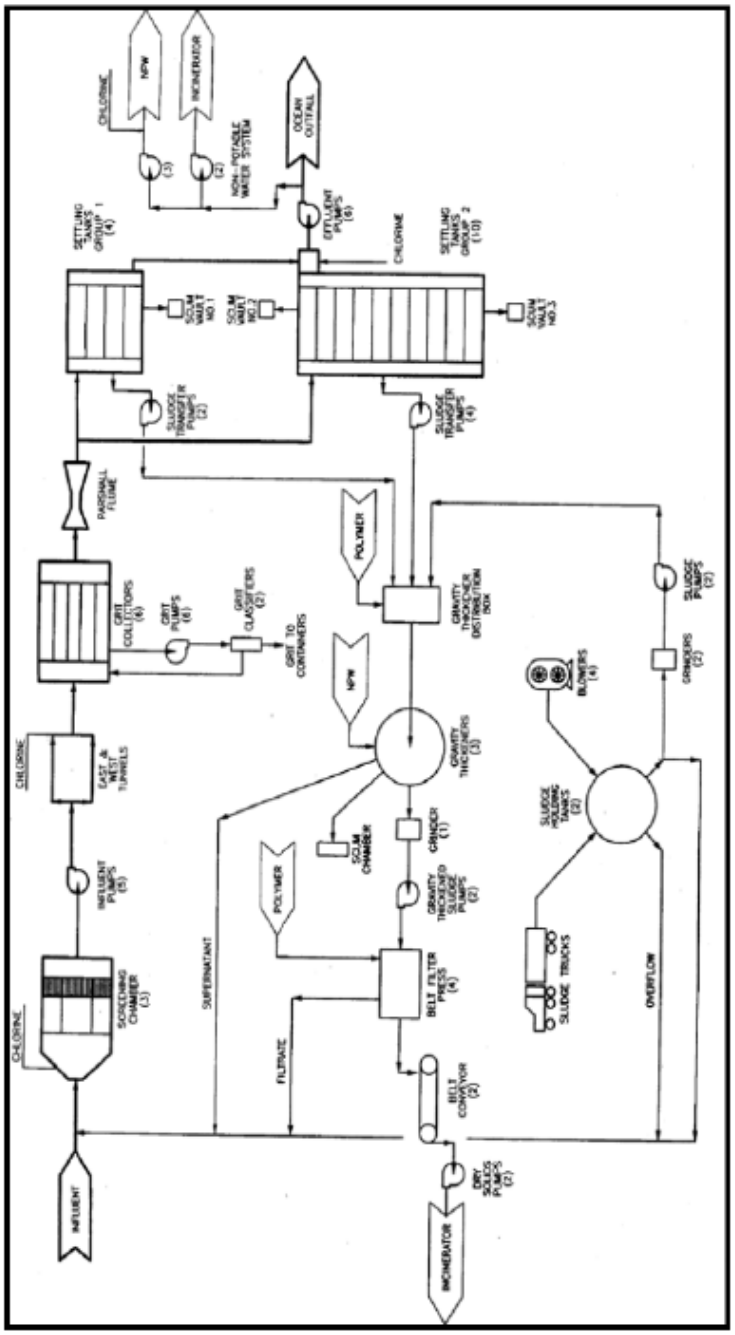
ATTACHMENT A — FACILITY MAP AND FLOW SCHEMATIC

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



Puerto Nuevo RWWTP Process Flow Diagram

ATTACHMENT B — WHOLE EFFLUENT TOXICITY REQUIREMENTS

Rule 1303.1(I) of PRWQS provides that all waters of Puerto Rico shall not contain any substance 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. This is generally referred to as a narrative water quality criterion "no toxics in toxic amounts". PRWQS do not provide a numeric criterion for toxicity. Since controls on individual pollutants may not always adequately protect water quality, toxicity testing is used to assess and control whole effluent toxicity (WET) which is necessary to reduce or eliminate the toxic impact of the effluent and meet narrative water quality criteria (54 FR 23868, June 2, 1989). NPDES regulations define WET as the whole or aggregate toxic effect of an effluent measured directly by a toxicity test.

Pursuant to the current modified permits, PRASA and the Bacardi Corporation are required to conduct acute and chronic WET testing on the combined effluent, and chronic WET testing on individual effluent samples from the Bayamón RWWTP, Puerto Nuevo RWWTP, and the Bacardi WWTP. PRASA has conducts acute WET monitoring for the combined effluent using the mysid shrimp (*Mysidopsis bahia*) and sheepshead minnow (*Cyprinidon variegates*), and chronic WET monitoring events using these WET test species as well as purple sea urchin (*Arbacia punctulata)*.

Since effluent toxicity is inversely related to the effect concentration (the lower the effect concentration, the higher the toxicity in the effluent), WET test data are sometimes expressed as toxic units (TUs) to better illustrate the magnitude of potential toxicity. Rule 1301.1 of PRWQS defines acute TU (TUa) and chronic TU (TUc) values as the Lethal Concentration (LC_{50}) of the tested effluent at which 50 percent of the test organisms die, where TUa = 100 ÷ LC_{50}; and the No Observed Effect Concentration (NOEC), where TUc = 100 ÷ NOEC, respectively.[1] To assess WET test data, PRWQS definitions at Rule 1301.1 include a criterion maximum concentration (CMC) of 0.3 TUa and criterion continuous concentration (CCC) of 1.0 TUc be used to ensure aquatic life protection against toxicity in the receiving water, which is based on the EPA recommended national water quality criteria (EPA 1991).

For the purpose of the section 301(h) evaluation, EPA determined the maximum allowable level of effluent toxicity or wasteload allocation (WLA) at the edge of the mixing zone that would still ensure attainment of water quality criteria for toxicity. With consideration of dilution and CMC and CCC values, EPA calculated acute and chronic WLAs of 30.6 TUa and 102 TUc, respectively, and then compared the WLAs to effluent WET test data.

For the combined effluent, acute results were below the WLA of 30.6 TUa. Most chronic WET tests reported TUc values based on the NOEC that were below the chronic WLA of 102 TUc. In March 2019, chronic test results for growth of *Mysidopsis bahia* were observed at levels above the chronic WLA of 102 TUc, calculated using the inverse of the NOEC concentration. This level of chronic effects triggered accelerated monitoring, as required by the current permit. Subsequent chronic results were within permit limits and below the chronic WLA.

Based on review of WET data, in accordance with 40 CFR 122.44(d)(v), EPA has determined that the combined discharge will cause, has the reasonable potential to cause, or contributes to an excursion above the narrative criterion for chronic toxicity and has proposed effluent limitation for the combined discharge. With consideration of dilution, EPA has proposed a maximum daily effluent limitation of 83.32 TUc , expressed as any combined discharge chronic test result greater than or equal to 1.2% effluent in the draft modified permits for the Bayamón RWWTP, Puerto Nuevo RWWTP, and Bacardi WWTP. EPA believes that the combined discharge will meet this effluent limitation upon permit issuance.

In addition to the limitation, EPA has included other toxicity testing requirements on the individual effluents from these three facilities, as these effluents combine prior to discharge. Such monitoring is also required by the draft Water Quality Certificate issued by the Puerto Rico Department of Natural and Environmental Resources. The toxicity observed in the effluent may be the result of toxicity in one or more of the discharges, or it may be the result of synergistic effects that occur when the effluents combine prior to discharge. The contemporaneous

[1] The NOEC is the highest tested effluent concentration (in percent effluent) that does not cause an adverse effect on the test organism (i.e., the highest effluent concentration at which the values for the observed responses are not statistically different from the control).

testing on each of the effluents from these facilities will provide an indication as to the source of any toxicity observed in the combined discharge.

EPA has required in the past that all three dischargers develop plans for a toxicity reduction evaluation (TRE). The three dischargers may coordinate and develop one plan to meet the permit requirement in each NPDES permit. Violation of the limitation for chronic toxicity using the combined discharge would trigger accelerated monitoring of both the combined discharge and the individual contributions from Bacardi, and PRASA Bayamón and Puerto Nuevo facilities for twelve weeks. During the accelerated testing period an additional violation of the limitation on the combined discharge would require these three permittees to activate their TRE workplans, and implement their strategy to identify and abate the source of toxicity.