



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
ANTILLEAN ADVENTIST UNIVERSITY
PERMIT No. PR0026492**

This Fact Sheet sets forth the principal 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 final 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 September 26, 2014, 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 final 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. No appeals were received by EQB on the WQC.

PART I. BACKGROUND

A. Permittee and Facility Description

The Antillean Adventist University (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 NPDES Permit No. PR0026492. The Permittee submitted Application Form 1 dated August 31, 2012 and Form 2C dated August 31, 2012, and applied for an NPDES permit to discharge treated wastewater from the Antillean Adventist University Wastewater Treatment Plant of Puerto Rico, called the facility. The facility is classified as a minor discharger by EPA in accordance with the EPA rating criteria.

The Permittee operates a private educational non-profit institution sponsored by and affiliated to the Seventh-day Adventist Church. The applicant, the AAU, proposes to discharge 178.86 m³/day (0.04725 MGD) as daily maximum of tertiary treated sanitary wastewater through the point of discharge 001. Attachment A of this Fact Sheet provides a map of the area around the facility and a flow schematic of the facility.

Summary of Permittee and Facility Information

Permittee	Antillean Adventist University
Facility contact, title, phone	Obed Jiménez, President, (787) 834-9595
Permittee (mailing) address	PO Box 118 Mayagüez, PR 00681
Facility (location) address	Interior State Road No. 106 KM 2.2 Mayagüez, PR 00680
Type of facility	Colleges, Universities and Professional Schools, SIC code 8221
Pretreatment program	N/A
Facility monthly average flow	0.04725 MGD
Facility design flow	0.06 MGD
Facility classification	Minor

B. Discharge Points and Receiving Water Information

Wastewater is discharged from Outfall 001 to an unnamed creek tributary to the Yagüez River, 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	Tertiary treated sanitary wastewaters	18°, 12', 27.6" N	67°, 06', 58.62" W	Unnamed creek tributary to Yagüez River

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

1. Raw source of public water supply;
2. Propagation and preservation of desirable species, including threatened or endangered species; and
3. Primary and secondary contact recreation (Primary contact recreation is precluded in any stream or segment that does not comply with Rule 1302.2 (d)(2)(I) until such stream or segment meets the goal of the referred section).

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. Mixing Zone/Dilution Allowance

A mixing zone or dilution allowance has not been authorized for the discharger.

D. Compliance Orders/Consent Decrees

The Permittee does not have any compliance orders or consent decrees that 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:

1. Clean Water Act section 401 Certification (Certificate dated September 26, 2014)
2. NPDES Regulations (40 CFR Part 122)
3. Secondary Treatment Regulation (40 CFR Part 133)
4. PRWQS (March 2010)

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 according to the WQC dated September 26, 2014, Rules 1301 and 1306 of the Puerto Rico Water Quality Standards Regulation, as amended, and the Environmental Public Policy Act of September 22, 2004, Act No. 416, as amended. Monitoring conditions are applied pursuant to 40 CFR 122.21(j)(4)(ii) and the WQC.
2. **5-Day Biological Oxygen Demand (BOD₅):** The effluent concentration is established based on Secondary Treatment Regulation (40 CFR Part 133) and the WQC dated September 26, 2014, Rules 1301 and 1306 of the Puerto Rico Water Quality Standards Regulation, as amended, and the Environmental Public Policy Act of September 22, 2004, Act No. 416, as amended. Monitoring conditions are applied pursuant to 40 CFR 122.21(j)(4)(ii) and the WQC.
3. **Total Suspended Solids (TSS):** The effluent concentration is established based on Secondary Treatment Regulation (40 CFR Part 133) and the WQC dated September 26, 2014, Rules 1301 and 1306 of the Puerto Rico Water Quality Standards Regulation, as amended, and the Environmental Public Policy Act of September 22, 2004, Act No. 416, as amended. Monitoring conditions are applied pursuant to 40 CFR 122.21(j)(4)(ii) and the WQC.
4. **Temperature:** The effluent limitation for temperature is based on the water quality criterion for all waters as specified in Rule 1303.1(D) of PRWQS, and the WQC.
5. **Narrative effluent limitations:** Effluent limitations for **oil and grease, solids and other matter, suspended, colloidal, or settleable solids, taste and odor producing substances**, and no toxic substances in toxic concentrations are based on the water quality criteria as specified in Rules 1303.1 and 1303.2(D) and 1306 of PRWQS, as required by the 2014 WQC, and as carried forward from the previous permit.
6. **Coliforms:** 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 SD** waters as specified in Rule 1303.2 D. 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. **Dissolved Oxygen (DO):** The effluent limitation is based on the water quality criterion for **Class SD** waters as specified in Rule 1303.2 D.2.a of PRWQS, and the WQC.
8. **Color:** The effluent limitation is based on the water quality criterion for **Class SD** waters as specified in Rule 1303.2.D 2.d of PRWQS, and the WQC.

9. **Turbidity:** The effluent limitation is based on the water quality criterion for **Class SD** waters as specified in Rule 1303.2 D.2.e of PRWQS, and the WQC.
10. **Surfactants:** The effluent limitation is based on the water quality criterion for **Class SD** waters as specified in Rule 1303.2 D.2.i of PRWQS, and the WQC.
11. **Total Dissolved Solids:** The effluent limitation is based on the water quality criterion for **Class SD** waters as specified in Rule 1303.2 D.2.f of PRWQS, and the WQC.
12. **Total Phosphorus:** The effluent limitation is based on the water quality criterion for **Class SD** waters as specified in Rule 1303.2 D.2.h of PRWQS, and the WQC.
13. **Total Ammonia:** The effluent limitation is based on the water quality criterion for **Class SD** waters as specified in Rule 1303.2 D.2.m of PRWQS, and the WQC.
14. **Sulfide:** The effluent limitation is based on the water quality criterion for **Class SD** waters as specified in Rule 1303.1.1.1 of PRWQS, and the WQC.

B. Effluent Limitations Summary Table

1. Outfall Number 001

Parameter	Units	Effluent limitations					
		Averaging period	Highest Reported Value (1)	Existing limits	Interim limits	Final limits	Basis
BOD ₅	mg/L	Average monthly Average weekly	2.7 5.8	5.0 45.0	n/a	5.0 45.0	WQBEL TBEL
BOD ₅ percent removal	%	Daily minimum	99.39	85	n/a	85	TBEL
Color	Pt-Co	Daily Maximum	20	15	n/a	15	WQBEL
Dissolved Oxygen	mg/L	Daily Maximum	6.8	≥ 5.0	n/a	≥ 5.0	WQBEL
Fecal Coliform	col/100 mL	Daily maximum	18100	200 col / 100 mL	n/a	200 col / 100 mL	WQBEL
Flow	MGD	Daily maximum	0.026	0.04725	n/a	0.04725	WQBEL
pH	SU	Daily maximum	7.8	6.0-9.0	n/a	6.0-9.0	WQBEL
Sulfates	mg/l	Daily Maximum	33.0	250	n/a	250	WQBEL
Sulfide	µg/L	Daily maximum	<2.0	2	n/a	2	WQBEL
Surfactants	µg/L	Daily maximum	108	100	n/a	100	WQBEL
Temperature	°C	Daily maximum	28.6	32.2	n/a	32.2	WQBEL
Total Ammonia	mg/L	Daily maximum	8.29	1.00	n/a	1.00	WQBEL
Total Coliforms	col/100 mL	Daily maximum	1000	10,000 col / 100 mL	n/a	10,000 col / 100 mL	WQBEL
Total Dissolved Solids	mg/L	Daily maximum	316	500	n/a	500	WQBEL
Total Phosphorus	mg/L	Daily maximum	1.15	1.00	n/a	1.00	WQBEL
TSS	mg/L	Average monthly Average weekly	9.38 29	30.0 45.0	n/a	30.0 45.0	TBEL
TSS percent removal	%	Daily minimum	100	85	n/a	85	TBEL
Copper	µg/L	Daily minimum	24	Monitor	n/a	7	WQBEL
Turbidity	NTU	Daily maximum	30.9	50	n/a	50	WQBEL

Parameter	Units	Effluent limitations					
		Averaging period	Highest Reported Value (1)	Existing limits	Interim limits	Final limits	Basis
Chloride	mg/L	Maximum Daily	49.7	250.0	n/a	250.0	WQBEL
Nitrate plus Nitrite	µg/L	Maximum Daily	5480	10,000	n/a	10,000	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 July 31, 2013 to May 31, 2015.

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 waters of Puerto Rico shall be substantially free from floating non petroleum oils and greases as well as petroleum derived oils and greases.
- 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. In addition, the 2014 WQC specifies the location of the discharge after the monitoring point and requirements for a licensed chemist and microbiologist according to Rules 1301 and 1306 of PRWQS, as amended.

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 Antbacksliding Policy" provides guidance regarding relaxation of effluent limitations based on water quality for Puerto Rico NPDES permits.

- Existing effluent limitations for **2,4,-6 Trichlorophenol, 2,4- Dichlorophenol, 2,4- Dimethylphenol, 2,4- Dinitrophenol, 2-Chlorophenol, 2,Methyl-4,6 -Dinitrophenol, Pentachlorophenol, Phenol, Arsenic, and Fluoride** 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. Specific citations are included below from the WQC.

- a. Environmental Public Policy Act of September 22, 2004, Act No. 416, as amended.
- b. WQC – September 26, 2014
- c. Rule 1306 of PRWQS
- d. Environmental Public Policy Act of September 22, 2004, Act No. 416, as amended.

2. Best Management Practices (BMP) Plan

The Permittee is not required to develop a BMP Plan in the permit on the basis of 40 CFR 122.2 and 122.44(k).

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

A. Coastal Zone Management Act

Under 40 CFR 122.49(d), and in accordance with the Coastal Zone Management Act of 1972, as amended, 16 *United States Code* (U.S.C.) 1451 *et seq.* section 307(c) of the act and its implementing regulations (15 CFR Part 930), EPA may not issue an NPDES permit that affects land or water use in the coastal zone until the Permittee certifies that the proposed activity complies with the Coastal Zone Management Program in Puerto Rico, and that the discharge is certified by the Commonwealth of Puerto Rico to be consistent with the Commonwealth's Coastal Zone Management Program. 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. No federally listed endangered or threatened species, or critical habitat, are in the vicinity of the discharge. Therefore, EPA has determined that the discharge is not likely to affect species or habitat listed under the ESA.

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, and including public notices in more than one language where appropriate. EPA did not conduct an EJ analysis as this permit is not a Regional priority permit action.

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. No corals or coral ecosystems are in the vicinity of the discharge.

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

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.

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. The unnamed creek tributary to the Yagüez River does not contain EFH.

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

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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 location are attached as provided by the discharger in the application.

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LOCATION MAP (1:20,000)
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Mavaquez Arriba Mavaquez PR



