



**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
MIRADERO WTP
PERMIT No. PR0023990**

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 **June 17, 2024**, DNER provided in the Intent to issue a 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.

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 **National Pollutant Discharge Elimination System (NPDES) permit**. The Permittee is discharging pursuant to existing **NPDES Permit No. PR0023990**. The Permittee submitted Application Form 1 and Form 2C dated **August 8, 2022**, and applied for an **NPDES permit to discharge treated wastewater** from Miradero WTP, called the facility. The facility is classified as a minor discharger by EPA in accordance with the EPA rating criteria.

The Permittee **owns and operates water treatment plant**. 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 Miradero Water Treatment Plant (WTP) is a filtration plant that treats raw water from the Rio Grande de Añasco and Rio Cañas to provide potable water to the municipalities of Mayaguez and Añasco. The treatment consists of coagulation, flocculation, sedimentation, and filtration.

Water is processed through the following units:

- **Flash-Mixing**
- **Coagulator / Flocculator Tanks.**
- **6 Sedimentation Tank.**
- **8 Filters**
- **Clarifier**
- **Gravity Thickener**
- **Dechlorination Tanks.**

➤ **Sludge Drying Beds.**

A long-term remedial measure to construct a Sludge Treatment System (STS) by 2025 is included in the Consent Decree **Civil Action No 3:15-CV-02283(JAG)**.

Summary of Permittee and Facility Information

Permittee	Puerto Rico Aqueduct and Sewer Authority (PRASA)
Facility contact, title, phone	Ms. Marichu Valentín Vázquez, Executive Director Compliance and Quality Control (787) 620-2277
Permittee (mailing) address	Puerto Rico Aqueduct and Sewer Authority P.O. Box 7066 Barrio Obrero Station Santurce, Puerto Rico 00916-7066
Facility (location) address	State Road 108, Km. 2.8, Mayaguez, PR 00680
Type of facility	WTP
Pretreatment program	N/A
Facility monthly average flow	1.442 MGD
Facility design flow	1.442 MGD
Facility classification	minor

B. Discharge Points and Receiving Water Information

Wastewater is discharged from Outfall **001** to **Pitillos Creek**, 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	filters backwasher and sedimentation tanks drains	18°, 13', 47.95" N	67°, 08', 35.39" W	Pitillos Creek, SD

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

- Use as a raw source of public water supply; and
- Propagation and preservation of desirable species, including threatened or endangered species.

C. Mixing Zone/Dilution Allowance -- N/A

D. Compliance Orders/Consent Decrees

The Permittee has a Consent Decree with the Agency (civil action **Civil Action No 3:15-CV-02283(JAG)**) in which the facility is included. This consent decree does not affect this permit action.

E. 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); and
- PRWQS (2022).

PART I. 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 WQBELs for several pollutants and the basis for these limitations are discussed below. **WQBEL are based on WQC.**

1. **Flow:** An effluent limitation for flow has been established in the permit. Monitoring conditions are applied pursuant to 40 CFR 122.21(j)(4)(ii) and DNER's Water Quality Certificate.
2. **BOD₅:** The effluent limitation is based on the water quality standards as specified in Rule 1303.1.F of PRWQS, and the WQC.
3. **Color:** The effluent limitation is based on the water quality criterion for **Class SD** waters as specified in Rule 1303.2.C.2.e of PRWQS, and the WQC.
4. **pH:** The effluent limitation is based on the water quality standards as specified in Rule 1303.2.C.2.d of PRWQS, and the WQC.
5. **Temperature:** The effluent limitation for temperature is based on the water quality criterion for Class **SD** waters as specified in Rule 1303.1.D.1 of PRWQS, and the WQC.
6. **Dissolved Oxygen (DO):** The effluent limitation is based on the water quality criterion for Class **SD** waters as specified in Rule 1303.2.C.2.a. of PRWQS, and the WQC.
7. **Turbidity:** The effluent limitation is based on the water quality criterion for **Class SD** waters as specified in Rule 1303.2.C.2.f. of PRWQS, and the WQC.
8. **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.
9. **Copper, Lead, Residual, and Chlorine:** The effluent limitation is based on the water quality standards as specified in Rule 1303.1.J.1 of PRWQS, and the WQC.
11. **Total Ammonia Nitrogen:** The effluent limitation is based on the water quality criterion for **Class SD** waters as specified in Rule 1303.2.C.2.i of PRWQS, and the WQC.
10. **Total Phosphorus:** The effluent limitation is based on the water quality criterion for Class **SD** waters as specified in Rule 1303.2.D.2.n of PRWQS, and the WQC.

B. Effluent Limitations Summary Table

1. Outfall Number 001

Parameter	Units	Effluent limitations					Notes
		Averaging period	Highest Reported Value (1)	Existing limits	Final limits	Basis	
BOD₅	mg/L	Daily maximum	7	5.0 (16.0)	5.0	WQBEL	(1)(2)
Color	Pt-Co	Daily maximum	10	15	15	WQBEL	(1)
Copper	µg/L	Daily maximum	41	7.7 (706)	7.7	WQBEL	(1)(2)
Dissolved Oxygen	mg/L	Daily Minimum	6.14	No less than 5.0	No less than 5.0	WQBEL	(1)
Flow	MGD	Daily maximum	1.01	1.442 (Monitor)	1.442	WQBEL	(1)
Lead	µg/L	Daily maximum	4.48	2.4	2.4	WQBEL	(1)
Mercury	µg/L	Daily maximum	0.057	Monitor	--	--	
pH	SU	Daily min/maxim	7.08-8.63	6- 9	6- 9	WQBEL	(1)
Residual Chlorine	µg/L	Daily maximum	10	11	11	WQBEL	(1)
Sulfate	mg/L	Daily Minimum	11.3	Monitor	--	--	
Suspended, Colloidal or Settleable Solids	ml/L	Daily maximum	0	Monitor	Monitor	WQBEL	(1)
Temperature	°C	Daily maximum	30.9	32.2 °C max	30 °C max	WQBEL	(1)
Total Ammonia Nitrogen	mg/L	Daily maximum	300	Monitor	0.25	WQBEL	(1)
Total Phosphorus	µg/L	Daily maximum	380	160 (Monitor)	160	WQBEL	(1)(2)
Turbidity	NTU	Daily maximum	25	50	50	WQBEL	(1)

Note: Dashes (--) indicate there are no effluent data, no limitations, or no monitoring requirements for this parameter.

(1) Wastewater data from DMRs dated **May 28, 2022 to May 28, 2024**.

(2) Second Value is an Interim Limit as per PRASA CD 3:15-CV-02283-JAG.

2. Outfall 001 Narrative Limitations

- 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.
- Suspended, Colloidal or Settleable Solids:** Solids from wastewater source shall not cause deposition in or be deleterious to the existing or designated uses of the water body.

- c. **Taste or Odor Producing Substances:** Shall not be present in amounts that will interfere with the use for potable water supply, or will render any undesirable taste or odor to edible aquatic life. Monitoring Requirements
- d. **Temperature:** Except by natural causes, no heat may be added to the waters of Puerto Rico, which would cause the temperature of any site to exceed 86°F(30°C).

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. 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 **Mercury and Sulfates** 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 water quality-based effluent limitation from the previous permit for **Temperature, and Total Ammonia Nitrogen** have been replaced with a more stringent water quality-based limitation in the Intent to Issue a 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 Intent to Issue a Water Quality Certificate.

PART II. 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:

- a. The flow of discharge 001 shall not exceed the limitation of 5,458.58 m³/day (1.442 MGD) as daily maximum. No increase in flow of discharge 001 shall be authorized without a recertification from the DNER.
- b. The discharge 001 will consist of filter backwashes and sedimentation tanks drains treated in the Sludge Treatment System (STS) constructed for these purposes.
- c. Within thirty (30) days after the Effective Date of the NPDES Permit (EDP), the permittee shall submit for DNER evaluation and approval, the engineering report, plans and specifications of the constructed sludge treatment system.
- d. Prior to the construction of any additional STS or the modification of the existing one, the permittee shall obtain the approval from 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 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 flow-measuring device for discharge 001, shall be periodically calibrated and properly maintained. Calibration and maintenance records must be kept in compliance with the Applicable Rules and Regulations.
- k. The sampling point for discharge 001 shall be located immediately after the primary flow-measuring device of the effluent.
- l. The sampling point for discharge 001 shall be labeled with an 18 inches per 12 inches (minimum dimensions) sign that reads as follows:

"Punto de Muestreo para la Descarga 001"

- m. All water or wastewaters treatment facilities, whether publicly or privately owned, must be operated by a person licensed by the Potable Water and Wastewaters Treatment Plants Operators Examining Board of the Commonwealth of Puerto Rico.
- n. The solid waste (sludge, screenings and grit) generated due to the operation of the STS 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 DNER and to the MWPB of EPA's Region 2 CEPD, 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 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. spill material,
 - ii. spill volume,
 - iii. measures taken to prevent the spill 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.

- o. A log book must be kept for the material removed from the STS 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 DNER must be attached to the log book.

- p. The permittee must request and obtain from the DNER the corresponding permit for the operation of the septic tanks used to dispose the sanitary wastewater coming from the facility, according to the Underground Injection Control Regulation and the Regulation for the Certification of Plans and Documents under Consideration of the Environmental Quality Board.

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

A compliance schedule has not been authorized for any pollutant or parameter in the permit on the basis of 40 CFR 122.47.

PART III. 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. **The Permittee has indicated the outfall is not in a coastal area managed by the Commonwealth's Coastal Zone Management Program and, although nearby, EPA has determined it will not affect the coastal area. Therefore, the requirements of 40 CFR 122.49(d) do not apply to this discharge.**

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 - Not Applicable

D. National Historic Preservation Act

Under 40 CFR 122.49(b), EPA is required to assess the impact of the discharge authorized by the permit on any properties listed or eligible for listing in the National Register of Historic Places (NRHP) and mitigate any adverse effects when necessary in accordance with the National Historic Preservation Act, 16 U.S.C. 470 *et seq.* EPA's analysis indicates that no soil disturbing or construction-related activities are being authorized by approval of this permit; accordingly, adverse effects to resources on or eligible for inclusion in the NHRP are not anticipated as part of this permitted action.

E. Magnuson-Stevens Fishery Conservation and Management Act - Not Applicable

PART IV. 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

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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.



