U.S. Department of Housing and Urban Development
451 Seventh Street, SW
Washington, DC 20410
www.hud.gov

espanol.hud.gov

Environmental Review for Activity/Project that is Categorically Excluded Subject to Section 58.5

Pursuant to 24 CFR 58.35(a)

Project Information

Project Name: PR-ESP-00132 AJC Service Stations, LLC (Asomante Service Stations)

Responsible Entity: Puerto Rico Department of Housing

Grant Recipient: Department of Economic Development and Commerce (DEDC)

State/Local Identifier: Puerto Rico / Aibonito, PR

Preparer: Patricia Carmenatty, Environmental Specialist
Behar Ybarra & Associates LLC
patricia.carmenatty@byaea.com
787-783-0290

Certifying Officer Name and Title: Permit and Environmental Compliance Officers:

Aldo A. Rivera Vazquez, PE - Director, Permits and Environmental Compliance Division

Angel G. López Guzmán - Deputy Director, Permits and Environmental Compliance Division

Maria T. Torres-Bregón - Permits and Environmental Compliance Manager

Permits and Environmental Compliance Specialist: Sally Z. Acevedo-Cosme, Limary Vélez Marrero, Ivelisse Lorenzo Torres, Mónica Machuca Rios, Janette I. Cambrelén, Santa Ramírez Lebrón, Abdul Feliciano Plaza, Pedro de León Rodriguez, Javier Mercado Barrera, Priscilla Toro Rivera

Consultant (if applicable): Behar Ybarra & Associates LLC

Direct Comments to: Puerto Rico Department of Housing at
comentariosambiental@vivienda.pr.gov

Project Location: Carretera 14 Km 46.7 Bo. Asomante, Aibonito PR, 00705
Coordinates: 18.129686, -66.285385
Parcel cadastral: 297-075-178-01-001

Description of the Proposed Project [24 CFR 50.21 & 58.32]**:**

The subject property is a commercial building located in Aibonito, PR serving as a gasoline station. The project is located at Carretera 14 Km 46.7 Bo. Asomante, Aibonito PR, 00705, Latitude: 18.129686, Longitude: -66.285385. A Site Map is included in Figure 1 in Appendix 1, illustrating the location of the building. The area is characterized by being urban, near family residences and commercial buildings. The nearest roads with access to the building are PR-861 and Ave. Duero.

A field visit was conducted on March 19, 2025, to document existing conditions of the project site. The Field Visit Report is included in Appendix 2. The project scope includes the installation of a photovoltaic (solar) panel system on the existing commercial building's roof and appurtenant storage system (batteries) on a lateral wall, with all improvements limited to the roof, floors, and walls of the existing structure. The batteries will be installed at the left side of the building. The proposed system includes 94 Solar Panels (400 Watts) and one Tesla Powerwall 2 – 7.6 kWh. The system will be interconnected with the LUMA Energy distribution network under the Net Metering Program. The proposed project Scope of Work quote is included in Appendix 3.

Level of Environmental Review Determination:
Categorically Excluded per 24 CFR 58.35(a), and subject to laws and authorities at §58.5: 58.35(a) [3(iii)]. In the case of non-residential structures, including commercial, industrial, and public buildings: (A) The facilities and improvements are in place and will not be changed in size or capacity by more than 20 percent; and (B) The activity does not involve a change in land use, such as from non-residential to residential, commercial to industrial, or from one industrial use to another.

Funding Information

Grant Number	HUD Program	Funding Amount
B-18-DE-72-0001	Community Development Block Grant (CDBG-DR): Electrical Power Reliability and Resilience Program (ER2) (Energy Support Incentive Program 2.0 Set-Aside)	Energy Support Incentive Program 2.0 Set-Aside - $30,000,000 set aside from ER2 Total – **$1,316,406,180.00.**

Estimated Total HUD Funded Amount: $50,000.00

Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]**:** $89,299.00

Privately funded by the applicant: $39,299.00

Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.6		
Airport Hazards 24 CFR Part 51 Subpart D	Yes ☐ No ☒	The site is located 103,451 feet from the nearest civil airport, Mercedita International Airport in Ponce and 145,899 feet from the nearest military airport, Luis Muñoz Marín International Airport in San Juan. This topic is in compliance with HUD's Airport Hazard Regulations without further evaluation. Refer to Airports Map Zone, Figure 2 included in Appendix 1.
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes ☐ No ☒	This project is not located in a CBRS Unit. The project is located 56,858 feet northeast of the nearest Coastal Barrier Resource System, PR-47. Therefore, this project has no potential to impact on a CBRS Unit and is in compliance with the Coastal Barrier Resources Act. Refer to Coastal Barrier Resource System Map, Figure 3 included in Appendix 1.
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes ☐ No ☒	As per FEMA's FIRM Panel 72000C1170H, effective April 19, 2005, this project is located within Zone X. The project does not require flood insurance or is excepted from flood insurance. The project is in compliance with the Flood Insurance section without further evaluation. Refer to Flood Insurance Rate Map, Figure 4 included in Appendix 1.

<table>
<tr><th colspan="3">STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5</th></tr>
<tr><td>Clean Air

Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93</td><td>Yes ☐ No ☒</td><td>The project is not located in a non-attainment municipality. This project includes the installation of a photovoltaic (solar) panel system on the existing commercial building’s roof and appurtenant storage system (batteries) on a lateral wall located in the Municipio of Aibonio. The project activities do not create new sources of air pollution. As described, the project does not involve new construction or a change in land use to facilitate the development of public, commercial, or industrial facilities, nor does it involve five or more dwelling units. Accordingly, under HUD’s environmental review procedures, the project is presumed to result in emissions below de minimis levels and is considered compliant with the Clean Air Act (CAA).

The project is located 20,535 feet from the nearest Non-attainment area. The proposed project activities will not create new air emission generator sources. Furthermore, under Puerto Rico’s air quality regulations, the project meets the exemption criteria outlined in Rule 206 of the RCAP (1995), Regulation No. 5300, and is therefore in compliance with the Clean Air Act and all applicable federal, state, and local air quality standards. The installation and operation of this project will have no impact and is in compliance with the Clean Air Act without further evaluation.

See attached published list of Puerto Rico Nonattainment/Maintenance Status for each country by year for all criteria pollutants in Appendix 4.

Refer to Clean Air Map, Figure 5 included in Appendix 1.</td></tr>
<tr><td>Coastal Zone Management

Coastal Zone Management Act, sections 307(c) & (d)</td><td>Yes ☐ No ☒</td><td>The project is located 53,135 feet from the nearest Coastal Zone Management Area and does not affect a Coastal Zone as defined in the state Coastal Management Plan. The</td></tr>
</table>

		project is in compliance with the Coastal Zone Management Act. Refer to CZMA map, Figure 6 included in Appendix 1.
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes ☒ No ☐	This project includes the installation of a photovoltaic (solar) panel system on the existing commercial building's roof and appurtenant storage system (batteries) on a lateral wall. The project site was evaluated for potential contamination by conducting a field inspection on March 19, 2025, to identify any onsite hazards including, but not limited to, soil staining, above ground storage tanks, signs of underground storage tanks, odors, hazardous debris, potential contamination regarding lead-based paint or asbestos, etc. The site inspection did not identify any onsite hazards. In addition, a desktop review of USEPA databases, NEPAssist, and other sources was conducted to determine if the project site was located near dump sites, junk yards, landfills, hazardous waste sites, or industrial sites, including USEPA National Priorities List Sites (Superfund sites), CERCLA or state equivalent sites, RCRA Corrective Action sites with release(s) or suspected release(s) requiring clean-up action and/or further investigation. The desktop review finds four sites within 3,000 feet of the project area. Two sites are registered as RCRA facilities with no violations, two as NPDES facilities and one as an AIR Pollution facility. The location for the proposed project is an active gas station and includes the presence of above storage tanks (ASTs) and underground storage tanks (USTs), as is typical for such facilities. According to the EPA database and available records, the facility has no violations or documented releases and is in compliance with applicable regulations. Given the facility's compliance status, the lack of known contamination, and the nature of the project—limited to roof-mounted solar panel installation with no soil disturbance—

		the presence of the gas station and USTs does not pose a risk of contamination on the project site. Therefore, the project complies with HUD's Site Contamination guidance. The TO-RICOS, LTD facility is listed as Significant/Category I Noncompliant under the Clean Water Act for failure to submit the quarterly DMR reports. Even though this is an administrative noncompliance, not necessarily indicating contamination in this facility, an analysis was conducted to confirm whether any potential contamination resulting from stormwater effluents does not have an adverse effect on the safety and health of the end users of the project site. First, the non-compliant site discharges based on the echo report are to the Rio de Aibonito. This river is 5,567 feet from the project site. However, the nearby stream to the project site is identified as an unnamed creek (see Wetlands Map, Figure 14 included in Appendix 1). Even though these systems intersect or connect in various points, the unnamed creek not listed in the 2024 Puerto Rico 305(b)/303(d) Integrated Report (See in Appendix 5). Additionally, based on the USGS elevation, the facility with the noncompliance is located at a lower elevation, 2089.9709734538724 feet, and the project site location for project PR-ESP-00132 is at 2107.7286401015135 feet according to the USGS EPQS included in Appendix 5. Therefore, any potential contamination that may be associated with the reported noncompliance from this facility will not have the potential or likelihood to reach the project site nor affect the health and safety of the end users of the project. The sites within 3,000 feet of the project area are: • HACIENDA KAMILA PUMP STATION, REGISTRY ID: 110058931009, PR-7718 BO ASOMANTE – NPDES – Not

		applicable. Non-Major: Unpermitted Facility – 2,268 feet • SHELL CO PR LTD SHELL SS 0299 ASOMANTE, REGISTRY ID: 110007818530, PR-14 KM 46.6 BO ASOMANTE – RCRAINFO – The site is inactive. No violations identified. – 1,563 feet • TO-RICOS LTD, REGISTRY ID: 110007805562, PR-14 KM 48 BO ASOMANTE – RCRAINFO – The site is active. No violations identified; AIR – Minor Emissions. Status: OPERATING – 1,563 feet • TO-RICOS, LTD, REGISTRY ID: 110067437544, CARRETERA 14 KM 48.0 – NPDES – The site permit is effective. Violations identified. Failure to Report DMR - Not Received – 824 feet Refer to the ECHO Reports included in Appendix 5. The lead-based paint review is subject to the Lead Safe Housing Rule (LSHR) under 24 CFR Part 35, the EPA's Renovation, Repair and Painting (RRP) Rule under 40 CFR Part 745 Subpart E, and Puerto Rico DNER Regulation 9098. A lead-based paint inspection and/or risk assessment is not required if the building was constructed after January 1, 1978. The subject property was built in circa 1962; therefore, it is required to perform a screen for lead-based paint prior to starting the work. • The work must be performed by RRP Certified Renovation Firm. • At least one RRP-Certified Renovator must be at the job site or available when work is being done. • Workers at the job site must receive on-the-job training from the Certified Renovator.

		• Lead Safe Work Practices are recommended if paint disturbance is "di minimis". • Lead Safe Work Practices are required if paint disturbance exceeds "di minimis" but not EPA's minor repair and maintenance threshold. • Property Risk Assessment and abatement of all lead-based paint hazards are required prior to commencing work if paint disturbance is significant. The proposed activities are minor in scope and involve limited surface penetration (e.g., drilling to mount equipment). They do not include demolition or renovation activities that would disturb significant quantities of ACM. The systems being installed have been consistently evaluated as non-invasive and do not trigger permitting thresholds under NESHAP. While minimal dust or particulate emissions may result from surface drilling, these emissions are expected to remain well below de minimis thresholds and do not result in the release of regulated asbestos fibers. Additionally, the program does not include new construction or land conversion. Under Puerto Rico's air quality regulations, these activities qualify for permitting exemptions under Rule 206 of the Regulation for the Control of Atmospheric Pollution (RCAP), Regulation No. 5300, confirming compliance with the Clean Air Act and all applicable federal, state, and local air quality standards. The Energy Support Incentive Program 2.0 – Set-Aside Program, funded through CDBG-DR, does not involve construction activities that would require a building or use permit. According to Planning Board Joint Regulation 9473, approved on June 16, 2023, Section 9.4.1.3.a.1 states: "Photovoltaic solar installations that are installed on the roofs of

		structures and whose capacity is up to one megawatt do not require a construction or use permit. Nor will a building permit be required for systems up to one hundred kilowatts above ground." As such, the proposed activities do not trigger construction permit requirements and do not involve regulated asbestos disturbance. No renovation or demolition activities that would exceed ACM thresholds are included in the program. On January 11, 2024, HUD issued Notice CPD-23-103, Departmental Policy for Addressing Radon in the Environmental Review Process, which requires the Responsible Entity (RE) to consider radon as part of the site contamination analysis for projects subject to HUD's contamination regulations at 24 CFR 58.5(i), unless the project qualifies for an exemption. According to the notice, radon must be addressed in environmental reviews for projects involving structures that are or will be occupied for at least four (4) hours per day. The eligible business activities under the Energy Support Incentive Program 2.0 – Set-Aside Program are expected to meet this occupancy threshold and thus would typically require radon consideration as part of the environmental review. However, there is currently no large-scale dataset available for Puerto Rico that meets HUD's standards for determining radon hazard levels. On March 6, 2024, the Puerto Rico Department of Housing (PRDOH) formally consulted with HUD to document the absence of reliable scientific data and to explain that radon testing in Puerto Rico would be impractical and infeasible. This determination was based on prior research efforts that lacked adequate laboratory support, making it difficult to obtain accurate or consistent results. Additionally, there is a limited number of trained radon testing professionals on the island, which presents another barrier to

		compliance with HUD's testing requirements. In response, on May 15, 2024, HUD requested that PRDOH consult with relevant agencies—including the Environmental Protection Agency (EPA), United States Geological Survey (USGS), University of Puerto Rico – Mayagüez Campus, and the Puerto Rico Department of Natural and Environmental Resources (DNER)—to further document the lack of scientific data, as outlined in Section III.C. of Notice CPD-23-103. On August 20, 2024, PRDOH conducted formal consultations with the above-mentioned agencies and submitted information requests to state and federal entities. Responses were received from the following: United States Geological Survey (USGS); Centers for Disease Control and Prevention (CDC); Puerto Rico Department of Health; United States Environmental Protection Agency (EPA). All responding agencies confirmed the absence of reliable, large-scale radon data for Puerto Rico and acknowledged the technical and logistical challenges associated with radon testing on the island. Based on these consultations and findings, radon testing is deemed infeasible and impracticable for the Energy Support Incentive Program 2.0 – Set-Aside Program. Therefore, no further consideration or evaluation of radon is required as part of the environmental review, in accordance with HUD Notice CPD-23-103. Supporting documentation is provided in Appendix 5. In conclusion, after reviewing the program in the context of the site contamination analysis requirements under 24 CFR 58.5(i), PRDOH has determined that radon testing is impractical and infeasible, and no further evaluation is required for radon. The project is in compliance with Contamination and Toxic Substances requirements.

		Refer to Contamination and Toxic Substances, Figure 7 included in Appendix 1.
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes ☐ No ☒	After reviewing data from the United States Fish and Wildlife Service (USFWS) Information and Planning Consultation (IPaC), the Puerto Rican boa (*Chilabothrus inornatus*) could be found in the project area. The scope of work includes the installation of a photovoltaic (solar) panel system on the existing commercial building's roof and appurtenant storage system (batteries) on a lateral wall. Since the work to be carried out is limited to the roof and wall of the structure, it does not involve any type of ground disturbance or removal of vegetation. The nature of the project, scope of work, information available, a careful analysis of the IpaC, the Caribbean Dkey in the US Fish and Wildlife Service's online IPaC application, and the observations during the field visit on March 19, 2025, were used to evaluate the potential impacts to federally listed species from this project. Based on the answers provided, a consistency letter was obtained for the Puerto Rican boa which determined that the proposed actions for this project would have "No Effect" (NE) for this species. The nearest Critical Habitat is 37,206 feet from the project site. Agency consultation was submitted on May 1, 2025, and response was received on May 13, 2025. The project is in compliance with the Endangered Species Act of 1973. If a Puerto Rican Boa is found in the project activity site, work shall cease until the Boa moves off on its own. If the Boa does not move off, the Construction Manager shall contact the Puerto Rico Department of Natural and Environmental Resources and ask them to relocate the Boa. As established by the USFWS Puerto Rican Boa Conservation Measures Guideline. https://ipac.ecosphere.fws.gov/guideline/design/population/156/office/41430.pdf

		Refer to Threatened and Endangered Species Map, Figure 8 included in Appendix 1. See USFWS "No Effect" Memo and supporting documentation in Appendix 6.
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes ☐ No ☒	This project includes the installation of a photovoltaic (solar) panel system on the existing commercial building's roof and appurtenant storage system (batteries) on a lateral wall and will not result in increased densities, conversion to residential uses, or making a vacant building habitable. The project itself is not the development of a hazardous facility, nor will the project increase residential densities or result in land conversion. The project is in compliance with HUD Explosive and Flammable Hazards.
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes ☐ No ☒	This project does not include any activities that could potentially convert agricultural land to non-agricultural use. The project is in an area designated as farmland of statewide importance. The project is in compliance with the Farmland Protection Policy Act. Refer to Farmland Protection Map, Figure 9 included in Appendix 1.
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes ☐ No ☒	PFIRMs in Puerto Rico was only developed for certain sections of the municipalities of Carolina, Canovanas, Loiza, San Juan, Trujillo Alto and Rio Grande. The proposed project is located in the municipality of Aibonito. Therefore, PFIRM information is not available for the area and considered in the review. As per the FEMA Advisory Based Flood Elevation Maps (ABFE), the project site is located within Zone X (area of minimal flood hazard). As the project site is not located within the FEMA-designated Special Flood Hazard Areas for the 1 percent (100-year) or 0.2 percent (500-year) flood zones, it is not classified as being within the floodplain. The project is in compliance with the HUD Floodplain Management Regulations and the Executive Order 11988.

		Refer to Preliminary FIRM Figure 4-A and Advisory Base Flood Elevation Map, Figure 10 included in Appendix 1.
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	Yes ☐ No ☒	The State Historic Preservation Office reviewed the proposed project location in accordance with 54 U.S.C. 306108 (commonly known as Section 106 of the National Historic Preservation Act) and 36 CFR Part 800: Protection of Historic Properties. Documentation with photographs and maps was subsequently submitted to SHPO (attached Appendix 7). In response from PR SHPO dated June 17, 2025, SHPO concurred with a finding of "*No Historic Properties Affected*" within the project's Area of Potential Effects. The property is not considered historic or contributing to an historic district (See attached Historic map, Figure 11). Therefore, this activity is in compliance with the National Historic Preservation Act. Refer to Historic Preservation Map, Figure 11 included in Appendix 1.
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	Yes ☐ No ☒	This project includes the installation of a photovoltaic (solar) panel system on the existing commercial building's roof and appurtenant storage system (batteries) on a lateral wall. The project does not include new construction for residential use or rehabilitation of an existing residential property. The site is urban developed and there will be no impact to or from the surrounding area from a noise perspective. This topic is in compliance with Noise abatement and Control without further evaluation. Refer to Noise Abatement and Control Map, Figure 12 included in Appendix 1.
Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes ☐ No ☒	According to the USEPA's Source Water Protection, Sole Source Aquifer Protection Program, there are no sole source aquifers in Puerto Rico. Therefore, the proposed project site is not located within a sole source aquifer, nor will it directly or indirectly impact one.

		Therefore, the project is in compliance with the Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 C.F.R. Part 149 without further evaluation. Refer to Sole Source Aquifer Map, Figure 13 included in Appendix 1.
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes No ☐ ☒	The project does not involve new constructions and/or activities that may have a direct or indirect adverse impact on any on site wetlands, there are no wetlands within or in the vicinity of the project area. The closest wetland is located 777 feet from the Project Site. The project does not have the potential to impact wetlands. The project is in compliance with E.O. 11990. Refer to Wetlands Map, Figure 14 included in Appendix 1.
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes No ☐ ☒	This project is not within proximity of the NWSRS river. The project is located 178,125 feet from the nearest Wild and Scenic River (De la Mina River). The project is in compliance with the Wild and Scenic Rivers Act. Refer to Wild and Scenic Rivers Map, Figure 15 included in Appendix 1.

Field Inspection: March 19, 2025, by Egon Gonzalez and Patricia Carmenatty.

Summary of Findings and Conclusions: The proposed activity has been found to not have any adverse effects on the environment nor is there a requirement for further consultation with any agency. There is no environmental review topics addressed that result in the need for formal compliance steps or the requirement for mitigation.

Mitigation Measures and Conditions

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Law, Authority, or Factor	Mitigation Measure
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	The subject property was built circa 1962; therefore, it is required to perform a screen for lead-based paint prior to starting the work. • The work must be performed by RRP Certified Renovation Firm. • At least one RRP-Certified Renovator must be at the job site or available when work is being done. • Workers at the job site must receive on-the-job training from the Certified Renovator. • Lead Safe Work Practices are recommended if paint disturbance is "di minimis". • Lead Safe Work Practices are required if paint disturbance exceeds "di minimis" but not EPA's minor repair and maintenance threshold. • Property Risk Assessment and abatement of all lead-based paint hazards is required prior to commencing work if paint disturbance is significant.

Determination:

☐ This categorically excluded activity/project converts to Exempt, per 58.34(a)(12) because there are no circumstances which require compliance with any of the federal laws and authorities cited at §58.5. **Funds may be committed and drawn down after certification of this part** for this (now) EXEMPT project; OR

☒ This categorically excluded activity/project cannot convert to Exempt because there are circumstances which require compliance with one or more federal laws and authorities cited at §58.5. Complete consultation/mitigation protocol requirements, **publish NOI/RROF and obtain "Authority to Use Grant Funds"** (HUD 7015.16) per Section 58.70 and 58.71 before committing or drawing down any funds; OR

☐ This project is now subject to a full Environmental Assessment according to Part 58 Subpart E due to extraordinary circumstances (Section 58.35(c)).

Preparer Signature: Date: 9/15/2025

Name/Title/Organization: Patricia Carmenatty Santiago
Environmental Specialist,
Behar Ybarra & Associates LLC

Responsible Entity Agency Official Signature:

Janette I. Cambrelen Digitally signed by Janette I. Cambrelen
Date: 2025.09.29 16:22:32 -04'00' Date: 9/29/2025

Name/Title: Janette I. Cambrelén, Permit and Environmental Compliance Specialist

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

Appendices

List of Appendices

Appendix Number	Appendix Description
1	Figures
2	Field Visit Report
3	Scope of Work Quote
4	EPA's published Summary of Nonattainment Area Population Exposure 1 Report. This is a summary of the 2010 population living in an area that is in nonattainment for at least one of the National Ambient Air Quality Standards (NAAQS). EPA's Published Status of Puerto Rico Designated Areas. This is a summary of Puerto Rico's designated areas by NAAQS and year
5	RADON - Memorandum to File and Supporting documentation, ECHO Reports, USGS EPQS, and 2024 Integrated Report
6	USFWS "No Effect" Memo and supporting documentation
7	Section 106 Consultation Package

Appendix 1: Figures

List of Figures

BYA BEHAR-YBARRA AND ASSOCIATES LLC
ENGINEERING · ENVIRONMENTAL · ARCHITECTURE · PLANNING
554 Calle Perseo, Suite J-3, San Juan, P.R. 00920 Tel.(787)783-0290

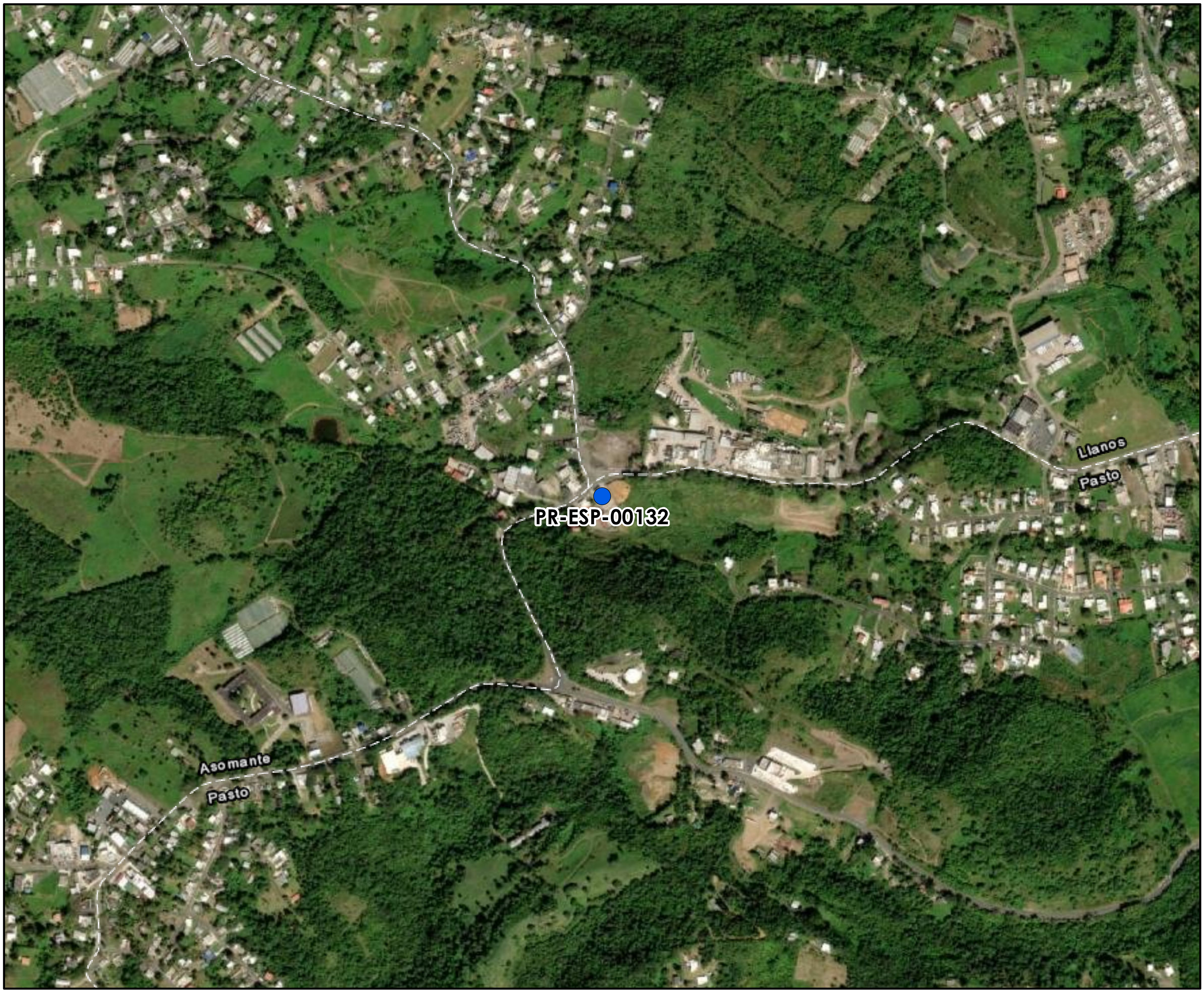
Application ID: PR-ESP-00132

AJC Service Stations, LLC (Asomante Service Stations)
Carretera 14 Km 46.7
Bo. Asomante,
Aibonito PR 00705
Catastro: 297-075-178-01-001
Lat: 18.129686, Lon: -66.285385

Figure 1

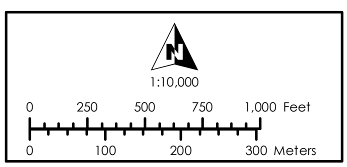
Location: Aerial Map

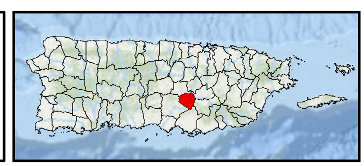
Electrical Power Reliability and Resilience Program (ER2)



Legend:

● PR-ESP-00132





Service Layer Credits:
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Source:
Centro de Recaudación de Ingresos Municipales (CRIM)
https://catastro.crimpr.net/cdprpc/

BYA BEHAR-YBARRA AND ASSOCIATES LLC
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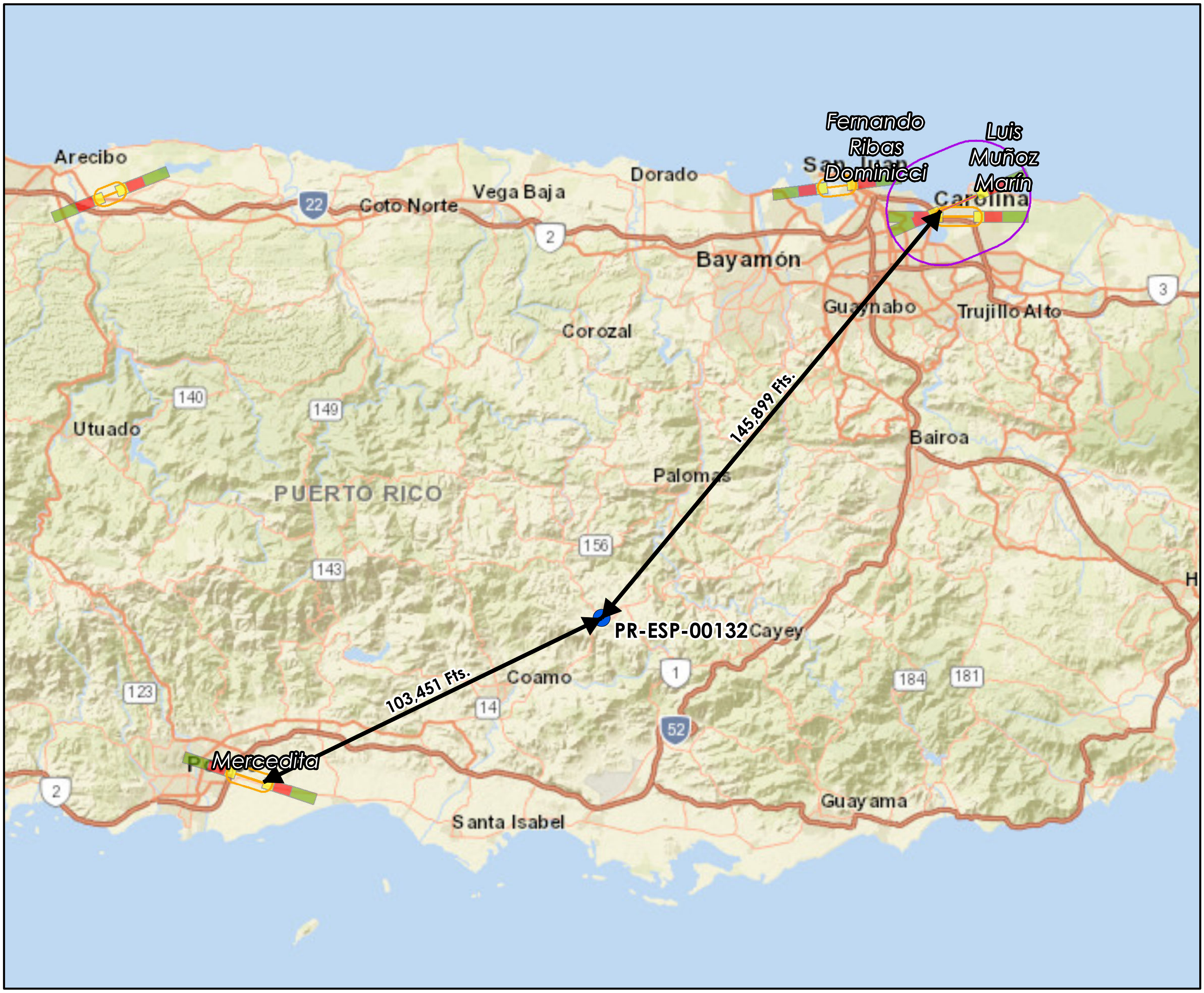
Figure 2

Airports Map

Electrical Power Reliability and Resilience Program (ER2)

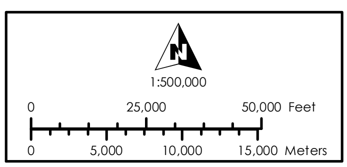


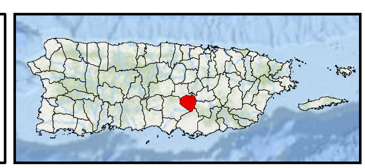
Legend:

- PR-ESP-00132
- SJU Military Runaway
- SJU Civil Runaway
- Militaryl Airport Buffer (15,000 Fts.)
- Civil Airport Buffer (2,500 Fts.)

Accident Potential Zone

- APZ 1
- APZ 2
- Clear Zone





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Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Source:
Federal Aviation Administration (FAA)
https://adds-faa.opendata.arcgis.com/
The Environmental Protection Agency
https://www.epa.gov/nepa/nepassist

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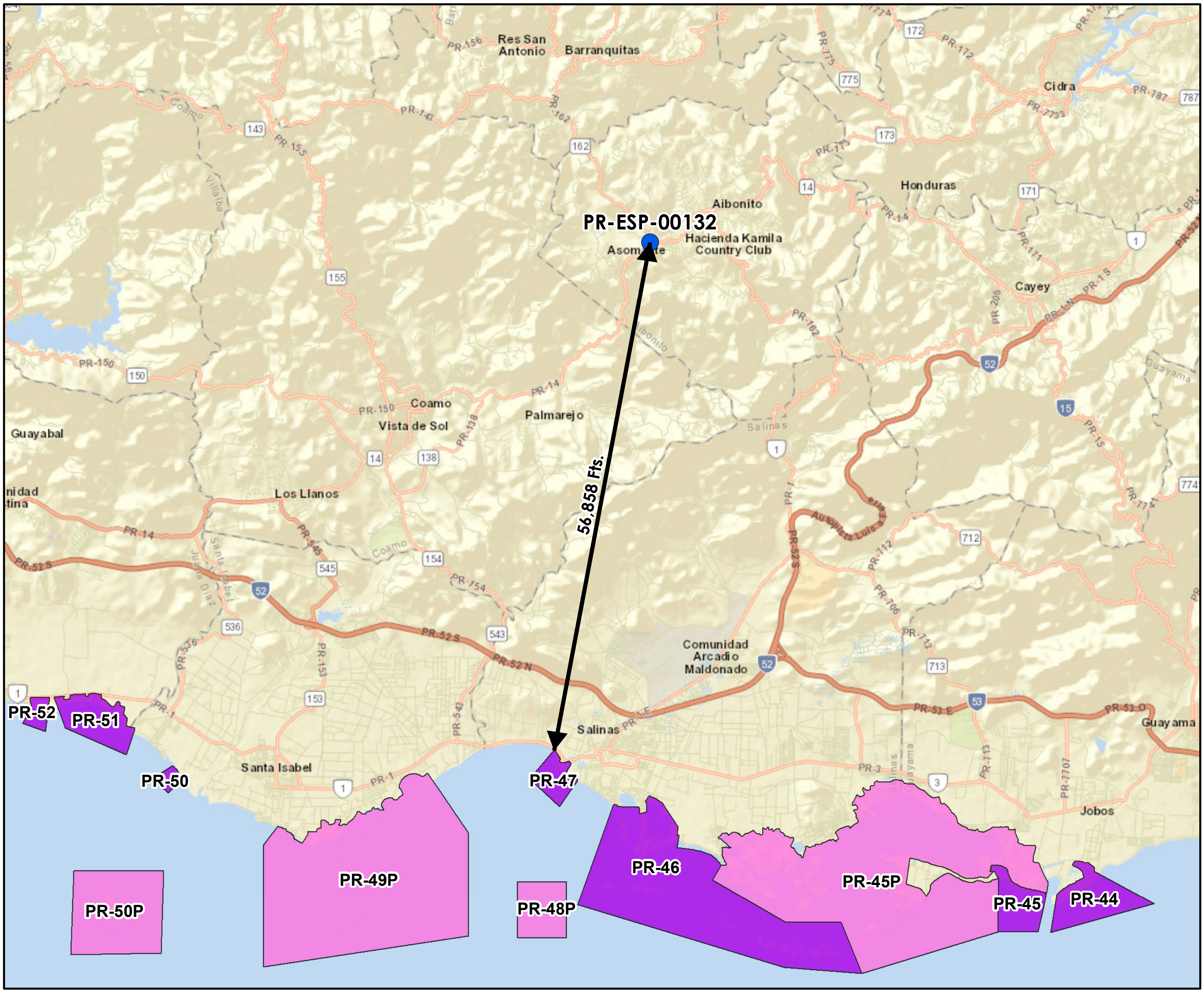
Application ID: PR-ESP-00132

AJC Service Stations, LLC (Asomante Service Stations)
Carretera 14 Km 46.7
Bo. Asomante,
Aibonito PR 00705
Catastro: 297-075-178-01-001
Lat: 18.129686, Lon: -66.285385

Figure 3

Coastal Barrier Resource System Map

Electrical Power Reliability and Resilience Program (ER2)



Legend:

- PR-ESP-00132

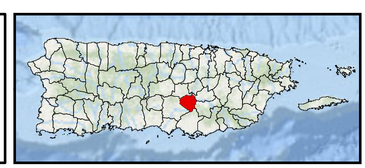
Coastal Barrier Resources System

- Otherwise Protected Area
- System Unit

1:200,000

0 10,000 20,000 Feet

0 2,000 4,000 6,000 Meters



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Source:
U.S. Fish and Wildlife Service (FWS)
https://www.fws.gov/program/coastal-barrier-resources-act

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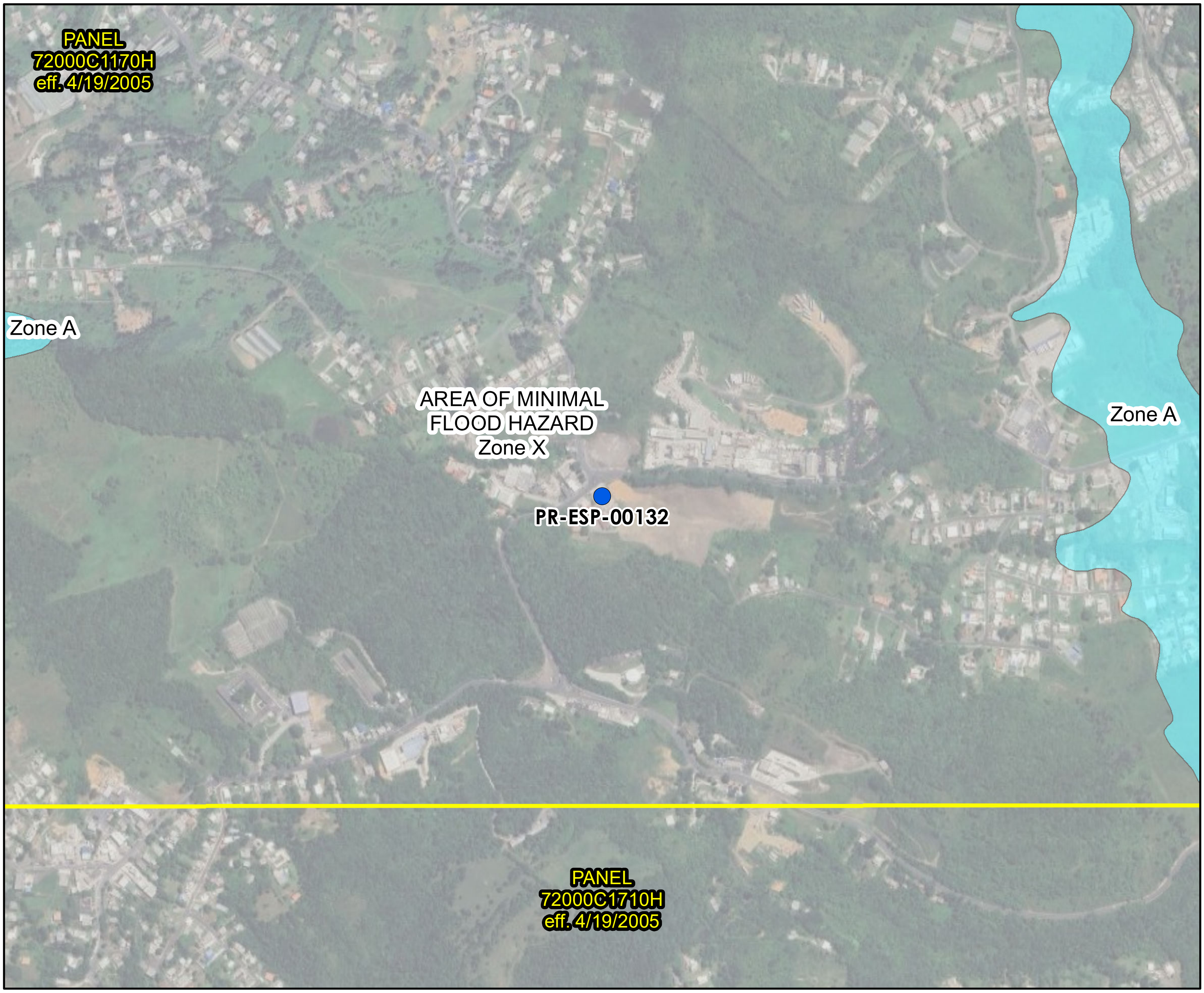
Figure 4

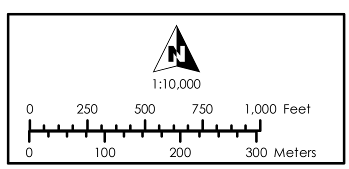
Flood Insurance Rate Map

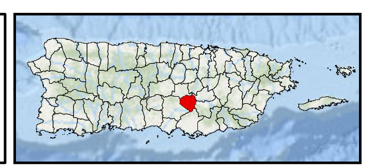
Electrical Power Reliability and Resilience Program (ER2)



Legend:

- PR-ESP-00132
- FIRM Panel
- Floodway
- 0.2% Annual Chance Flood Hazard
- Zone D Area of Undetermined Flood Hazard
- Zone A
- Zone AE
- Zone AH
- Zone AO
- Zone VE
- Zone X





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Source:
Federal Emergency Management Agency (FEMA)
https://msc.fema.gov/portal/home

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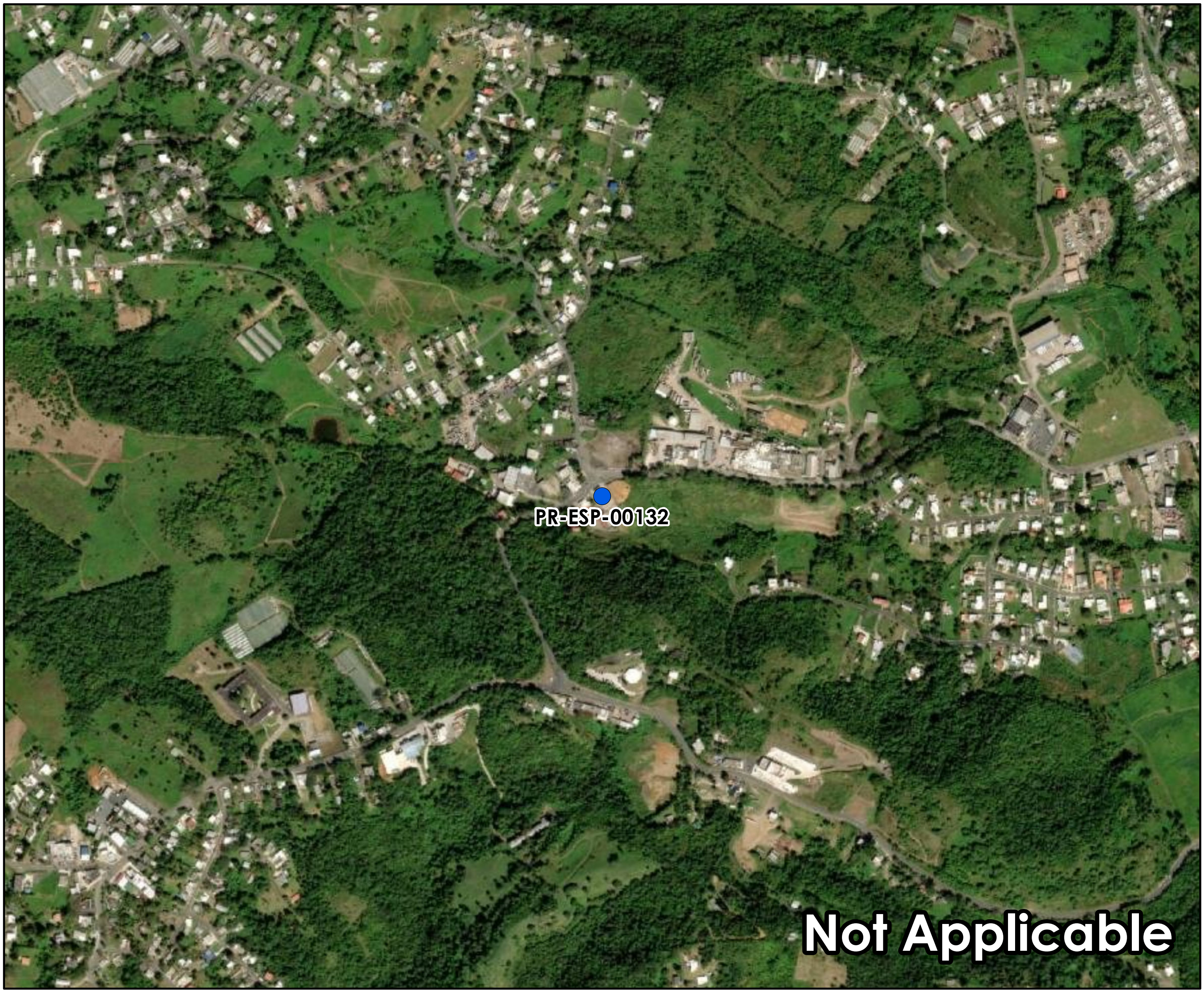
Figure 4-A

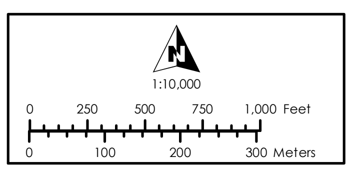
Preliminary Flood Insurance Rate Map

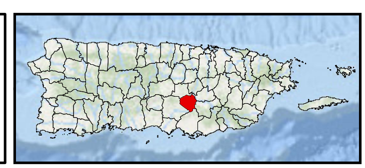
Electrical Power Reliability and Resilience Program (ER2)



Legend:

●	PR-ESP-00132		Zone A
	Preliminary FIRM Panel		Zone AE
	Floodway		Zone AH
	Profile Baseline		Zone AO
	Base Flood Elevation (m)		Zone VE
	0.2% Annual Chance Flood Hazard (Zone X)		Zone X





Service Layer Credits:
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Source:
Federal Emergency Management Agency (FEMA)
https://msc.fema.gov/portal/home

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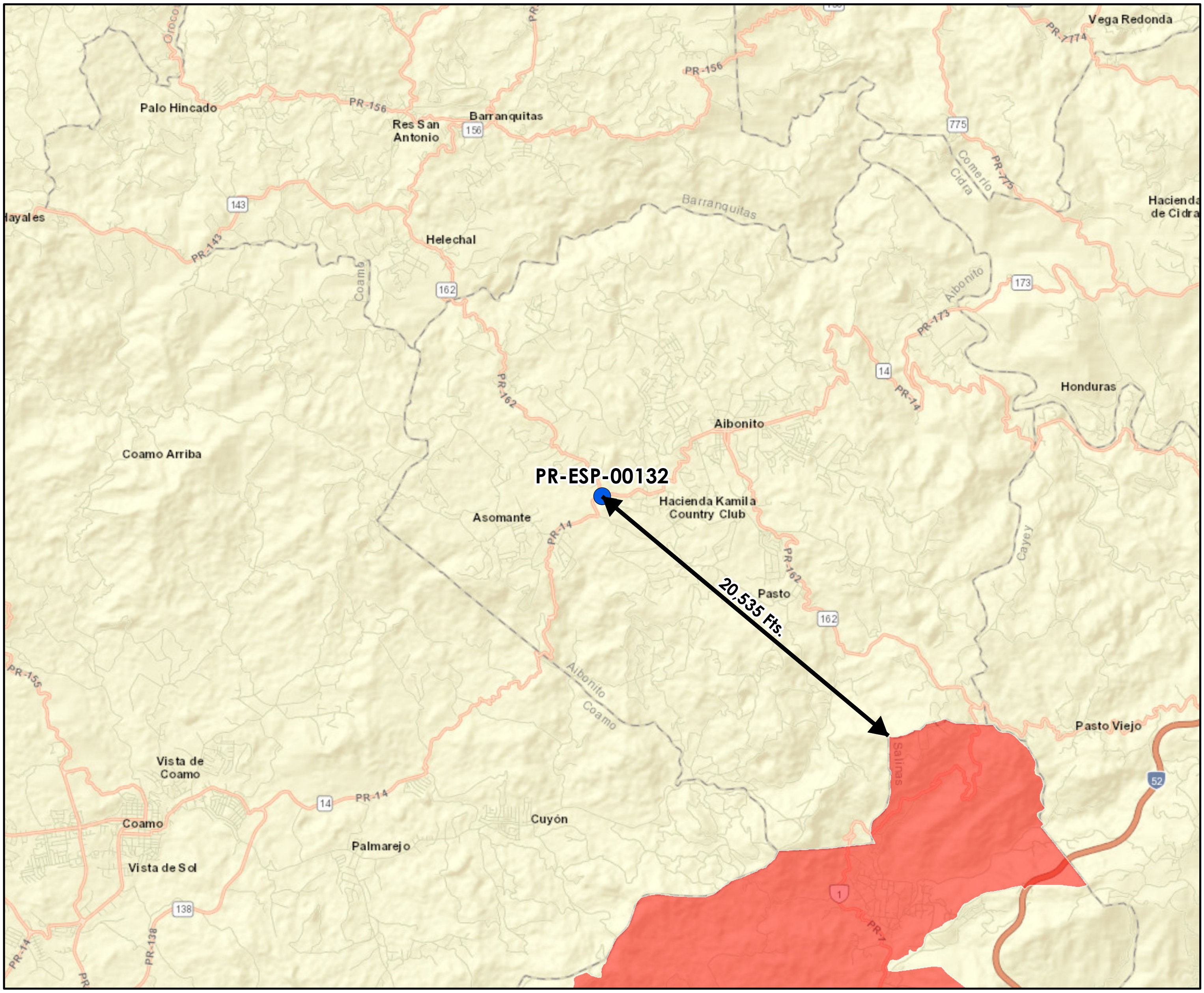
Figure 5

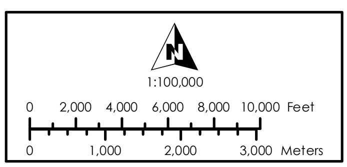
Clean Air Map

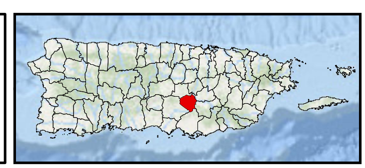
Electrical Power Reliability and Resilience Program (ER2)



Legend:

- PR-ESP-00132
- Clean Air Areas - SO2
- Clean Air Areas - Lead





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Source:
U.S. Geological Survey (USGS)
https://pubs.er.usgs.gov

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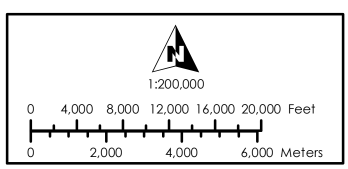
Figure 6

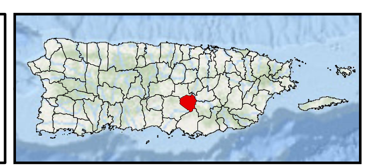
Coastal Zone Management Map

Electrical Power Reliability and Resilience Program (ER2)

Legend:

- PR-ESP-00132
- Coastal Zone Management Act Boundary





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Source:
NOAA Office for Coastal Management (NOAA/OCM)
https://www.fisheries.noaa.gov/inport/item/53132

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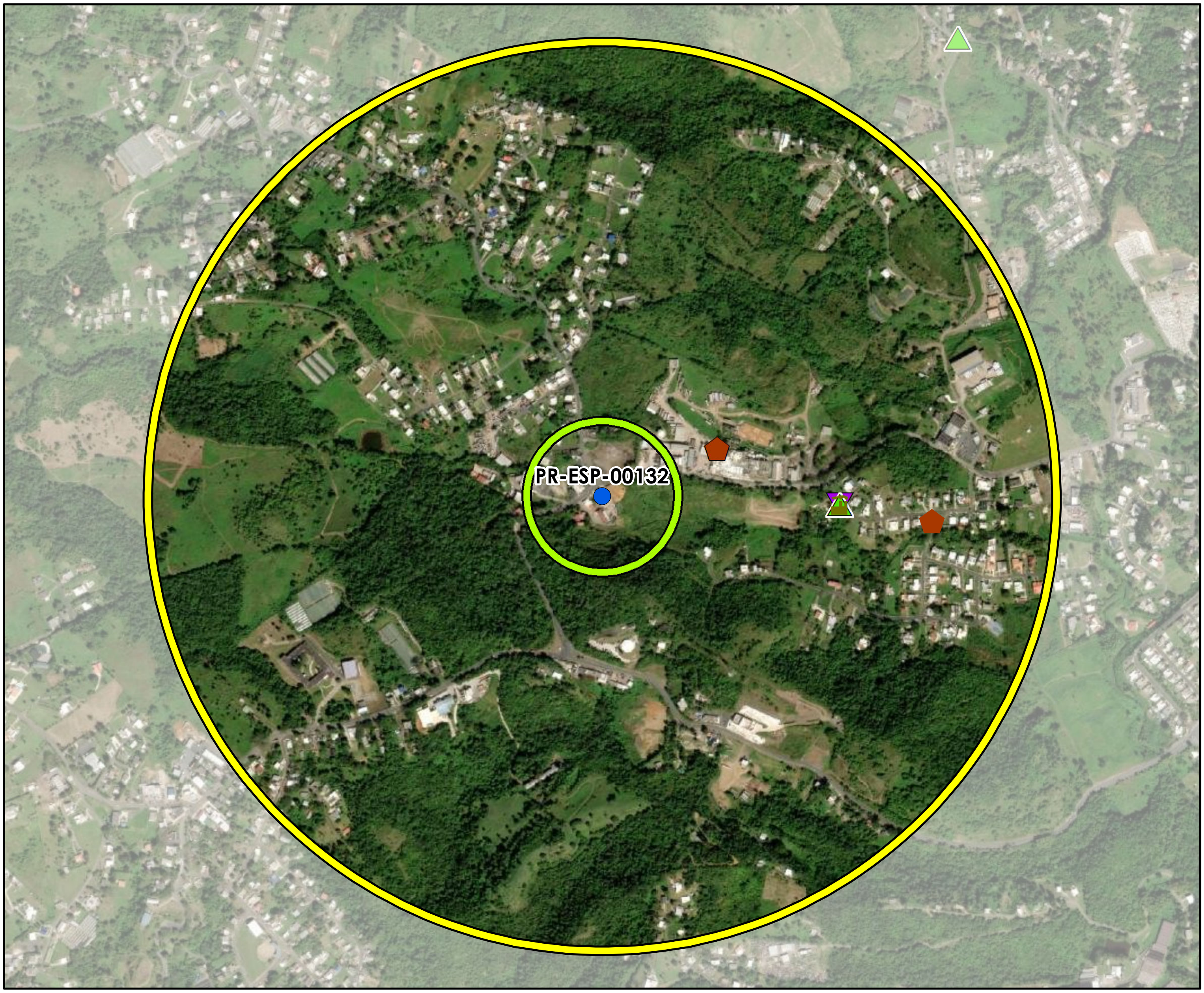
Figure 7

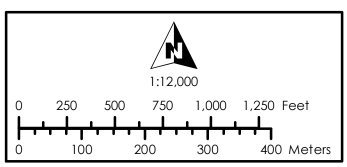
Toxic and Hazardous Facilities Map

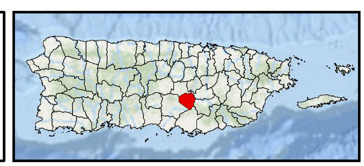
Electrical Power Reliability and Resilience Program (ER2)



Legend:

- PR-ESP-00132
- Buffer (500 Fts.)
- Buffer (3,000 Fts.)
- AIR
- NPDES
- NPDES - Major
- RADINFO
- RCRA
- RCRA - Active
- RCRA - Inactive
- TRI





Service Layer Credits:
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
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Source:
EPA Facility Registry Service (FRS)
https://www.epa.gov/frs

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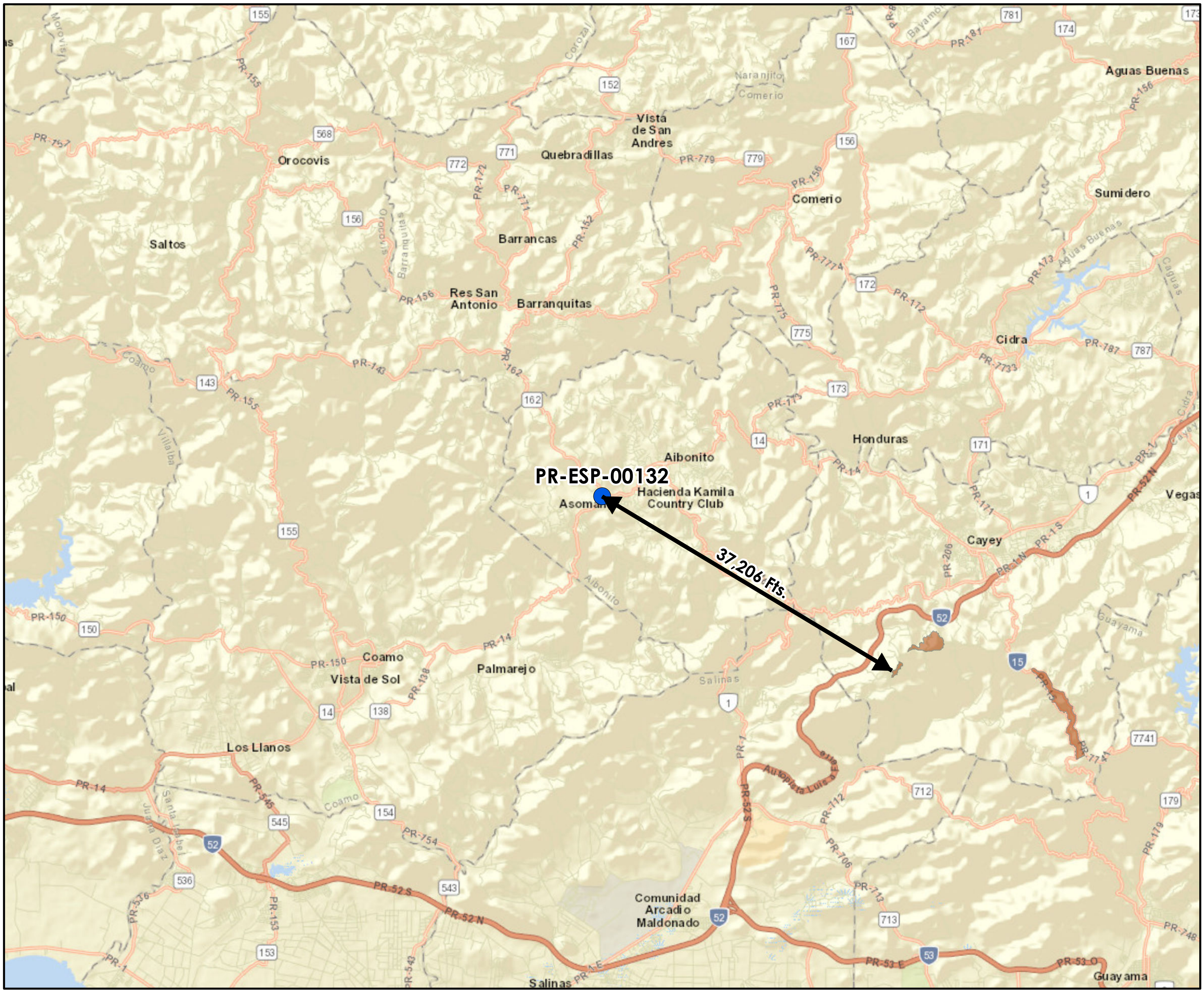
Figure 8

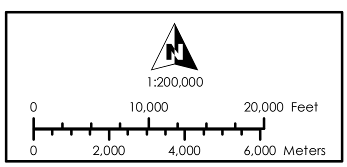
Threatened and Endangered Species Map

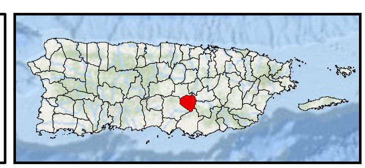
Electrical Power Reliability and Resilience Program (ER2)



Legend:

- PR-ESP-00132
- Critical Habitat





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Source:
NOAA Office of Response and Restoration
https://response.restoration.noaa.gov/

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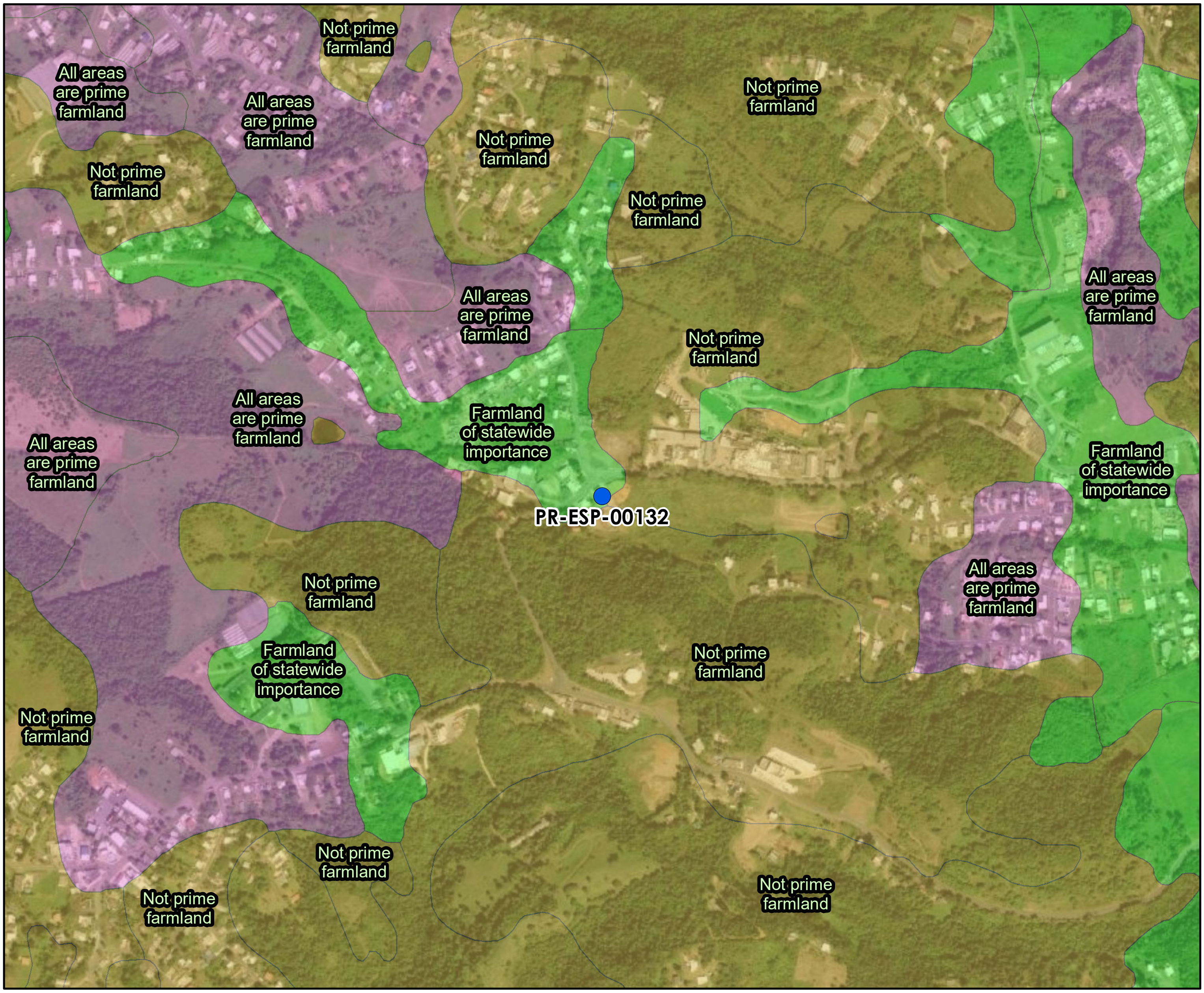
Figure 9

Farmland Protection

Electrical Power Reliability and Resilience Program (ER2)



Legend:

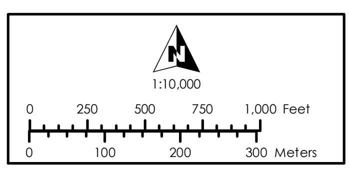
PR-ESP-00132

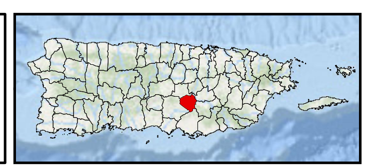
Farm Class

All areas are prime farmland

Farmland of statewide importance

Not prime farmland





Service Layer Credits:
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
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Source:
Underground Storage Tanks (USTs)
https://www.epa.gov/ust

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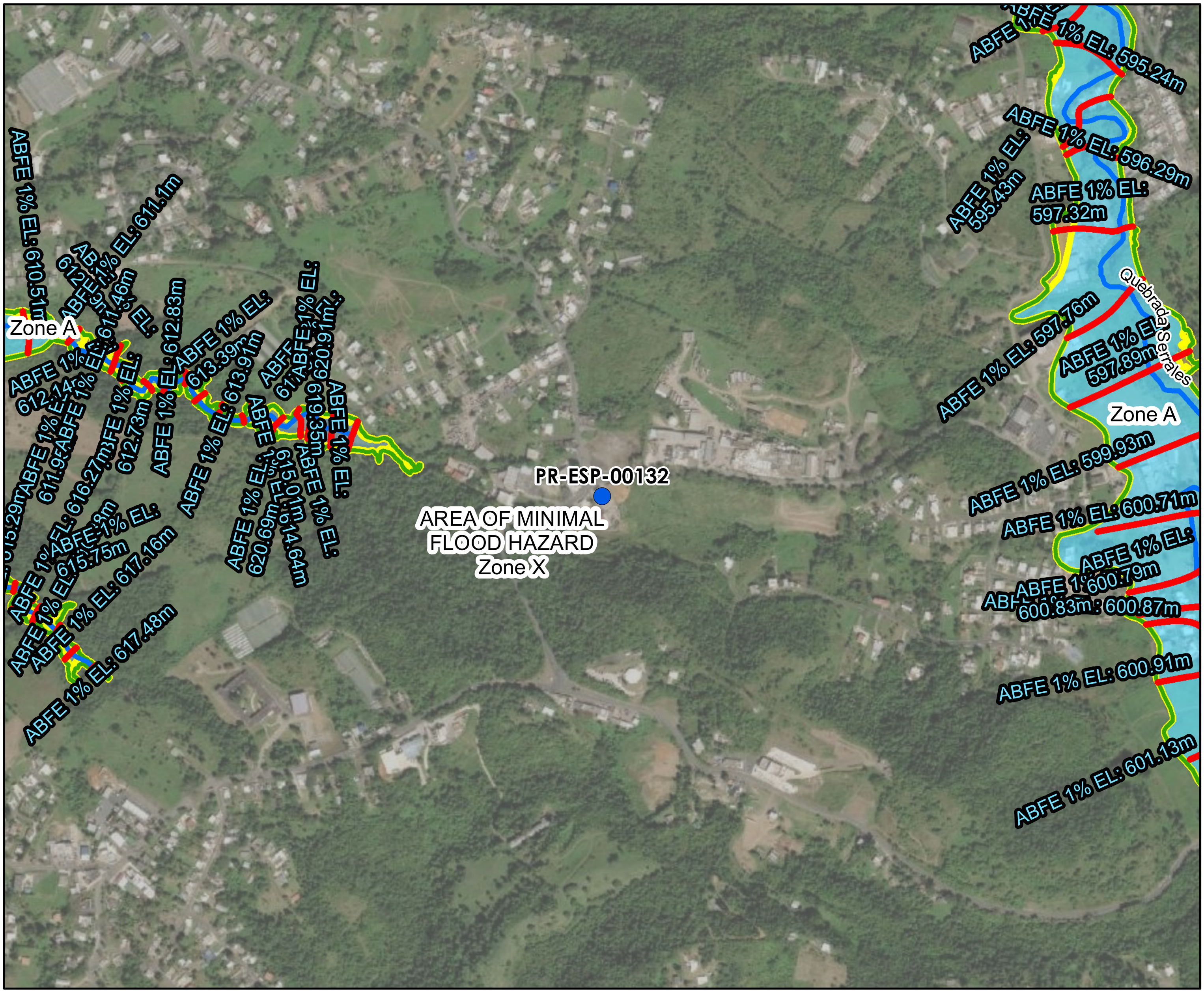
Figure 10

Advisory Base Flood Elevation Map

Electrical Power Reliability and Resilience Program (ER2)

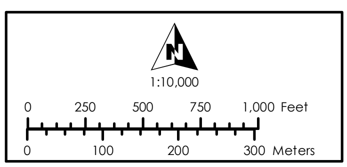


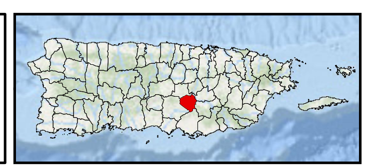
Legend:

- PR-ESP-00132
- Area Potential Effect (Building Footprint)
- CRIM-Parcel
- Advisory Base Flood Elevations (ABFE)
- 0.2 % Annual Chance Flood
- 1 % Annual Chance Flood

Flood Zone

- Zone A
- Zone AE
- Zone AO
- Zone VE
- Zone X - Area of Minimal Flood Hazard
- 0.2 % Annual Chance Flood
- Floodway





Service Layer Credits:
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Source:
Federal Emergency Management Agency (FEMA),
https://gis-r2-fema.hub.arcgis.com/
Junta de Planificacion de Puerto Rico (JP), https://maps.jp.pr.gov/
Mapas de Niveles de Inundacion Base Recomendados

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Figure 11

Historic Preservation Map

Electrical Power Reliability and Resilience Program (ER2)

Legend:

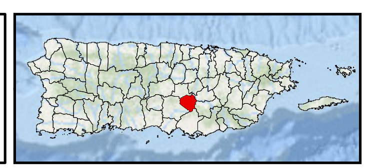
- PR-ESP-00132
- Buffer (0.5 Mile)
- Cultural Resource Building
- Cultural Resource Structure
- Cultural Resource Object
- Cultural Resource Site
- Historic Centers
- Cultural Resource District
- Sensitive Archaeological Zones
- Archaeological Resource Zones
- Historic Communities
- Traditional Urban Center

N

1:10,000

0 250 500 750 1,000 Feet

0 100 200 300 Meters



Service Layer Credits:
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Source:
National Park Service (NPS) - National Register of Historic Places (NRHP)
https://www.nps.gov/subjects/nationalregister/index.htm
State Historic Preservation Office (SHPO)
https://oech.pr.gov/Pages/default.aspx

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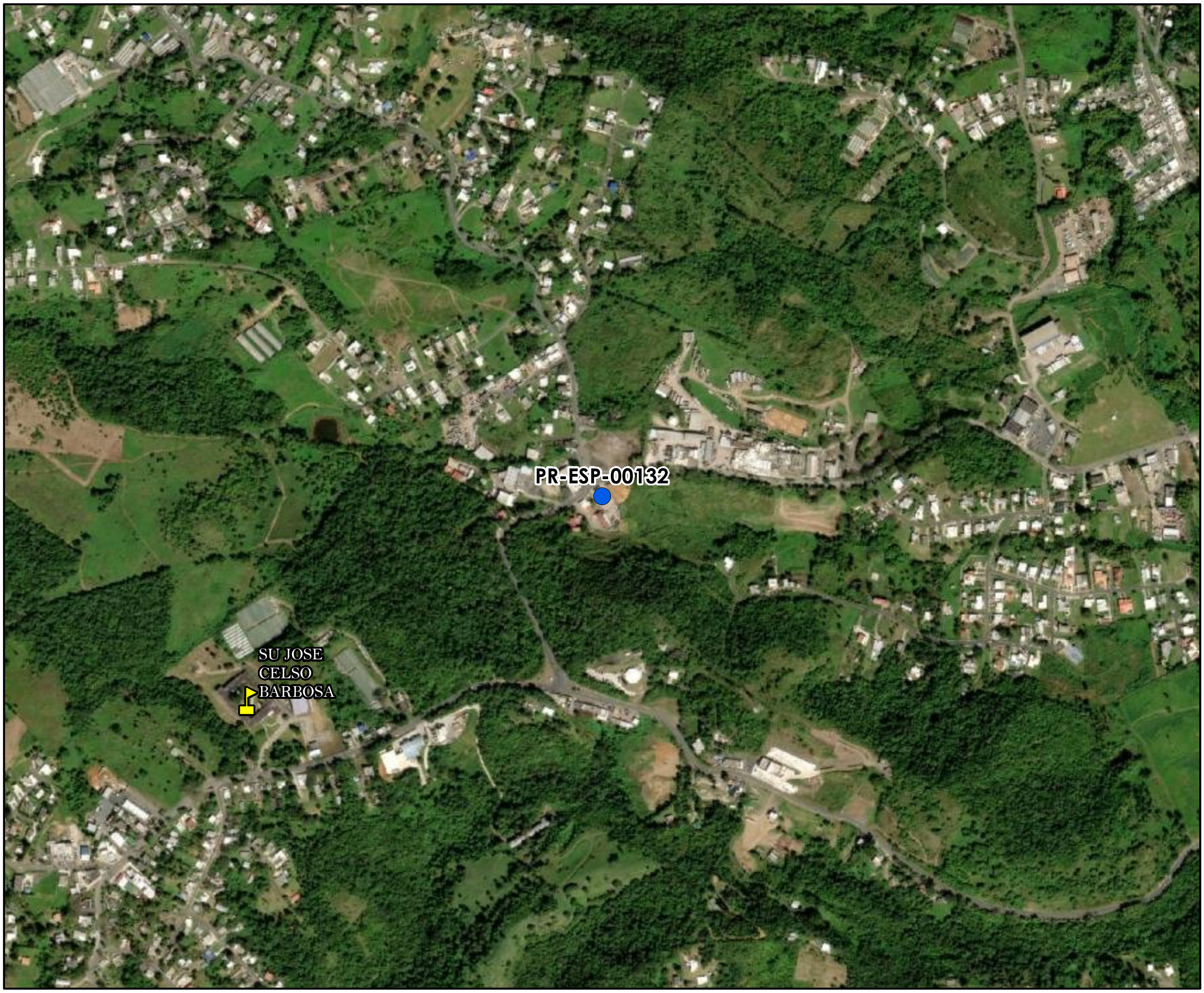
Figure 12

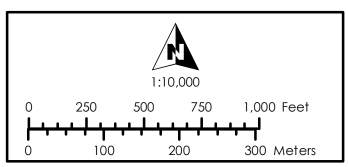
Noise Abatement and Control Map

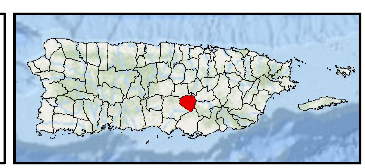
Electrical Power Reliability and Resilience Program (ER2)



Legend:

- PR-ESP-00132
- University
- School
- Hospital
- Emergency Hospital





Service Layer Credits:
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Source:
U.S. Geological Survey (USGS)
https://pubs.er.usgs.gov/publication/ofr20201022

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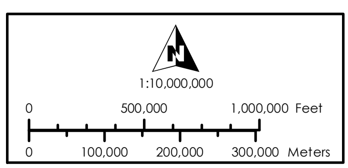
Figure 13

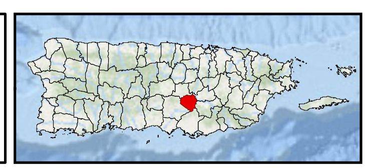
EPA Sole Source Aquifers

Electrical Power Reliability and Resilience Program (ER2)

Legend:

- PR-ESP-00132
- EPA Sole Source Aquifers





Service Layer Credits:
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Source:
U.S. Environmental Protection Agency
https://epa.maps.arcgis.com/apps/webappviewer/index.html
?id=9ebb047ba3ec41ada1877155fe31356b

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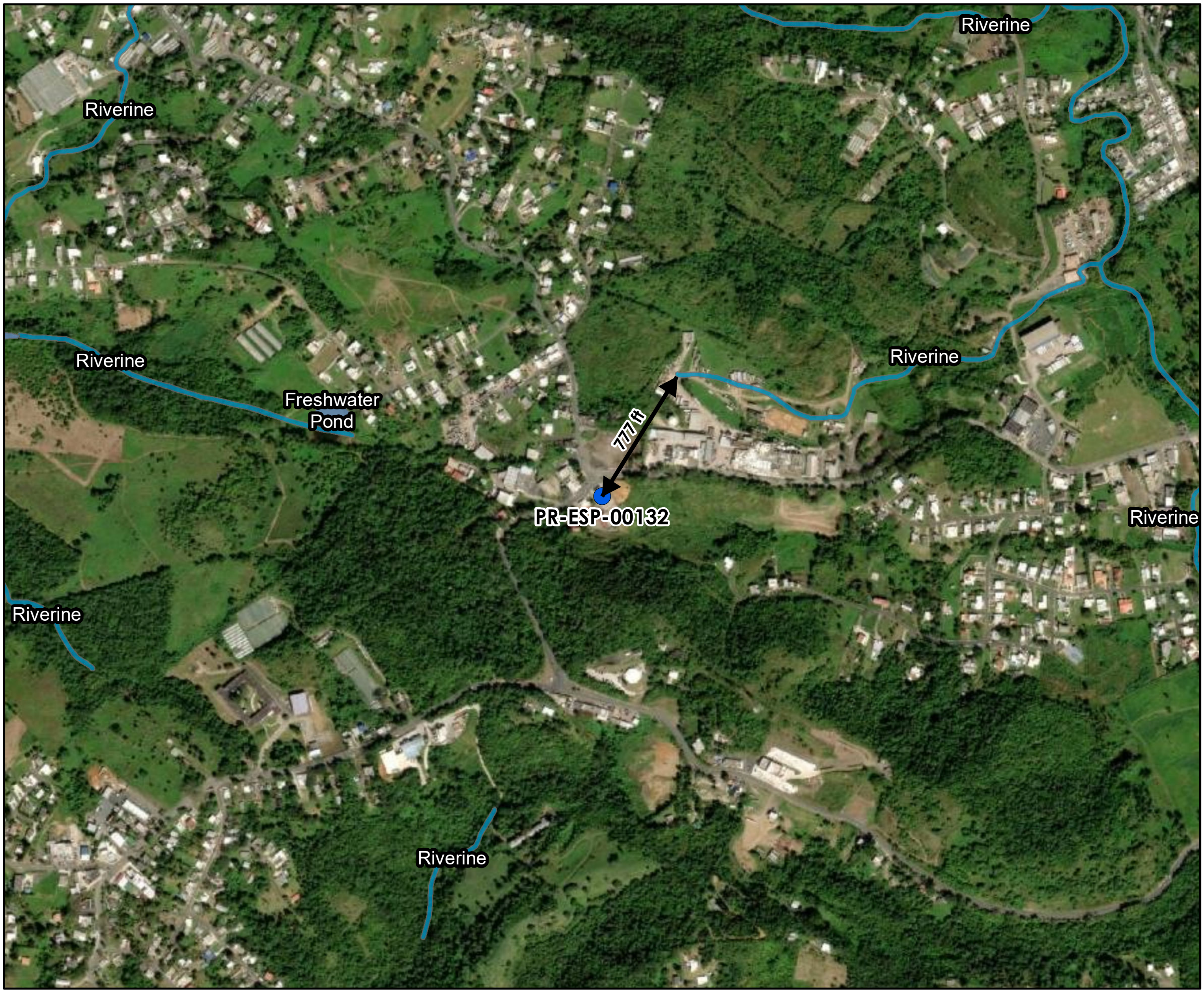
Figure 14

Wetlands Map

Electrical Power Reliability and Resilience Program (ER2)

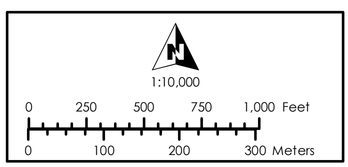


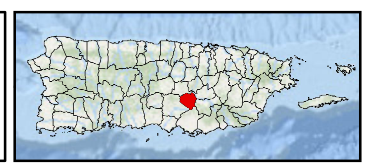
Legend:

PR-ESP-00132

National Wetlands Inventory

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine





Service Layer Credits:
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Source:
U.S. Fish and Wildlife Service - National Weatlands Inventory
https://www.fws.gov/program/national-wetlands-inventory

BYA BEHAR-YBARRA AND ASSOCIATES LLC
ENGINEERING · ENVIRONMENTAL · ARCHITECTURE · PLANNING
554 Calle Perseo, Suite J-3, San Juan, P.R. 00920 Tel.(787)783-0290

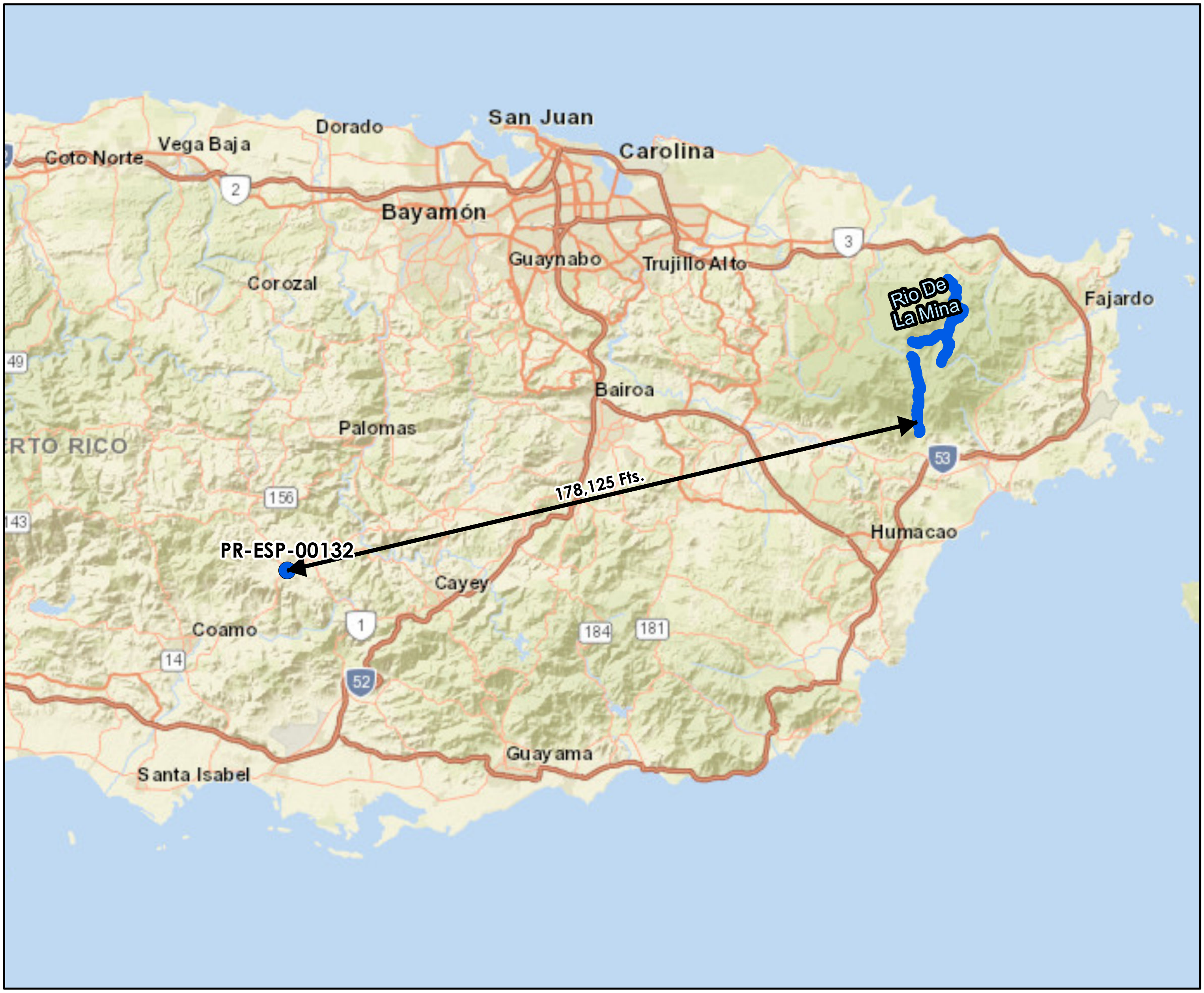
Application ID: PR-ESP-00132

AJC Service Stations, LLC (Asomante Service Stations)
Carretera 14 Km 46.7
Bo. Asomante,
Aibonito PR 00705
Catastro: 297-075-178-01-001
Lat: 18.129686, Lon: -66.285385

Figure 15

Wild and Scenic Rivers Map

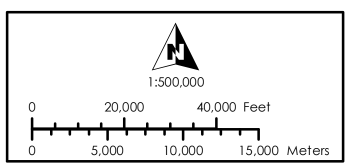
Electrical Power Reliability and Resilience Program (ER2)

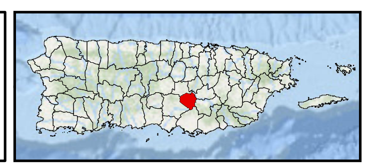


Legend:

PR-ESP-00132

Wild and Scenic Rivers





Service Layer Credits:
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

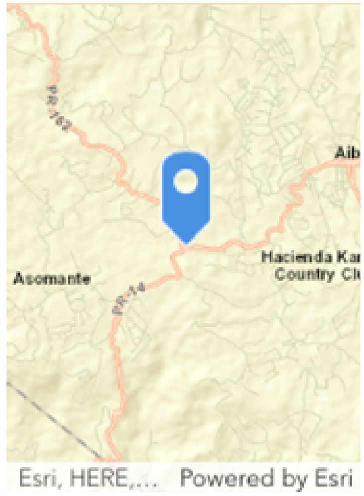
Source:
U.S. Fish and Wildlife Service - National Weatlands Inventory
https://www.fws.gov/program/national-wetlands-inventory

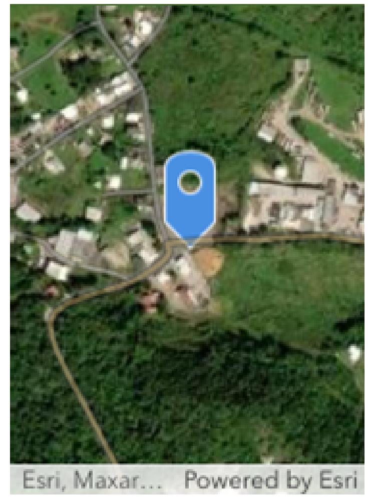
Appendix 2: Field Visit Report

Environmental Field Assessment Form - PR-ESP-00132

APPLICANT/LOCATION INFORMATION

Applicant ID:	PR-ESP-00132
Applicant Name:	AJC Service Stations, LLC (Asomante Service Stations)
Parcel ID:	297-075-178-01-001
Coordinates:	18.129686, -66.285385
Street Address:	Carretera 14 Km 46.7 Bo. Asomante
Municipio:	Aibonito
Zip Code:	00705
Site Inspector:	Egon Gonzalez
Date of Visit:	March 19, 2025
Time of Visit:	12:39
Year Built:	circa 1985





Building Information

Question	Answer	Notes
1. Location verified:	Yes	18.129686, -66.285385
2. Is the building correct on GIS?	Yes	Building is correct on GIS
3. Building Type:	Commercial	
4. # of Stories:	1	
5. Building Foundation:	Concrete Slab	
6. Is the building in use?	Yes	Building is in use
7. Does the building have a detached garage / carport present?	No	
8. Is the electricity connected?	Yes	Electricity is connected
9. Is the water connected?	Yes	Water is connected
10. Are there signs of poor housekeeping on site? (mounds of rubble, garbage, storm debris, solid waste, petroleum products, paint, pesticides, cleaning fluids, vehicle batteries, abandoned vehicles, pits, pools, ponds of hazardous substances, electrical equipment etc.)	No	
11. Is a septic system present? If Yes report apparent condition.	No	
12. Are there any obvious signs of animals, birds nesting or burrows near the site?	No	

Parcel Conditions		
Question	**Answer**	**Notes**
1) Are there any 55-gallon drums visible on site? If yes, are they leaking?	No	
2) Are there any (or signs of any) underground storage tanks on the property?	Yes	10000gal Premium, 10000gal Regular, 6000gal Diesel Underground Storage tank located at back of structure
3) Are there signs of AST on the parcel or adjacent parcel? If yes, list approximate size and contents, if known.	Yes	200gal Diesel tank for generator located on roof of structure
4) Is there any stained soil or pavement on the parcel?	No	
5) Are there any potentially hazardous trees that could fall?	No	
6) Are there any groundwater monitoring wells on the site or adjacent parcel?	No	
7) Is there distressed vegetation on the parcel?	No	
8) Are any additional environmental or non-environmental site hazards observed?	No	
9) Is there any permanent standing water, such as a pond or stream, located on the site(do not include ponding from recent rain / weather events)?	No	
10) Does the subject property have water frontage?	No	
11) Is the applicant aware of any significant historical event or persons associated with the structure, or of it being located in a historic district/ area?	No	
12) Is a historic marker present?	No	
13) Based on the above finding, does additional information need to be obtained from the applicant to determine whether an environmental hazard is present?	No	

Building Environmental Conditions		
Question	**Answer**	**Notes**
1. Is there any visible evidence of asbestos, chipping, and flaking or peeling paint, or hazardous materials present in or on the structure?	No	
2. Is there any visible indication of mold?	No	
3. Are there any pungent, foul or noxious odors?	No	

Additional Needs Analysis		
Question	**Answer**	**Notes**
Based on the above findings, does additional information need to be obtained from the applicant to determine whether an environmental hazard is present?	No	

☑ I verify that I have physically visited this property and that the findings outlined above are accurate.

Inspector Signature

Egon Gonzalez

March 19, 2025

Front of Structure

Photo Direction: Southeast

Comments:

Facing Away from Front

Photo Direction: Northwest

Comments:

Side #1 of Structure	
Photo Direction: South Comments:	

Facing Away From Side #1	
Photo Direction: East Comments:	

Back of Structure	
Photo Direction: Northwest Comments:	

Facing Away from Back	
Photo Direction: Southeast Comments:	

Side #2 of Structure	
Photo Direction: Southeast Comments:	

Facing Away from Side #2	
Photo Direction: Southeast Comments:	

Streetscape #1

Photo Direction: Southeast

Comments:

Streetscape #2

Photo Direction: Northwest

Comments:

Address	
Photo Direction: Southeast Comments:	

Architectural Details 1

Photo Direction:

Photo Description: Electricity is connected

Architectural Details 2

Photo Direction:

Photo Description: Water is connected

Architectural Details 3

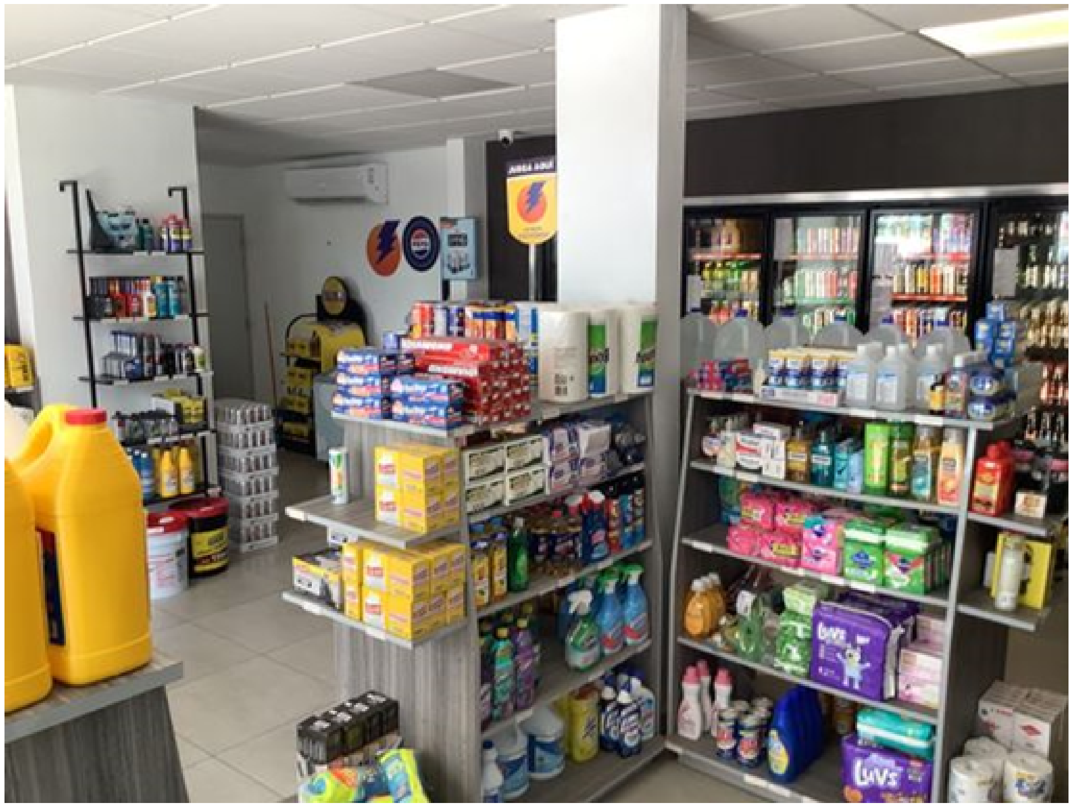
Photo Direction:

Photo Description: 200gal Diesel tank for generator located on roof of structure

Architectural Details 4

Photo Direction:

Photo Description: General interior view

Architectural Details 5	
Photo Direction: Photo Description: General interior view	

Architectural Details 6	
Photo Direction: Photo Description: 10000gal Regular Underground Storage tank located at back of structure	

Architectural Details 7	
Photo Direction: Photo Description: 6000gal Diesel Underground Storage tank located at back of structure	

Architectural Details 8	
Photo Direction: Photo Description: 10000gal Premium Underground Storage tank located at back of structure	

Architectural Details 9	
Photo Direction: Photo Description: Facing away from front	

Architectural Details 10	
Photo Direction: Photo Description:	

Appendix 3: Quote

Propuesta para Instalación de Sistema de Energía Solar APOYO ENERGETICO 2.0

CARIBBEAN SOLAR ENERGY, LLC

CÁLCULO DE CONSUMO ANUAL Y SISTEMA PROPUESTO

											Iniciales
Nombre de cliente	**ESTACION DE SERVICIOS AJC**										
Dirección del servicio	**CARR 14 K47 H6 BO ASOMANTE-GS-SHELL AIBONITO PR 00786**										
ID Contrato	**EDSA 1364**										
Fecha	**27/08/2024**										
Ultimos 12 meses de consumo											
4809	3027	4725	4898	5320	4952	5040	5089	4509	4886	4505	4941
Placa (W)	400										
Pueblo	Aibonito										

Consumo anual (kWh)	56.701
Costo por kWh en LUMA	0,26
Tamaño de sistema según consumo (kWDC)	37,6
(1) Sistema propuesto (kWDC)	37,6
(2) Almacenamiento propuesto (kWh)	14
(3) Cubierta de consumo estimada	100%
(4) Costo de placas solares	$28.200
(5) Costo de bateria(s)	$13.250
(6) Instalacion, Ingenieria, Permisos y BOS	$47.849
(7) Costo Total	$89.299
(8) Incentivo potencial	-$50.000
(9) Balance aportado por cliente	$39.299
(10) Retorno de inversion estimado (en años)	2,7
(11) Ahorro anual estimado en factura de LUMA	$14.724

TIPO DE SISTEMA

Sistema fotovoltaico nuevo con sistema de almacenamiento de batería(s).

EQUIPOS

Equipo	Marca	Modelo	Cantidad
Placas	Canadian Solar	CS6R-400MS-HL	94
Batería	Tesla	Powerwall 2	1
Inversor	Tesla	7.6 kW/AC Powerwall+	1
Inversor	Enphase	IQ8 Series	74
Transformador	Hammond	SG3L0050BE	0

CARIBBEAN SOLAR ENERGY
787-643-6767
info@caribbeansolarenergypr.com

INTRODUCCIÓN

Le damos las gracias por la oportunidad que nos ha dado para presentar nuestra propuesta para el trabajo de referencia. Caribbean Solar Energy, LLC se complace en presentar esta propuesta para la instalación de un Sistema Fotovoltaico para generación de energía. Agradecemos sus esfuerzos para ayudarnos a definir y entender las necesidades de su proyecto en su casa o negocio. Caribbean Solar Energy LLC se compromete a proporcionar los recursos necesarios para ejecutar con éxito este proyecto conforme a su petición y de acuerdo con las especificaciones y acuerdos aquí presentados.

SEGUROS

Caribbean Solar Energy reconoce el riesgo inherente y las exposiciones en la prestación de servicios a los clientes y utiliza un programa de seguro integral para protegerse contra cualquier acto negligente por el que pueda volverse legalmente responsable. Nuestro programa incluye $1,000,000 en cobertura general y $1,000,000 en exceso de cobertura. Adicional a esto contamos con una fianza para realizar proyectos de energía renovable, según establece la Ley 146 del Estado Libre Asociado de Puerto Rico.

Fuerza de trabajo

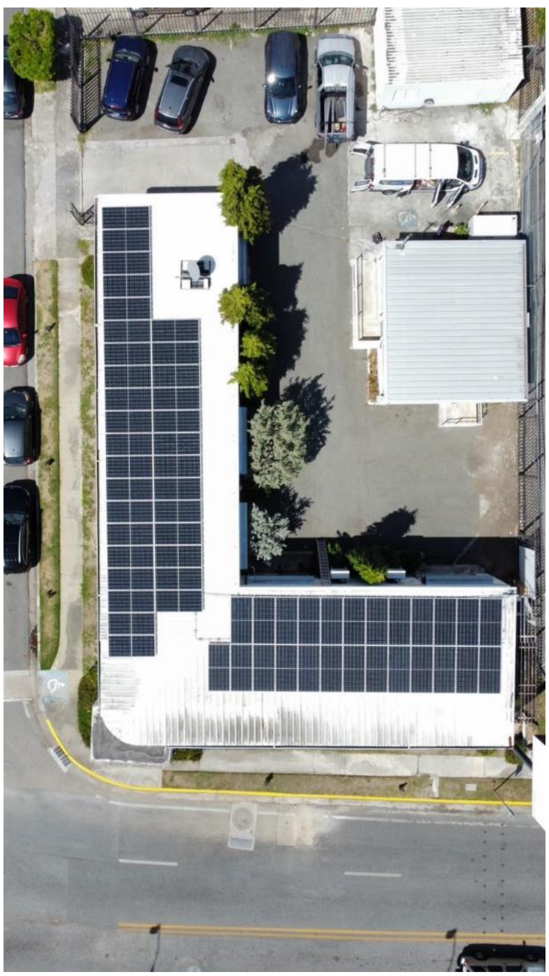
La fuerza de trabajo de Caribbean Solar Energy está formada por profesionales de la industria con experiencia en miles de instalaciones. Nuestra fuerza de trabajo está compuesta por ingenieros con licencia, electricistas certificados, personal administrativo, personal de ventas e instaladores altamente experimentados.

Certificaciones

Caribbean Solar Energy cuenta con las prestigiosas certificaciones de Tesla, Inc como "Tesla Certified Installer", Enphase Energy como "Enphase Certified Installer", UNIRAC, Gobierno Federal de Estados Unidos (SAM), Agencia de Protección Ambiental (EPA), entre otros. Adicional, nuestro personal de diseño cuenta con certificación del Colegio de Ingenieros y Agrimensores de Puerto Rico y de Instalador de Sistemas Eléctricos Renovables del Programa de Política Pública del Gobierno de Puerto Rico. Todos nuestros componentes cumplen con las certificaciones requeridas por la Oficina de Gerencia y Permisos (OGPE) y la Autoridad De Energía Eléctrica de Puerto Rico.

787-643-6767 info@caribbeansolarenergypr.com

CARTERA DE INSTALACIONES



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ALCANCE DEL TRABAJO

Iniciales

Esta propuesta incluye (según aplique):

1) **Diseño e ingeniería.**
2) **Permisos requeridos para operación e instalación.**
   a) Someter solicitud para programa de medición neta ante LUMA.
   b) Certificaciones Oficina de Gerencia y Permisos (OGPE).
3) **Equipos**
   a) Paneles solares.
   b) Inversores de corriente.
   c) Sistemas de almacenamiento (baterías).
   d) Accesorios necesarios para operación de sistema.
   e) Anclaje estructural de aluminio y acero inoxidable ("racking").
   f) Materiales misceláneos: tuberías, cables, interruptores, etc.
4) **Instalación**
   a) Instalación y encendido.
   b) Pruebas y "System Commissioning".
   c) Adiestramiento sobre operación y mantenimiento.

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NREL

Cuidado: Las predicciones de rendimiento de sistemas fotovoltaicos que calcula PVWatts® incluyen muchas suposiciones e incertidumbres intrínsecas y no reflejan las variaciones entre tecnologías FV ni características específicas de los sitios, con excepción de las que representan los datos de entrada de PVWatts®. Por ejemplo, PVWatts® no diferencia los módulos FV de mejor rendimiento de los de rendimiento más bajo. Both NREL and private companies provide more sophisticated PV modeling tools (such as the System Advisor Model at (fsam.nrel.gov) that allow for more precise and complex modeling of PV systems.

El rango esperado se basa en 30 años de datos meteorológicos reales de la ubicación dada y su finalidad es proporcionar un indicio de la variación que podría haber. Encontrará más información en este informe del NREL: The Error Report (El informe de errores).

El rango de producción eléctrica se basa en el análisis de 30 años de datos meteorológicos históricos de un sitio cercano, y su finalidad es proporcionar un indicio de la posible variación interanual en la generación de un sistema FV (de bastidor abierto) fijo situado en esa ubicación.

RESULTADOS

56,158 kWh/año*

Mes	Radiación solar (kWh / m^2 / día)	Energía de corriente alterna (kWh)
Enero	4.77	4,263
Febrero	5.25	4,232
Marzo	5.66	4,995
Abril	5.68	4,820
Mayo	5.58	4,871
Jun	6.05	5,153
Jul	6.26	5,507
Agosto	5.85	5,147
Septiembre	5.53	4,688
Octubre	5.00	4,368
Noviembre	4.63	3,989
Diciembre	4.61	4,123
Annual	**5.41**	**56,156**

Ubicación e identificación de la estación

Ubicación solicitada	18.1296517,-66.2854056
Fuente de datos meteorológicos	Lat., long.: 18.13, -66.3 1.0 mi
Latitud	18.13° N
Longitud	66.30° W

Especificaciones del sistema FV

Tamaño del sistema en CC	37.6 kW
Tipo de módulo	Estándar
Tipo de campo	Fijo (montaje en techo)
Pérdidas del sistema	14.08%
Inclinación del campo	5°
Acimut del campo	180°
Relación de tamaño de CC a CA	1.2
Eficiencia del inversor	96%
Tasa de cobertura del terreno	0.4
Albedo	*From weather file*
Bifacial	No (0)

Pérdida de irradiación mensual

Ene	Feb	Marzo	Abr	Mayo	Jun
0%	0%	0%	0%	0%	0%

Jul	Ago	Sept	Oct	Nov	Dic
0%	0%	0%	0%	0%	0%

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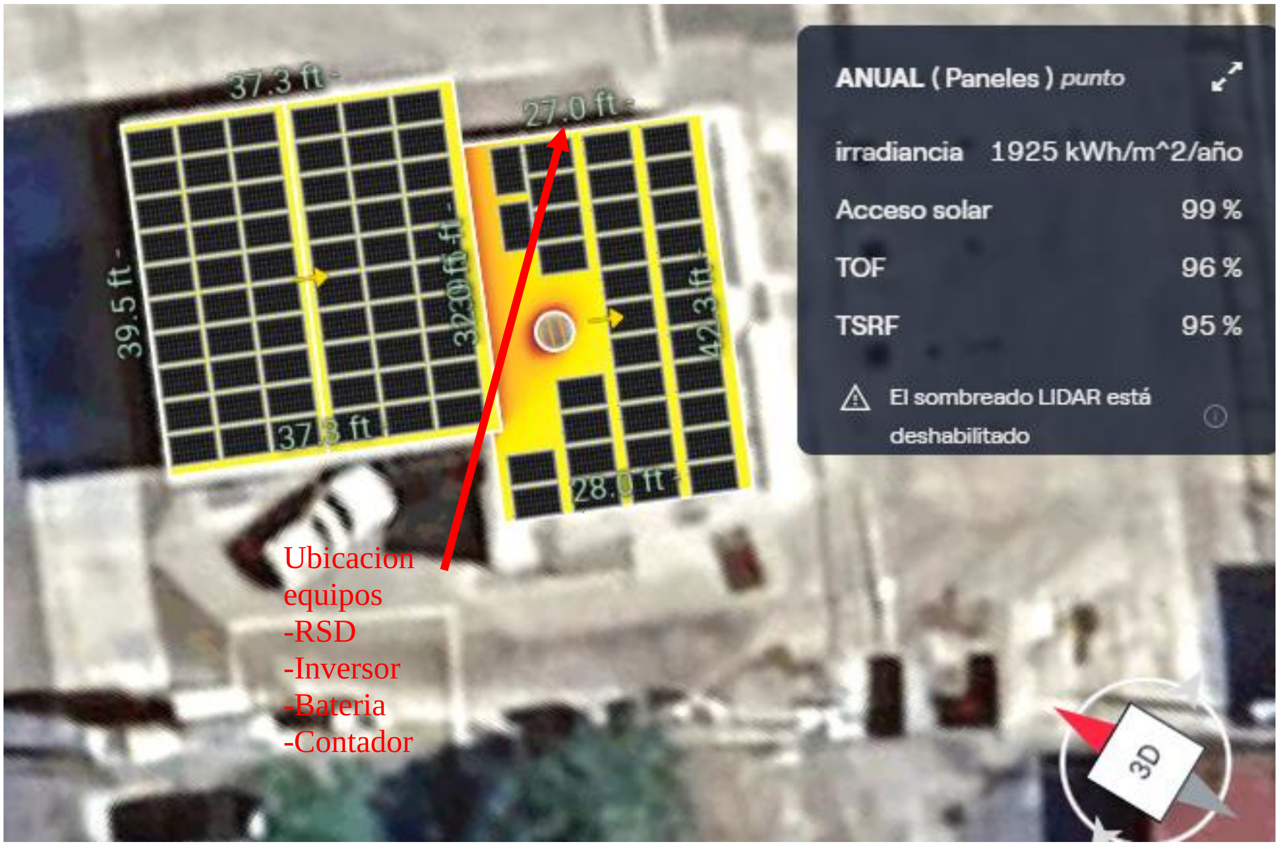
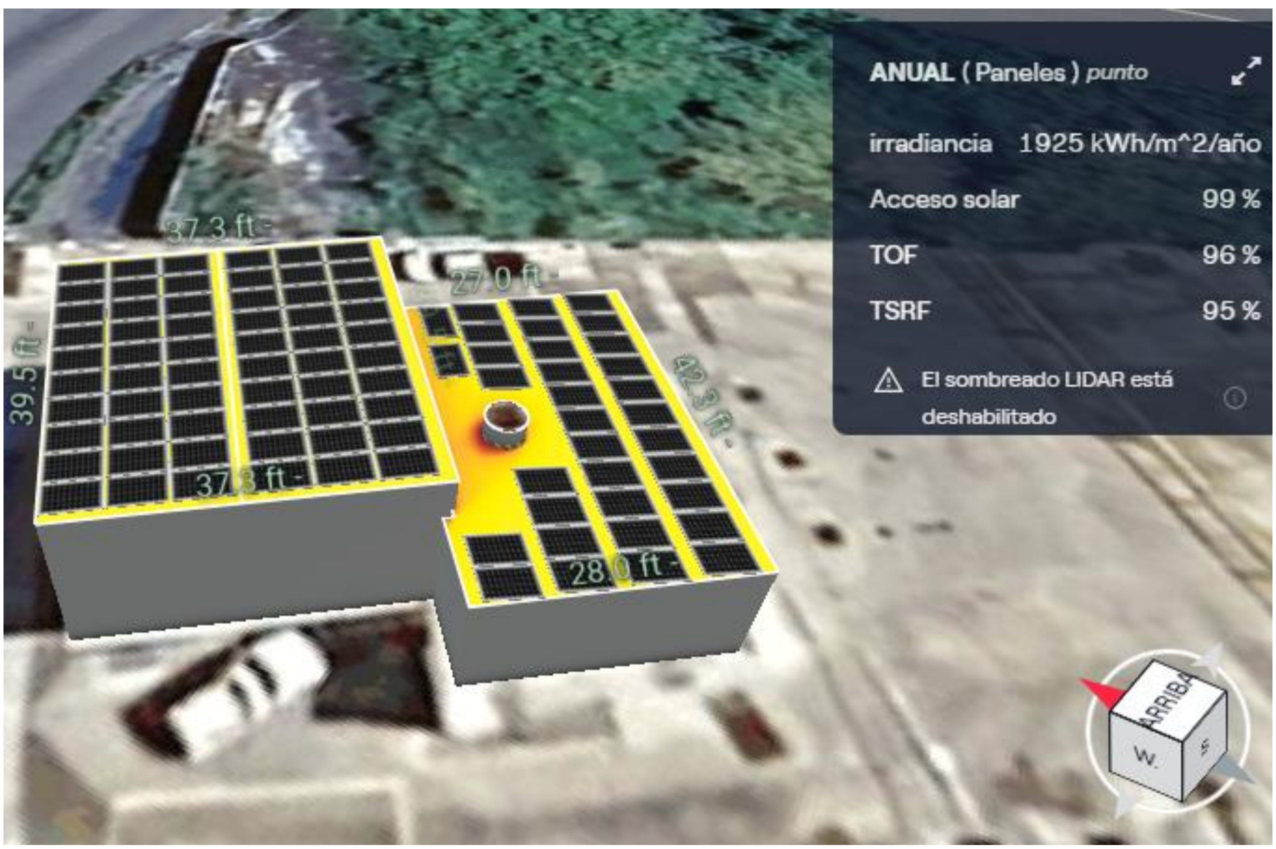

37.3 ft
27.0 ft
39.5 ft
42.3 ft
37.3 ft
28.0 ft
ANUAL (Paneles) punto
irradiancia 1925 kWh/m^2/año
Acceso solar 99 %
TOF 96 %
TSRF 95 %
El sombreado LIDAR está deshabilitado
Ubicacion
equipos
-RSD
-Inversor
-Bateria
-Contador
3D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ANUAL (Paneles) punto
irradiancia 1925 kWh/m^2/año
Acceso solar 99 %
TOF 96 %
TSRF 95 %
El sombreado LIDAR está deshabilitado
ARRIBA

ACUERDO DE INSTALACIÓN

787-643-6767 info@caribbeansolarenergypr.com

TÉRMINOS, CONDICIONES Y DEFINICIONES

1. **DEFINICIONES.** "INSTALACIÓN" PARA USO EN ESTE DOCUMENTO SE REFIERE A MANO DE OBRA Y SITUAR LOS EQUIPOS PROPUESTOS EN EL SITIO. "PROPUESTA" O "CONTRATO" SE REFIERE A ESTE DOCUMENTO. "SITIO" SE REFIERE A LA PROPIEDAD DONDE SE INSTALARÁ EL SISTEMA PROPUESTO. "PROGRAMA" SE REFIERE A PROGRAMA DE APOYO ENERGETICO 2.0. "ACTIVIDADES DE INSTALACION" SE REFIERE A DISEÑO, ADQUISION DE MATERIALES O INSTALACION. "DDEC" SE REFIERE A DEPARTAMENTO DE DESARROLLO ECONOMICO Y COMERCIO DE PUERTO RICO. "CSE" SE REFIERE A CARIBBEAN SOLAR ENERGY, LLC.
2. **DIVULGACIÓN**. ESTA PROPUESTA CONTIENE INFORMACIÓN CONFIDENCIAL, PROPIETARIA Y/O SENSIBLE A LA COMPETENCIA DE CSE POR LO TANTO; TODA LA INFORMACIÓN PROPORCIONADA EN ESTA PROPUESTA SE CONSIDERARÁ CONFIDENCIAL Y NO SE DIVULGARÁ A TERCEROS SIN EL CONSENTIMIENTO ESCRITO DE CSE.
3. **GARANTÍAS**. CSE CORREGIRÁ CUALQUIER DEFECTO DE INSTALACIÓN, SIN COSTO ALGUNO, DURANTE LOS PRIMEROS <u>10 AÑOS DESDE ENCENDIDO EL SISTEMA</u>. NUESTROS MANUFACTUREROS OFRECEN LAS SIGUIENTES GARANTÍAS, EN DESEMPEÑO; PANELES SOLARES 25 AÑOS; MICRO-INVERSORES ENPHASE 25 AÑOS; SOPORTE UNIRAC O SWH 25 AÑOS; BATERÍA TESLA O ENPHASE 10 AÑOS. MANIPULACIÓN AL EQUIPO POR PERSONAL NO-AUTORIZADO INVALIDARÍA GARANTÍAS. EL CLIENTE, CON LA FIRMA DE ESTE DOCUMENTO, CERTIFICA HABER LEIDO EL(LOS) MANUAL(ES) DE TÉRMINOS Y CONDICIONES DE GARANTÍA DEL MANUFACTURERO.
4. **TÉRMINOS DE PAGO**. (1) CSE RECIBIRÁ 50% DE LA APORTACION TOTAL CORRESPONDIENTE AL CLIENTE CON LA FIRMA DEL ACUERDO DE RESERVA DEL INCENTIVO. (2) CSE RECIBIRA EL RESTANTE 50% DE LA APORTACION TOTAL CORRESPONDIENTE AL CLIENTE UNA VEZ CULMINADA LA INSTALACIÓN. <u>LOS PAGOS SERÁN EMITIDOS EN UN PERIODO NO MAYOR DE 7 DÍAS LABORABLES Y NO PODRÁN SER RETENIDOS BAJO NINGUN CONCEPTO</u>. DEFICIENCIAS EN LA RED ELÉCTRICA QUE LIMITEN LA INTERACCIÓN DEL SISTEMA SOLAR CON DICHA RED NO SERÁ CAUSA PARA EXTENDER ESTE PERIODO. CSE SE RESERVA EL DERECHO DE APAGAR EL SISTEMA FOTOVOLTAICO, SIN EMITIR AVISO, SI SE EXCEDE ESTE PERIODO DE 7 DÍAS. EN CASO DE QUE CUALQUIER PAGO NO SEA EMITIDO DENTRO DE LOS TÉRMINOS ESTABLECIDOS EN ESTE CONTRATO, Y SIN MENOSCABO O MODIFICACIÓN DE OTRAS SECCIONES DE ESTE CONTRATO, EL CLIENTE ACUERDA Y SE OBLIGA A PAGAR A CSE UN CARGO POR DEMORA ADICIONAL DE DIEZ POR CIENTO (10%) DEL BALANCE ADEUDADO, MENSUALMENTE, HASTA QUE LOS PAGOS SEAN RECIBIDOS EN SU TOTALIDAD.
5. **EQUIPOS**. EN CASO DE "BACK-ORDER" EN INVENTARIO SE PROVEERÁ EQUIVALENTE DE IGUAL O MAYOR CAPACIDAD.
6. **TIEMPO DE INSTALACIÓN**. SE ESTIMA LA INSTALACIÓN SE REALIZARÁ DENTRO DEL TERMINO QUE PROVEE EL PROGRAMA. ESTE PERIODO PUEDE VERSE AFECTADO POR EVENTOS DE LLUVIA EXTENSOS, ESCASEZ DE MATERIAL Y EVENTOS DE FUERZA MAYOR (ATMOSFÉRICOS, PANDEMIAS, TERREMOTOS, ENTRE OTROS EVENTOS IMPREDECIBLES). EL CLIENTE RELEVA A CSE DE EXCEDERSE EL TERMINO DEL PROGRAMA A CAUSA DE UNO DE ESTOS EVENTOS.
7. **PRODUCCIÓN SOLAR ANUAL ESTIMADA.** SU PRODUCCIÓN SOLAR PUEDE VARIAR DEPENDIENDO DEL CLIMA Y EL ACORTAMIENTO (EN CASO DE APAGONES). CSE UTILIZA LA BASE DE DATOS DEL "NATIONAL RENEWABLE ENERGY LABORATORY" PARA LA RECOMENDACIÓN DE TAMAÑO DE SISTEMA POR LO QUE CSE NO SE HACE RESPONSABLE DE LAS VARIACIONES QUE PUDIERAN SURGIR.
8. **CANCELACIONES**. EN CUALQUIERA DE LOS ESCENARIOS DE CANCELACIÓN POSTERIOR AL COMIENZO DE LAS ACTIVIDADES DE INSTALACIÓN, SE COBRARÁ UNA TARIFA PROPORCIONAL AL GASTO INCURRIDO HASTA EL MOMENTO DE LA CANCELACIÓN EL CUAL NO SERÁ MENOR DE UN 5% DEL COSTO TOTAL DEL PROYECTO. CSE SE RESERVA EL DERECHO DE RESCINDIR DE ESTE CONTRATO, EN CUALQUIER MOMENTO, PREVIO A LA INSTALACIÓN DEL SISTEMA. ESTO NOTIFICANDO AL CLIENTE CON 10 DIAS DE ANTICIPACIÓN.
9. **MEDICIÓN NETA**. MEJORAS A INFRAESTRUCTURA SOLICITADAS POR LUMA NO ESTÁN CUBIERTOS EN ESTA PROPUESTA. LA APROBACIÓN DE ESTE PROGRAMA ESTÁ BAJO LA DISCRECIÓN DE LUMA.
10. **ALCANCE**. CUALQUIER TRABAJO NO IDENTIFICADO EN ESTA PROPUESTA O COMPONENTE (EJ. MEJORAS A INFRAESTRUCTURA EXISTENTE, ETC.) SE CONSIDERARÁ FUERA DEL ALCANCE Y PUEDE REQUERIR UNA ORDEN DE TRABAJO O UNA ORDEN DE COMPRA ADICIONAL. ESTA PROPUESTA INCLUYE UNA INSTALACIÓN BÁSICA DE 25 PIES AL PUNTO DE INTERCONEXIÓN Y CON TUBERÍAS EXPUESTAS, CUALQUIER PREFERENCIA ADICIONAL REQUERIRÁ UN CAMBIO DE ORDEN. EL DÍA DE INSTALACIÓN SE REPASARÁ EL PLANO DE INSTALACIÓN Y PRESENTARAN LOS EQUIPOS EN SUS RESPECTIVAS ÁREAS PARA SU APROBACIÓN ESCRITA. UNA VEZ APROBADOS E INSTALADOS LOS EQUIPOS SI DESEA REALIZAR UN CAMBIO DE UBICACIÓN EL MISMO CONLLEVARA UN CAMBIO DE ORDEN.
11. **SEGUROS**. ESTA PROPUESTA NO INCLUYE CUBIERTA PARA DAÑOS POR EVENTOS DE FUERZA MAYOR (ATMOSFÉRICOS, FUEGOS, TERREMOTOS, ENTRE OTROS), ROBO, VANDALISMO Y/O VARIACIONES DE VOLTAJE DE LA RED ELÉCTRICA UNA VEZ CULMINADA LA INSTALACION. EL CLIENTE ASUME RESPONSABILIDAD TOTAL DE CUALQUIER DAÑO AL SISTEMA UNA VEZ CULMINADA DICHA INSTALACIÓN EN EL SITIO.
12. **PERMISOS DE CONSTRUCCIÓN**. SEGÚN ESTABLECE EL REGLAMENTO DE OGPE, ESTAS INSTALACIONES NO REQUIEREN PERMISO DE CONSTRUCCIÓN POR SER MENORES A 1MW Y LLEVARSE A CABO SOBRE EL TECHO DE LA RESIDENCIA O COMERCIO.
13. **APAGONES.** PARA FUNCIONAR EN EL EVENTO DE UN APAGÓN, DE DÍA O NOCHE, ES NECESARIO EL SISTEMA INCLUYA ALMACENAMIENTO (BATERÍAS).
14. **MONITOREO.** REQUIERE CONECTAR EL SISTEMA A RED WI-FI CON INTERNET ESTABLE Y DE ALTA VELOCIDAD.
15. **VISITAS TÉCNICAS.** VISITAS DE SERVICIO NO-ASOCIADAS A DEFECTOS DE INSTALACIÓN TENDRÁN TARIFA MÍNIMA, COMENZANDO DESDE $150.
16. **CÓDIGOS Y REQUERIMIENTOS**. LOS EQUIPOS SOLO PODRÁN SER INSTALADOS EN ÁREAS APROBADAS POR

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MANUFACTUREROS, CÓDIGOS DE ELECTRICIDAD Y LA AUTORIDAD DE ENERGÍA ELÉCTRICA DE PUERTO RICO (“AEE” O “LUMA”, EN ADELANTE). EL CLIENTE RELEVA DE CUALQUIER RESPONSABILIDAD A CSE DE EL CLIENTE EXIGIR QUE NO SE CUMPLA CON ESTOS REQUISITOS.

17. **FACILIDADES.** SE PRESUME QUE SU INFRAESTRUCTURA ENERGÉTICA EXISTENTE CUMPLE CON LOS PARÁMETROS (VOLTAJES, FRECUENCIAS, ETC.) REQUERIDOS POR AEE-LUMA Y EL “NATIONAL ELECTRICAL CODE” PARA LA INTERACCIÓN DE SISTEMAS FOTOVOLTAICOS CON SU PROVEEDOR DE ENERGÍA ELÉCTRICA. CSE NO SE RESPONSABILIZA POR DAÑOS ESCONDIDOS, DISIMULADOS U OCULTOS QUE SE DESCUBRAN EN, DURANTE O DESPUÉS DE LA INSTALACIÓN; CORREGIRLOS REQUERIRÁ UNA ORDEN DE TRABAJO ADICIONAL.
18. **TECHO.** SE PRESUME ESPACIO DE TECHO DISPONIBLE Y EN CONDICIONES ADECUADAS PARA INSTALAR EL SISTEMA SIN REALIZAR MEJORAS, MODIFICACIONES O ADICIONES. CSE SE RESERVA EL DERECHO DE CLASIFICAR LAS CONDICIONES DEL TECHO. NO SE INCLUYE IMPERMEABILIZACIÓN DE TECHOS, SIN EMBARGO, TODAS LAS PENETRACIONES GARANTIZAN LAS MEJORES PRÁCTICAS PARA NO AFECTAR NINGUNA GARANTÍA (SI CORRESPONDE) O INTEGRIDAD DEL TECHO. CSE NO SE HACE RESPONSABLE BAJO NINGUN CONCEPTO DE DAÑOS AL TECHO NO RELACIONADOS A LA INSTALACIÓN O A LOS TRABAJOS REALIZADOS POR CSE. UNA VEZ INSTALADO EL SISTEMA FOTOVOLTAICO Y HABIENDO SIDO ACEPTADO POR EL CLIENTE, CSE NO SERA RESPONSABLE POR NINGUN RECLAMO RELACIONADO A LA IMPERMEABILIZACIÓN Y/O DAÑOS DEL TECHO.
19. **VALIDEZ Y CORRECCIONES**. ESTA PROPUESTA TIENE UNA VALIDEZ DE NOVENTA DÍAS (90) DÍAS A PARTIR DE LA EMISIÓN. LAS CITAS VERBALES EXPIRAN EL MISMO DÍA EN QUE SE REALIZAN. TODOS LOS ERRORES TIPOGRÁFICOS Y ADMINISTRATIVOS ESTÁN SUJETOS A CORRECCIÓN.
20. **TITULARIDAD**. EL CLIENTE RECONOCE QUE EL SISTEMA PROPUESTO Y TODOS SUS COMPONENTES SON PROPIEDAD EXCLUSIVA DE CSE HASTA TANTO SE SATISFAGAN EL 100% DE LOS PAGOS ACORDADOS BAJO ESTE CONTRATO.
21. **ACCESO**. EL CLIENTE RECONOCE QUE CONCEDE ACCESO A CSE A SU PROPIEDAD (PROPIA O ARRENDADA), EN CUALQUIER MOMENTO, PARA REMOVER Y/O REPOSEER LOS EQUIPOS, DE SER INCUMPLIDOS LOS TÉRMINOS DE PAGO POR CUALQUIER RAZÓN.
22. **FOTOGRAFÍAS.** CSE ESTÁ AUTORIZADO A UTILIZAR FOTOGRAFÍAS DE LOS EQUIPOS INSTALADOS EN SU PROPIEDAD (PROPIA O ARRENDADA) PARA PROPÓSITO PUBLICITARIOS SIEMPRE Y CUANDO SE PROTEJA SU PRIVACIDAD. ☐ MARCAR SI **NO** AUTORIZA.
23. **LLAMADAS GRABADAS.** TODAS LAS LLAMADAS RECIBIDAS Y REALIZADAS DE CSE SE REALIZAN A TRAVÉS DE UNA LÍNEA GRABADA.
24. **HONORARIOS DE ABOGADO.** EN CASO DE QUE CSE RECURRA A UN ABOGADO PARA MANEJAR POR MEDIO DE LA VÍA JUDICIAL, O EXTRAJUDICIAL, CUALQUIER VIOLACIÓN DE CUALQUIER TÉRMINO O CONDICIÓN DE ESTE CONTRATO, EL CLIENTE PAGARÁ LOS HONORARIOS RESULTANTES POR UNA CANTIDAD NO MENOR DEL VEINTE POR CIENTO (20%) DE LA CANTIDAD RECLAMADA EN EL MOMENTO, O QUE ESTÉ ACUMULANDO, PERO EN NINGÚN CASO DICHA CANTIDAD SERÁ MENOR DE DOS MIL QUINIENTOS DÓLARES ($2,500.00). ADEMÁS, SE ACUERDA QUE, SI SE INICIA UNA ACCIÓN JUDICIAL EN SU CONTRA POR VIOLAR LOS TÉRMINOS DE ESTE CONTRATO, ÉSTA SE SOMETERÁ A LA JURISDICCIÓN DEL TRIBUNAL QUE ESCOJA CSE.
25. **INCENTIVOS.** EL CLIENTE SE COMPROMETE A REALIZAR DE MANERA DILIGENTE Y PROACTIVA TODAS LAS GESTIONES PERTINENTES Y REQUERIDAS, DE SU PARTE, POR CUALQUIER ENTIDAD QUE LE HAYA APROBADO U OTORGADO UN INCENTIVO PARA LA ADQUISICIÓN DE SU SISTEMA Y ESTE SE HAYA CONSIDERADO COMO PARTE O TOTALIDAD DE LOS PAGOS POR EL PRESENTE CONTRATO. EL CLIENTE SE COMPROMETE A PAGAR EL 100% DE LOS COSTOS DEL PROYECTO, OBJETO DE ESTE CONTRATO, SI POR NEGLIGENCIA, OMISIÓN, PREFERENCIA O DEJADEZ DE SU PARTE EXPIRA EL PERIODO PARA RECLAMAR EL PAGO DE DICHO INCENTIVO Y EL SISTEMA HA SIDO INSTALADO. DE SER REQUERIDO POR EL CLIENTE QUE CSE O SUS REPRESENTANTES LE ASISTAN EN EL SOMETIMIENTO, LLENADO O RADICACIÓN DE CUALQUIER PROCESO, DOCUMENTO O SOLICITUD, EL CLIENTE, RELEVA A CSE Y SUS REPRESENTANTES DE CUALQUIER NEGLIGENCIA, OMISIÓN O ERROR EN TODO MOMENTO. HASTA TANTO SE EJECUTE EL ACUERDO DE RESERVA DE SUBVENCIÓN: (A) NO SE INICIARÁN NI REALIZARÁN NINGÚN TRABAJO PARA LA INSTALACIÓN DEL SISTEMA; (B) NO SE ORDENARÁN O TOMARÁN ACCIONES PARA ADQUIRIR EQUIPO O MATERIAL PARA EL SISTEMA; Y (C) NO SE INCURRIRÁ O PAGARÁ COSTOS RELACIONADOS CON EL TRABAJO O CUALQUIER OTRA RESPONSABILIDAD DE LAS FASES DE INSTALACIÓN PARA EL SISTEMA. ESTE CONTRATO QUEDARA AUTOMATICAMENTE CANCELADO, SIN PENALIDAD ALGUNA PARA LAS PARTES, SI EL DDEC NO APRUEBA EL INCENTIVO. LOS SUPLIDORES Y LOS BENEFICIARIOS NO PODRÁN MODIFICAR LAS SOLICITUDES APROBADAS Y DEBIDAMENTE NOTIFICADAS NI LOS CRITERIOS EXAMINADOS PARA EL PROCESO DE EVALUACIÓN Y APROBACIÓN, ENTIÉNDASE: LA PROPUESTA DEL SUPLIDOR, COSTO TOTAL DEL PROYECTO, CAMBIO DE UBICACIÓN O LOCAL, TAMAÑO DEL SISTEMA DE ENERGÍA RENOVABLE, TAMAÑO DEL ALMACENAMIENTO DE BATERÍA Y, SI SOLICITÓ, LA INFRAESTRUCTURA PARA EL CARGADOR DE AUTO ELÉCTRICO.
26.
27. **ACEPTACIÓN**. TAL ES EL CONTRATO QUE OTORGAN LOS COMPARECIENTES Y POR EL CUAL SE COMPROMETEN Y OBLIGAN MUTUAMENTE, HACIENDO CONSTAR QUE EL PRESENTE CONTIENE LA TOTALIDAD DE LOS ACUERDOS ENTRE LAS PARTES Y QUE CUALQUIER CAMBIO O ENMIENDA AL MISMO TENDRÁ QUE CONSTAR POR ESCRITO PARA SURTIR EFECTO Y OBLIGAR A LAS PARTES. SI ALGUNA DE LAS CLÁUSULAS DE ESTE CONTRATO FUERA DECLARADA ILEGAL O CONTRARIA A DERECHO, QUEDARÁN VIGENTES Y EN TODO VIGOR LAS CLÁUSULAS RESTANTES DEL CONTRATO.

FIRMA CLIENTE:

[redacted]

NOMBRE EN LETRA DE MOLDE

FIRMA

FECHA

CARIBBEAN SOLAR ENERGY:

Juan A Echegaray Romero

NOMBRE DE REPRESENTANTE AUTORIZADO

FIRMA

CARIBBEAN SOLAR ENERGY

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NEW

CanadianSolar

HiKu6 Mono PERC

395 W ~ 420 W

CS6R-395|400|405|410|415|420MS-HL

MORE POWER

420 W

Module power up to 420 W
Module efficiency up to 21.5 %

Lower LCOE & system cost

Comprehensive LID / LeTID mitigation technology, up to 50% lower degradation

Better shading tolerance

MORE RELIABLE

Minimizes micro-crack impacts

Heavy snow load up to 8100 Pa, wind load up to 5000 Pa*

* For detailed information, please refer to the Installation Manual.

25 Years Industry Leading Product Warranty on Materials and Workmanship*

25 Years Linear Power Performance Warranty*

1st year power degradation no more than 2%
Subsequent annual power degradation no more than 0.55%

*Subject to the terms and conditions contained in the applicable Canadian Solar Limited Warranty Statement. Also this 25-year limited product warranty is available only for products installed and operating on residential rooftops in certain regions.

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2015 / Quality management system
ISO 14001:2015 / Standards for environmental management system
ISO 45001: 2018 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730 / CE
CEC listed (US California) / FSEC (US Florida)
UL 61730 / IEC 61701 / IEC 62716
Take-e-way

* The specific certificates applicable to different module types and markets will vary, and therefore not all of the certifications listed herein will simultaneously apply to the products you order or use. Please contact your local Canadian Solar sales representative to confirm the specific certificates available for your Product and applicable in the regions in which the products will be used.

CSI SOLAR (USA) CO., LTD. is committed to providing high quality solar photovoltaic modules, solar energy and battery storage solutions to customers. The company was recognized as the No. 1 module supplier for quality and performance/price ratio in the IHS Module Customer Insight Survey. Over the past 20 years, it has successfully delivered over 70 GW of premium-quality solar modules across the world.

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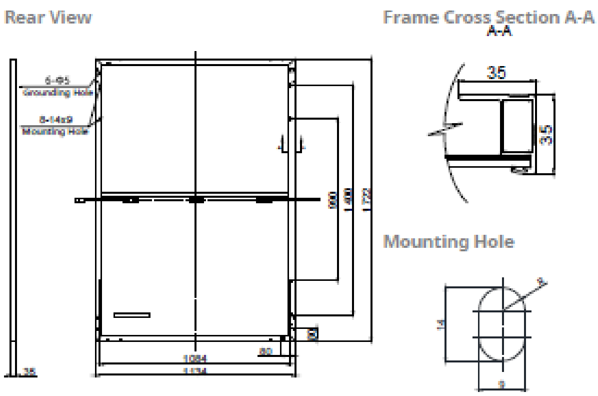
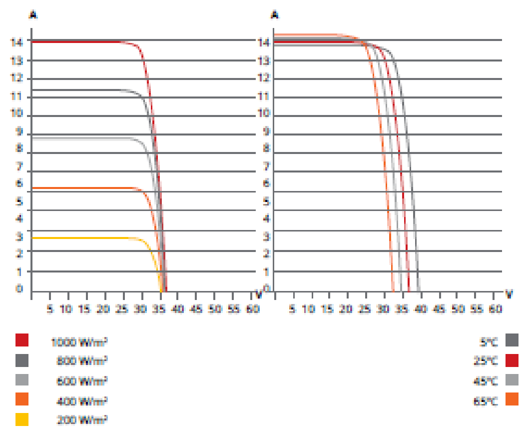
ENGINEERING DRAWING (mm)



CS6R-405MS-HL / I-V CURVES



ELECTRICAL DATA | STC*

CS6R-395/400/405/410/415/420MS-HL

Nominal Max. Power (Pmax)	395 W	400 W	405 W	410 W	415 W	420 W
Opt. Operating Voltage (Vmp)	30.6 V	30.8 V	31.0 V	31.2 V	31.4 V	31.6 V
Opt. Operating Current (Imp)	12.91 A	12.99 A	13.07 A	13.15 A	13.23 A	13.31 A
Open Circuit Voltage (Voc)	36.6 V	36.8 V	37.0 V	37.2 V	37.4 V	37.6 V
Short Circuit Current (Isc)	13.77 A	13.85 A	13.93 A	14.01 A	14.09 A	14.17 A
Module Efficiency	20.2%	20.5%	20.7%	21.0%	21.3%	21.5%
Operating Temperature	-40°C ~ +85°C					
Max. System Voltage	1000V (IEC/UL)					
Module Fire Performance	TYPE 2 (UL 61730 1000V) or CLASS C (IEC 61730)					
Max. Series Fuse Rating	25 A					
Application Classification	Class A					
Power Tolerance	0 ~ + 10 W					

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

MECHANICAL DATA

Specification	Data
Cell Type	Mono-crystalline
Cell Arrangement	108 [2 X (9 X 6)]
Dimensions	1722 × 1134 × 35 mm (67.8 × 44.6 × 1.38 in)
Weight	22.4 kg (49.4 lbs)
Front Cover	3.2 mm tempered glass with anti-reflective coating
Frame	Anodized aluminium alloy,
J-Box	IP68, 3 bypass diodes
Cable	4 mm² (IEC), 12 AWG (UL)
Connector	T6, MC4, MC4-EVO2 or MC4-EVO2A
Cable Length (Including Connector)	1550 mm (61.0 in) (+) / 1100 mm (43.3 in) (-)*
Per Pallet	30 pieces
Per Container (40' HQ)	780 pieces

* For detailed information, please contact your local Canadian Solar sales and technical representatives.

ELECTRICAL DATA | NMOT*

CS6R-395/400/405/410/415/420MS-HL

Nominal Max. Power (Pmax)	296 W	300 W	304 W	307 W	311 W	315 W
Opt. Operating Voltage (Vmp)	28.7 V	28.9 V	29.1 V	29.2 V	29.4 V	29.6 V
Opt. Operating Current (Imp)	10.33 A	10.39 A	10.45 A	10.52 A	10.58 A	10.65 A
Open Circuit Voltage (Voc)	34.6 V	34.8 V	35.0 V	35.1 V	35.3 V	35.5 V
Short Circuit Current (Isc)	11.09 A	11.15 A	11.21 A	11.28 A	11.34 A	11.41 A

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m² spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.34 % / °C
Temperature Coefficient (Voc)	-0.26 % / °C
Temperature Coefficient (Isc)	0.05 % / °C
Nominal Module Operating Temperature	41 ± 3°C

PARTNER SECTION

* The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. CSI Solar Co., Ltd. reserves the right to make necessary adjustment to the information described herein at any time without further notice.
Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.

POWERWALL+

Powerwall+ is an integrated solar battery system that stores energy from solar production. Powerwall+ has two separate inverters, one for battery and one for solar, that are optimized to work together. Its integrated design and streamlined installation allow for simple connection to any home, and improved surge power capability brings whole home backup in a smaller package. Smart system controls enable owners to customize system behavior to suit their renewable energy needs.

KEY FEATURES

- Integrated battery, inverter, and system controller for a more compact install
- A suite of application modes, including self-powered, time-based control, and backup modes
- Wi-Fi, Ethernet, and LTE connectivity with easy over-the-air updates

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POWERWALL+

PHOTOVOLTAIC (PV) AND BATTERY ENERGY STORAGE SYSTEM (BESS) SPECIFICATIONS

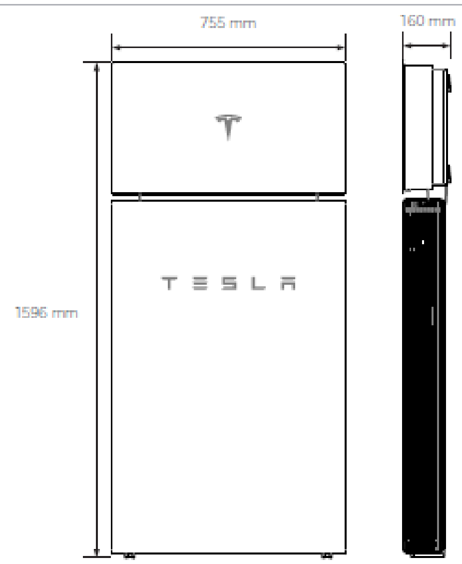
Powerwall+ Model Number	1850000-xx-y
Solar Assembly Model Number	1538000-xx-y
Nominal Battery Energy	13.5 kWh
Nominal Grid Voltage (Input / Output)	120/240 VAC
Grid Voltage Range	211.2 - 264 VAC
Frequency	60 Hz
Phase	240 VAC: 2W+N+GND
Maximum Continuous Power On-Grid	7.6 kVA full sun / 5.8 kVA no sun[1]
Maximum Continuous Power Off-Grid	9.6 kW full sun / 7 kW no sun[1]
Peak Off-Grid Power (10 s)	22 kW full sun / 10 kW no sun[1]
Maximum Continuous Current On-Grid	32 A output
Maximum Continuous Current Off-Grid	40 A output
Load Start Capability	98 - 118 A LRA[2]
PV Maximum Input Voltage	600 VDC
PV DC Input Voltage Range	60 - 550 VDC
PV DC MPPT Voltage Range	60 - 480 VDC
MPPTs	4 (or 2 combined strings)
Input Connectors per MPPT	1-2-1-2
Maximum Current per MPPT (I_{mp})	13 A (26 A for combined strings)
Maximum Short Circuit Current per MPPT (I_{sc})	15 A
Allowable DC/AC Ratio	1.7
Overcurrent Protection Device	50 A breaker
Maximum Supply Fault Current	10 kA
Output Power Factor Rating	+/- 0.9 to 1[3]
Round Trip Efficiency	90%[4]
Solar Generation CEC Efficiency	97.5% at 208 V 98.0% at 240 V
Customer Interface	Tesla Mobile App
Internet Connectivity	Wi-Fi, Ethernet, Cellular LTE/4G)[5]
PV AC Metering	Revenue grade (+/-0.5%)
Protections	Integrated arc fault circuit interrupter (AFCI), PV Rapid Shutdown
Warranty	10 years

COMPLIANCE INFORMATION

PV Certifications	UL 1699B, UL 1741, UL 3741, UL 1741 SA, UL 1998 (US), IEEE 1547, IEEE 1547.1
Battery Energy Storage System Certifications	UL 1642, UL 1741, UL 1741 PCS, UL 1741 SA, UL 1973, UL 9540, IEEE 1547, IEEE 1547.1, UN 38.3
Grid Connection	United States
Emissions	FCC Part 15 Class B
Environmental	RoHS Directive 2011/65/EU
Seismic	AC156, IEEE 693-2005 (high)

MECHANICAL SPECIFICATIONS

Dimensions	1596 x 755 x 160 mm (62.8 x 29.7 x 6.3 in)
Total Weight	140 kg (310 lb)[6]
Battery Assembly	118 kg (261 lb)
Solar Assembly	22 kg (49 lb)
Mounting options	Floor or wall mount



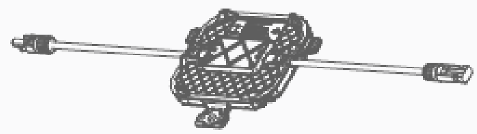
ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	–20°C to 50°C (–4°F to 122°F)[7]
Recommended Temperature	0°C to 30°C (32°F to 86°F)
Operating Humidity (RH)	Up to 100%, condensing
Storage Conditions	–20°C to 30°C (–4°F to 86°F) Up to 95% RH, non-condensing State of Energy (SoE): 25% initial
Maximum Elevation	3000 m (9843 ft)
Environment	Indoor and outdoor rated
Enclosure Type	Type 3R
Solar Assembly Ingress Rating	IP55 (Wiring Compartment)
Battery Assembly Ingress Rating	IP56 (Wiring Compartment) IP67 (Battery & Power Electronics)
Noise Level @ 1 m	< 40 db(A) optimal, < 50 db(A) maximum

[1]Values provided for 25°C (77°F).
[2]Load start capability may vary.
[3]Power factor rating at max real power.
[4]AC to battery to AC, at beginning of life.
[5]Cellular connectivity subject to network service coverage and signal strength.
[6]The total weight does not include the Powerwall+ bracket, which weighs an additional 9 kg (20 lb).
[7]Performance may be de-rated at operating temperatures below 10°C (50°F) or greater than 43°C (109°F).

SOLAR SHUTDOWN DEVICE

The Tesla Solar Shutdown Device is part of the PV system rapid shutdown (RSD) function in accordance with Article 690 of the applicable NEC. When paired with Powerwall+, solar array shutdown is initiated by turning the Powerwall+ Enable switch off, or by pushing the System Shutdown Switch if one is present.



ELECTRICAL SPECIFICATIONS

Nominal Input DC Current Rating (I_{MP})	12 A
Maximum Input Short Circuit Current (I_{SC})	15 A
Maximum System Voltage	600 V DC

RSD MODULE PERFORMANCE

Maximum Number of Devices per String	5
Control	Power Line Excitation
Passive State	Normally open
Maximum Power Consumption	7 W
Warranty	25 years

COMPLIANCE INFORMATION

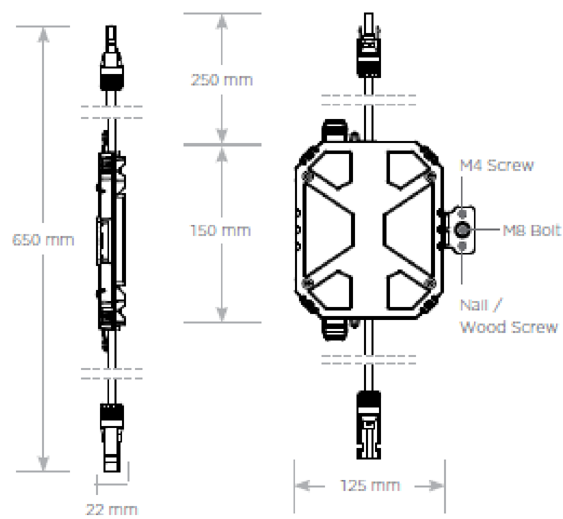
Certifications	UL 1741 PVRSE, UL 3741, PVRSA (Photovoltaic Rapid Shutdown Array)
RSD Initiation Method	External System Shutdown Switch
Compatible Equipment	*See Compatibility Table below*

ENVIRONMENTAL SPECIFICATIONS

Ambient Temperature	-40ºC to 50ºC (-40ºF to 122ºF)
Storage Temperature	-30ºC to 60ºC (-22ºF to 140ºF)
Enclosure Rating	NEMA 4 / IP65

MECHANICAL SPECIFICATIONS

Electrical Connections	MC4 Connector
Housing	Plastic
Dimensions	125 mm x 150 mm x 22 mm (5 in x 6 in x 1 in)
Weight	350 g (0.77 lb)
Mounting Options	ZEP Home Run Clip M4 Screw (#10) M8 Bolt (5/16") Nail / Wood screw



UL 3741 PV HAZARD CONTROL (AND PVRSA) COMPATIBILITY

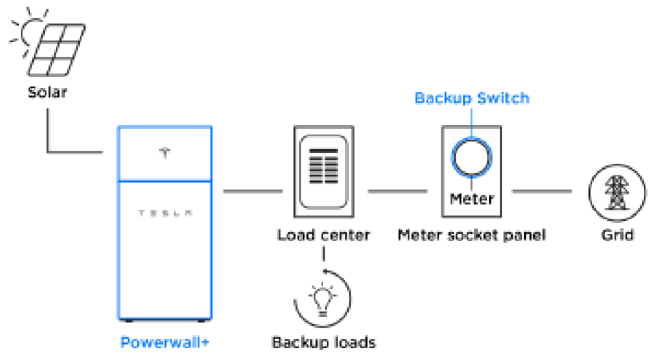
Tesla Solar Roof and Tesla/Zep ZS Arrays using the following modules are certified to UL 3741 and UL 1741 PVRSA when installed with the Powerwall+ and Solar Shutdown Devices. See the Powerwall+ Installation Manual for detailed instructions and for guidance on installing Powerwall+ and Solar Shutdown Devices with other modules.

Brand	Model	Required Solar Shutdown Devices
Tesla	Solar Roof V3	1 Solar Shutdown Device per 10 modules
Tesla	Tesla TxxxS (where xxx = 405 to 450 W, increments of 5)	1 Solar Shutdown Device per 3 modules[1]
Tesla	Tesla TxxxH (where xxx = 395 to 415 W, increments of 5)	1 Solar Shutdown Device per 3 modules
Hanwha	Q.PEAK DUO BLK-G5	1 Solar Shutdown Device per 3 modules
Hanwha	Q.PEAK DUO BLK-G6+	1 Solar Shutdown Device per 3 modules

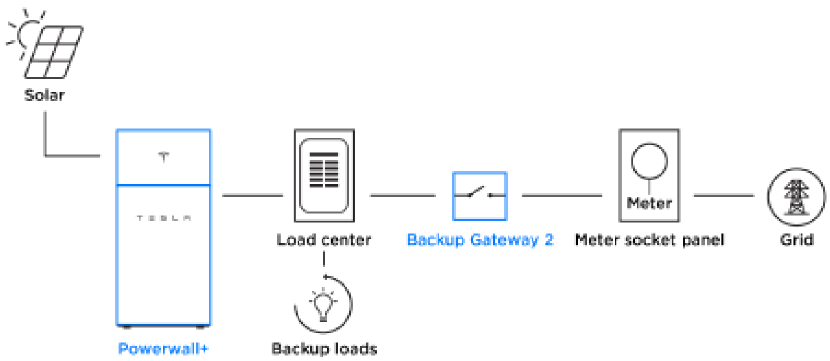
[1]**Exception**: Tesla solar modules installed in locations where the max Voc for three modules at low design temperatures exceeds 165 V shall be limited to two modules between MCIs.

SYSTEM LAYOUTS

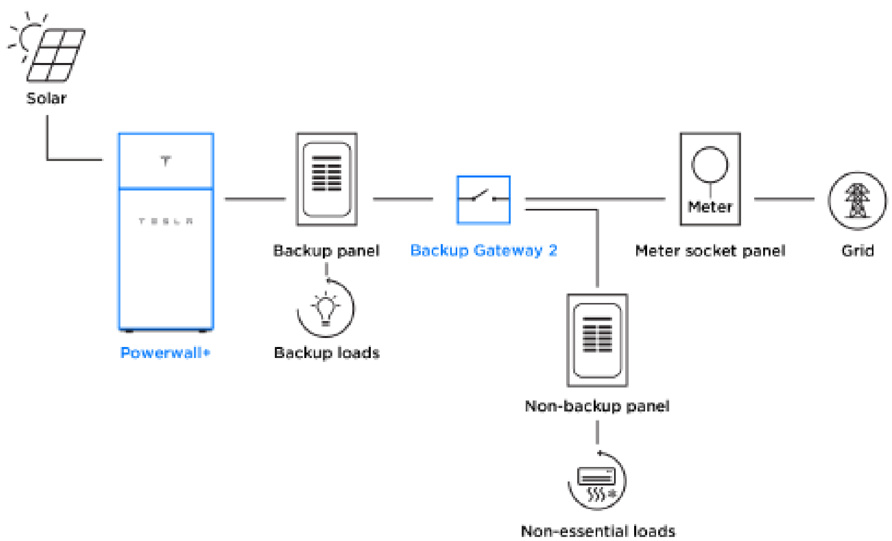
Powerwall+ with Backup Switch for Whole Home Backup



Powerwall+ with Backup Gateway 2 for Whole Home Backup



Powerwall+ with Backup Gateway 2 for Partial Home Backup



ENPHASE.

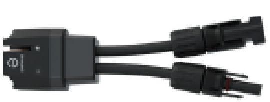
DATA SHEET

IQ8 Series Microinverters

Our newest IQ8 Microinverters are the industry's first microgrid-forming, software-defined microinverters with split-phase power conversion capability to convert DC power to AC power efficiently. The brain of the semiconductor-based microinverter is our proprietary application-specific integrated circuit (ASIC) which enables the microinverter to operate in grid-tied or off-grid modes. This chip is built in advanced 55nm technology with high speed digital logic and has super-fast response times to changing loads and grid events, alleviating constraints on battery sizing for home energy systems.

Part of the Enphase Energy System, IQ8 Series Microinverters integrate with the Enphase IQ Battery, Enphase IQ Gateway, and the Enphase App monitoring and analysis software.

IQ8 Series Microinverters redefine reliability standards with more than one million cumulative hours of power-on testing, enabling an industry-leading limited warranty of up to 25 years.



Connect PV modules quickly and easily to IQ8 Series Microinverters using the included Q-DCC-2 adapter cable with plug-n-play MC4 connectors.

CERTIFIED SAFETY

IQ8 Series Microinverters are UL Listed as PV Rapid Shut Down Equipment and conform with various regulations, when installed according to manufacturer's instructions.

Easy to install

- Lightweight and compact with plug-n-play connectors
- Power Line Communication (PLC) between components
- Faster installation with simple two-wire cabling

High productivity and reliability

- Produce power even when the grid is down*
- More than one million cumulative hours of testing
- Class II double-insulated enclosure
- Optimized for the latest high-powered PV modules

Microgrid-forming

- Complies with the latest advanced grid support**
- Remote automatic updates for the latest grid requirements
- Configurable to support a wide range of grid profiles
- Meets CA Rule 21 (UL 1741-SA) requirements

IQ8SE-DS-0001-01-EN-US-2022-03-17

* Only when installed with IQ System Controller 2, meets UL 1741. IQ8H-208V operates only in grid-tied mode.
** IQ8 Series Microinverters supports split phase, 240V. IQ8H-208 supports split phase, 208V only.

IQ8 Series Microinverters

INPUT DATA (DC)		IQ8-60-2-US	IQ8PLUS-72-2-US	IQ8M-72-2-US	IQ8A-72-2-US	IQ8H-240-72-2-US	IQ8H-208-72-2-US[1]
Commonly used module pairings[2]	W	235 – 350	235 – 440	260 – 460	295 – 500	320 – 540+	295 – 500+
Module compatibility		60-cell/120 half-cell	60-cell/120 half-cell, 66-cell/132 half-cell and 72-cell/144 half-cell				
MPPT voltage range	V	27 – 37	29 – 45	33 – 45	36 – 45	38 – 45	38 – 45
Operating range	V	25 – 48	25 – 58				
Min/max start voltage	V	30 / 48	30 / 58				
Max input DC voltage	V	50	60				
Max DC current[3] [module Isc]	A	15					
Overvoltage class DC port		II					
DC port backfeed current	mA	0					
PV array configuration		1x1 Ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit					
OUTPUT DATA (AC)		**IQ8-60-2-US**	**IQ8PLUS-72-2-US**	**IQ8M-72-2-US**	**IQ8A-72-2-US**	**IQ8H-240-72-2-US**	**IQ8H-208-72-2-US[1]**
Peak output power	VA	245	300	330	366	384	366
Max continuous output power	VA	240	290	325	349	380	360
Nominal (L-L) voltage/range[4]	V	240 / 211 – 264					208 / 183 – 250
Max continuous output current	A	1.0	1.21	1.35	1.45	1.58	1.73
Nominal frequency	Hz	60					
Extended frequency range	Hz	50 – 68					
AC short circuit fault current over 3 cycles	Arms	2					4.4
Max units per 20 A (L-L) branch circuit[5]		16	13	11	11	10	9
Total harmonic distortion		<5%					
Overvoltage class AC port		III					
AC port backfeed current	mA	30					
Power factor setting		1.0					
Grid-tied power factor (adjustable)		0.85 leading – 0.85 lagging					
Peak efficiency	%	97.5	97.6	97.6	97.6	97.6	97.4
CEC weighted efficiency	%	97	97	97	97.5	97	97
Night-time power consumption	mW	60					
MECHANICAL DATA							
Ambient temperature range		-40ºC to +60ºC (-40ºF to +140ºF)					
Relative humidity range		4% to 100% (condensing)					
DC Connector type		MC4					
Dimensions (HxWxD)		212 mm (8.3") x 175 mm (6.9") x 30.2 mm (1.2")					
Weight		1.08 kg (2.38 lbs)					
Cooling		Natural convection – no fans					
Approved for wet locations		Yes					
Pollution degree		PD3					
Enclosure		Class II double-insulated, corrosion resistant polymeric enclosure					
Environ. category / UV exposure rating		NEMA Type 6 / outdoor					
COMPLIANCE							
Certifications		CA Rule 21 (UL 1741-SA), UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01 This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC 2014, NEC 2017, and NEC 2020 section 690.12 and C22.1-2018 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according to manufacturer's instructions.					

(1) The IQ8H-208 variant will be operating in grid-tied mode only at 208V AC. (2) No enforced DC/AC ratio. See the compatibility calculator at https://link.enphase.com/module-compatibility (3) Maximum continuous input DC current is 10.6A (4) Nominal voltage range can be extended beyond nominal if required by the utility. (5) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

IQ8SE-DS-0001-01-EN-US-2022-03-17

CARIBBEAN SOLAR ENERGY

787-643-6767 info@caribbeansolarenergypr.com

Appendix 4: EPA's Published Summary of Non-attainment Areas Population Exposure Report & Status of Puerto Rico Designated Areas

EPA's Published Summary of Nonattainment Areas Population Exposure Report & Status of Puerto Rico Designated Areas logo

Summary Nonattainment Area Population Exposure Report

Data is current as of June 30, 2025

Ordered by state(s)
The NO_2 nonattainment area became a maintenance area on September 22, 1998. All Carbon Monoxide areas were redesignated to maintenance areas as of September 27, 2010. The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.
Download National Dataset: dbf | xls | Data dictionary (PDF)

State(s)	General Area Name (see note)	2010 Population in 1000s (area count)									
		8-Hour Ozone (2015)	8-Hour Ozone (2008)	PM-2.5 (2012)	PM-2.5 (2006)	PM-2.5 (1997)	PM-10 (1987)	SO_2 (2010)	SO_2 (1971)	Lead (2008)	Lead (1978)
AK	Fairbanks				87(1)						
AZ	Douglas/Paul Spur (Cochise County)						17(1)				
AZ	Hayden/Miami						26(2)	20(2)	5(1)	5(1)	
AZ	Nogales						30(1)				
AZ	Phoenix-Mesa	3,945(1)	3,850(1)				3,853(1)				
AZ	Rillito (Pima County)						1(1)				
AZ	West Pinal				52(1)		283(1)				
AZ	Yuma	87(1)					101(1)				
CA	Amador and Calaveras Cos (Central Mountain Cos)	84(2)	46(1)								
CA	Chico	220(1)	220(1)								
CA	Imperial County	175(1)	175(1)	154(1)	154(1)						
CA	Los Angeles-South Coast Air Basin	15,704(3)	15,723(3)	15,716(1)	15,716(1)	15,716(1)				9,437(1)	
CA	Mariposa and Tuolumne Cos (Southern Mountain Cos)	74(2)	18(1)								
CA	Mono County						0(1)				
CA	Nevada County (Western Part)	82(1)	82(1)								
CA	Owens Valley						7(1)				
CA	Plumas County			6(1)							
CA	Sacramento Metro	2,240(1)	2,241(1)		2,206(1)						
CA	San Diego	3,077(1)	3,095(1)								
CA	San Francisco-Bay Area	6,969(1)	6,973(1)		6,971(1)						

State(s)	General Area Name (see note)	2010 Population in 1000s (area count)									
		8-Hour Ozone (2015)	8-Hour Ozone (2008)	PM-2.5 (2012)	PM-2.5 (2006)	PM-2.5 (1997)	PM-10 (1987)	SO_2 (2010)	SO_2 (1971)	Lead (2008)	Lead (1978)
CA	San Joaquin Valley	3,937(2)	3,938(2)	3,842(1)	3,842(1)	3,842(1)	126(1)				
CA	San Luis Obispo	1(1)	2(1)								
CA	Searles Valley						4(1)				
CA	Southeast Desert Modified AQMA	1,292(2)	1,294(2)				495(2)				
CA	Tuscan Buttes	0(1)	0(1)								
CA	Ventura County	821(1)	823(1)								
CA	Yuba City	0(1)									
CO	Denver-Boulder-Greeley-Ft. Collins-Loveland	3,331(1)	3,330(1)								
CT	Greater Connecticut	1,629(1)	1,629(1)								
DC-MD-VA	Washington	5,136(1)									
GU	Piti-Cabras							6(1)	1(1)		
GU	Tanguisson Power Plant								1(1)		
IA	Muscatine County							30(1)			
ID	Pocatello						1(1)				
IL-IN-WI	Chicago-Joliet-Napier	9,075(1)									
IN	Fort Wayne-Huntington-Auburn							21(1)			
KS	Salina									0(1)	
KY	Henderson-Webster Counties							7(1)			
KY-IN	Louisville	876(1)									
LA	Evangeline Parish							0(1)			
LA	New Orleans							36(1)			
MA-NH	Boston-Worcester-Manchester		17(1)								
MD	Baltimore	2,663(1)	2,663(1)					990(1)			
MI	Allegan County	47(1)									
MI	Benton Harbor	157(1)									
MI	Detroit-Ann Arbor							306(2)			
MI	Muskegon	147(1)									
MN	Minneapolis-St. Paul									9(1)	

State(s)	General Area Name (see note)	2010 Population in 1000s (area count)									
		8-Hour Ozone (2015)	8-Hour Ozone (2008)	PM-2.5 (2012)	PM-2.5 (2006)	PM-2.5 (1997)	PM-10 (1987)	SO_2 (2010)	SO_2 (1971)	Lead (2008)	Lead (1978)
MO	Iron, Dent, and Reynolds Counties									0(1)	
MO	New Madrid County							0(1)			
MO-IL	St. Louis	2,488(1)								5(1)	3(1)
MT	Billings/Laurel								7(1)		
MT	Lame Deer						1(1)				
MT	Polson (Lake County)						4(1)				
MT	Ronan (Lake County)						3(1)				
NV	Las Vegas	1,892(1)									
NY	Jamestown		135(1)								
NY	St. Lawrence County							12(1)			
NY-NJ-CT	New York-N. New Jersey-Long Island	20,217(1)	20,217(1)								
OH	Canton-Massillon									6(1)	
OH	Cleveland-Akron-Elyria	2,780(1)									
OR	Klamath Falls				47(1)						
PA	Clearfield and Indiana Counties							93(1)			
PA	Lancaster		519(1)								
PA	Pittsburgh-New Castle		2,356(1)	1,223(1)	21(1)	21(1)		20(2)	5(1)	18(1)	
PA	Reading		411(1)							49(2)	
PA	Warren County							18(1)			
PA-NJ	Allentown-Bethlehem-Easton		712(1)								
PA-NJ-DE-MD	Philadelphia-Wilmington-Atlantic City	7,437(1)	7,634(2)								
PR	Arecibo									32(1)	
PR	Guayama-Salinas							23(1)			
PR	San Juan							275(1)			
TN	Johnson City-Kingsport-Bristol							15(1)			
TX	Dallas-Fort Worth	6,202(1)	6,280(1)								
TX	Fairfield							4(1)			
TX	Houston-Sugar Land-Baytown	5,773(1)	5,892(1)								
TX	Howard County							0(1)			

State(s)	General Area Name (see note)	2010 Population in 1000s (area count)									
		8-Hour Ozone (2015)	**8-Hour Ozone (2008)**	**PM-2.5 (2012)**	**PM-2.5 (2006)**	**PM-2.5 (1997)**	**PM-10 (1987)**	**SO_2 (2010)**	**SO_2 (1971)**	**Lead (2008)**	**Lead (1978)**
TX	Hutchinson County							15(1)			
TX	Mount Pleasant							0(1)			
TX	Navarro County							2(1)			
TX	San Antonio	1,715(1)									
TX	Tatum							2(1)			
TX-NM	El Paso-Las Cruces	813(1)					652(2)				
UT	Provo	516(1)			518(1)						
UT	Salt Lake City	1,616(1)			1,665(1)				1,030(1)		
UT	Tooele County								58(1)		
UT	Uinta Basin	47(1)									
VA	Giles County							0(1)			
WI	Milwaukee-Racine	1,648(1)									
WI	Sheboygan	68(1)									
WV-OH	Parkersburg-Marietta							4(1)			
WY	Upper Green River Basin		11(1)								

Total Estimated 2010 Population in Nonattainment Areas (1000's)	2010 Population in 1000s (area count) by Pollutant									
	8-Hour Ozone (2015)	**8-Hour Ozone (2008)**	**PM-2.5 (2012)**	**PM-2.5 (2006)**	**PM-2.5 (1997)**	**PM-10 (1987)**	**SO_2 (2010)**	**SO_2 (1971)**	**Lead (2008)**	**Lead (1978)**
Across All Criteria Pollutants: 121,102	114,981 (46)	90,288 (34)	20,942 (5)	31,280 (11)	19,579 (3)	5,605 (20)	1,900 (28)	1,106 (7)	9,561 (11)	3 (1)

The Summary Population Exposure Report is a summary of the population living in an area that is in nonattainment for at least one of the NAAQS.

Area Name:

The "State(s) Area Name" column contains a common or general name for the nonattainment areas on the row, but may not reflect the exact name of any area on the row. This column cannot be exact since the nonattainment area for one pollutant may not contain the same counties, cities, or states as the nonattainment area for another pollutant on the same row. The abbreviations listed in the "State(s)" column reflect all states identified in row. However, some states on a row may be nonattainment for some pollutants and not for others in the general area. A multi-state area with states that have not all been redesignated to maintenance is counted as a nonattainment area until all of the states in the area are redesignated, with the whole area population displayed.

logo

Puerto Rico Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Data is current as of June 30, 2025

Listed by County, NAAQS, Area. The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.

* The 1997 Primary Annual PM-2.5 NAAQS (level of 15 µg/m^3) is revoked in attainment and maintenance areas for that NAAQS. For additional information see the PM-2.5 NAAQS SIP Requirements Final Rule, effective October 24, 2016. (81 FR 58009)

Change the State:
PUERTO RICO GO

Important Notes   Download National Dataset: dbf | xls | Data dictionary (PDF)

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
PUERTO RICO								
Arecibo Municipio	Lead (2008)	Arecibo, PR	11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	/ /		Part	32,185	72/013
Bayamon Municipio	Sulfur Dioxide (2010)	San Juan, PR	18 19 20 21 22 23 24 25	/ /		Part	22,921	72/021
Catano Municipio	Sulfur Dioxide (2010)	San Juan, PR	18 19 20 21 22 23 24 25	/ /		Whole	28,140	72/033
Guaynabo Municipio	PM-10 (1987)	Mun. of Guaynabo, PR	92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09	02/11/2010	Moderate	Part	90,470	72/061
Guaynabo Municipio	Sulfur Dioxide (2010)	San Juan, PR	18 19 20 21 22 23 24 25	/ /		Part	23,802	72/061
Salinas Municipio	Sulfur Dioxide (2010)	Guayama-Salinas, PR	18 19 20 21 22 23 24 25	/ /		Part	23,401	72/123
San Juan Municipio	Sulfur Dioxide (2010)	San Juan, PR	18 19 20 21 22 23 24 25	/ /		Part	147,963	72/127
Toa Baja Municipio	Sulfur Dioxide (2010)	San Juan, PR	18 19 20 21 22 23 24 25	/ /		Part	52,441	72/137

Important Notes

Status of Puerto Rico Designated Areas

Puerto Rico Areas by NAAQS

NOTE: As of 03/12/2021, these reports are no longer being updated. For the latest information, see the SIP Status Tools.

Jump to Puerto Rico section for: CO (1971) Lead (1978) Lead (2008) NO2 (1971) Ozone-1Hr (1979) Ozone-8Hr (1997) Ozone-8Hr (2008) Ozone-8Hr (2015) PM-10 (1987) PM-2.5 (1997) PM-2.5 (2006) PM-2.5 (2012) SO2 (1971) SO2 (2010)

Puerto Rico CO (1971) Areas

Return to map

No designated areas for this pollutant.

Puerto Rico Lead (1978) Areas

Return to map Top of page

No designated areas for this pollutant.

Puerto Rico Lead (2008) Areas

Return to map Top of page

Click on the Area name to view SIP Required Elements Area	Status	Designation Date	Classification	2010 Population (state portion)	Meets NAAQS Basis	Design Value Annual (µg/m³) (entire area)	Meets NAAQS	SIP Requirements Original/ Approved	Clean Air Determination Citation Effective Date Click to view FR notice	Redesignation Request Date	Redesignation Citation Effective Date Click to view FR notice
Arecibo	Nonattainment	12/31/2011		32,185	2017-2019	0.18	No	6 / 6			

Puerto Rico NO2 (1971) Areas

Return to map Top of page

No designated areas for this pollutant.

Puerto Rico Ozone-1Hr (1979) Areas

Return to map Top of page

No designated areas for this pollutant.

Puerto Rico Ozone-8Hr (1997) Areas

Return to map Top of page

No designated areas for this pollutant.

Puerto Rico Ozone-8Hr (2008) Areas

Return to map Top of page

No designated areas for this pollutant.

Puerto Rico Ozone-8Hr (2015) Areas

Return to map Top of page

No designated areas for this pollutant.

Puerto Rico PM-10 (1987) Areas

Return to map Top of page

Click on the Area name to view SIP Required Elements Area	Status	Designation Date	Classification	2010 Population (state portion)	Meets NAAQS Basis	Average Estimated Exceedances (est. exc.) (entire area)	Meets NAAQS	SIP Requirements Original/ Approved	Clean Air Determination Citation Effective Date Click to view FR notice	Redesignation Request Date	Redesignation Citation Effective Date Click to view FR notice
Guaynabo County	Maintenance	11/15/1990	Moderate	90,470	2017-2019		Insufficient Data	3 / 3		03/31/2009	02/11/2010 75 FR 1543

Puerto Rico PM-2.5 (1997) Areas

Return to map Top of page

No designated areas for this pollutant.

Puerto Rico PM-2.5 (2006) Areas

Return to map Top of page

No designated areas for this pollutant.

Puerto Rico PM-2.5 (2012) Areas

Return to map Top of page

No designated areas for this pollutant.

Puerto Rico SO2 (1971) Areas

Return to map Top of page

No designated areas for this pollutant.

Puerto Rico SO2 (2010) Areas

Return to map Top of page

Click on the Area name to view SIP Required Elements Area	Status	Designation Date	Classification	2010 Population (state portion)	Meets NAAQS Basis	3 Year 1-Hour Design Value (ppb) (entire area)	Meets NAAQS	SIP Requirements Original/ Approved	Clean Air Determination Citation Effective Date Click to view FR notice	Redesignation Request Date	Redesignation Citation Effective Date Click to view FR notice
Guayama-Salinas	Nonattainment	04/09/2018		23,401	2017-2019		No Data	6 / 0			
San Juan	Nonattainment	04/09/2018		275,267	2017-2019		No Data	6 / 0			

We have made our best effort to ensure that the data contained in these reports is accurate. We note that there may be brief delays in updating the reports as we receive new state submissions and we take rulemaking action on plans. In order to assist us in providing accurate information, we request that you contact us by clicking on the "Contact Us" link near the top of this page with any comments regarding or corrections to the posted information, including concerns about whether the entries reflect the most recent status.

Current and historical design value data can be found on the EPA Air Quality Design Values website and the EPA Green Book contains comprehensive nonattainment area, designation status, and historical information.

The level of the 1-hour NAAQS for sulfur dioxide is 75 parts per billion (ppb) calculated as the 3-year average of the 99th percentile of the annual distribution of daily maximum 1-hour average concentrations.

Appendix 5: RADON Memo to file and supporting documentations

Memorandum to File

Date: July 1, 2025

From: Patricia Carmenatty Santiago
Environmental Specialist
Behar Ybarra & Associates LLC
CDBG-DR Program
Electrical Power Reliability and Resilience Program (ER2)
Puerto Rico Department of Housing

Application Number: PR-ESP-00132
Project: AJC Service Stations, LLC (Asomante Service Stations)

Re: Justification for the Infeasibility and Impracticability of Radon Testing

After reviewing Application Number PR-ESP-00132 under the Electrical Power Reliability and Resilience Program (ER2), administered by the Puerto Rico Department of Housing (**PRDOH**), to complete the property's contamination analysis in accordance with 24 C.F.R. § 50.3(i) and 24 C.F.R. § 58.5(i), we have determined that testing the property's radon levels is infeasible and impracticable.

Per the U.S. Department of Housing and Urban Development's (**HUD**) CPD Notice 23-103, the recommended best practices and alternative options for radon testing are infeasible and impracticable in this case due to the following reasons:

- As required by the CPD Notice 23-103, the scientific data reviewed in lieu of testing must consist of a minimum of ten documented test results over the previous ten years. If there are less than ten documented results over this period, it is understood that there is a lack of scientific data. The latest report for radon testing in Puerto Rico was prepared in 1995 by the U.S. Department of the Interior in Cooperation with the U.S. Environmental Protection Agency. No other completed studies and reports on radon testing are available in Puerto Rico.

- There is no available science-based or state-generated information for Puerto Rico for the last ten years that can be used to determine whether the project site is in a high-risk area. The Department of Health and Human Services, Centers for Disease Control and Prevention (**CDC**), National Environmental Public Health Tracking, and Radon Testing map do not include Puerto Rico data.

- There are only two (2) licensed professionals in Puerto Rico who can conduct radon testing using the American National Standards Institute/American Association of Radon Scientists and Technologists (**ANSI/AARST**) testing standards, which makes it difficult, time-consuming, and highly expensive to coordinate and secure a site visit for the contamination evaluation.

- Do-it-yourself (**DIY**) radon test kits are known to be unreliable in assuring and controlling the quality of the test results; they are not readily available in Puerto Rico, and the cost and time required for purchasing and sending them for analysis are unreasonable when weighed against the results' reliability and the need for prompt results.

- Local authorities in Puerto Rico do not have the specialized radon monitoring equipment or trained staff needed to conduct the radon testing analysis and ensure proper quality control and quality assurance practices are adhered to. We also do not have a radiation laboratory certified for radon testing.

- Local authorities in Puerto Rico do not have the specialized radon monitoring equipment or trained staff needed to conduct the radon testing analysis and ensure proper quality control and quality assurance practices are adhered to. We also do not have a radiation laboratory certified for radon testing.

As part of the evaluation for this determination, PRDOH sent information requests to six (6) local agencies at the state and federal levels. We received responses from the following agencies:

- United States Geological Survey;
- Centers for Disease Control and Prevention;
- Puerto Rico Department of Health; and
- United States Environmental Protection Agency.

The agencies mentioned above confirmed the lack of scientific data on Radon testing for Puerto Rico and the technical difficulties that we face to comply with HUD's Radon testing requirement. For the above-mentioned reasons, Radon testing is infeasible and impracticable for this property, and no further consideration of Radon is needed for the environmental review.

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF HOUSING

August 20, 2024

Mrs. Carmen R. Guerrero Pérez
Director
Caribbean Environmental Protection Division
City View Plaza II – Suite 7000
#48 Rd. 165 km 1.2
Guaynabo, PR 00968-8069

Vía email: guerrero.carmen@epa.gov

RE: Request for Information regarding available data on radon testing and levels within Puerto Rico

The Puerto Rico Department of Housing (PRDOH) kindly requests your assistance in gathering data, information, or reports related to radon testing in Puerto Rico, as this information is crucial for our compliance with the U.S. Department of Housing and Urban Development (HUD) Community Planning and Development (CPD) Notice CDP-23-103.

This Notice emphasizes the importance of radon testing and mitigation in ensuring safe living environments, particularly in HUD-assisted properties. PRDOH, as the grantee of the Community Development Block Grant for Disaster Recovery and Mitigation (CDBG-DR/MIT), is responsible for ensuring compliance with environmental requirements under CDBG-DR/MIT programs. To fulfill our obligations under this Notice, we must compile comprehensive and up-to-date information on radon levels, testing practices, and any mitigation efforts within the islands of Puerto Rico.

Specifically, we are seeking for possible availability of the following information:

Radon testing data – Results from radon testing conducted within your agency's purview, including details on location, testing methods, and recorded radon levels.

Reports and assessments – Any reports, studies, or assessments your agency has produced or commissioned that address radon testing or mitigation.

Policies and guidelines – Information or any policy, guideline, or protocol your agency follows concerning radon testing, exposure limits, or mitigation.

Historical data – if available, historical data or trends in radon levels within the regions you monitor that may impact HUD-assisted housing.

This information is vital to ensure that our radon management strategies are practical and compliant with federal requirements. If some of this information may be sensitive or confidential, we are prepared to discuss any necessary agreements or protocols for sharing this data securely.

Please let us know if you require additional details or have any questions regarding this request. We would greatly appreciate your response by September 15, 2024, so we can incorporate this data into our ongoing compliance efforts.

Thank you in advance for your cooperation and support. We look forward to working together on this critical initiative.

Sincerely,

William O. Rodríguez Rodríguez, Esq.
Secretary

Cc:
Mr. Oleg Povetko, Povetko.Oleg@epa.gov
Mr. Matthew Laurita, laurita.matthew@epa.gov

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF HOUSING

August 20, 2024

Dr. Silvina Cancelos
Professor
College of Engineering
University of Puerto Rico – Mayagüez Campus
259 Norte Blvd. Alfonso Valdés Cobián
Mayagüez, Puerto Rico

Vía email: silvina.cancelos@upr.edu

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Sincerely,

William O. Rodríguez Rodríguez, Esq.
Secretary

Cc:
Dr. Carlos Marín, carlos.marin3@upr.edu

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF HOUSING

August 20, 2024

Dr. Jessica Irizarry
Director
Office of Island Affairs
U.S. Centers for Disease Control and Prevention
1324 Cll Canada, San Juan, 00920
Guaynabo, PR 00968-8069

Vía email: OIA@cdc.gov

RE: Request for Information regarding available data on radon testing and levels within Puerto Rico

The Puerto Rico Department of Housing (PRDOH) kindly requests your assistance in gathering data, information, or reports related to radon testing in Puerto Rico, as this information is crucial for our compliance with the U.S. Department of Housing and Urban Development (HUD) Community Planning and Development (CPD) Notice CDP-23-103.

This Notice emphasizes the importance of radon testing and mitigation in ensuring safe living environments, particularly in HUD-assisted properties. PRDOH, as the grantee of the Community Development Block Grant for Disaster Recovery and Mitigation (CDBG-DR/MIT), is responsible for ensuring compliance with environmental requirements under CDBG-DR/MIT programs. To fulfill our obligations under this Notice, we must compile comprehensive and up-to-date information on radon levels, testing practices, and any mitigation efforts within the islands of Puerto Rico.

Specifically, we are seeking for possible availability of the following information:

Radon testing data – Results from radon testing conducted within your agency's purview, including details on location, testing methods, and recorded radon levels.

Reports and assessments – Any reports, studies, or assessments your agency has produced or commissioned that address radon testing or mitigation.

Policies and guidelines – Information or any policy, guideline, or protocol your agency follows concerning radon testing, exposure limits, or mitigation.

Historical data – if available, historical data or trends in radon levels within the regions you monitor that may impact HUD-assisted housing.

This information is vital to ensure that our radon management strategies are practical and compliant with federal requirements. If some of this information may be sensitive or confidential, we are prepared to discuss any necessary agreements or protocols for sharing this data securely.

Please let us know if you require additional details or have any questions regarding this request. We would greatly appreciate your response by September 15, 2024, so we can incorporate this data into our ongoing compliance efforts.

Thank you in advance for your cooperation and support. We look forward to working together on this critical initiative.

Sincerely,

William O. Rodríguez Rodríguez, Esq.
Secretary

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF HOUSING

August 20, 2024

Mrs. Anaís Rodríguez
Secretary
Puerto Rico Department of Natural Resources
Carretera 8838, km. 6.3, Sector El Cinco,
Río Piedras San Juan, PR 00926

Vía email: anais.rodriguez@drna.pr.gov

RE: Request for Information regarding available data on radon testing and levels within Puerto Rico

The Puerto Rico Department of Housing (PRDOH) kindly requests your assistance in gathering data, information, or reports related to radon testing in Puerto Rico, as this information is crucial for our compliance with the U.S. Department of Housing and Urban Development (HUD) Community Planning and Development (CPD) Notice CDP-23-103.

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Sincerely,

William O. Rodríguez Rodríguez, Esq.
Secretary

Cc:
Mr. Luis Márquez, secretariaaire@drna.pr.gov
Eng. Amarilys Rosario, aire@drna.pr.gov
Mrs. Elid Ortega, eortega@drna.pr.gov

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF HOUSING

August 20, 2024

Dr. Carlos R. Mellado López
Secretary
Puerto Rico Department of Health
PO Box 70184
San Juan, PR 00936-8184

Vía email: drcarlos.mellado@salud.pr.gov

RE: Request for Information regarding available data on radon testing and levels within Puerto Rico

The Puerto Rico Department of Housing (PRDOH) kindly requests your assistance in gathering data, information, or reports related to radon testing in Puerto Rico, as this information is crucial for our compliance with the U.S. Department of Housing and Urban Development (HUD) Community Planning and Development (CPD) Notice CDP-23-103.

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Sincerely,

William O. Rodríguez Rodríguez, Esq.
Secretary

Cc:
Mr. Raúl Hernández Doble, rhernandez2@salud.pr.gov

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF HOUSING

August 20, 2024

Mrs. Holly Weyers
Regional Director, Southeast – Puerto Rico
US Geological Survey
3916 Sunset Ridge Road
Raleigh, NC 27607

Vía email: hsweyers@usgs.gov

RE: Request for Information regarding available data on radon testing and levels within Puerto Rico

The Puerto Rico Department of Housing (PRDOH) kindly requests your assistance in gathering data, information, or reports related to radon testing in Puerto Rico, as this information is crucial for our compliance with the U.S. Department of Housing and Urban Development (HUD) Community Planning and Development (CPD) Notice CDP-23-103.

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Sincerely,

William O. Rodríguez Rodríguez, Esq.
Secretary

Cc:
Mr. R. Randall Schumann, rschumann@usgs.gov

From: Charp, Paul (CDC/NCEH/DEHSP) <pac4@cdc.gov>
Sent: Tuesday, September 3, 2024 6:36 AM
To: Miranda, Sandra (CDC/PHIC/DPS); Irizarry, Jessica (CDC/PHIC/DPS); Rzeszotarski, Peter (CDC/NCEH/DEHSP); Vinson, D. Aaron (CDC/NCEH/DEHSP)
Cc: Kostak, Liana (CDC/PHIC/DPS); Vazquez, Germaine (CDC/NCEH/DEHSP)
Subject: RE: REHi: Puerto Rico Request for Information- Randon testing and levels

Good morning, Sandra and others,

In response to the request from Mr. William Rodriguez of the Department of Housing, Government of Puerto Rico, I have reviewed all the available data within the CDC National Environmental Public Health Tracking Network system for data related to radon in Puerto Rico. In addition to the tracking data available on the internet, I also reached out to Mr. Aaron Vinson of the NCEH Tracking Branch.

I was not able to find any data in the CDC systems and this was confirmed by Mr. Vinson. We also reached out the US Environmental Protection Agency who indicated they had no radon data in their systems. Please relay this information to Mr. Rodriguez in your response to his requests

If you have any additional questions, please contact me.

Thank you and best regards,

Paul A. Charp, Ph.D., Fellow, HPS
Senior Health Physicist
Emerging Environmental Hazards and Health Effects Branch (EEHHEB)
Division of Environmental Health Science and Practice (DEHSP)
National Center for Environmental Health (NCEH)
Centers for Disease Control and Prevention (CDC)
pcharp@cdc.gov
770-488-0723 office
404.388.0614 Cell

From: Schumann, R. Randall <rschumann@usgs.gov>
Sent: Wednesday, August 21, 2024 4:39 PM
To: Melanie Medina Smaine <mmedina@vivienda.pr.gov>; Weyers, Holly S <hsweyers@usgs.gov>
Cc: Elaine Dume Mejia <Edume@vivienda.pr.gov>; Luz S Colon Ortiz <Lcolon@vivienda.pr.gov>; Aldo A. Rivera-Vazquez <aarivera@vivienda.pr.gov>
Subject: RE: Request for Information- Radon testing and levels

Dear Ms. Medina Smaine,

In the early 1990s the U.S. Geological Survey (USGS) conducted geologic assessments of radon potential for all 50 states and the territories of Guam and Puerto Rico, in collaboration with the U.S. EPA. I conducted the geologic radon potential assessment for Puerto Rico. The PDF file of the report is too large to attach to this message but it can be obtained at https://pubs.usgs.gov/of/1993/0292k/report.pdf. The USGS did not conduct indoor radon testing and we did not conduct field studies associated with this assessment; it was based on existing data. Mr. David Saldana of the Puerto Rico Department of Health kindly provided us with data for 610 homes that were tested for indoor radon by his agency between 1993 and 1995, which are summarized in the report. I am not aware of any other radon-related geologic studies conducted in the Commonwealth of Puerto Rico by the U.S. Geological Survey.

Best regards,

R. Randall Schumann
Scientist Emeritus
U.S. Geological Survey
Geociences and Environmental Change Science Center
Denver, Colorado, USA
rschumann@usgs.gov
https://www.usgs.gov/staff-profiles/r-randall-schumann

From: Raul Hernandez Doble <rhernandez2@salud.pr.gov>
Sent: Wednesday, August 21, 2024 2:13:31 PM
To: Melanie Medina Smaine <mmedina@vivienda.pr.gov>; Dr. Carlos Mellado <drcarlos.mellado@salud.pr.gov>
Cc: Elaine Dume Mejia <Edume@vivienda.pr.gov>; Luz S Colon Ortiz <Lcolon@vivienda.pr.gov>; Aldo A. Rivera-Vazquez <aarivera@vivienda.pr.gov>; Mayra Toro Tirado <mtoro@salud.pr.gov>
Subject: RE: [EXTERNAL]Request for Information- Randon testing and levels

Good afternoon. Ms. Medina

I regret to inform that we do not have any recent information on radon testing, since we do not have a certified radiation laboratory certified for radon testing. There are companies that sell test kits available online that can be done and mailed to a testing laboratory. There are also lists of radon contractors and these companies that process radon testing cartridges with instructions, on the Environmental Protection Agency Indoor air Quality web page. The last radon study in Puerto Rico done by the PR Department of Health was done on the year 1993.

Raul Hernandez Doble
Director, Seccion Salud Radiologica
Division de Salud Ambiental
Secretaria Auxiliar para la Vigilancia y la Proteccion de la Salud Publica
rhernandez2@salud.gov.pr
Phone: (787)765-2929 ext. 3210

From: Reyes, Brenda <Reyes.Brenda@epa.gov>
Sent: Wednesday, September 18, 2024 11:48 AM
To: Cesar O Rodriguez Santos <cesarrodriguez@drna.pr.gov>; Maritza Rosa Olivares <maritzarosaolivares@drna.pr.gov>; Silvina Cancelos Mancini <silvina.cancelos@upr.edu>; Melanie Medina Smaine <mmedina@vivienda.pr.gov>
Cc: Elaine Dume Mejia <Edume@vivienda.pr.gov>; Luz S Colon Ortiz <Lcolon@vivienda.pr.gov>; Aldo A. Rivera-Vazquez <aarivera@vivienda.pr.gov>; Povetko, Oleg (he/him/his) <Povetko.Oleg@epa.gov>
Subject: RE: Request for Information- Randon testing and levels

Saludos.

La EPA esta trabajando una respuesta a su petición. Se sometió borrador a la directora y el subdirector para su aprobación y firma.

Brenda Reyes Tomassini
Public Affairs
U.S. EPA
Region 2
Caribbean Environmental Protection Division
(787) 977-5869/(787) 977-5865
Mobile: 202-834-1290

From: Silvina Cancelos Mancini <silvina.cancelos@upr.edu>
Sent: Friday, September 6, 2024 15:04
To: Melanie Medina Smaine <mmedina@vivienda.pr.gov>
Cc: Elaine Dume Mejia <Edume@vivienda.pr.gov>; Luz S Colon Ortiz <Lcolon@vivienda.pr.gov>; Aldo A. Rivera-Vazquez <aarivera@vivienda.pr.gov>; Maritza Rosa Olivares <maritzarosaolivares@drna.pr.gov>; Reyes, Brenda <Reyes.Brenda@epa.gov>; Povetko, Oleg <Povetko.Oleg@epa.gov>
Subject: Re: Request for Information- Randon testing and levels

Estimada Melanie Medina
Quería dejarle saber que recibimos su correo el 21 de agosto al igual que el de Maritza Rosa el pasado 4 de septiembre. Ya las personas involucradas de EPA, junto conmigo y el Dr. Marín estamos al tanto del asunto y estamos trabajando para poder enviarles la información.

Atentamente

Silvina Cancelos
Professor
Associate Director
Mechanical Engineering Department
University of Puerto Rico - Mayaguez
Call BOX 9000 Mayaguez PR 00680
Tel: 787-832-4040 ext 5956
email: silvina.cancelos@upr.edu

Bubble Dynamics Lab
University of Puerto Rico - Mayagüez

EPA REGION 2
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION

September 23, 2024

VIA EMAIL

William O. Rodríguez Rodríguez, Esq.
Secretary
Puerto Rico Department of Housing
Barbosa Ave. 606 Building Juan C. Cordero
San Juan, PR 00917
Email: W.Rodriguez@vivienda.pr.gov

RE: EPA Response to August 20, 2024 request for information of data on radon testing and levels in Puerto Rico

Dear Honorable Secretary Rodríguez Rodríguez:

This communication is in response to your letter of August 20, 2024 addressed to the Puerto Rico Department of Natural and Environmental Resources (DNER) and referred to the U.S. Environmental Protection Agency (EPA) regarding available data on radon testing and levels within Puerto Rico.

EPA's National Radon Action Plan 2021–2025 sets a goal for the nation to find, fix and prevent high indoor radon levels in 8 million buildings by 2025 and prevent 3,500 lung cancer deaths per year. Under this Plan, leaders from across multiple sectors are working together to plan, guide, and sustain nationwide action to prevent exposure to radon.

Due to the lack of data in Puerto Rico, EPA undertook an investigation in collaboration with the University of Puerto Rico-Mayaguez (UPRM) Campus, Departments of Civil Engineering and Surveying and Mechanical Engineering, to find out if radon presented a problem in Puerto Rico. Up until 2021, the only data we had for Puerto Rico was a 1993-1995 mail-in radon screening study referred to by the U.S. Geological Survey report (USGS, 1995) in which the USGS concluded that several areas of Puerto Rico have the geologic potential to generate indoor radon levels exceeding the EPA Action Level of 4 pCi/L (picocuries per liter), perhaps locally reaching very high levels above 50 pCi/L, if a house construction and

ventilation allow for soil-gas radon to enter and concentrate within the structure.[1] According to the USGS report, most of these areas are located in the northwest part of the island. Please note that the actual 1993-1995 study documentation is not available to the EPA.

Typical radon testing technology used in mainland United States (charcoal canisters or electric-powered devices) are impractical in Puerto Rico because of high humidity and power outages. The recovery and rebuilding of communities following the aftermath of 2017 Hurricanes Irma and Maria presented an opportunity to develop radon prevention and mitigation strategies in 2019. Initially, EPA sampled indoor radon air in over 170 single-family residences in the municipalities of San Sebastian, Lares, Ciales, Arecibo, Morovis, Camuy, and Hatillo and later expanded the project to other municipalities such as Rincon, Aguada, Aguadilla, Isabela, Quebradillas, Barceloneta and Vega Baja. The quality assurance protocols were anchored in American National Standards Institute/American Association of Radon Scientists and Technologists (ANSI/AARST) standards of practice (ANSI/AARS, 2019). The sampling was designed in two stages: scoping and confirmatory sampling. The scoping sampling was conducted using Corentium Home (CH) electronic monitors and E-Perm systems. Locations measuring above the EPA Action Level of 4 pCi/L with CH were measured at the second stage of the sampling using RAD7 and Corentium Pro Continuous Radon Monitors (CRMs). Nationally certified radon sampling professionals led by one such professional from the UPRM conducted confirmatory sampling in the second stage. Also, during the study, the nationally certified radon mitigation professionals inspected several homes with elevated indoor radon levels.

Mapping radon in Puerto Rico proved to be a complicated endeavor given the COVID-19 pandemic in 2020. EPA and UPRM continue to work on the project, however, results have not been finalized, and no scientific report has been published yet. Unfortunately, EPA cannot share preliminary data at this time because it contains privileged information. Nevertheless, preliminary data from the study does show homes with levels over 4 pCi/L (EPA Action Level) that might need mitigation to protect the health of their inhabitants.

Although many states have developed laws and regulations governing radon disclosure, certification, and mitigation, Puerto Rico lacks legislation or mandatory radon testing provisions for new construction, remodeling, selling or buying homes. Given this loophole and aiming to answer your request, the EPA can provide information on Best Management Practices for sampling indoor radon in Puerto Rico.

[1] **Reference**: USGS. Geologic Radon Potential of Guam and Puerto Rico, Report 93-292-K. Washington, DC: USGS. Retrieved 9/11/2024, from https://pubs.usgs.gov/of/1993/0292k/report.pdf.

If you have any questions or need any additional information, please contact me at 787-977-5865 or guerrero.carmen@epa.gov or have your staff contact Reyes, Brenda at reyes.brenda@epa.gov or (787) 977-5869.

Sincerely,

CARMEN GUERRERO PEREZ

Digitally signed by CARMEN GUERRERO PEREZ
Date: 2024.09.23 09:41:39 -04'00'

Carmen R. Guerrero Pérez
Director

cc: Roberto Mendez, Esq (Acting Secretary, PR Department of Natural and Env. Resources)
Melany Medina: mmedina@vivienda.pr.gov
Elaine Dume Mejia: Edume@vivienda.pr.gov
Luz S Colon Ortiz: Lcolon@vivienda.pr.gov
Aldo A. Rivera-Vazquez: aarivera@vivienda.pr.gov
Cesar O. Rodriguez: cesarrodriguez@drna.pr.gov
Marita Rosa Olivares: maritzarosaolivares@drna.pr.gov

ECHO Reports

Detailed Facility Report

Facility Summary

SHELL CO PR LTD SHELL SS 0299 ASOMANTE

PR-14 KM 46.6 BO ASOMANTE, AIBONITO, PR 00705

FRS (Facility Registry Service) ID: 110007818530

EPA Region: 02

Latitude: 18.12953

Longitude: -66.28087

Locational Data Source: FRS

Industries: --

Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	04/29/1997
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information

Clean Water Act (CWA): No Information

Resource Conservation and Recovery Act (RCRA): Inactive Other, (PRR000004929), Inactive Other, (PRR000005173), Inactive Other, (PRO007001738)

Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Toxic Releases (TRI): No Information

Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Go To Enforcement/Compliance Details
Known Data Problems <https://epa.gov/resources/echo-data/known-data-problems>

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110007818530					N	18.12953	-66.28087
ICIS		1400002772					N	18.129722	-66.285278
RCRAInfo	RCRA	PRR000004929	Other	Inactive ( )			N		
RCRAInfo	RCRA	PRR000005173	Other	Inactive ( )			N		
RCRAInfo	RCRA	PRO007001738	Other	Inactive ( )			N		

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110007818530	SHELL CO PR LTD SHELL SS 0299 ASOMANTE	PR-14 KM 46.6 BO ASOMANTE, AIBONITO, PR 00705	Aibonito Municipio
ICIS		1400002772	SHELL #299 (204202)	RD 14, KM 46.6 BO ASOMANTE, AIBONITO, PR 00705	Aibonito Municipio
RCRAInfo	RCRA	PRR000004929	SHELL CO PR LTD SHELL SS 0299 ASOMANTE	CARR PR 14 KM 46.6, AIBONITO, PR 00705	Aibonito Municipio
RCRAInfo	RCRA	PRR000005173	SHELL CO PR LTD SS 0299 ASOMANTE	RD PR 14 KM 46.6, AIBONITO, PR 00705	Aibonito Municipio
RCRAInfo	RCRA	PRO007001738	ASOMANTE SHELL	HC-02 BOX 8146 INT 162, AIBONITO, PR 00705	Aibonito Municipio

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description

No data records returned

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description

No data records returned

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)

No data records returned

Entries in italics are not included in ECHO's Compliance Monitoring Activity counts because they are not compliance monitoring strategy <https://www.epa.gov/compliance/compliance-monitoring-programs> *activities or because they are not counted as inspections within EPA's Annual Results* <https://www.epa.gov/enforcement/enforcement-data-and-results>.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	PRR000004929	No	05/31/2025	0	05/30/2025
RCRA	PRR000005173	No	05/31/2025	0	05/30/2025
RCRA	PRO007001738	No	05/31/2025	0	05/30/2025

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11
RCRA (Source ID: PRO007001738)		07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23	07/01-09/30/23	10/01-12/31/23	01/01-03/31/24	04/01-06/30/24	07/01-09/30/24	10/01-12/31/24	01/01-03/31/25
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency											
RCRA (Source ID: PRR000004929)		07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23	07/01-09/30/23	10/01-12/31/23	01/01-03/31/24	04/01-06/30/24	07/01-09/30/24	10/01-12/31/24	01/01-03/31/25
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency											
RCRA (Source ID: PRR000005173)		07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23	07/01-09/30/23	10/01-12/31/23	01/01-03/31/24	04/01-06/30/24	07/01-09/30/24	10/01-12/31/24	01/01-03/31/25
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation Agency											

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/ Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/ Filed Date	Settlements/ Actions	Settlement/ Action Date	Federal Penalty Assessed	State/ Local Penalty Assessed	Penalty Amount Collected	SEP Value	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?

No data records returned

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Ecological Use	Fish Consumption Use	Recreation Use	Other Use

No data records returned

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released or Transferred in Pounds per Year at Site

TRI Facility ID	Year	Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Disposal to Land	Total On-Site Releases	Total Off-Site Transfers

No data records returned

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name

No data records returned

Community

Demographic Profile of Surrounding Area (1-Mile Radius)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2022 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. Census boundaries and demographic data for U.S. Territories are based on the "2020 Island Areas Demographic Profiles" from the U.S. Census Bureau. EPA's spatial processing methodology considers the overlap between the selected radii and ACS census block groups in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary <https://epa.gov/help/reports/dfr-data-dictionary#demographic>.

General Statistics (ACS (American Community Survey))	
Total Persons	3,453
Population Density	1,108/sq.mi.
Housing Units in Area	1,438
Percent People of Color	100%
Households in Area	1,274
Households on Public Assistance	30
Persons With Low Income	2,607
Percent With Low Income	76%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	18.12953
Center Longitude	-66.28087
Total Area	--
Land Area	100%
Water Area	0%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	466 (36.64%)

Age Breakdown (ACS (American Community Survey)) - Persons (%)	
Children 5 years and younger	130 (4%)
Minors 17 years and younger	536 (16%)
Adults 18 years and older	2,918 (85%)
Seniors 65 years and older	759 (22%)

Race Breakdown (ACS (American Community Survey)) - Persons (%)	
White	1,087 (31%)
African-American	388 (11%)
Hispanic-Origin	3,449 (100%)
Asian	0 (0%)
Hawaiian/Pacific Islander	0 (0%)
American Indian	0 (0%)
Other/Multiracial	178 (5%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	311 (12.08%)
9th through 12th Grade	176 (6.84%)
High School Diploma	779 (30.26%)
Some College/2-year	400 (15.54%)

Detailed Facility Report

Facility Summary

TO-RICOS LTD

PR-14 KM 48 BO ASOMANTE, AIBONITO, PR 00705

FRS (Facility Registry Service) ID: 110007805562

EPA Region: 02

Latitude: 18.12953

Longitude: -66.28087

Locational Data Source: FRS

Industries: Computer and Electronic Product Manufacturing

Indian Country: N

Enforcement and Compliance Summary

Statute	CAA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--
Statute	**RCRA**
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	05/10/2011
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): Operating Minor (PR0000007200900001)

Clean Water Act (CWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Resource Conservation and Recovery Act (RCRA): Active VSQG, (PRD000912220)

Safe Drinking Water Act (SDWA): No Information

Toxic Releases (TRI): 00705TRCSNRD14K

Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Go To Enforcement/Compliance Details

Known Data Problems <https://epa.gov/resources/echo-data/known-data-problems>

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110007805562					N	18.12953	-66.28087
ICIS		40529					N	18.130899	-66.27565
ICIS-Air	CAA	PR0000007200900001	Minor Emissions	Operating	CAANSPS, CAASIP		N	18.130899	-66.27565
TRI	EP313	00705TRCSNRD14K	Toxics Release Inventory	Last Reported for 2023			N	18.130899	-66.27565
RCRAInfo	RCRA	PRD000912220	VSQG	Active (H)			N	18.130899	-66.27565

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110007805562	TO-RICOS LTD	PR-14 KM 48 BO ASOMANTE, AIBONITO, PR 00705	Aibonito Municipio
ICIS		40529	TO-RICOS INC	PR 14 KM 48 ASOMANTE WARD, AIBONITO, PR 00705	Aibonito Municipio
ICIS-Air	CAA	PR0000007200900001	TO-RICO	PR 14 KM.48.0_BO. ASOMANTE, AIBONITO, PR 00609	Aibonito Municipio
TRI	EP313	00705TRCSNRD14K	TO-RICOS LTD	RD 14 KM 48 BO ASOMANTE, AIBONITO, PR 00705	Aibonito Municipio
RCRAInfo	RCRA	PRD000912220	TO-RICOS INC	PR 14 KM 48 ASOMANTE WARD, AIBONITO, PR 00705	Aibonito Municipio

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
TRI	00705TRCSNRD14K	2015	Poultry Slaughtering And Processing
ICIS-Air	PR0000007200900001	2015	Poultry Slaughtering And Processing

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
TRI	00705TRCSNRD14K	311615	Poultry Processing
ICIS-Air	PR0000007200900001	334111	Electronic Computer Manufacturing

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)

No data records returned

Entries in italics are not included in ECHO's Compliance Monitoring Activity counts because they are not compliance monitoring strategy <https://www.epa.gov/compliance/compliance-monitoring-programs> *activities or because they are not counted as inspections within EPA's Annual Results* <https://www.epa.gov/enforcement/enforcement-data-and-results>.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
CAA	PR0000007200900001	No	05/31/2025	0	05/30/2025
RCRA	PRD000912220	No	05/31/2025	0	05/30/2025

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	
CAA (Source ID: PR0000007200900001)		07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23	07/01-09/30/23	10/01-12/31/23	01/01-03/31/24	04/01-06/30/24	07/01-09/30/24	10/01-12/31/24	01/0
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	N
	HPV History											
	Violation Type / Agency / Programs / Pollutants											

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11
RCRA (Source ID: PRD000912220)		07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23	07/01-09/30/23	10/01-12/31/23	01/01-03/31/24	04/01-06/30/24	07/01-09/30/24	10/01-12/31/24	01/01-03/31/25
	Facility-Level Status	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation / Agency											

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/ Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/ Filed Date	Settlements/ Actions	Settlement/ Action Date	Federal Penalty Assessed	State/ Local Penalty Assessed	Penalty Amount Collected	SEP Value	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?

No data records returned

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Ecological Use	Fish Consumption Use	Recreation Use	Other Use

No data records returned

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released or Transferred in Pounds per Year at Site

TRI Pollution Prevention Report

TRI Facility ID	Year	Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Disposal to Land	Total On-Site Releases	Total Off-Site Transfers
00705TRCSNRD14K	2023	--	--	54,524	--	--	0	54,524
00705TRCSNRD14K	2022	--	--	60,414	--	--	0	60,414
00705TRCSNRD14K	2021	--	--	69,048	--	--	0	69,048
00705TRCSNRD14K	2020	--	132	52,680	--	--	132	52,680
00705TRCSNRD14K	2019	--	132	13,950	--	--	132	13,950
00705TRCSNRD14K	2018	--	150	29,721	--	9,880	10,030	29,721
00705TRCSNRD14K	2017	--	306	23,294	--	--	306	23,294
00705TRCSNRD14K	2016	--	200	31,216	--	--	200	31,216
00705TRCSNRD14K	2015	--	195	13,950	--	0	195	13,950
00705TRCSNRD14K	2014	--	--	77,238	--	--	0	77,238

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Nitrate compounds (water dissociable; reportable only when in aqueous solution)	54,524	60,414	69,048	52,812	14,082	19,991	23,600	31,416	14,145	77,238
Peracetic acid	R	R	R	R	0	19,760	0	0	0	--

Community

Demographic Profile of Surrounding Area (1-Mile Radius)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2022 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. Census boundaries and demographic data for U.S. Territories are based on the "2020 Island Areas Demographic Profiles" from the U.S. Census Bureau. EPA's spatial processing methodology considers the overlap between the selected radii and ACS census block groups in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary <https://epa.gov/help/reports/dfr-data-dictionary#demographic>.

General Statistics (ACS (American Community Survey))	
Total Persons	3,453
Population Density	1,108/sq.mi.
Housing Units in Area	1,438
Percent People of Color	100%
Households in Area	1,274
Households on Public Assistance	30
Persons With Low Income	2,607
Percent With Low Income	76%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	18.12953
Center Longitude	-66.28087
Total Area	--
Land Area	100%
Water Area	0%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	466 (36.64%)
$15,000 - $25,000	249 (19.58%)
$25,000 - $50,000	337 (26.49%)
$50,000 - $75,000	114 (8.96%)
Greater than $75,000	106 (8.33%)

Age Breakdown (ACS (American Community Survey)) - Persons (%)	
Children 5 years and younger	130 (4%)
Minors 17 years and younger	536 (16%)
Adults 18 years and older	2,918 (85%)
Seniors 65 years and older	759 (22%)

Race Breakdown (ACS (American Community Survey)) - Persons (%)	
White	1,087 (31%)
African-American	388 (11%)
Hispanic-Origin	3,449 (100%)
Asian	0 (0%)
Hawaiian/Pacific Islander	0 (0%)
American Indian	0 (0%)
Other/Multiracial	178 (5%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	311 (12.08%)
9th through 12th Grade	176 (6.84%)
High School Diploma	779 (30.26%)
Some College/2-year	400 (15.54%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	568 (22.07%)

ECHO

Detailed Facility Report

Facility Summary

TO-RICOS, LTD

CARRETERA 14 KM 48.0, AIBONITO, PR 00705

FRS (Facility Registry Service) ID: 110067437544

EPA Region: 02

Latitude: 18.130557

Longitude: -66.283204

Locational Data Source: NPDES

Industries: --

Indian Country: N

Enforcement and Compliance Summary

Statute	CWA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	Significant/Category I Noncompliance
Qtrs in Noncompliance (of 12)	10
Qtrs with Significant Violation	4
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information

Clean Water Act (CWA): Non-Major, Permit Effective (PRR053272)

Resource Conservation and Recovery Act (RCRA): No Information

Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Toxic Releases (TRI): No Information

Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Go To Enforcement/Compliance Details
Known Data Problems <https://epa.gov/resources/echo-data/known-data-problems>

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110067437544					N	18.130557	-66.283204
ICIS-NPDES	CWA	PRR053272	Non-Major: General Permit Covered Facility	Effective	Industrial Stormwater	02/28/2026	N	18.130557	-66.283204

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110067437544	TO-RICOS, LTD	CARRETERA 14 KM 48.0, AIBONITO, PR 00705	

System	Statute	Identifier	Facility Name	Facility Address	Facility County
ICIS-NPDES	CWA	PRR053272	TO-RICOS, LTD	CARRETERA 14 KM 48.0, AIBONITO, PR 00705	Aibonito Municipio

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description
ICIS-NPDES	PRR053272	2015	Poultry Slaughtering And Processing

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description

No data records returned

Facility Industrial Effluent Guidelines

Identifier	Effluent Guideline (40 CFR Part)	Effluent Guideline Description

No data records returned

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)

No data records returned

Entries in italics are not included in ECHO's Compliance Monitoring Activity counts because they are not compliance monitoring strategy <https://www.epa.gov/compliance/compliance-monitoring-programs> *activities or because they are not counted as inspections within EPA's Annual Results* <https://www.epa.gov/enforcement/enforcement-data-and-results>.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
CWA	PRR053272	Yes	12/31/2024	10	05/30/2025

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	
CWA (Source ID: PRR053272)		01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23	07/01-09/30/23	10/01-12/31/23	01/01-03/31/24	04/01-06/30/24	07/(
	Facility-Level Status	No Violation Identified	No Violation Identified	Significant/Category I Noncompliance	Violation Identified	Violation Identified	Violation Identified	Violation Identified	Significant/Category I Noncompliance	Significant/Category I Noncompliance	Violation Identified	I
	Quarterly Noncompliance Report History			Failure to Report DMR - Not Received	Reportable Noncompliance	Reportable Noncompliance	Reportable Noncompliance	Reportable Noncompliance	Failure to Report DMR - Not Received	Failure to Report DMR - Not Received	Reportable Noncompliance	R Nor
	Late or Missing Discharge Monitoring Report (DMR) Measurements											
	Counts of Late DMR Measurements	4	5				5	4	2			
	Counts of Missing DMR Measurements			2		2			2	2	4	

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/ Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/ Filed Date	Settlements/ Actions	Settlement/ Action Date	Federal Penalty Assessed	State/ Local Penalty Assessed	Penalty Amount Collected	SEP Value	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
210100050704	Rio Usabon	QUEBRADA SERRALLES	No	No	Coliform, total general	Yes

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Ecological Use	Fish Consumption Use	Recreation Use	Other Use
PR	2024	PRER10I2	RIO AIBONITO	Impaired - With Restoration Plan	PATHOGENS	Not Assessed	Insufficient Information	--	Not Supporting	--

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released or Transferred in Pounds per Year at Site

TRI Facility ID	Year	Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Disposal to Land	Total On-Site Releases	Total Off-Site Transfers

No data records returned

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name

No data records returned

CWA (Clean Water Act) Discharge Monitoring Report (DMR) Pollutant Loadings

DMR and TRI Multi-Year Loading Report

NPDES ID	Description

No data records returned

Community

Demographic Profile of Surrounding Area (1-Mile Radius)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2022 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. Census boundaries and demographic data for U.S. Territories are based on the "2020 Island Areas Demographic Profiles" from the U.S. Census Bureau. EPA's spatial processing methodology considers the overlap between the selected radii and ACS census block groups in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary <https://epa.gov/help/reports/dfr-data-dictionary#demographic>.

General Statistics (ACS (American Community Survey))	
Total Persons	3,274
Population Density	1,051/sq.mi.
Housing Units in Area	1,366
Percent People of Color	100%
Households in Area	1,213
Households on Public Assistance	30
Persons With Low Income	2,505
Percent With Low Income	77%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	18.130557
Center Longitude	-66.283204
Total Area	--
Land Area	100%
Water Area	0%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	440 (36.27%)
$15,000 - $25,000	232 (19.13%)
$25,000 - $50,000	337 (27.78%)
$50,000 - $75,000	106 (8.74%)
Greater than $75,000	98 (8.08%)

Age Breakdown (ACS (American Community Survey)) - Persons (%)	
Children 5 years and younger	124 (4%)
Minors 17 years and younger	538 (16%)
Adults 18 years and older	2,737 (84%)
Seniors 65 years and older	712 (22%)

Race Breakdown (ACS (American Community Survey)) - Persons (%)	
White	1,019 (31%)
African-American	349 (11%)
Hispanic-Origin	3,271 (100%)
Asian	0 (0%)
Hawaiian/Pacific Islander	0 (0%)
American Indian	0 (0%)
Other/Multiracial	192 (6%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	306 (12.63%)
9th through 12th Grade	174 (7.18%)
High School Diploma	745 (30.75%)
Some College/2-year	369 (15.23%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	518 (21.38%)

How's My Waterway?

Explore, Discover and Learn about your water.

Waterbody Report

RIO AIBONITO

Assessment Unit ID: PRER10I2

Waterbody Condition: Impaired (Issues Identified)

Existing Plans for Restoration: Yes

303(d) Listed: No

Year Reported: 2024

303(d) List Status: EPA Final Action

Other Years Reported:
2018 <https://epa.gov/waterbody-report/pr_lakes/prer10i2/2018>, 2020 <https://epa.gov/waterbody-report/pr_lakes/prer10i2/2020>, 2022 <https://epa.gov/waterbody-report/pr_lakes/prer10i2/2022> (opens new browser tab)

Organization Name (ID): Puerto Rico (PR_LAKES)

What type of water is this?

River (18.7 Miles)

Where is this water located?

DORADO; HUC: 2101000507

Advanced Filtering (opens new browser tab)

Download Waterbody Data (2024)

5 km
2 mi

Esri, TomTom, Garmin, SafeGraph, GeoTech… Powered by Esri <https://www.esri.com/>

Assessment Information from 2024

State or Tribal Nation specific designated uses:
Information on Water Quality Standards <https://www.epa.gov/wqs-tech/state-specific-water-quality-standards-effective-under-clean-water-act-cwa>

Expand All

Aquatic Life Insufficient Info

Identified Issues for Use

No impairments evaluated for this use.

Other Water Quality Parameters Evaluated

No other parameters evaluated for this use.

Drinking Water Supply Not Assessed

Identified Issues for Use

No impairments evaluated for this use.

Other Water Quality Parameters Evaluated

No other parameters evaluated for this use.

Primary Contact Recreation Impaired

Identified Issues for Use

Impaired Parameters	Plan in Place
Fecal Coliform	Yes

Other Water Quality Parameters Evaluated

No other parameters evaluated for this use.

Secondary Contact (Recr) Impaired

Identified Issues for Use

Impaired Parameters	Plan in Place
Fecal Coliform	Yes

Other Water Quality Parameters Evaluated

No other parameters evaluated for this use.

Probable sources contributing to impairment from 2024:

Click a column heading to sort... **Clear Filters**

Source	Parameter	Co
Filter...	Filter...	Fi
Urban Runoff/storm Sewers	Fecal Coliform	No
On-Site Treatment Systems (Septic Systems and Similar Decentralized Systems)	Fecal Coliform	No
Municipal Point Source Discharges	Fecal Coliform	No
Industrial Point Source Discharge	Fecal Coliform	No
Confined Animal Feeding Operations - Cafos (Point Source)	Fecal Coliform	No

Click a column heading to sort... **Clear Filters**

Assessment Documents

No documents are available

Plans to Restore Water Quality

What plans are in place to protect or restore water quality?

Links below open in a new browser tab.

Plan	Impairments	Type	Completion Date
Rio La Plata Watershed Fecal Coliform Tmdl <https://epa.gov/plan-summary/pr_lakes/11091>	Fecal Coliform	TMDL	2003-09-30

No FEAR Act Data <https://www.epa.gov/ocr/whistleblower-protections-epa-and-how-they-relate-non-disclosure-agreements-signed-epa>

Plain Writing <https://www.epa.gov/web-policies-and-procedures/plain-writing>

Privacy <https://www.epa.gov/privacy>

Privacy and Security Notice <https://www.epa.gov/privacy/privacy-and-security-notice>

USA.gov <https://www.usa.gov/>

White House <https://www.whitehouse.gov/>

Follow.

Project site (PR-ESP-00132) elevation

location:
x: -66.285385
y: 18.129686
spatialReference:
wkid: 4326
latestWkid: 4326
locationId: 0
value: 2107.7286401015135
rasterId: 51791
resolution: 1

TO-RICOS LTD elevation

location:
x: -66.283204
y: 18.130557
spatialReference:
wkid: 4326
latestWkid: 4326
locationId: 0
value: 2089.9709734538724
rasterId: 51791
resolution: 1

Detailed Facility Report

Facility Summary

HACIENDA KAMILA PUMP STATION

PR-7718 BO ASOMANTE, AIBONITO, PR 00705

FRS (Facility Registry Service) ID: 110058931009

EPA Region: 02

Latitude: 18.12941

Longitude: -66.27884

Locational Data Source: FRS

Industries: --

Indian Country: N

Enforcement and Compliance Summary

Statute	CWA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	04/04/2014
Compliance Status	Not Applicable
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--
Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information

Clean Water Act (CWA): Non-Major, (PRU021021)

Resource Conservation and Recovery Act (RCRA): No Information

Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Toxic Releases (TRI): No Information

Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Go To Enforcement/Compliance Details

Known Data Problems <https://epa.gov/resources/echo-data/known-data-problems>

Identifier	Effluent Guideline (40 CFR Part)	Effluent Guideline Description
No data records returned		

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)
No data records returned							

Entries in italics are not included in ECHO's Compliance Monitoring Activity counts because they are not compliance monitoring strategy <https://www.epa.gov/compliance/compliance-monitoring-programs> *activities or because they are not counted as inspections within EPA's Annual Results* <https://www.epa.gov/enforcement/enforcement-data-and-results>.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
CWA	PRU021021	No	03/31/2025	0	08/22/2025

Three-Year Compliance History by Quarter

Statute	Program/ Pollutant/ Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12	QTR 13+
CWA (Source ID: PRU021021)		04/01-06/30/22	07/01-09/30/22	10/01-12/31/22	01/01-03/31/23	04/01-06/30/23	07/01-09/30/23	10/01-12/31/23	01/01-03/31/24	04/01-06/30/24	07/01-09/30/24	10/01-12/31/24	01/01-03/31/25	04/01-08/22/25
	Facility-Level Status	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Quarterly Noncompliance Report History													

Informal Enforcement Actions

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Statute	System	Law/ Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/ Filed Date	Settlements/ Actions	Settlement/ Action Date	Federal Penalty Assessed	State/ Local Penalty Assessed	Penalty Amount Collected	SEP Value	Comp Action Cost
No data records returned															

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
210100020202	Rio Orocovis	--	No	No	--	Yes

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Ecological Use	Fish Consumption Use	Recreation Use	Other Use
PR	2024	PRNR8E1	RIO OROCOVIS	Impaired - 303(d) Listed - With Restoration Plan	METALS (OTHER THAN MERCURY) | NUTRIENTS | PATHOGENS | TOXIC INORGANICS	Not Supporting	Not Supporting	--	Not Supporting	--

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)
No data records returned				

Pollutants

Toxics Release Inventory History of Reported Chemicals Released or Transferred in Pounds per Year at Site

TRI Facility ID	Year	Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Disposal to Land	Total On-Site Releases	Total Off-Site Transfers
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name

No data records returned

CWA (Clean Water Act) Discharge Monitoring Report (DMR) Pollutant Loadings

DMR and TRI Multi-Year Loading Report

NPDES ID	Description

No data records returned

Community

Demographic Profile of Surrounding Area (1-Mile Radius)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2022 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. Census boundaries and demographic data for U.S. Territories are based on the "2020 Island Areas Demographic Profiles" from the U.S. Census Bureau. EPA's spatial processing methodology considers the overlap between the selected radii and ACS census block groups in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary <https://epa.gov/help/reports/dfr-data-dictionary#demographic>.

General Statistics (ACS (American Community Survey))	
Total Persons	3,770
Population Density	1,210/sq.mi.
Housing Units in Area	1,573
Percent People of Color	100%
Households in Area	1,385
Households on Public Assistance	29
Persons With Low Income	2,830
Percent With Low Income	75%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	18.12941
Center Longitude	-66.27884
Total Area	3.121 sq.mi.
Land Area	100%
Water Area	0%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	517 (37.19%)
$15,000 - $25,000	272 (19.57%)
$25,000 - $50,000	357 (25.68%)
$50,000 - $75,000	127 (9.14%)
Greater than $75,000	117 (8.42%)

Age Breakdown (ACS (American Community Survey)) - Persons (%)	
Children 5 years and younger	146 (4%)
Minors 17 years and younger	568 (15%)
Adults 18 years and older	3,203 (85%)
Seniors 65 years and older	844 (22%)

Race Breakdown (ACS (American Community Survey)) - Persons (%)	
White	1,200 (32%)
African-American	443 (12%)
Hispanic-Origin	3,765 (100%)
Asian	0 (0%)
Hawaiian/Pacific Islander	0 (0%)
American Indian	0 (0%)
Other/Multiracial	176 (5%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	338 (11.96%)
9th through 12th Grade	193 (6.83%)
High School Diploma	839 (29.69%)
Some College/2-year	447 (15.82%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	631 (22.33%)

BEHAR-YBARRA AND ASSOCIATE

USGS Elevation Point Query Service Elevation

Pretty-print

{"location":{"x":-66.285385,"y":18.129686,"spatialReference":
{"wkid":4326,"latestWkid":4326}},"locationId":0,"value":2107.7286401015135,"rasterId":51791,"resolution
":1,"attributes":{"AcquisitionDate":"3/4/2019"}}

Pretty-print

{"location":{"x":-66.283204,"y":18.130557,"spatialReference":
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":1,"attributes":{"AcquisitionDate":"3/4/2019"}}

BEHAR-YBARRA AND ASSOCIATES

2024 Puerto Rico Integrated Report

GOVERNMENT OF PUERTO RICO
DEPARTMENT OF NATURAL AND ENVIRONMENTAL RESOURCES

2024 Puerto Rico 305(b)/303(d) Integrated Report

Plans and Special Projects Division
Water Quality Area

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EXECUTIVE SUMMARY

To comply with the requirements established in Section 305(b) of the Clean Water Act (CWA), The Puerto Rico Department of Natural and Environmental Resources (PRDNER) performs the required assessment in terms of the current water quality in the different water resources throughout Puerto Rico (PR). This assessment allows us to determine whether these resources comply with the applicable water quality standards and achieve the designated uses. The PRDNER is the local agency responsible for seeking the attainment of the designated uses established in the Puerto Rico Water Quality Standards Regulation (PRWQSR, as amended on August 8, 2022) for the various water resources and is also responsible for the oversight, maintenance, and protection of the quality of these water resources. The designated uses established in the PRWQSR are: Primary Contact Recreation, Secondary Contact Recreation, Propagation, and maintenance of desirable species, including threatened or endangered species (Aquatic Life) and Raw Source of Public Water Supply.

For water bodies that do not meet the applicable standard for a designated use, the Act requires that the state develop control measures for pollutants. These water bodies will form 303(d) List (Appendix I). Control measures should address the problem that caused the non-compliance of the standard for the designated use. Each impairment reflected on the 303(d) List requires a calculation of the maximum amount of the impairing pollutant that a water body can receive and still meet water quality standards. This calculation is called the Total Maximum Daily Load (TMDL). TMDL's include reduction of pollution sources impacting the water body which, when achieved, will result in the attainment of the water quality standard in the impaired water body.

The information considered for the assessment for the water bodies is routine ambient water quality sampling data from various networks, water quality special monitoring projects and existing or secondary data requested to government agencies and non-government entities. This will provide physical, chemical, and biological water quality data from the different water bodies. The PRDNER generates data from four (4) routine monitoring networks. These are: ***Surface Water Monitoring Network, Clean Lakes Monitoring Network, Coastal Monitoring Network and Beach Monitoring and Public Notification Program*.** Supplementary information, such as: NPDES compliance evaluation inspections, operation and maintenance inspections and pump station by-passes, implementation of BMPs by non-point sources, fish-kills, or spill events, make possible identified potential pollution sources.

To restore and preserve the designated uses and water quality in our streams, lakes, and coastal shorelines, DNER will coordinate efforts with various government agencies, private enterprise and concerned citizen groups as well as outreach and educational programs, both in communities and through the public media. These promote the incorporation of actions to increase resilience and adaptation to climate change impacts and improve conditions in communities with environmental justice concerns.

In addition, to achieve the restoration and preservation of the water quality in our water bodies, the PRDNER is working with the implementation of the PR Non-Point Sources Management Program (PRNPSMP) and the development of the 2022 – 2032 Clean Water Act 303(d) Long – Term Vision Program.

- **PRNPSMP** has set the goal to establish the strategies that will mark the progress to achieve and maintain water quality standards and water quality benefits; short term or long terms objectives that are activity-based measures (milestones) were established to accomplishing the program's goal. The milestones associated with each objective may include those of local agencies which are partners in the PRNPSMP. The main goal is to identify non-point sources of pollution of surface waters to prevent and reduce non-point source pollution, such that water quality standards are achieved.

- **2022 – 2032 Clean Water Act 303(d) Long – Term Vision Program** – This document is under development.

In this Cycle, the PRDNER has reviewed the 2024 Integrated Reporting (IR) Memo (*Information Concerning 2024 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions*), for which has specific comments on its content (Appendix II). The Department has already addressed most of the topics included in this Memorandum. The memorandum focuses on the following topics:

- 2022 – 2032 CWA Section 303 (d) Vision
- Clarification Regarding Priority Rankings and Total Maximum Daily Load Submission Schedule
- Environmental Justice
- Participatory Science
- Climate Change
- Indian Tribes and Tribal Water Resources
- CWA Section 303 (d) Assessment / Listing for Trash – Related Impairments
- CWA Section 303 (d) Assessment / Listing for Nutrient – Related Impairment
- Identifying the Pollutants Causing or Expected to Cause and Exceedance of Applicable Water Quality Standards for Water on CWA 303 (d) List

This report constitutes the PR 305(b)/303(d) Integrated Report (IR) for fiscal year 2024. For 2024 cycle there are total of three hundred fifty-eight (358) Assessment Units (AUs), of these one hundred ninety-four (194) are river basins, sixty-two (62) are river estuaries, eighteen (18) are lakes, seventeen (17) lagoons, three (3) are San Juan Bay Estuary System (SJBES) and sixty-four (64) are coastal shoreline.

Rivers & Streams

The water quality assessment for the 2024 cycle indicates that five thousand four hundred three point five (5,403.5) miles of rivers and streams were assessed. For this cycle, two thousand six hundred eighty-nine point five (2,689.5) of river and stream were assessed with water quality monitoring stations. From the evaluation of the water quality data obtained it was found that the impairment for primary and secondary recreation designated uses was due to Enterococci exceeding the standard. For aquatic life and raw source for drinking water designated uses Chromium VI, Total Phosphorus, Turbidity, Temperature and Total Nitrogen were the most common causes of impairment. A total of forty-two (42) AU/parameter combination was removed from the 2024 303(d) List.

Lakes (reservoirs)

The water quality assessment for the 2024 cycle indicates that seven thousand three hundred twenty-four (7,324) acres were assessed. At the present time seven thousand two hundred sixty-nine (7,269) acres of lakes have a permanent water quality monitoring station. The primary and secondary recreation designated uses were evaluated as Category 4a, which means that have an approved TMDL for fecal coliform. For aquatic life designated use Dissolved Oxygen, pH and Temperature were the most common causes of impairment. For raw sources for drinking water designated use the most common cause of impairment were Total Phosphorus, Total Nitrogen and Turbidity. One (1) AU/parameter combination was removed from the 2024 303(d) List.

Coastal Waters

The water quality assessment for the 2024 cycle indicates that five hundred forty-six point six three (546.63) coastal miles of PR were assessed. At the present time four hundred seventy-two point five two (472.52) coastal miles have permanent water quality monitoring stations. From the evaluation of the water quality data obtained it was found that the impairment for primary and secondary recreation designated uses was due to Enterococci exceeding the applicable standard. For aquatic life designated use Turbidity, Copper and Temperature were the most common causes of impairment.

Estuaries

The assessment of estuaries corresponds to the lower reaches of the rivers near the coastal shoreline as defined in the PRWQSR. Island wide, there are a total of five point three six zero two (5.3602) square miles (sq. mi.) of river estuaries. For this cycle the river estuaries do not have a permanent water quality monitoring station. The San Juan Bay Estuary System (SJBES) is addressed separately, below.

San Juan Bay Estuary System

The SJBES is the only estuary identified as a separate basin due to its complex composition and interrelation of streams, lagoons, channels, and closed bay. The five (5) basins included in the overall drainage area of the SJBES are Caño Martin Peña, Quebrada Juan Méndez, Quebrada San Antón, Río Piedras and Quebrada Blasina. The SJBES it consists of three (3) AU with twenty-six (26) monitoring stations of the San Juan Bay Estuary Program.

For SJBES the water quality assessment for the 2024 cycle indicates that the three point eight three four zero (3.8340) sq. mi. and eighteen point eight (18.8) miles were assessed with water quality monitoring stations. From the evaluation of the water quality data obtained it was found that the impairment for the primary and secondary recreation designated uses was due to Enterococci exceeding the standard. Among the most important causes of impairment for aquatic life designated uses were Chromium VI, Dissolved Oxygen, Oil and Grease, pH, Temperature, Total Nitrogen, Total Phosphorus and Turbidity. A total of three (3) AU/parameter combinations were removed from the 2024 303(d) List.

PART A. Background

1.0 Total Waters

Is the goal of the PRDNER to preserve, maintain and enhance the quality of the water of PR to protect the designated uses and threatened and endangered species, among other responsibilities.

This report constitutes the Puerto Rico (PR) 305(b)/303(d) Integrated Report (IR) for the fiscal year 2024. For the 2024 cycle, there are a total of three hundred fifty-eight (358) Assessment Units (AU), of these one hundred ninety-four (194) are river basins (See Figure 1), sixty-two (62) are river estuaries, eighteen (18) are lakes (See Figure 2), seventeen (17) lagoons, three (3) are San Juan Bay Estuary System (SJBES) and sixty-four (64) are coastal shoreline. (See Figure 3).

Figure 1: Watersheds in Puerto Rico

PRDNER groups all the river basins in four hydrographic regions, in which the different watersheds are included: to the north (9 watersheds), east (28 watersheds), south (33 watersheds), and west (26 watersheds).

The reservoirs in PR, constructed in the main rivers basins to store water for domestic and industrial consumption, irrigation, production of electrical power and control of floods, also provide an additional benefit, recreation (Figure 2). The recreational activities performed in the reservoirs include direct contact (swimming) and indirect contact (recreational fishing and strolls in boats).

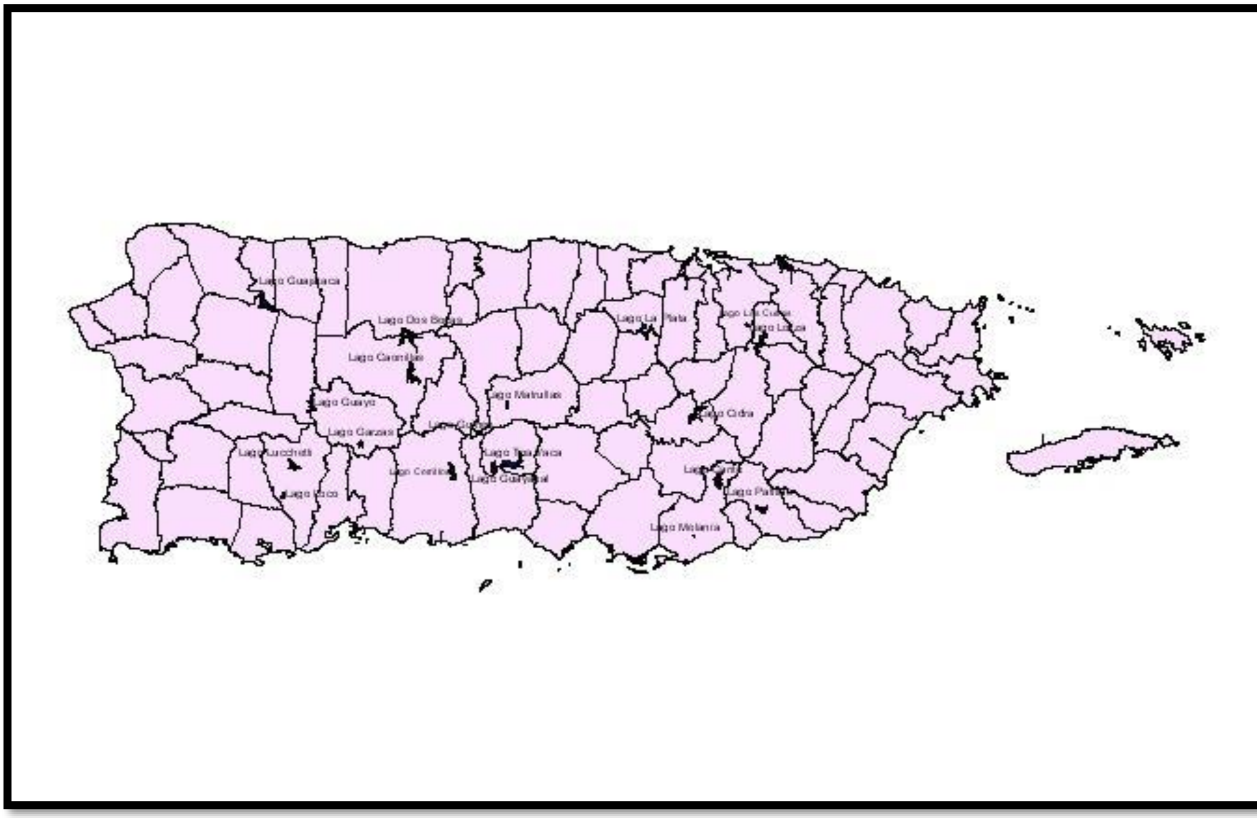

Figure 2: Reservoirs in Puerto Rico

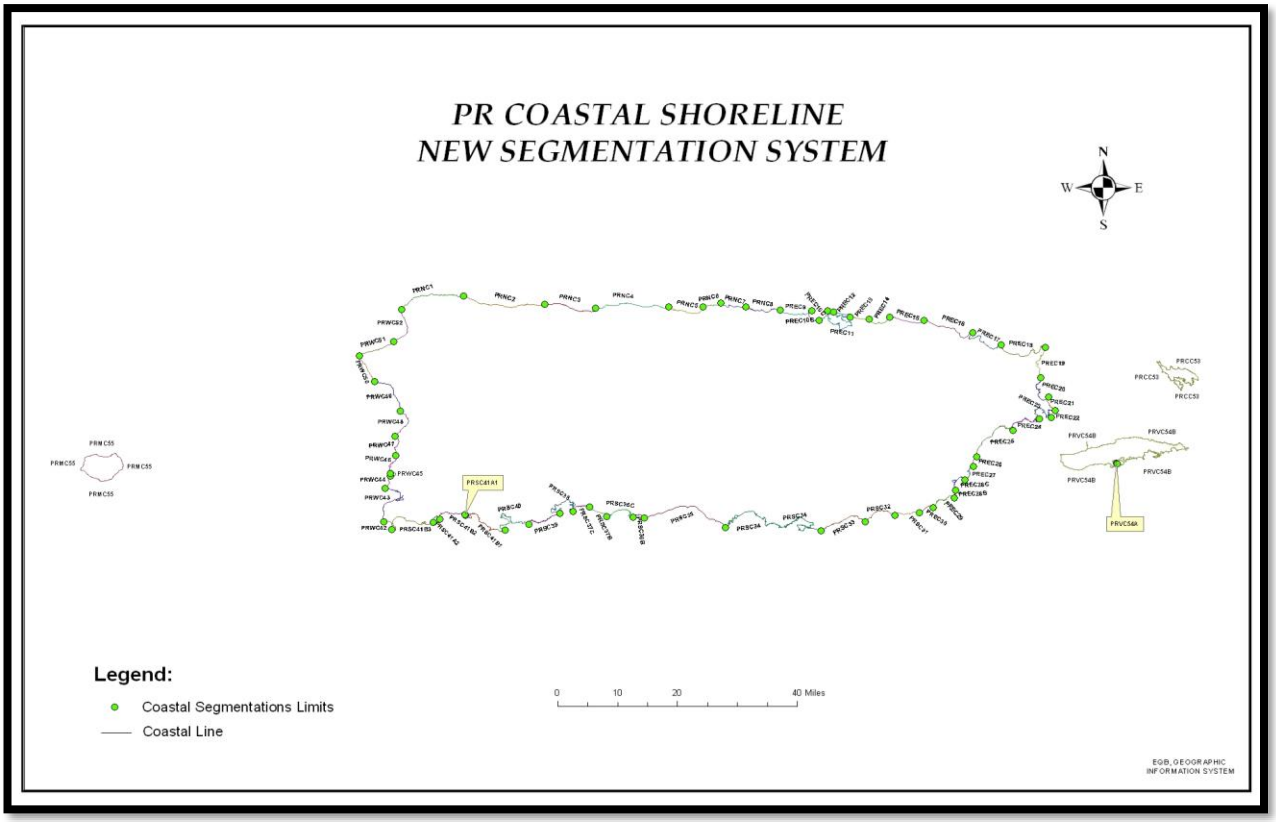

Figure 3: Puerto Rico Coastal Shoreline Segmentation System

The coastal shoreline presents a great variety of geologic aspects such as: cliffs, dunes, beaches, wooded hills, sinkhole, forests, lagoons, mangrove, salt mines, earth flooding, bays, small barren islands, and keys, which altogether give the characteristics and specific form to the archipelago. The coastal zone is one of the areas of greater tourist-recreational value and the areas bordering to the coasts constitute very active zones of economic and social development, where it undergoes a fast growth of population and an active commercial and industrial growth.

2.0 Water Quality Area

The PRDNER Water Quality Area (WQA) is the area responsible for preparing the Integrated Water Quality Monitoring and Assessment Report (Integrated Report) to comply with sections 303(d) and 305(b) of the Clean Water Act. The WQA is organized as follows (Figure 4).

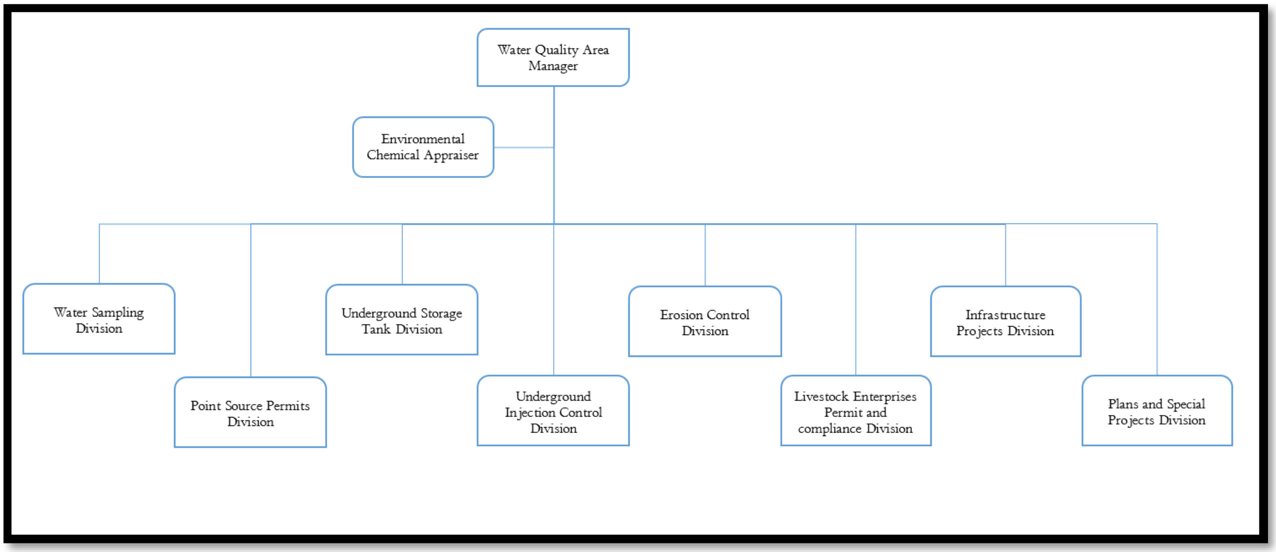

Figure 4: Water Quality Area Organization Chart

Below is an overview of the WQA divisions and their respective responsibilities.

Plans and Special Projects Division manages and evaluates the monitored water quality data to determine if the desirable water quality in the different hydric resources from the country is achieved. Plans and Special Projects Division develops the 305(b)/303(d) Integrated Report as required by Clean Water Act. It includes the water quality evaluation for rivers, streams, coastal, lakes, lagoons, estuary, and groundwater of the island. Also, verifies the effectiveness of the management and control programs implemented and develops the strategies for the improvement of the water quality, as required by the CWA and the PRWQSR. Those strategies include implementation of the TMDL for the impaired water bodies, the Wellhead Protection Program, Non-Point Sources Management Program and PR Unified Watershed Assessment and Restoration Activities. Also consistent with the new EPA's vision, this Division will have the responsibility for implementing the CWA Section 303(d) Program – *A long-term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program*. This 2022 – 2032 long-term Vision is under development. Other responsibility is the evaluation, preparation and coordination with the Quality Assurance Control Officer of the Water Quality Area and the Division of Environmental Science and Assessment of the USEPA Region II in all sampling and analytical activities that are subjected to a Water Quality Assurance Program Plan. The Beach Monitoring and Public Notification Program is also managed under this Division.

The **Underground Injection Control Division** was created to regulate/control the facilities with underground injection system (UIS) and respond to the wastewater releases or escapes from these systems that could be affecting the underground water resource. To control these types of systems, permits and authorizations are issued, sampling monitoring reports are evaluated, and remedial plans are required for those where the bad operation of the systems has caused spills to the water or to the subsoil. The USEPA, through a memorandum of understanding delegated the pursuit of UIS to PRDNER.

The **Point Source Permit Division** (PSPD) regulates wastewater treatment systems that do not have direct discharges to surface and coastal waters. The discharge of pollutants to surface and coastal waters is regulated by the National Discharge Elimination System (NPDES) under Section 402 of the CWA. This is a program administered by the USEPA. Section 401 of the Act, as amended requires USEPA that prior to issuing a discharge permit under NPDES a Water Quality Certificate must be obtained from a state agency with jurisdiction over water pollution control. In PR, such responsibility is also, on PRDNER specifically to the PSPD.

The **Underground Storage Tanks Division** (UST) was created to regulate/control the UST facilities and respond to leaking tanks that could be affecting the underground water resources. To control this type of system, permits and authorizations are issued, sampling monitoring reports are evaluated, and remedial plans are required for those where the bad operations of the systems have caused spills to the water or to the subsoil. USEPA, through a memorandum of understanding delegated the pursuit of UST to PRDNER.

The Erosion Control Division implements and manages the Erosion Control and Sedimentation Prevention Regulation, which performs enforcement actions to the facilities regulated under the General Permit. The division is responsible to perform inspections of all the permitted projects and presenting them to PRDNER to verify compliance with the permit granted and take corrective action or legal action if needed. The way to grant this permit was changed, to increase the oversight of the project and verify compliance with regulations.

The **Infrastructure Projects Division** has the responsibility of managing the federal funds assigned by USEPA through the State Revolving Fund program. Also, assess the planning, design, and construction phases of each project to verify compliance with Title VI of the CWA.

The CWSRF program maintains revolving loan funds to provide independent and permanent sources of low-cost financing for a wide range of water quality infrastructure projects including all types of NPS, watershed protection or restoration, and estuary management projects, as well as municipal wastewater treatment projects. The program allows the flexibility to target resources to the state's particular environmental needs. Also, it allows the flexibility to customize the loan terms to meet the needs of small and disadvantaged communities.

The **Livestock Permit and Compliance Division** performs inspections, evaluates, and approve the Animal Waste Management Plans that submit livestock enterprises such as: dairy facilities, poultry facilities, horse farms, among others. Through the approved *Reglamento para el Control de los Desperdicios Fecales de Animales en Confinamiento* (January 2009), this Division regulate the procedures, requirements, and prohibitions with respect to the design, implementation, operation, and maintenance of the Animal Waste Management Plan for each facility where animal in confinement stay.

The **Water Sampling Division** as part of their responsibilities must perform the sampling of the surface, coastal, underground waters, lakes, and sampling projects in some watersheds in PR.

Following a summary of Actions Initiated by Point and Non-Point Source Control Units (Table 1 and Table 2).

Table 1: Actions Initiated Point Sources Control Units

Actions	NPDES Facilities	UST	UIC	Non-Filer (Illegal Discharges)
Certificates or permits Issued		1,621	136	-
Permits of operation	-	348	166	-
Total number of inspections		653	130	182
Referrals to Legal Affairs	-	77	15	16
Notification of violation	-	374	158	142
Administrative Orders	-	-	10	-
Consent Orders	-	-	-	-

Table 2: Actions Initiated Non-Point Sources Control Units

Actions	SEC Activities	Livestock Enterprises
Certificates or permits Issued	306	156
Total number of inspections	368	534
Referrals to Legal Affairs	6	5
Notification of violation	307	180
Administrative Orders	4	4

3.0 Cost/Benefit Assessment

Accurate costs associated with water quality improvements in PR are not readily available. This type of assessment would require diverse data on government and private expenditures concerning multiple aspects of direct environmental improvement efforts, including installation of treatment methods, changes and improvements in treatment levels, technologies and methods, installation and improvements of sewerage and storm water sewer systems, development, and implementation costs of best management practices, as well as urban, rural and industrial development improvements. Other necessary information would include increased use and/or demand of the improved environmental resource as well as the monitoring and assessment efforts and activities performed to measure the improvements or lack of improvements achieved in each basin or regional area.

Although this information is not readily available, we do provide some of the costs involved in efforts pertaining to water quality improvement and protection. These costs are only those incurred directly by PRDNER utilizing state and federal funds to operate and manage water quality planning and control programs. Another cost, such as sanitary infrastructure improvements, governmental and private sector expenditures on waste and storm water management and control programs, recreational benefits (including tourism promotional activities and costs), governmental and private expenditures to promote natural resources protection, preservation and enjoyment are not being considered.

The major costs incurred with federal and state funds to operate environmental protection and planning activities in the WQA are show in Table 3 thru Table 7.

Table 3: Federal and State Funds (US dollars)

Categories	Performance Partnership Grant (PPG)				Beach Monitoring and Public Notification Program	
	2022		2023		2022	2023
	Federal	State	Federal	State	Federal	Federal
Salaries	1,497,777	320,858	2,007,383	390,780	171,426	178,824
Fringe Benefits	240,102	51,434	326,876	63,634	28,275	29,267
Travel	31,000	6,641	31,000	6,035	9,000	7,000
Equipment	107,064	22,936	107,064	20,842	-	-
Supplies	155,000	33,205	155,000	30,174	36,500	36,500
Contractual	746,049	139,877	282,500	54,994	-	-
Construction	-	-	-	-	-	-
Others	87,631	18,771	79,125	15,404	21,341	21,663

Table 4: Federal and State Funds (Cont.)

Categories	Water Quality Management 604(B)		State Revolving Fund (SRF)			
	2022	2023	2022		2023	
	Federal	Federal	Federal	State	Federal	State
Salaries	63,656	65,458	343,960	68,808	124,258	24,857
Fringe Benefits	10,513	10,802	56,450	11,293	19,009	3,803
Travel	250	250	1,667	333	2,500	500
Equipment	-	-	1,333	267	1,333	267
Supplies	4,500	4,500	1,667	333	3,333	667
Contractual	51,600	295,600	44,582	8,918	60,000	10,002
Construction	-	-	-	-	-	-
Others	1,255	1,230	14,521,817	2,904,338	9,506,432	1,903,274

Table 5: Federal and State Funds (Cont.)

Categories	SRF - BIL				SRF - Emerging		SRF - OSG	
	2022		2023		2022	2023	2022	2023
	Federal	State	Federal	State	Federal	Federal	Federal	State
Salaries	385,017	38,502	312,845	31,285	-	-	-	-
Fringe Benefits	62,972	6,297	47,873	4,787	-	-	-	-
Travel	3,636	364	4,545	455	-	-	-	-
Equipment	2,909	291	4,363	437	-	-	-	-
Supplies	5,942	594	5,364	536	-	-	-	-
Contractual	117,727	11,773	272,727	27,273	-	-	663,000	165,750
Construction	-	-	-	-	-	-	-	-
Others	22,425,870	2,242,586	26,369,250	2,636,924	1,220,000	2,773,000	-	-

Table 6: Federal and State Funds (Cont.)

Categories	LUST - Corrective				UST - Preventive				UST- Hurricane Relief			
	2022		2023		2022		2023		2022		2023	
	Federal	State	Federal	State	Federal	State	Federal	State	Federal	State	Federal	State
Salaries	248,231	27,582	248,231	27,582	193,104	64,368	193,104	64,368	53,035	5,893	53,035	5,893
Fringe Benefits	40,160	4,462	40,160	4,462	31,765	10,589	31,765	10,589	8,543	949	8,543	949
Travel	5,600	622	5,600	622	5,600	1,867	5,600	1,867	500	56	500	56

Categories	LUST - Corrective				UST - Preventive				UST- Hurricane Relief			
	2022		2023		2022		2023		2022		2023	
	Federal	State	Federal	State	Federal	State	Federal	State	Federal	State	Federal	State
Equipment	-	-	-	-	-	-	-	-	12,600	1,400	12,600	1,400
Supplies	10,000	1,112	10,000	1,112	7,500	2,500	7,500	2,500	2,000	222	2,000	222
Contractual	-	-	-	-	-	-	-	-	602,347	66,927	602,347	66,927
Construction	-	-	-	-	-	-	-	-	-	-	-	-
Others	5,500	611	5,500	611	13,000	4,334	13,000	4,334	2,440	271	2,440	271

Table 7: Total Federal and State Funds

Summary of Federal and State Funds	
Federal	88,752,212
State	11,668,630
Total	100,420,842

4.0 Special State Concerns and Recommendations

[RESERVED]

PART B. Assessment Methodology Used for 305(b)/303(d) Integrated Report for 2024 Cycle and Assessment Results

1.0 Assessment Units (AU)

This report constitutes the PR 305(b)/303(d) Integrated Report (IR) for fiscal year 2024. For 2024 cycle there are total of three hundred fifty-eight (358) AU, of these one hundred ninety-four (194) are river basins, sixty-two (62) are river estuaries, eighteen (18) are lakes, seventeen (17) lagoons, three (3) are San Juan Bay Estuary System and sixty-four (64) are coastal shoreline.

1.1 Assessment Unit for Inland Waters

The PRDNER uses the river basins system for planning activities and implementation of restoration efforts. Under this system, each main river is divided into AUs that consist of complete sub-basins. The smaller river basins have been maintained as a single AU or, for the most, it may be segmented in two.

Each AU generally consists of one of the following:

- A section of the main basin, with the corresponding minor first order tributaries.
- Sub-basin represented by major first order tributary (a river or stream that flows directly into main basin), second order tributary (a river or stream that flows into a first order tributary), and in some cases, third order tributary (a river or stream that flows into a second order tributary).
- In cases where either the main basin or any major tributary includes a lake (reservoir), the lake constitutes another AU. The AU includes the lake (from the dam up to the highest reach that defines the lake) and all the immediate minor tributaries that discharge directly to the lake.

The Table 8 provides basic information pertaining to the ninety-six (96) basins. For 2022 cycle there is a total of two hundred - fifteen (215) AU: of these one hundred ninety-four (194) AU are river basins, eighteen (18) AU are lakes. And three (3) AU are of San Juan Bay Estuary System.

Table 8: Basins for the Inland Waters Segmentation System

BASIN NAME	BASIN ID	BASIN SIZE (miles)	REGION	SUB-BASIN
QUEBRADA DE LOS CEDROS	PRNQ1A	12.0	N	1
QUEBRADA DEL TORO	PRNQ2A	1.0	N	1
RÍO GUAJATACA*	PRNR3A	38.0	N	4
QUEBRADA BELLACA	PRNQ4A	1.7	N	1
RÍO CAMUY	PRNR5A	48.6	N	1
QUEBRADA SECA	PRNQ6A	2.0	N	1
RÍO GRANDE DE ARECIBO*	PRNR7A	424.6	N	12
RÍO GRANDE DE MANATÍ*	PRNR8A	234.6	N	11
RÍO CIBUCO*	PRNR9A	144.6	N	6
RÍO DE LA PLATA*	PRER10A	470.1	E	18
RÍO HONDO	PRER11A	22.0	E	1
RÍO BAYAMÓN*	PRER12A	185.0	E	5
SAN JUAN BAY ESTUARY SYSTEM*	PREE13A	3.8340 sq.mi., 18.8 miles	E	3
RÍO GRANDE DE LOIZA*	PRER14A	554.3	E	15
RÍO HERRERA	PRER15A	17.0	E	1
RÍO ESPÍRITU SANTO*	PRER16A	58.4	E	2

BASIN NAME	BASIN ID	BASIN SIZE (miles)	REGION	SUB-BASIN
RÍO MAMEYES	PRER17A	38.9	E	2
QUEBRADA MATA DE PLÁTANO	PREQ18A	4.0	E	1
RÍO SABANA	PRER19A	33.1	E	2
RÍO JUAN MARTÍN	PRER20A	7.8	E	1
QUEBRADA FAJARDO	PREQ21A	10.0	E	1
RÍO FAJARDO*	PRER22A	59.0	E	1
RÍO DEMAJAGUA	PRER23A	2.8	E	1
QUEBRADA CEIBA	PREQ24A	5.0	E	1
QUEBRADA AGUAS CLARAS	PREQ25A	4.8	E	1
RÍO DAGUAO	PRER26A	13.8	E	1
QUEBRADA PALMA	PREQ27A	11.8	E	1
QUEBRADA BOTIJAS	PREQ28A	7.4	E	1
RÍO SANTIAGO	PRER29A	15.3	E	2
RÍO BLANCO	PRER30A	58.4	E	2
RÍO ANTÓN RUIZ	PRER31A	20.4	E	2
QUEBRADA FRONTERA	PREQ32A	8.5	E	1
RÍO HUMACAO*	PRER33A	55.8	E	1
RÍO CANDELERO	PRER34A	10.4	E	1
RÍO GUAYANÉS*	PRER35A	94.6	E	2
QUEBRADA EMAJAGUA	PREQ36A	2.5	E	1
RÍO MAUNABO*	PRER37A	36.0	E	1
QUEBRADA MANGLILLO	PRSQ38A	1.0	S	1
QUEBRADA FLORIDA	PRSQ39A	3.0	S	1
RÍO JACABOA	PRSR40A	13.0	S	1
QUEBRADA PALENQUE	PRSQ41A	1.0	S	1
RÍO CHICO	PRSR42A	14.6	S	1
RÍO GRANDE DE PATILLAS*	PRSR43A	48.6	S	4
QUEBRADA YAUREL	PRSQ44A	6.0	S	1
RÍO NIGUAS – ARROYO	PRSR45A	21.0	S	1
QUEBRADA SALADA	PRSQ46A	1.7	S	1
QUEBRADA CORAZÓN	PRSQ47A	9.7	S	1
QUEBRADA BRANDERI	PRSQ48A	4.5	S	1
RÍO GUAMANÍ	PRSR49A	22.0	S	1
QUEBRADA MELANÍA	PRSQ50A	7.0	S	2
RÍO SECO	PRSR51A	24.7	S	1
QUEBRADA AMORÓS	PRSQ52A	0.7	S	1
QUEBRADA AGUAS VERDES	PRSQ53A	15.0	S	1
RÍO NIGUAS – SALINAS	PRSR54A	102.5	S	1
RÍO JUEYES	PRSR55A	11.0	S	1
RÍO CAYURES	PRSR56A	5.0	S	1
RÍO COAMO*	PRSR57A	115.7	S	3
RÍO DESCALABRADO	PRSR58A	18.8	S	1
RÍO CAÑAS	PRSR59A	8.0	S	1
RÍO JACAGUAS	PRSR60A	89.5	S	4
RÍO INABÓN	PRSR61A	66.7	S	1
RÍO BUCANÁ – CERRILLOS*	PRSR62A	60.4	S	3
RÍO PORTUGUÉS*	PRSR63A	54	S	1
RÍO MATILDE - PASTILLO	PRSR64A	51.2	S	2
RÍO TALLABOA	PRSR65A	59.6	S	1
RÍO MACANÁ	PRSR66A	21.7	S	1
RÍO GUAYANILLA*	PRSR67A	60.0	S	1
RÍO YAUCO	PRSR68A	93.7	S	3
RÍO LOCO	PRSR69A	113.4	S	3
RÍO ARROYO CAJÚL	PRSR70A	7.4	S	1

BASIN NAME	BASIN ID	BASIN SIZE (miles)	REGION	SUB-BASIN
QUEBRADA BOQUERÓN	PRWQ71A	11.7	W	1
QUEBRADA ZUMBÓN	PRWQ72A	1.7	W	1
QUEBRADA GONZÁLEZ	PRWQ73A	1.8	W	1
QUEBRADA LOS PAJARITOS	PRWQ74A	2.7	W	1
CAÑO CONDE ÁVILA	PRWK75A	4.0	W	1
QUEBRADA IRIZARRY	PRWQ76A	2.0	W	1
RÍO GUANAJIBO*	PRWR77A	324.6	W	9
CAÑO MERLE	PRWK78A	11.1	W	2
RÍO YAGÜÉZ*	PRWR79A	42.2	W	1
QUEBRADA DEL ORO	PRWQ80A	10.0	W	1
CAÑO MANÍ	PRWK81A	3.0	W	1
CAÑO BOQUILLA	PRWK82A	12.3	W	3
RÍO GRANDE DE AÑASCO*	PRWR83A	488.6	W	10
QUEBRADA JUSTO	PRWQ84A	1.0	W	1
QUEBRADA ICACOS	PRWQ85A	1.4	W	1
QUEBRADA CAGUABO	PRWQ86A	1.0	W	1
CAÑO GARCÍA	PRWK87A	2.0	W	1
QUEBRADA GRANDE DE CALVACHE	PRWQ88A	14.8	W	1
QUEBRADA LOS RAMOS	PRWQ89A	6.9	W	1
QUEBRADA PUNTA ENSENADA	PRWQ90A	5.0	W	1
QUEBRADA PILETAS	PRWQ91A	2.0	W	1
RÍO GRANDE	PRWR92A	21.8	W	1
CAÑO DE SANTI PONCE	PRWK93A	4.8	W	1
RÍO GUAYABO	PRWR94A	43.1	W	1
RÍO CULEBRINAS*	PRWR95A	308.8	W	11
CAÑO CORAZONES	PRWK96A	1.3	W	1

* Basins with permanent monitoring stations

Of the one hundred ninety-four (194) river basin AUs, forty-nine (49) AUs are monitored routinely. Also, two (2) of the three (3) SJBES AUs are monitored routinely, for a total of fifty-one (51) AUs with monitoring stations (Table 9). One hundred forty-five (145) river basin AUs do not have monitoring stations (Table 10).

Table 9: The 51 AUs with monitoring stations

AU NAME	AU ID
RÍO GUAJATACA	PRNR3A1
RÍO GUAJATACA	PRNR3A2
RÍO GRANDE DE ARECIBO	PRNR7A1
RÍO GRANDE DE ARECIBO	PRNR7A2
RÍO GRANDE DE ARECIBO	PRNR7A3
RÍO CAONILLAS	PRNR7C1
RÍO LIMÓN	PRNR7C2
RÍO YUNES	PRNR7C3
RÍO TANAMÁ	PRNR7B2
RÍO GRANDE DE MANATI	PRNR8A1
RÍO GRANDE DE MANATI	PRNR8A2
RÍO CIALITO	PRNR8B
RÍO OROCOVIS	PRNR8E1
RÍO CIBUCO	PRNR9A
RÍO DE LA PLATA	PRER10A1
RÍO DE LA PLATA	PRER10A3

AU NAME	AU ID
RÍO DE LA PLATA	PRER10A4
RÍO DE LA PLATA	PRER10A5
RÍO GUADIANA	PRER10E
RÍO ARROYATA	PRER10G
RÍO MATÓN	PRER10J
RÍO BAYAMÓN	PRER12A1
RÍO BAYAMÓN	PRER12A2
RÍO GUAYNABO	PRER12B
SAN JUAN BAY ESTUARY SYSTEM	PREE13A2
SAN JUAN BAY ESTUARY SYSTEM	PREE13A3
RÍO GRANDE DE LOIZA	PRER14A1
RÍO GRANDE DE LOIZA	PRER14A2
RÍO GURABO	PRER14G1
RÍO VALENCIANO	PRER14G2
RÍO BAIROA	PRER14H
RÍO CAGÜITAS	PRER14I
RÍO TURABO	PRER14J
RÍO CAYAGUAS	PRER14K
RÍO ESPÍRITU SANTO	PRER16A
RÍO FAJARDO	PRER22A
RÍO HUMACAO	PRER33A
RÍO GUAYANÉS	PRER35A
RÍO MAUNABO	PRER37A
RÍO GRANDE DE PATILLAS	PRSR43A2
RÍO COAMO	PRSR57A2
RÍO BUCANÁ – CERRILLOS	PRSR62A1
RÍO BUCANÁ – CERRILLOS	PRSR62A2
RÍO PORTUGUÉS	PRSR63A
RÍO GUAYANILLA	PRSR67A
RÍO GUANAJIBO	PRWR77A
RÍO ROSARIO	PRWR77C
RÍO VIEJO	PRWR77D
RÍO YAGÜEZ	PRWR79A
RÍO GRANDE DE AÑASCO	PRWR83A
RÍO CULEBRINAS	PRWR95A

Table 10: The 145 AUs without monitoring stations

AU NAME	AU ID
QUEBRADA DE LOS CEDROS	PRNQ1A
QUEBRADA DEL TORO	PRNQ2A
QUEBRADA LAS SEQUÍAS	PRNQ3B
QUEBRADA BELLACA	PRNQ4A
RÍO CAMUY	PRNR5A
QUEBRADA SECA	PRNQ6A
RÍO SANTIAGO	PRNR7A1a
RÍO TANAMÁ	PRNR7B1
RIO GRANDE DE MANATÍ	PRNR8A3
RÍO TORO NEGRO	PRNR8C1
RÍO BAUTA	PRNR8C2
RÍO SANA MUERTOS	PRNR8D

AU NAME	AU ID
RÍO BOTIJAS	PRER8E2
RÍO INDIO	PRNR9B1
RÍO MOROVIS	PRNR9B2
RÍO UNIBÓN	PRNR9B3
RÍO MAVILLAS	PRNR9C
RÍO DE LOS NEGROS	PRNR9D
RÍO DE LA PLATA	PRER10A2
RÍO LAJAS	PRER10B
RÍO BUCARABONES	PRER10C
RÍO CAÑAS	PRER10D
RÍO CUESTA ARRIBA	PRER10F
RÍO HONDO	PRER10H
RÍO USABÓN	PRER10I1
RÍO AIBONITO	PRER10I2
RÍO GUAVATE	PRER10K
RÍO HONDO	PRER11A
RÍO MINILLAS	PRER12C
RÍO CANÓVANAS	PRER14B
RÍO CANOVANILLAS	PRER14C
QUEBRADA MARACUTO	PRER14D
QUEBRADA GRANDE	PREQ14E
RÍO CAÑAS	PRER14F
RÍO EMAJAGUA	PRER14L
RÍO HERRERA	PRER15A
RÍO ESPÍRITU SANTO	PRER16A1
RÍO MAMEYES	PRER17A
RÍO MAMEYES	PRER17A1
QUEBRADA MATA DE PLÁTANO	PREQ18A
RÍO SÁBANA	PRER19A
RÍO SÁBANA	PRER19A1
RÍO JUAN MARTÍN	PRER20A
QUEBRADA FAJARDO	PREQ21A
RÍO DEMAJAGUA	PRER23A
QUEBRADA CEIBA	PREQ24A
QUEBRADA AGUAS CLARAS	PREQ25A
RÍO DAGUAO	PRER26A
QUEBRADA PALMA	PREQ27A
QUEBRADA BOTIJAS	PREQ28A
RÍO SANTIAGO	PRER29A
RÍO SANTIAGO	PRER29A1
RÍO BLANCO	PRER30A
QUEBRADA PEÑA POBRE	PREQ30B
RÍO ANTÓN RUIZ	PRER31A
QUEBRADA MULAS	PREQ31A1
QUEBRADA FRONTERA	PREQ32A
RÍO CANDELERO	PRER34A
RÍO INGENIO	PRER35A1
QUEBRADA EMAJAGUA	PREQ36A
QUEBRADA MANGLILLO	PRSQ38A
QUEBRADA FLORIDA*	PRSQ39A
RÍO JACABOA	PRSR40A
QUEBRADA PALENQUE	PRSQ41A
RÍO CHICO	PRSR42A
RÍO GRANDE DE PATILLAS	PRSR43A1
RÍO MARÍN	PRSR43B

AU NAME	AU ID
QUEBRADA YAUREL	PRSQ44A
RÍO NIGUAS DE ARROYO	PRSR45A
QUEBRADA SALADA	PRSQ46A
QUEBRADA CORAZÓN	PRSQ47A
QUEBRADA BRANDERI	PRSQ48A
RÍO GUAMANÍ	PRSR49A
QUEBRADA MELANÍA	PRSQ50A
RÍO SECO	PRSR51A
QUEBRADA AMORÓS	PRSQ52A
QUEBRADA AGUAS VERDES	PRSQ53A
RÍO NIGUAS DE SALINAS	PRSR54A
RÍO JUEYES	PRSR55A
RÍO CAYURES	PRSR56A
RÍO COAMO	PRSR57A1
RÍO CUYÓN	PRSR57B
RÍO DESCALABRADO	PRSR58A
RÍO CAÑAS	PRSR59A
RÍO JACAGUAS	PRSR60A1
RÍO JACAGUAS	PRSR60A2
RÍO INABÓN	PRSR61A
RÍO MATILDE-PASTILLO	PRSR64A
QUEBRADA DEL AGUA	PRSQ64A1
RÍO TALLABOA	PRSR65A
RÍO MACANÁ	PRSR66A
RÍO YAUCO	PRSR68A1
RÍO YAUCO	PRSR68A2
RÍO LOCO	PRSR69A2
RÍO LOCO	PRSR69A1
RÍO ARROYO CAJÚL	PRSR70A
QUEBRADA BOQUERÓN	PRWQ71A
QUEBRADA ZUMBÓN	PRWQ72A
QUEBRADA GONZÁLEZ	PRWQ73A
QUEBRADA LOS PAJARITOS	PRWQ74A
CAÑO CONDE ÁVILA	PRWK75A
QUEBRADA IRIZARRY	PRWQ76A
RÍO HONDO	PRWR77B
RÍO DUEY Y RÍO HOCONUCO	PRWR77E
RÍO CAÍN	PRWR77F
RÍO CUPEYES	PRWR77G
RÍO CRUCES	PRWR77H
RÍO GRANDE	PRWR77I
CAÑO MERLE	PRWK78A
CAÑO MERLE	PRWK78A1
QUEBRADA DEL ORO	PRWQ80A
CAÑO MANÍ	PRWK81A
CAÑO BOQUILLAS	PRWK82A
CAÑO BOQUILLAS	PRWK82A1
CAÑO BOQUILLAS	PRWK82A2
RÍO CAÑAS	PRWR83B
RÍO CASEY	PRWR83C
RIO HUMATA	PRWR83D
RÍO ARENAS	PRWR83E
RÍO MAYAGUECILLO	PRWR83F
RÍO GUABÁ	PRWR83G
RÍO BLANCO	PRWR83H

AU NAME	AU ID
RÍO PRIETO	PRWR83I
QUEBRADA JUSTO	PRWQ84A
QUEBRADA ICACOS	PRWQ85A
QUEBRADA CAGUABO	PRWQ86A
CAÑO GARCIA	PRWK87A
QUEBRADA GRANDE DE CALVACHE	PRWQ88A
QUEBRADA LOS RAMOS	PRWQ89A
QUEBRADA PUNTA ENSENADA	PRWQ90A
QUEBRADA PILETAS	PRWQ91A
RÍO GRANDE	PRWR92A
CAÑO DE SANTI PONCE	PRWK93A
RÍO GUAYABO	PRWR94A
RÍO CAÑO (RIO CAÑAS)	PRWR95B
QUEBRADA GRANDE	PRWQ95C
QUEBRADA LAS MARÍAS	PRWQ95D
QUEBRADA YAGRUMA	PRWQ95E
QUEBRADA LA SALLE	PRWQ95F
QUEBRADA EL SALTO	PRWR95G
QUEBRADA GRANDE DE LA MAJAGUA	PRWQ95H
QUEBRADA SALADA	PRWR95I
RÍO SONADOR	PRWR95J
RÍO GUATEMALA	PRWR95K
CAÑO CORAZONES	PRWK96A

* This AU was always dry in this cycle and not assess

For purposes of water quality assessment and planning, PRDNER continues to group all the river basins into four (4) geographic regions. The Table 11 presents geographic regions with its corresponding basins as part of the monitoring network.

Table 11: Geographic Regions

REGION	BASIN	BASIN IN PERMANENT STREAM WATER QUALITY NETWORK	ASSESSMENT UNITS BY WATER QUALITY EXISTING DATA
North	9	4	0
South	33	5	0
East	28*	10	3 (26 monitoring stations)
West	26	4	0

* Included the San Juan Bay Estuary System

In the case of assessment units with several monitoring stations in the same assessment unit, the water quality evaluation is performed by evaluating all the data from all the stations within that assessment unit and the evaluation is indicative for the whole assessment unit.

Potential pollution sources are identified through supplementary information: NPDES compliance evaluation inspections, operation and maintenance inspections, pump station by-passes and sanitary sewer system overflow incidents for a period of two years, implementation of Best Management Practices by non-point sources, fish-kills, or spill events.

1.2 Assessment Unit for Coastal Shoreline

The Coastal Shoreline consists of 64 AUs, of which fifty-five (55) have monitoring stations and nine (9) do not have monitoring stations. (The AU that do not have monitoring stations were classified on Category 3 because there is insufficient available data and/or information to determine if any designated uses are being attained). The monitoring stations are positioned along coastal shoreline AUs to maximize efficiency. The following description provides the rationale for setting the number of stations according to the length of the AU:

- AUs eleven (11) miles or greater, have three (3) stations.
- AUs shorter than eleven (11) miles but longer than or equal to four (4) miles, have two (2) stations.
- AU shorter than four (4) miles has one station.

Due to accessibility, the monitoring network excludes Roosevelt Roads Naval Station in Ceiba (PREC21 and PREC22), Vieques (PRVC54B), Culebra (PRCC53), Mona Island (PRMC55), Isla de Cabra to Punta El Morro (PREC11).

AUs that have waters classified as SA are not monitored by the Coastal Monitoring Network. Class SA waters are defined in the PRWQSR, as coastal and estuarine waters of high quality or exceptional ecological or recreational value whose existing conditions shall not be altered, except by natural phenomena, as defined under this regulation to preserve its natural characteristics. Class SA waters include the following: *Bahía Bioluminiscente La Parguera*, *Lajas,* two (2) miles (AU PRSC41A1), *Bahía Monsio José*, Lajas, three point seventy-two (3.72) miles (AU PRSC41A2) and *Bahía Mosquito*, Vieques, three (3) miles (AU PRVC54A).

The Table 12 summarize the coastal shoreline AUs. *AU DESCRIPTION column* indicates where the AU begins and ends.

Table 12: Coastal Shoreline Assessment Units

AU ID	AU DESCRIPTION	AU SIZE (miles)	GEOGRAPHIC REGION
PRNC01*	Punta Borinquen to Punta Sardina	11.72	North
PRNC02*	Punta Sardina to Punta Manglillo	14.10	North
PRNC03*	Punta Manglillo to Punta Morrillos	9.65	North
PRNC04*	Punta Morrillos to Punta Manatí	13.66	North
PRNC05*	Punta Manatí to Punta Chivato	7.46	North
PRNC06*	Punta Chivato to Punta Puerto Nuevo	3.23	North
PRNC07*	Punta Puerto Nuevo to Punta Cerro Gordo	5.05	North
PRNC08*	Punta Cerro Gordo to Punta Boca Juana	7.32	North
PREC09*	Punta Boca Juana to Punta Salinas	5.78	East
PREC10B*	Punta Salinas to Río Bayamón mouth	2.91	East
PREC10C*	Río Bayamón mouth to Isla de Cabras	6.63	East
PREC11	Isla de Cabras to Punta del Morro	7.79	East
PREC12*	Punta del Morro to west side of Condado Bridge	3.50	East
PREC13*	East side of Condado Bridge to Punta Las Marías	4.31	East
PREC14*	Punta Las Marías to Punta Cangrejos	4.19	East
PREC15*	Punta Cangrejos to Punta Vacía Talega	6.23	East
PREC16*	Punta Vacía Talega to Punta Miquillo	9.46	East
PREC17*	Punta Miquillo to Punta La Bandera	8.41	East
PREC18*	Punta La Bandera to Cabezas de San Juan	10.46	East
PREC19*	Cabezas de San Juan to Punta Barrancas	7.08	East

AU ID	AU DESCRIPTION	AU SIZE (miles)	GEOGRAPHIC REGION
PREC20*	Punta Barrancas to Punta Medio Mundo	5.33	East
PREC21	Punta Medio Mundo to Punta Puerca	3.00	East
PREC22	Punta Puerca to Isla Cabras	3.30	East
PREC23*	Isla Cabras to Punta Cascajo	8.83	East
PREC24*	Punta Cascajo to Punta Lima	9.07	East
PREC25*	Punta Lima to Morro de Humacao	9.83	East
PREC26*	Morro de Humacao to Punta Candelero	1.84	East
PREC27*	Punta Candelero to Punta Guayanés	3.74	East
PREC28C*	Punta Guayanés to Punta Quebrada Honda	4.68	East
PREC28B*	Punta Quebrada Honda to Punta Yeguas	0.74	East
PREC29*	Punta Yeguas to Punta Tuna	4.35	East
PREC30*	Punta Tuna to Cabo Mala Pascua	2.65	East
PRSC31*	Cabo Mala Pascua to Punta Viento	4.06	South
PRSC32*	Punta Viento to Punta Figuras	6.16	South
PRSC33*	Punta Figuras to Punta Ola Grande	8.10	South
PRSC34*	Punta Ola Grande to Punta Petrona	40.96	South
PRSC35*	Punta Petrona to Punta de Cabullones	2.53	South
PRSC36B*	Punta de Cabullones to Punta Carenero	6.70	South
PRSC36C*	Punta Carenero to Punta Cucharas	9.23	South
PRSC37B*	Punta Cuchara to Cayo Parguera	3.30	South
PRSC37C*	Cayo Parguera to Punta Guayanilla	4.20	South
PRSC38*	Punta Guayanilla to Punta Verraco	13.20	South
PRSC39*	Punta Verraco to Punta Ballenas	6.41	South
PRSC40*	Punta Ballenas to Punta Brea	13.26	South
PRSC41B1*	Punta Brea to Bahía Fosforescente La Parguera	10.93	South
PRSC41A1	Bahía Fosforescente La Parguera	2.00	South
PRSC41B2*	Bahía Fosforescente to Punta Cueva de Ayala	7.00	South
PRSC41A2	Bahía Monsio José	3.72	South
PRSC41B3*	Bahía Monsio José to Faro de Cabo Rojo	13.45	South
PRWC42*	Faro de Cabo Rojo to Punta Águila	2.89	West
PRWC43*	Punta Águila to Punta Guaniquilla	9.54	West
PRWC44*	Punta Guaniquilla to Punta La Mela	2.50	West
PRWC45	Punta La Mela to Punta Carenero	2.95	West
PRWC46*	Punta Carenero to front of Cayo Ratones	4.00	West
PRWC47*	In front of Cayo Ratones to Punta Guanajibo	3.85	West
PRWC48*	Punta Guanajibo to Punta Algarrobo	5.60	West
PRWC49*	Punta Algarrobo to Punta Cadena	6.98	West
PRWC50*	Punta Cadena to Punta Higüero	4.98	West
PRWC51*	Punta Higüero to Punta del Boquerón	6.14	West
PRWC52*	Punta del Boquerón to Punta Borinquen	6.80	West
PRCC53	Culebra Island	32.70	Offshore Islands
PRVC54A	Bahía Mosquito	3.00	Offshore Islands
PRVC54B	Vieques Island	67.60	Offshore Islands
PRMC55	Mona Island	18.60	Offshore Islands

* Assessment Units with monitoring stations

2.0 Monitoring Program

2.1 Permanent Water Quality Monitoring Network

The PRDNER monitoring activities for this reporting cycle (October 1, 2021, to September 30, 2023), included routine ambient water quality sampling at the various networks, special water quality studies performed in the water bodies of concern and existing or secondary data requested.

Also, where available, effluent quality data from the discharge monitoring reports submitted by NPDES permitted point sources are used as contributing sources that may impact the use support potential of the water bodies. In addition, PRDNER may perform special sampling activities whenever necessary to investigate fish kills, hydrocarbons leak and spills, and illegal discharges to storm sewers and water bodies to obtain water quality data to assess the impact.

In this cycle the PRDNER generates data from four (4) routine monitoring networks. This will provide physical, chemical, and biological water quality data from the different water bodies. These are:

- **Surface Water Monitoring Network:** Operated by the United States Geological Survey (USGS) under a cooperative agreement with PR, this network includes fifty-one (51) water quality sampling stations in twenty-three (23) major river basins, which corresponds to fifty-one (51) AU in the north, south, east, and west hydrographic regions of PR. The USGS collects samples on a quarterly basis and analyzes for the following parameters:

Dissolved Oxygen	pH
Enterococci	Specific Conductance*
Flow*	Temperature
Hardness*	Total Nitrogen
Nitrate + Nitrite as Nitrogen	Total Phosphorus
NH_3 + NH_4 as N	Turbidity

* Parameter that does not have numeric standard as establish in the PRWQSR

Analyses for the detection of cyanide and methylene blue active substances (MBAS), as well as the other following parameters, are performed twice a year:

Arsenic	Chromium VI	Mercury
Cadmium	Copper	Selenium
Chromium III	Lead	Zinc

Additional samples are collected for dissolved solids, such as calcium and magnesium.

For data provided by the USGS, all results are used regardless of whether they include remarks such as >, <, estimated (E), or average (A), under each parameter. All results reported with or without the remarks were used as a valid result for this assessment cycle.

- **Clean Lakes Monitoring Network:** Operated by PRDNER, this network monitors water quality in the eighteen (18) major lakes (reservoirs) that are mostly used as raw sources of public water supply, propagation and preservation of desirable species, including threatened and endangered species, as well as primary and secondary contact recreation (Table 13).

Table 13: Lakes Monitoring Network

BASIN	WATER BODY NAME	WB SIZE (Acres)	2024 PERMANENT MONITORING STATION ID
Río Guajataca	Lago Guajataca PRNL3A1	1000 acres	10720 10790 10790C
Río Grande De Arecibo	Lago Dos Bocas PRNL$_1$7A1	634 acres	25110 27090 27090E
Río Grande De Arecibo	Lago Caonillas PRNL$_2$7C1	700 acres	89001 89002 89003
Río Grande De Arecibo	Lago Garzas PRNL$_3$7A3	108 acres	20050
Río Grande De Manatí	Lago Matrullas PRNL$_2$8C1	77 acres	89009 89010
Río De La Plata	Lago La Plata PREL$_1$10A1	560 acres	44400 44950 44950C
Río De La Plata	Lago Carite PREL$_2$10A5	333 acres	39900 39950 39950C
Río Bayamón	Lago Cidra PREL12A2	268 acres	89029 89030 89031
Estuario De La Bahía De San Juan	Lago Las Curías PREE13A2	55 acres	89027
Río Grande De Loiza	Lago Loiza PREL14A1	713 acres	57500 58800 58800D
Río Grande De Patillas	Lago Patillas PRSL43A1	312 acres	89022 89023 89024
Quebrada Melanía	Lago Melanía PRSL50A	35 acres	89026
Río Jacaguas	Lago Guayabal PRSL$_1$60A1	373 acres	89011 89012 89013
Río Jacaguas	Lago Toa Vaca PRSL$_2$60A1	836 acres	89014 89015 89016
Río Bucaná-Cerrillos	Lago Cerrillos PRSL62A1	700 acres	89032 89033 89034
Río Yauco	Lago Luchetti PRSL68A1	266 acres	89017 89018 89019
Río Loco	Lago Loco PRSL69A	69 acres	89021C
Río Grande de Añasco	Lago Guayo PRWL83H	285 acres	89004 89005 89006

Samples taken at these lakes are analyzed for the following parameters:

Arsenic	Nickel
Cadmium	Pesticides (organochlorides)
Copper	pH
Dissolved Oxygen (profile)	Selenium
Enterococci	Temperature (profile)
Hardness*	Total Nitrogen
Lead	Total Phosphorous
Mercury	Turbidity
Zinc	

***** Parameter that does not have numeric standard as establish in PRWQSR

All parameters are collected once in each of three (3) sampling cycles (rainy season, dry season, and midpoint between these two (2) periods):

- October-November- represents flows greater than low flow.
- February-March- represents minimum dilution of discharge; typically, lowest rainfall period in Puerto Rico.
- May- represents first stream flush-effects.
- August-September- represents flows greater than low flow; typically, more humid and highest ambient temperature in Puerto Rico.

- ***Coastal Monitoring Network:*** Operated by PRDNER, this network includes one hundred four (104) monitoring stations around the coastal perimeter of PR (Table 14). The network covers a total of four hundred nineteen-point zero one (419.01) coastal miles of PR's main island, out of a total of five hundred forty-six-point sixty-three (546.63) shore miles from the archipelago. The Coastal Monitoring Network Stations are sampled for the following parameters:

Dissolved Oxygen	pH
Enterococci	Temperature
***Oil and Grease	Total Nitrogen
Turbidity	

*** Sample for this parameter will be collected only if oil sheen is observed in the water body.

Table 14: Puerto Rico Coastal Permanent Network Water Quality Monitoring Stations

STATION NUMBER	AU ID	CLASSIFICATION (PRWQSR)	COORDINATES		FREQUENCY OF SAMPLING
			LATITUDE	LONGITUDE	
MAC-049	PRNC04	SB	18º 29′ 12.30″	66º 40′ 33.92″	Every two months
SBZ-008	PRNC04	SB	18º 29′ 03.84″	66º 34′ 39.01″	Every two months
MAC-055	PRNC04	SB	18º 28′ 54.93″	66º 32′ 11.61″	Every two months
SEG5-01	PRNC05	SB	18º 28′ 36.50″	66º 30′ 24.80″	Every two months
SBZ-010	PRNC05	SB	18º 28′ 22.50″	66º 29′08.36″	Every two months
MAC-087	PRNC06	SB	18º 29′ 30.80″	66º 23′ 55.28″	Every two months

STATION NUMBER	AU ID	CLASSIFICATION (PRWQSR)	COORDINATES		FREQUENCY OF SAMPLING
			LATITUDE	LONGITUDE	
SEG7-01	PRNC07	SB	18º 29´ 24.70″	66º 23´ 40.49″	Every two months
MAC-088	PRNC07	SB	18º 28´ 52.56″	66º 20´ 26.81″	Every two months
SBZ-013	PRNC08	SB	18º 28´ 32.86″	66º 19´ 11.95″	Every two months
SBZ-014	PRNC08	SB	18º 28´ 28.22″	66º 16´ 51.88″	Every two months
SEG9-01	PRNC09	SB	18º 28´ 15.66″	66º 14´ 47.38″	Every two months
MAC-077	PRNC09	SB	18º 28´ 21.27″	66º 11´ 09.68″	Every two months
MAC-063	PREC10B	SB	18º 27´ 17.64″	66º 10´ 43.31″	Every two months
SEG10C-01	PREC10C	SB	18º 27´ 09.58″	66º 09´ 27.38″	Every two months
SEG10C-02	PREC10C	SB	18º 27´ 55.18″	66º 08´ 19.21″	Every two months
SBZ-019	PREC12	SB	18 º 28´ 01.72″	66 º 05´ 25.19″	Every two months
SBZ-018	PREC12	SB	18º 28´ 00.23″	66º 05´ 12.00″	Every two months
B-1	PREC13	SB	18º 27´ 40.07″	66º 04´ 56.67″	Every two months
B-2	PREC13	SB	18º 27´ 10.84″	66º 02´ 55.97″	Every two months
EB-40	PREC14	SB	18º 26´ 38.73″	66º 01´ 19.74″	Every two months
SEG14-01	PREC14	SB	18º 26´ 45.50″	66º 00´ 13.10″	Every two months
B-3	PREC14	SB	18º 27´ 01.86″	65 º 59´ 48.63″	Every two months
SEG14-02	PREC14	SB	18º 27´ 32.84″	66º 59´ 34.27″	Every two months
SBZ-024	PREC15	SB	18º 27´ 22.62″	65º 58´ 25.74″	Every two months
SBZ-026	PREC15	SB	18º 26´ 52.29″	65º 54´ 22.43″	Every two months
SBZ-027	PREC16	SB	18º 26´ 04.49″	65º 51´ 08.34″	Every two months
SBZ-028	PREC16	SB	18º 25´ 24.30″	65º 49´ 44.73″	Every two months
SEG17-01	PREC17	SB	18º 24´ 08.80″	65º 46´ 19.90″	Every two months
MAC-009	PREC17	SB	18º 23´ 05.67″	65º 43´ 47.98″	Every two months
SBZ-030	PREC18	SB	18º 22´ 54.72″	65º 43´ 06.45″	Every two months
SEG23-01	PREC23	SB	18º 13´ 29.20″	65º 37´ 00.40″	Every two months
SEG20-02	PREC20	SB	18º 15´ 46.10″	65º 37´ 48.13″	Every two months
SEG20-01	PREC20	SB	18º 17´ 06.10″	65º 37´ 52.60″	Every two months
MAC-078	PREC19	SB	18º 20´ 02.39″	65º 37´ 48.76″	Every two months
MAC-010	PREC18	SB	18º 22´ 10.45″	65º 38´ 10.79″	Every two months
SEG24-02	PREC24	SB	18º 12´ 10.90″	65º 40´ 08.10″	Every two months
SEG25-01	PREC25	SB	18º 11´ 22.80″	65º 43´ 10.60″	Every two months
MAC-080	PREC25	SB	18º 11´ 12.94″	65º 43´ 33.48″	Every two months
MAC-081	PREC25	SB	18º 09´ 27.90″	65º 45´ 21.44″	Every two months
SEG26-01	PREC26	SB	18º 06´ 32.70″	65º 47´ 00.60″	Every two months
SEG27-01	PREC27	SB	18º 04´ 52.64″	65º 47´ 47.60″	Every two months
MAC-012	PREC28C	SB	18º 03´ 45.70″	65º 49´ 09.10″	Every two months
SBZ-040	PRSC32	SB	17º 58´ 26.00″	65º 59´ 19.00″	Every two months
SEG31-01	PRSC31	SB	17º 58´ 23.50″	65º 56´ 39.10″	Every two months
MAC-082	PREC30	SB	17º 59´ 31.69″	65º 53´ 28.32″	Every two months
SEG29-02	PREC29	SB	18º 00´ 20.70″	65º 52´ 16.60″	Every two months
SEG29-01	PREC29	SB	18º 00´ 53.90″	65º 50´ 44.50″	Every two months
SBZ-038	PREC28B	SB	18º 01´ 44.54″	65º 49´ 52.27″	Every two months
SBZ-037	PREC28C	SB	18º 02´ 34.97″	65º 50´ 00.06″	Every two months
MAC-020	PRSC35	SB	17º 57´ 13.67″	66º 24´ 22.76″	Every two months
SEG34-02	PRSC34	SB	17º 57´ 35.60″	66º 22´ 13.50″	Every two months
SEG34-01	PRSC34	SB	17º 58´ 39.30″	66º 19´ 56.90″	Every two months
MAC-019	PRSC34	SB	17º 57´ 04.76″	66º 13´ 34.38″	Every two months
MAC-017	PRSC33	SB	17º 55´ 55.97″	66º 09´ 03.62″	Every two months
SEG33-01	PRSC33	SB	17º 57´ 46.18″	66º 03´ 55.95 ″	Every two months
MAC-083	PRSC32	SB	17º 57´ 43.14″	66º 02´ 23.94″	Every two months
MAC-084	PRSC37B	SB	17º 58´ 15.88″	66º 40´ 38.16″	Every two months
MAC-023	PRSC36C	SB	17º 58´ 54.05″	66º 37´ 33.87″	Every two months
MAC-022	PRSC36C	SB	17º 58´ 13.93″	66º 37´ 04.75″	Every two months
SEG36B-01	PRSC36B	SB	17º 58´ 09.40″	66º 36´ 09.80″	Every two months

STATION NUMBER	AU ID	CLASSIFICATION (PRWQSR)	COORDINATES		FREQUENCY OF SAMPLING
			LATITUDE	LONGITUDE	
SEG35-02	PRSC35	SB	17º 58´ 30.80″	66º 32´ 09.40″	Every two months
SEG35-01	PRSC35	SB	17º 59´ 26.10″	66º 29´ 11.20″	Every two months
MAC-030	PRSC39	SB	17º 57´ 54.22″	66º 48´ 33.45″	Every two months
MAC-028	PRSC38	SB	17º 59´ 43.51″	66º 47´ 06.50″	Every two months
MAC-089	PRSC38	SB	18º 00´ 22.54″	66º 46´ 06.00″	Every two months
MAC-027	PRSC38	SB	17º 59´ 39.62″	66º 45´ 43.21″	Every two months
MAC-025	PRSC37C	SB	17º 59´ 00.12″	66º 45´ 12.90″	Every two months
MAC-024	PRSC37C	SB	17º 59´ 29.54″	66º 43´ 53.30″	Every two months
SEG41B2-01	PRSC41B2	SB	17º 58´ 24.30″	67º 02´ 57.50″	Every two months
SBZ-046	PRSC41B2	SB	17º 58´ 19.17″	66º 01´ 55.12″	Every two months
SEG41B1-01	PRSC41B1	SB	17º 57´ 40.30″	66º 58´ 55.30″	Every two months
SBZ-045	PRSC41B1	SB	17º 56´ 19.57″	66º 54´ 21.05″	Every two months
MAC-034	PRSC40	SB	17º 57´ 53.14″	66º 54´ 30.46″	Every two months
MAC-085	PRSC40	SB	17º 57´ 09.11″	66º 53´ 04.42″	Every two months
SEG39-01	PRSC39	SB	17º 57’ 22.80″	66º 51’ 18.09″	Every two months
SEG41B3-01	PRSC41B3	SB	17º 57´ 54.60″	67º 10´ 44.40″	Every two months
SEG41B3-02	PRSC41B3	SB	17º 56´ 07.60″	67º 11´ 25.00″	Every two months
SEG42-01	PRSC42	SB	17º 57´ 05.00″	67º 11´ 47.80″	Every two months
SBZ-047	PRSC43	SB	17º 58´ 29.26″	67º 12´ 46.46″	Every two months
SBZ-048	PRWC43	SB	17º 58´ 57.49″	67º 12´ 55.51″	Every two months
MAC-037	PRWC43	SB	18º 01´ 09.99″	67º 10´ 20.08″	Every two months
SBZ-050	PRWC44	SB	18º 02´ 56.20″	67º 11´ 51.10″	Every two months
SBZ-051	PRWC44	SB	18º 03´ 52.32″	67º 11´ 51.10″	Every two months
SEG45-01	PRWC45	SB	18º 04´ 24.40″	67º 11´ 17.40″	Every two months
SBZ-052	PRWC46	SB	18º 05´ 42.37″	67º 11´ 42.36″	Every two months
SEG47-01	PRWC47	SB	18º 08´ 26.60″	67º 10´ 48.30″	Every two months
MAC-038	PRWC48	SB	18º 11´ 41.18″	67º 09´ 21.07″	Every two months
MAC-040	PRWC48	SB	18º 13´ 19.02″	67º 10´ 08.05″	Every two months
MAC-041	PRWC49	SB	18º 17´ 16.31″	67º 11´ 38.23″	Every two months
SEG49-01	PRWC49	SB	18º 17’ 41.80 ″	67º 12’ 36.00 ″	Every two months
SBZ-054	PRWC50	SB	18º 18´ 47.81″	67º 14´ 34.21″	Every two months
SBZ-055	PRWC50	SB	18º 20´ 26.52″	67º 15´ 22.16″	Every two months
SEG51-01	PRWC51	SB	18º 22´ 14.20″	67º 15´ 25.00″	Every two months
SEG51-02	PRWC51	SB	18º 23 ´4.42″	67º 12´ 45.81″	Every two months
MAC-043	PRWC52	SB	18º 24´ 51.78″	67º 09´ 42.05″	Every two months
SBZ-002	PRWC52	SB	18º 27´ 28.01″	67º 09´ 49.21″	Every two months
SBZ-003	PRNC01	SB	18º 29´ 26.21″	67º 09´ 25.09″	Every two months
SBZ-004	PRNC01	SB	18º 30´ 51.24″	67º 04´ 32.41″	Every two months
MAC-044	PRNC01	SB	18º 30´ 30.49″	67º 01´ 22.85″	Every two months
MAC-086	PRNC02	SB	18º 29´ 23.21″	66º 57´ 31.76″	Every two months
SBZ-006	PRNC02	SB	18º 29´ 26.16″	66º 51´ 21.16″	Every two months
MAC-047	PRNC02	SB	18 º 29´ 15.53″	66 º 49´ 42.50″	Every two months
SBZ-007	PRNC03	SB	18º 29´ 34.51″	66º 47´ 53.70″	Every two months
SEG3-01	PRNC03	SB	18º 28´ 45.33″	66º 47´ 70.04″	Every two months

- **Beach Monitoring and Public Notification Program:** Operated by PRDNER, implemented in thirty-five (35) beaches included in the Beach Monitoring and Public Notification Program. All the stations were sampled biweekly for the Enterococcus, pH, and Temperature parameters. From April 2015, bacteriological samples are analyzed using Defined Substrate Technology and Quanti-Tray (Enterolert). These changes were made to comply with the CWA as amended by Beaches Environmental Assessment and Coastal Health Act (Beach Act) that requires compliances with the requirements of the National Beach Guidance and Required Performance Criteria for Grants (NBGRPCG)

2014. This document outlines the eleven (11) performance criteria that States and eligible territorial, tribal or local governments, must meet to receive the grant from the USEPA, to implement programs of monitoring, and public notification of recreational waters under section 406 of the CWA. The frequency of samples collection is every two weeks, throughout the year, since in PR, the season variability through the whole year is not significant and local bathers and tourists visit the beaches frequently.

All sampling and analytical activities are subjected to a Water Quality Assurance Program Plan, coordinated through the Quality Assurance Control Officer of the Water Quality Area and the Division of Environmental Science and Assessment of USEPA Region II.

Each monitoring initiative is supported by the corresponding Quality Assurance Project Plan (QAPP), which must comply with the Water Program's Quality Assurance Management Plan (QAMP).

All samples are collected, preserved, transported, and analyzed in accordance with the protocols established in the corresponding QAPP. The purpose and goals of PRDNER's fixed monitoring station programs are:

1. Provide current data on the quality of the various water bodies throughout PR.
2. Provide information on specific pollutants of concern and uses that may be impaired in the different water bodies monitored.
3. Provide information on potential pollution sources responsible for water quality impairment.
4. Provide information to determine the compliance with the water quality standards applicable to the different designated uses as established in the PRWQSR.
5. Determine if the pollution control measures being implemented throughout PR are effective in protecting the quality of the different water bodies.

Data generated from the rivers and stream stations sampled and analyzed by the USGS are not available through national STORET database; however, the data is available in the Internet through the water quality portal (www.waterqualitydata.us/) or hardcopy files from its Caribbean Field Office.

2.2 Special Monitoring Projects

1. Surface Water Assessment of Pesticides Sampling Plan 2020-2021

The EPA and the United States Fish and Wildlife Service (USFWS) requested the Puerto Rico Environmental Quality Board (PREQB, now PRDRNA) to begin sampling for known pesticides; Naled, Camaphos, and Fenthion in the fifty-one stations of the Permanent Monitoring Network. This project was completed in November 2021, and was not detected the presence of these Pesticides in any of the monitoring stations.

2. Development of an Ecological Index for Palustrine Wetland Assessment in Puerto Rico

Below is a summary taken from the last report of this project, which includes the period from July 1, 2020, to September 3O, 2023. All sampling and analyses were conducted by Agricultural Experiment Station (AES) personnel. This project was led by a multidisciplinary team of scientists from the University of Puerto Rico.

The purpose of this study is to develop and evaluate the efficacy of a quantitative comprehensive framework for palustrine wetlands assessment in Puerto Rico using a combination of different indices of ecological wetland condition. The conceptual approach follows that used to develop the Florida Wetland Condition Index (FWCI) (Chinners-Reiss and Brown, 2005). This study will provide statistically defendable evidence on the feasibility of developing a comprehensive framework for Palustrine Wetlands assessment in Puerto Rico to discriminate for the effects of the human imprint on the ecological integrity of palustrine wetlands.

The objectives of the study are: 1) Assess the effectiveness of different ecological indices to characterize the degree of human intervention in palustrine wetlands of Puerto Rico and its impact on wetland functions. 2) Develop a comprehensive wetland assessment framework for palustrine wetland assessment in Puerto Rico using an integrated approach based on the combination of several distinct indices.

In this study, different indices based on multiple biotic components, environmental parameters and landscape development intensity metrics will be combined to produce a comprehensive wetland assessment framework for Palustrine Wetlands of Puerto Rico. Separate measures of wetland biological integrity (i.e., diatom and macroinvertebrate community composition or assemblages), as well as the WQI and different soil properties, will be used to develop a quantitative measure of biological integrity. Six (6) locations were selected (three forested and three emergent wetlands) as representatives of the best attainable conditions for the evaluation of potential indicators towards the development of an ecological index for Palustrine Wetlands in Puerto Rico. A second group of six (6) wetlands was chosen to represent “impaired” wetlands. The latter were selected from the population of sites with total Antilles Rapid Assessment Method (ARAM) scores ≤ than the 75th percentile value, and stressor scores ≥ than the 25th percentile value.

Selected sites for the reference wetlands are: Forested sites (El Manantial-Vega Baja, Finca Virginia- Loíza, Palmas del Mar- Humacao); Emergent sites (Finca La Esperanza B-Manatí, Arroyo I-Arroyo, Corredor Ecológico A-Luquillo). Impaired wetlands are: Forested sites (Laguna Tortuguero-Vega Baja, Canóvanas, Luquillo-PR-3); Emergent sites (Río Grande, Humacao, Laguna Cartagena).

Until this phase, six impacted wetlands and five non-impacted wetlands were identified, evaluating their compliance with the hydrological criterion established by the EPA, which requires a water column of at least 18 inches above the ground surface. The reference wetlands demonstrated compliance with the criterion and saturation above the ground surface, indicating a healthy hydrological state. Although a wetland in Loíza experienced a dry period, it consistently met the standards. The impacted wetlands also met the hydrology criterion, but with greater variation in the water column. Human intervention alters the flow, level, and water quality in impacted wetlands, potentially affecting biodiversity and ecosystem health. Understanding the hydraulic retention time (HRT) is essential, and through its calculation (HRT = V / Q), the wetlands' effectiveness in water filtration and purification was assessed. The affected HRT in impacted wetlands highlights the need to mitigate the effects of human intervention and restore these ecosystems to maintain their hydrological function and ecological role. Overall, this study emphasizes the importance of hydrology in the conservation and proper management of wetlands to safeguard water quality and biodiversity.

3. **Development and Implementation of a Water Quality Monitoring Project in Shallow Coral Reef Areas around Puerto Rico 2022-2024**

   The DNER is interested in collecting information on water quality at the sites included in the Puerto Rico Coral Reef Monitoring Program (PRCRMP) for shallow coral reef areas (at depths less than or equal to 30 meters) around of Puerto Rico, quarterly, for two consecutive years. A total of 42 coral reef sites will be visited 4 times a year for 16 water quality parameters, resulting in an annual total of 2,688 data points per year.

   Due to variable environmental conditions and anthropogenic impacts that threaten the integrity of coral reefs, the primary goal of this project will be the identification of parameters that help sustain healthy coral reefs. The QAPP (August 2022), additionally includes demographic monitoring of corals at PRCRMP sites and implementation of the biological condition gradient (BCG) from the PRCRMP and coral demographic data. This project is managed and carried out by the University of Puerto Rico (UPR), Department of Marine Sciences (DMS), and the Caribbean Coral Reef Institute (CCRI) in La Parguera, PR.

2.3 Water Quality Existing Data

The development of the IR requires the assessment of existing and readily available water quality-related data and information. In addition, PR is required to evaluate and consider any other readily available information. The assessment determination must include all relevant data and take into consideration the QA/QC requirements established in the QAPP for the use of Water Quality Existing Data for the Development of the 303(d)/305(b) IR, March 17, 2021. For the development of the IR in addition to the water quality data obtained by the routine monitoring networks, secondary or external data requested from governmental agencies, non-governmental entities and/or reliable sources of the web should be considered.

Existing data will be gathered and used to address the following objectives related to the assessment of the quality of the water bodies:

- **Objective 1**: Determine compliance with the water quality criteria and attainment with the designated uses.
- **Objective 2**: Develop the 303(d) list and the AU to be delisted.
- **Objective 3**: Develop and publish the 305(b)/303(d) IR.

The data requested and downloaded must be the most recent or from the previous two federal fiscal years from the even-numbered year that comprises the assessment cycle (October 1, 2021, to September 30, 2023). The information must be comparable to the PRWQSR to supplement the information available from PRDNER monitoring networks to carry out the water quality assessment.

The list of sources PRDNER has actively solicited data from government agencies and non-governmental entities can be found in Table 15.

Table 15: Government Agencies and Non-Governmental Entities

NAME	POSITION	AGENCY
Eng. Carlos Rodríguez	Chairman	Associated General Contractors of America PR Chapter
Mr. Orlando Rodríguez Hernández	Executive Director, Environmental Compliance and Quality Control	PR Aqueduct and Sewer Authority
Eng. Alexandra Velázquez Delgado	Director Programming and Special Studies	PR Highway and Transportation Authority
Ms. Jeannette Villamil Rivera	Chief Environmental Studies Office	PR Highway and Transportation Authority
Eng. Faustino González Quiles	Chairman	College of Engineers and Land Surveyors of PR
Mr. Alex R. Muñiz Lasalle	Director Auxiliary Secretariat of Agrocommercial Integrity	PR Department of Agriculture
Mr. Juan C. Muñoz Ruiz	Supervisor Pesticides Inspection Program Agrological Laboratory	PR Department of Agriculture
Ms. Dilcia Barros	Director Agrological Laboratory	PR Department of Agriculture
Mr. Raúl Santini	Environmental Coordinator II Coastal Zone Division	Department of Natural and Environmental Resources
Mr. Farel Velázquez Cancel	Acting Assistant Secretary, Auxiliary Secretary for Conservation and Research Coastal Zone Division Program	Department of Natural and Environmental Resources
Ms. Aitza Pabón	Director Jobos Bay Natural Estuarine Research Reserve	Jobos Bay Natural Estuarine Research Reserve
Dr. Jorge Bauzá	Science Director	San Juan Bay Estuary Program
Ms. Darilyn Amador Cosme	Director Geology and Hydrogeology	PR Planning Board
Mr. Wilfredo Mass Arroyo	Flood Unit Planning Analyst	PR Planning Board
Ms. Rose A. Ortiz Díaz	Coastal Zone Unit Coordinator	PR Planning Board
Dr. Yazdel Martínez	Dean Academic Affairs	Pontifical Catholic University of PR – Arecibo Campus
Ms. Jackeline Rosas Negrón	Director College of Science	Pontifical Catholic University of PR – Mayagüez Campus
Prof. Carmen Reyes Colón	Associate Director Department of Natural Sciences	Pontifical Catholic University of PR – Ponce Campus
Dr. Graciela I. Ramírez Toro	Director Centro de Educación e Interpretación Ambiental (CECIA)	Interamerican University of PR
Dr. María Plaza	Director Crop and Agro-Environmental Sciences Department	University of PR – Mayagüez Campus
Mr. Roberto Vargas	Department of Agro-Environmental Sciences	University of PR – Mayagüez Campus
Dr. Ernesto Weil	Director Department of Marine Sciences	University of PR – Mayagüez Campus
Dr. Luis R. Pérez Alegría	Professor Agricultural Engineering Department	University of PR–Mayagüez Campus
Mr. Ruperto Chaparro Serrano	Director Sea Grant College Program	University of PR – Mayagüez Campus
Dr. Jorge Rivera Santos	Director	University of PR – Mayagüez Campus

NAME	POSITION	AGENCY
	PR Water Resources and Environmental Research Institute	
Dr. Francisco M. Monroig Saltar	Director Agricultural Engineering Department	University of PR– Mayagüez Campus
Dr. Teresa Lipsett	Director Department of Natural Sciences and Technology	Turabo University
Dr. Jorge Torres Colón	Dean Academic Division Science, Technology and Environment	Metropolitan University of PR
Dr. Fernando Crastz Peters	Assistant Professor School of Science and Technology	Metropolitan University of PR
Mr. Karlos J. Malavé Llamas	Project Director Division of Science and Technology	Metropolitan University of PR
Ms. Carmen Guerrero	Director Caribbean Environmental Protection Division	Environmental Protection Agency
Ms. Yasmin Laguer	Caribbean Environmental Protection Division	Environmental Protection Agency
Dr. Ariel Lugo	Director International Institute of Tropical Forestry USDA Forest Service	USDA Forest Service
Mr. Luis A. Cruz Arroyo	Director	Natural Resources Conservation Service (NRCS) Caribbean Area
Ms. Marelisa Rivera	Deputy Field Supervisor	US Fish and Wildlife Service PR Field Office
Dr. Lizzette Rodríguez	Director Department of Geology	University of PR– Mayagüez Campus
Dr. Luis A. Ríos Hernández	Professor Biology Department	University of PR– Mayagüez Campus
Prof. José L. Flores	Director Department of Civil Engineering and Surveying	University of PR– Mayagüez Campus
Ms. Lirio Márquez D'Acunti	Executive Director	Vieques Conservation and Historical Trust
Mr. Mark Martin Bras	Director Community Relations	Vieques Conservation and Historical Trust
Dr. Roberto Viqueira	Executive Director	*Protectores de Cuencas, Inc.*
Ms. Deborah Rivera Velázquez	Director Environmental Affairs Department	Autonomous Municipality of Carolina
Dr. Edwin Hernández Delgado	Affiliate Researcher Department of Biology	University of Puerto Rico
Ms. Aurielee Díaz Conde	Environmental Planner Water Plan Monitoring Division Planning Secretariat	Department of Natural and Environmental Resources
Mr. Francisco Cátala Miguez	Environmental Planner Water Plan Monitoring Division Planning Secretariat	Department of Natural and Environmental Resources
Ms. Olga M. Ramos	GIS Analyst and Remote Sensing Lab	International Institute of Tropical Foresty
Dr. Angel A. Toledo López	Rector Metropolitan University	Metropolitan University

As result of the water quality data request, the following government agencies and/or non-governmental entities responded and submitted data:

1. San Juan Bay Estuary System Program (SJBES)
    a. The monitoring network consists of twenty-six (26) stations (Figure 5).

   b. Parameters analyzed: Temperature, Dissolved Oxygen, Specific Conductance, Salinity, Turbidity, pH, Secchis Depth, Oil and Grease, Total Nitrate & Nitrite, Total Phosphorus, Enterococci, Total Nitrogen Kjeldahl (TKN), Total Organics Compound (TOC), Chlorophyll a, Total Suspended Solid (TSS), Ammonia, and Fecal Coliform.
   c. The SJBES Program has an approved QAPP by EPA.
   d. This data will be used for the 2024 IR assessment.

2. USGS data:
   a. The data was obtained from the following stations: 50048565 and 50048580, located in PREE13A1 AU (San Juan Bay Estuary System).
   b. Parameter analyzed: Discharge, Specific Conductance, Dissolved Oxygen, pH, Temperature, Oil and Grease, Total Nitrogen, Nitrite, Nitrate, Phosphorus, Cyanide, Nitrate plus nitrite, Hardness water, Calcium, Magnesium, Methylene blue active substances (MBAS), Arsenic, Cadmium, Chromium, Copper, Lead, Selenium, Turbidity and Zinc.
   c. This data was used for the 2024 IR assessment.

3. University of PR– Mayagüez Campus, Department of Geology
   a. Disclaimer: *DNER does not know the quality requirements of the sampling and analysis of the water quality data submitted to the agency, thus the quality of the secondary data is unknown and was not used for the 2024 IR assessment.*

4. NOAA - Bahía de Jobos
   a. The data was obtained of the following site hosted by National Oceanic and Atmospheric Administration (NOAA): National Estuarine Research Reserve System, Centralized Data Management Office http://cdmo.baruch.sc.edu/.
   b. Monitoring networks consist of four (4) monitoring stations (Figure 6).
   c. Parameters analyzed: Temperature, pH, Dissolved Oxygen and Turbidity.
   d. Disclaimer: *PRDNER does not know the quality requirements of the sampling and analysis of the water quality data submitted to the agency, thus the quality of the secondary data is unknown.*
   e. This data was used for the 2024 IR assessment.

Figure 5: San Juan Bay Estuary System Monitoring Stations

Figure 6: NOAA - Bahía de Jobos Monitoring Stations

2.4 Water's Quality Existing Data - Access Online

Due to the large amount of published information on the Internet and its accessibility, the PRDNER conducted a search for information related to the quality of the coastal water in PR, to evaluate the greater amount of information that is available. To perform a more complete evaluation, the information search is delimited to recognized and reliable sources. The main source of information from which it could access data was the NOAA and its partners in the Caribbean Area. The Caribbean Coastal Ocean Observing System (CariCOOS). CariCOOS has two buoys located on Ponce in the AU PRSC35 and the other on San Juan in the AU PREC12 from which temperature data is obtained (Figure 7). The temperature data will be used to evaluate the corresponding assessment units for these parameters, in addition to the data of the coastal network of PRDNER.

Disclaimer: *Note from the web page of CariCOOS: This information is presented as a good faith service to the scientific community, the public in general and to our colleagues and friends. The information, views and opinions herein provided should not be viewed as formally accurate scientific data and/or advice that can be relied upon without proper verification and validation. This service should not be construed as a substitute for specific data that could be obtained through official sources. If any inaccuracy is observed, please inform CaRA as soon as possible for verification and correction, as necessary. Use of and reliance upon the information provided in this web site signifies that its user(s) understands and has accepted the above mentioned caveat and conditions.*

Disclaimer: *Note from the web page of National Data Buoy Center, NOAA: This operational server maintains a current database of meteorological and hydrological data, historical data, and written information generated by the NWS or received from other official sources. In addition, this server accesses in real time a selection of current official weather observations, forecasts, and warnings from U.S. government sources for use by the national and international community. To enhance the science, experimental products may be accessible on this server and care must be taken when using such products as they are intended for research use.*

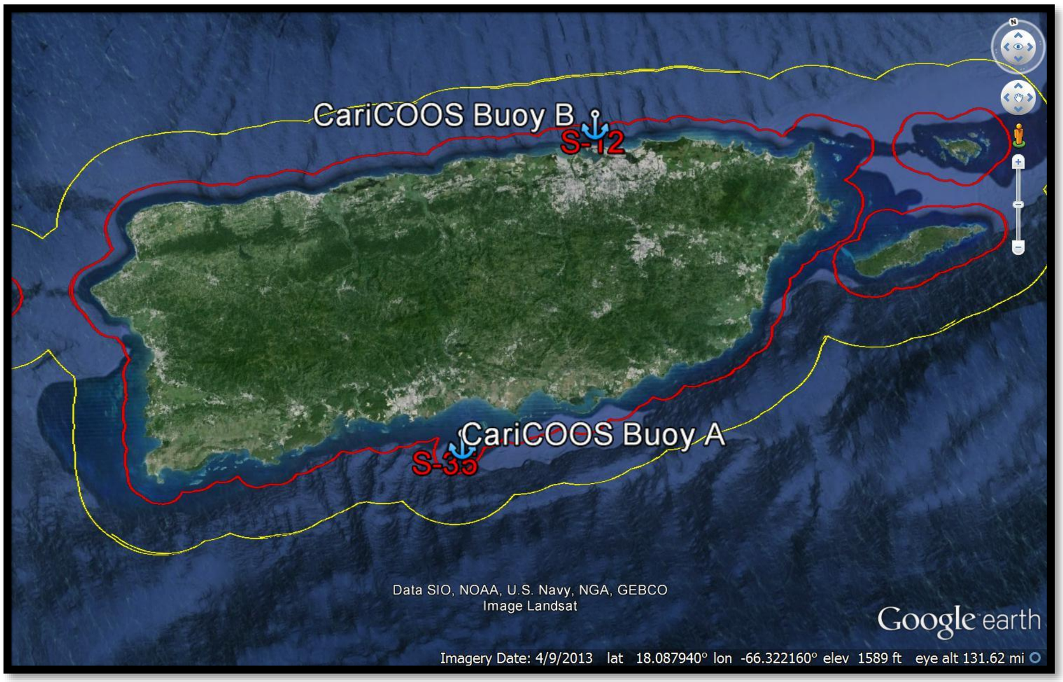

Figure 7: Buoys of CariCoos of NOAA

3.0 Designated Uses, and Applicable Water Quality Standards

The PRWQSR, as amended on August 8, 2022, established, as goals preserve, maintain, and enhance the quality of the waters of PR in such manner that they are compatible with the social and economic needs of PR.

The PRWQSR establishes the designated uses to be maintained and protected for all waters in the archipelago of PR. These uses include:

1. Propagation and maintenance of desirable species, including threatened or endangered species (Aquatic Life)
2. Primary and secondary contact recreation
3. Raw source of public water supply (Class SD waters only).

The water body classification established in the PRWQSR are as follows:

CLASS SA - Coastal or estuarine waters exceptional quality or exceptional or high ecological or recreational value whose existing conditions shall not be altered, except by natural phenomena, as defined under PRWQSR, to preserve its natural characteristics. Class SA includes bioluminescent lagoons and bays such as La Parguera and Monsio José in the Municipality of Lajas, Laguna Joyudas in the Municipality of Cabo Rojo, Laguna Grande in the Municipality of Fajardo, Bahía Puerto Mosquito in the Municipality of Vieques, and any other coastal or estuarine waters of exceptional quality or high ecological or recreational value which may be designated by the pertinent agency and adopted by the Department through Resolution, requiring this classification for protection of the waters. Except for lagoons, Rule 1303.2 (A) (2) of the PRWQSR will also apply to the waters 500 meters (0.31 miles) offshore of the physical and geographical limits of the water bodies under this classification.

CLASS SB - Coastal waters and estuarine waters intended for use in primary and secondary contact recreation, and for propagation and maintenance of desirable species, including threatened or endangered species. Class SB includes coastal and estuarine waters not classified as Class SA under Rules 1302.1 (A) of the PRWQSR. Class SB also includes lagoons not classified under any other class. This classification will apply from the zone subject to the ebb and flow of tides (mean sea level) up to a maximum of 10.35 miles (16,656.71 meters) offshore.

CLASS SD - Surface waters intended for use as a raw source of public water supply, propagation, and maintenance of desirable species, including threatened or endangered species, as well as primary and secondary contact recreation. All surface waters are classified SD, except those classified SE in accordance with Rule 1302.2 (B).

CLASS SE - Laguna Tortuguero, Laguna Cartagena, and any other surface water body of exceptional quality or high ecological or recreational value which may be designated by the pertinent agency and adopted by the Department, through Resolution requiring this classification for protection of the waters. Surface waters and wetlands of exceptional ecological value, whose existing conditions shall not be altered to preserve its natural characteristics.

Table 16 and Table 17 summarize the existing applicable water quality standards that will be used to perform the assessment for the 2024 IR. Here are shown the maximum allowable concentrations for specific substances in coastal and surface waters.

Table 16: Specific Water Quality Standards for Selected Parameters (As established in the PRWQSR)

SUBSTANCE	COASTAL WATERS (ug/l)	RIVERS AND STREAM (ug/l)
Aluminum (Al)[&]	-	87.0 (AL)
Antimony (Sb)[+, &]	640.0 (HH)	5.6 (HH)
Arsenic (AS)[*, +, &]	36.0 (AL)	10.0 (DW)
Cadmium (Cd)[+, %, &]	7.95 (AL)	Note 1 (AL)
Chlorine	7.5 (AL)	11.0 (AL)
Cyanide (Free CN) [+]	1.0 (AL)	-
Cyanide [+, &]	-	4.0 (HH)
Copper (Cu)[+, &]	3.73 (AL)	Note 3 (AL)
Chromium III (Cr^{+3}) [+, &]	-	Note 2 (AL)
Chromium VI (Cr^{+6}) [+, &]	50.4 (AL)	11.4 (AL)
Fluoride (F)	-	4,000 (DW)
Lead (Pb)[+, %, &]	8.52 (AL)	Note 6 (AL)
Mercury (Hg)[+, &]	0.051 (HH)	0.050 (HH)
Nickel (Ni)[+, &]	8.28 (AL)	Note 4 (AL)
Selenium (Se)[+, &]	71.14 (AL)	5.0 (AL)
Silver (Ag)[+, &]	2.24 (AL)	Note 5 (AL)
Sulfide (Undissociated H_2S)	2.0 (AL)	2.0 (AL)
Thallium (Tl)[+, &]	0.47 (HH)	0.24 (HH)
Zinc (Zn)[+, &]	85.62 (AL)	Note 7 (AL)

Note 1 - Concentration in ug/l must not exceed the numerical value given by $e^{(0.7977 [\ln Hardness] - 3.909)}$
Note 2 - Concentration in ug/l must not exceed the numerical value given by $e^{(0.8190 [\ln Hardness] + 0.6848)}$

Note 3 - Concentration in ug/l must not exceed the numerical value given by $e^{(0.8545\,[\text{Ln Hardness}]\,-1.70)}$
Note 4 - Concentration in ug/l must not exceed the numerical value given by $e^{(0.8460\,[\text{Ln Hardness}]\,+\,0.0584)}$
Note 5 - Concentration in ug/l must not exceed the numerical value given by $e^{(1.72\,[\text{Ln Hardness}]\,–\,6.59)}$
Note 6 - Concentration in ug/l must not exceed the numerical value given by $e^{(1.273\,[\text{Ln Hardness}]\,–\,4.705)}$
Note 7 - Concentration in ug/l must not exceed the numerical value given by $e^{(0.8473\,[\text{Ln Hardness}]\,+\,0.884)}$
Hardness (as CaCO3 in mg/L) of the water body
AL - Protection of the water body for the propagation and preservation of aquatic species or species dependent on the waterbody.
DW - Protection of the water body for use as source of drinking water supply.
HH - Protection of the water body or aquatic life for reasons of human health.
***** Identifies a substance that may be a carcinogen. The HH criteria is based on a carcinogenicity risk of 10^{-5}
+ Identifies a priority pollutant.
% In cases where the surface water body is used as a source of drinking water supply, the water quality standard for the indicated substance shall not exceed the drinking water standard upstream from the water intake.
& The number represents a total recoverable value.

Table 17: Water Quality Standard for Specific Classifications

PARAMETER	SA	SB	SD	SE
Chlorides	Note 1	-	230 mg/L	Note 1
Color	Note 1	Shall not be altered except by natural phenomena, as defined under this regulation	15 Pt-Co.	Note 1
Dissolved Oxygen	Note 1	Not less than 5 mg/L	Not less than 5 mg/L	Note 1
Enterococci	Note 1	Note 2	Note 2	Note 1
Fecal Coliforms	Note 1	Note 3	Note 3	Note 1
Other Pathogenic Organisms	Note 1	Shall not contain other pathogenic organisms.		
pH	Note 1	7.3 - 8.5 units	6.0 - 9.0 units	Note 1
Sulfates	Note 1	2,800 mg/L	250 mg/L	Note 1
Surfactants as MBAS	Note 1	500 ug/L	100 ug/L	Note 1
Taste and odor producing substances	Note 1	Shall not be present	Shall not be present	Note 1
Total Dissolved Solids	Note 1	-	500 mg/L	Note 1
Total, Ammonia Nitrogen (TAN)	Note 1	-	Note 6	Note 1
Total, Nitrogen	Note 1	5,000ug/L	Note 4	Note 1
Total, Phosphorous	Note 1	1,000 ug/L	Note 5	Note 1
Temperature	86ºF (30ºC)	86ºF (30ºC)	86ºF (30ºC)	86ºF (30ºC)
Turbidity	Note 1	10 NTU	50 NTU	Note 1

Note 1 –The concentration of any parameter, whether or not considered in this Rule, shall not be altered, except by natural phenomena as defined under this regulation. Substances reactive with methylene blue shall not be present.
Note 2- For Class SB and Class SD, the Enterococcus density, in terms of geometric mean shall not exceed 35 colonies/100mL in any 90-day interval: neither the 90th Percentile of the samples taken shall exceed 130 colonies/100mL in the same 90-day interval.
Note 3- In shellfish growing area or harvesting areas, designated by the pertinent agency, and adopted by the Department, through Resolution; the median fecal coliform concentration of a series representative samples of the water taken sequentially, shall not exceed 14 MPN/100mL, and not more than 10 percent of the samples shall exceed 43 MPN/100mL.
Note 4 - Shall not exceed 1,700 ug/L in any stream nor exceed 400 ug/L in any reservoir or lake.
Note 5 – Total Phosphorus shall not exceed 160 ug/L in any river and stream nor exceed 26 ug/L in any reservoir or lake.
Note 6 - Shall not exceed the concentration in mg/L calculated using the following equation:

$$TAN = 0.8876 \times \left(\frac{0.0278}{1+10^{7.688-pH}} + \frac{1.1994}{1+10^{pH-7.688}}\right) \times \left(2.126 \times 10^{0.028 \times (20-T)}\right)$$ Where: T = temperature in °C.

4.0 Water Quality Assessment by Designated Uses

The surface waters (rivers, reservoirs, lagoons, estuaries, and coasts) for which data are available are assessed for the following designated uses in accordance with the requirements of the CWA and the PRWQSR: primary contact recreation (swimming), secondary contact recreation, raw source of public water supply and propagation and maintenance of desirable species, including threatened and endangered species (Aquatic Life).

1. Primary and Secondary Contact Recreation

   Class SB and Class SD

   The use support evaluation will be based on the enterococci density, in terms of geometric mean shall not exceed 35 colonies/100mL in any 90-day interval: neither the 90th Percentile of the samples taken shall exceed 130 colonies/100mL in the same 90-day interval.

2. Raw Source of Public Water Supply (rivers and lakes):

   Class SD

   The assessment of the drinking water use will be based on monitored contaminants listed in the PRWQSR. The additional criterion used to assess raw source of public water supply use is the presence of a water intake in the assessment unit. To assess the Raw Sources of Public Water Supply use, will be considered the compliance of water quality standards of any of the parameters indicated below:

Aldrin	Endrin Aldehyde
Alpha-BHC	Fluoride
Arsenic	Heptachlor
Beta-BHC	Heptachlor Epoxide
Chlorides	Lindane (Gamma BHC)
Cyanide	Mercury
4,4’-DDT	Thallium
Dieldrin	Total, Ammonia Nitrogen
Endosulfan Sulfate	Total, Nitrogen
Endrin	Total, Phosphorus
Turbidity	

   In all cases, each parameter considered is evaluated strictly in accordance with the applicable standard. If a single data point exceeds the water quality standard, it is sufficient to classify the AU not in compliance with the raw source of public water supply use.

3. Propagation and maintenance of desirable species, including threatened and endangered species (Aquatic Life):

   Currently, the aquatic life use is based on the physical /chemical data collected on sampling incursions during key periods (wet and dry seasons) for all parameters applicable to this use as indicated in the PRWQSR.

   In all cases, each parameter considered will be evaluated strictly in accordance with the applicable standard. The parameters taken into consideration are:

Arsenic	Lead	Sulfide (Undissociated H_2S)
Cadmium	Mercury	Surfactants
Chromium (Cr^{+3})	Nickel	Thallium
Chromium (Cr^{+6})	Pesticides (Organochlorides)	Total, Ammonia Nitrogen
Copper	Selenium	Total, Nitrogen
Cyanide	Silver	Total, Phosphorus
Cyanide (Free CN)	Zinc	

   The conventional parameters used for the assessment of aquatic life use support were:

Dissolved Oxygen (DO)	Temperature
pH	Turbidity

   If a single data point exceeds the water quality standard, it is sufficient to classify the AU not in compliance with the propagation and maintenance of desirable species including threatened and endangered species (aquatic life use).

5.0 Assessment Categories

The assessment of the water quality in PR is performed taking into consideration the five (5) attainment categories currently required by EPA assessment guideline. These attainment categories are:

Category 1: Waters that are attaining the applicable water quality standards for all designated uses.

Category 2: Waters that are attaining some of the designated uses, but no data is available to make attainment determinations for the remaining designated uses.

Category 3: Waters for which insufficient available data and/ or information to determine if any designated uses are being attained.

Category 4: Waters in which particular designated uses are impaired or threatened and it is expected that they will meet the water quality standard with implementation of the adequate and corresponding control measure without the development of TMDLs.

4a - A state developed TMDL has been approved by EPA or a TMDL has been established by USEPA for any AU /pollutant combination.

4b - Other required control measures are expected to result in the attainment of an applicable water quality standard in a reasonable period of time.

4c - Water where a designated use is impaired or threatened by a cause that is not a pollutant (eg. hydrological and habitat alterations).

Category 5: Waters where at least one water quality standard was not attained. The nonattainment of water quality standards requires the development and implementation of a TMDL. Waters identified as impaired in this category are included in the 303(d) List.

Table 18 shows size of waters assigned to reporting categories, including the impairments from previous cycles and the description of the health of PR waters.

Table 18: Size of Waters Assigned to Reporting Categories

WATERBODY TYPE	CATEGORY							TOTAL IN STATE	TOTAL ASSESSED
	1	2	3	4a	4b	4c	5		
Rivers and Streams – miles	0	0	102.8	1,677.2	0	0	3,620.5	5,403.5 *	5,400.5**
Reservoirs – acres	0	0	0	0	0	0	7,323	7,323	7,323
Estuaries – sq. mi.	0	0	0.4572	3.6652	0	0	1.2378	5.3602	5.3602
Coastal Waters- miles	67.6	0	33.62	0	0	0	445.41	546.63	546.63
Lagoons- sq. mi.	0	0	0.4688	0	0	0	3.8781	4.3469	4.3469
San Juan Bay Estuary- sq. mi., miles	0	0	0	0	0	0	3.8340 sq. mi., 18.8 mi	3.8340 sq. mi., 18.8 mi	3.8340 sq. mi, 18.8 mi

Total miles of rivers, creek and streams assessed with monitoring station	2,689.5
Total miles of rivers, creek and streams assessed without monitoring station	2,711.0
	5,400.5*

* The total miles do not include 18.8 miles that corresponds to PREE13A1 AU, since they are water classified as SB.

** Does not include 3.0 miles that correspond to PRSR39A AU, since it had no flow for this evaluation cycle.

6.0 Description of Puerto Rico waters by designated uses, including the impairments from previous cycles

Table 19 to Table 40 include the information related with the description of the health of PR waters, including the impairments from previous cycles.

Table 19: Primary Contact Use Summary

WATERBODY TYPE	CATEGORY							TOTAL IN STATE	TOTAL ASSESSED
	1	2	3	4a	4b	4c	5		
Rivers and Streams - miles	0	0	75.9	2,733.7	0	0	2,555.1	5,403.5	5,364.7
Reservoirs – acres	0	0	0	7,288	0	0	35	7,323	7,323
Estuaries – sq. mi	0	0	0.2228	4.8410	0	0	0	5.3602	5.0638
Coastal Waters- miles	174.25	0	33.62	0	0	0	338.76	546.63	546.63
Lagoons- sq. mi.	0	0	3.2922	0.5297	0	0	0.5250	4.3469	4.3469
San Juan Bay Estuary- sq. mi, miles	0	0	0	0	0	0	3.8340 sq. mi, 18.8 mi.	3.8340 sq. mi., 18.8 mi.	3.8340 sq. mi., 18.8 mi.

Table 20: Secondary Contact Use Summary

WATERBODY TYPE	CATEGORY							TOTAL IN STATE	TOTAL ASSESSED
	1	2	3	4a	4b	4c	5		
Rivers and Streams - miles	0	0	75.9	2,733.7	0	0	2,555.1	5,403.5	5,364.7
Reservoirs – acres	0	0	0	7,288	0	0	35	7,323	7,323
Estuaries – sq. mi.	0	0	0.2228	4.8410	0	0	0	5.3602	5.0638
Coastal Waters- miles	174.25		33.62	0	0	0	338.76	546.63	546.63
Lagoons- sq. mi.	0	0	3.2922	0.5297	0	0	0.5250	4.3469	4.3469
San Juan Bay Estuary- sq. mi., miles	0	0	0	0	0	0	3.8340 sq. mi, 18.8 mi.	3.8340 sq. mi, 18.8 mi.	3.8340 sq. mi, 18.8 mi

Table 21: Aquatic Life Use Summary

WATERBODY TYPE	CATEGORY							TOTAL IN STATE	TOTAL ASSESSED
	1	2	3	4a	4b	4c	5		
Rivers and Streams - miles	0	0	1,780	0	0	0	3,620.5	5,403.5	5,400.5
Reservoirs – acres	0	0	0	0	0	0	7,323	7,323	7,323
Estuaries – sq. mi.	0	0	4.1224	0	0	0	1.2378	5.3602	5.3602
Coastal Waters- miles	0	0	101.22	0	0	0	445.41	546.63	546.63
Lagoons- sq. mi.	0	0	0.4688	0	0	0	3.8781	4.3469	4.3469
San Juan Bay Estuary- sq. mi., miles	0	0	0	0	0	0	3.8340 sq. mi., 18.8 mi.	3.8340 sq. mi, 18.8 mi.	3.8340sq. mi., 18.8 mi.

Table 22: Drinking Water Use Summary

WATERBODY TYPE	CATEGORY							TOTAL IN STATE	TOTAL ASSESSED
	1	2	3	4a	4b	4c	5		
Rivers and Streams - miles	237.7	0	2,318.7	0	0	0	2,796.2	5,403.5	5,352.6
Reservoirs – acres	0	0	0	0	0	0	7,323	7,323	7,323
San Juan Bay Estuary- sq. mi, miles	0	0	0	0	0	0	0.1009	3.8340 sq. mi, 18.8 mi.	0.1009 mi^2

Rivers, Streams, and Creeks

Table 23: Size of Waters Impaired by Causes (Monitored Miles for Rivers, Streams, and Creeks) *

Causes of Impairments 2021-2023 Cycle		Causes of Impairments Summary
Causes of Impairments	Size of Waters Impaired* (miles)	Size of Waters Impaired (miles)
Ammonia	53.9	128.5
Arsenic	0	25.4
Chromium VI	0	2,555.1
Copper	397.4	600.9
Cyanide	1,144.4	1,144.4
Dissolved Oxygen	551.3	1,139.1
Enterococci	2,555.1	2,555.1
Lead	168.6	259.5
Mercury	141.9	141.9
Oil and Grease	103.8	103.8

Causes of Impairments 2021-2023 Cycle		Causes of Impairments Summary
Causes of Impairments	Size of Waters Impaired* (miles)	Size of Waters Impaired (miles)
Pesticides	0	544.3
pH	299.9	573.8
Silver	0	14.6
Surfactants	286.3	347.1
Temperature	1,618.3	2,075.1
Total, Nitrogen	1,003.4	1,477.4
Total, Phosphorus	1,443.4	2,291.5
Turbidity	1,603.9	1,959.4

* It includes rivers, stream or creek miles that are part of the lakes, estuaries, and San Juan Bay Estuary except 18.8 miles from PREE13A1 AU

Table 24: Size of Waters Impaired by Sources (Monitored and Unmonitored Rivers and Streams)

Potential Sources of Pollution 2021-2023 Cycle		Potential Sources of Pollution Summary
Potential Sources of Pollution	Size of Water Impaired (miles)	Size of Water Impaired (miles)
Agriculture	2,716.3	2,716.3
Collection System Failure	3,238.9	3,238.9
Confined Animal Feeding Operations	3,876.5	3,876.5
Landfill	2,159.7	2,159.7
Major Industrial Point Sources	382.7	382.7
Major Municipal Point Sources	1,220.5	1,220.5
Minor Industrial Point Sources	2,913.9	2,913.9
Minor Municipal Point Sources	634.1	634.1
Onsite Wastewater Systems	5,322.6	5,322.6
Package Plants (Small Flows)	42.2	42.2
Surface Mining	615.8	615.8
Unknown Source	2.7	2.7
Urban Runoff/Storm Sewers	3,214.8	3,253.5

Table 25: Rivers and Streams Assessment (Monitored and Unmonitored)

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
QUEBRADA DE LOS CEDROS	QUEBRADA DE LOS CEDROS PRNQ1A	12.0	SD		4a	4a	3	3	H J L	Collection System Failure Onsite Wastewater Systems Urban Runoff/Storm Sewers	
QUEBRADA DEL TORO	QUEBRADA DEL TORO PRNQ2A	1.0	SD		3	3	3	3	H	Confined Animal Feeding Operations Onsite Wastewater Systems	
RÍO GUAJATACA	RÍO GUAJATACA PRNR3A1	9.9	SD	NS 50011400	5	5	5	5		Collection System Failure Landfill Minor Industrial Point Sources Onsite Wastewater Systems	*Chromium VI* *Cyanide* *Dissolved Oxygen* *Enterococci* *Total, Nitrogen* **Surfactants**
	RÍO GUAJATACA PRNR3A2	22.0	SD	NS 50010600	5	5	5	5	F	Agriculture Collection System Failure Confined Animal Feeding Operations Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Total, Nitrogen* **Cyanide** **pH** **Total, Phosphorus** **Turbidity**
	QUEBRADA LAS SEQUÍAS PRNQ3B	3.5	SD		4a	4a	5	5	D F H, L	Confined Animal Feeding Operations Onsite Wastewater Systems	*Arsenic* *Dissolved Oxygen*
QUEBRADA BELLACA	QUEBRADA BELLACA PRNQ4A	1.7	SD		3	3	3	3	H	Confined Animal Feeding Operations Onsite Wastewater Systems	
RÍO CAMUY	RÍO CAMUY PRNR5A	48.6	SD		4a	4a	3	3	F H	Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems	
QUEBRADA SECA	QUEBRADA SECA PRNQ6A	2.0	SD		3	3	3	3	H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RÍO GRANDE DE ARECIBO	RÍO GRANDE DE ARECIBO PRNR7A1	22.4	SD	NS 50029000	5	5	5	5	K	Agriculture Collection System Failure Confined Animal Feeding Operations Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Turbidity*
	RÍO SANTIAGO PRNR7A1a	9.0	SD		4a	4a	3	3	H K	Onsite Wastewater Systems	
	RÍO GRANDE DE ARECIBO PRNR7A2	122.8	SD	NS 50025000	5	5	5	5	K	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Pesticides* *Temperature* *Total, Nitrogen* *Total, Phosphorus* *Turbidity*
	TÚNEL PRNR7A3	28.9	SD	NS 50020500	5	5	5	5	K	Agriculture Collection System Failure Confined Animal Feeding Operations Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *pH* *Total, Phosphorus* **Cyanide**

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	RÍO CAONILLAS PRNR7C1	87.0	SD	NS 50026000	5	5	5	5	K	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Surface Mining Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Total, Phosphorus*
	RÍO LIMÓN PRNR7C2	40.7	SD	NS 50026350	5	5	5	5	K	Agriculture Minor Industrial Point Sources Onsite Wastewater Systems	*Chromium VI* *Enterococci* **Temperature**
	RÍO YUNES PRNR7C3	32.7	SD	NS 50026950	5	5	5	5	K	Agriculture Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Temperature*
	RÍO TANAMÁ PRNR7B1	16.2	SD		N/A	N/A	3	3	H K	Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems	
	RÍO TANAMÁ PRNR7B2	43.5	SD	NS 50028000	5	5	5	5	K	Agriculture Collection System Failure Minor Industrial Point Sources Onsite Wastewater Systems	*Chromium VI* *Enterococci* *Total, Phosphorus* *Turbidity* **Copper** **Lead**
RÍO GRANDE DE MANATÍ	RÍO GRANDE DE MANATÍ PRNR8A1	31.0	SD	NS 50038100	5	5	5	5	K	Collection System Failure Confined Animal Feeding Operations Landfill Major Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* Temperature *Total, Phosphorus* *Turbidity* **pH**

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	RÍO GRANDE DE MANATÍ PRNR8A2	38.1	SD	NS 50035500	5	5	5	5	K	Collection System Failure Confined Animal Feeding Operations Landfill Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Copper* *Enterococci* *Temperature* *Total, Nitrogen* *Total, Phosphorus* *Turbidity* **Cyanide** **Lead** **Mercury**
	RÍO GRANDE DE MANATÍ PRNR8A3	27.0	SD		4a	4a	3	3	H K	Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems	
	RÍO CIALITO PRNR8B	25.8	SD	NS 50035950	5	5	5	5	K	Agriculture Collection System Failure Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Turbidity* **Total, Phosphorus**
	RÍO TORO NEGRO PRNR8C1	41.5	SD		4a	4a	3	3	H K	Agriculture Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems	
	RÍO BAUTA PRNR8C2	27.6	SD		4a	4a	3	3	H K	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	
	RÍO SANA MUERTOS PRNR8D	16.0	SD		4a	4a	3	3	H K	Agriculture Collection System Failure Minor Industrial Point Sources Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	RÍO OROCOVIS PRNR8E1	19.8	SD	NS 50030700	5	5	5	5	K	Collection System Failure Landfill Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Total, Phosphorus* ***Cyanide***
	RÍO BOTIJAS PRNR8E2	19.1	SD		4a	4a	5	3	D H K	Confined Animal Feeding Operations Onsite Wastewater Systems	*pH*
RÍO CIBUCO	RÍO CIBUCO PRNR9A	31.1	SD	NS 50039500	5	5	5	5	A	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Major Industrial Point Sources Major Municipal Point Sources Onsite Wastewater Systems	*Chromium VI* *Enterococci* Temperature *Total, Nitrogen* *Total, Phosphorus* *Turbidity* **Lead**
	RÍO INDIO PRNR9B1	12.5	SD		4a	4a	3	3	A H	Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	
	RÍO MOROVIS PRNR9B2	25.5	SD		4a	4a	5	3	A D H	Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Dissolved Oxygen*

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	RÍO UNIBÓN PRNR9B3	17.4	SD		4a	4a	3	3	A H	Collection System Failure Confined Animal Feeding Operations Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	
	RÍO MAVILLAS PRNR9C	34.0	SD		4a	4a	3	3	A H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems	
	RÍO DE LOS NEGROS PRNR9D	24.1	SD		4a	4a	3	3	A H	Agriculture Collection System Failure Confined Animal Feeding Operations Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	
RIO DE LA PLATA	RÍO DE LA PLATA PRER10A1	21.0	SD	NS 50046000	5	5	5	5	B	Collection System Failure Confined Animal Feeding Operations Major Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Surfaces Mining	*Chromium VI* *Dissolved Oxygen* *Enterococci* *Temperature* **Surfactants** **Total, Phosphorus** **Turbidity**
	RÍO DE LA PLATA PRER10A2	14.3	SD		4a	4a	3	3	B H	Confined Animal Feeding Operations Onsite Wastewater Systems	
	RÍO DE LA PLATA PRER10A3	55.7	SD	NS 50044000	5	5	5	5	B	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Major Municipal Point Sources Onsite Wastewater Systems	*Chromium VI* *Enterococci* *Total, Phosphorus* **Temperature**

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	RÍO DE LA PLATA PRER10A4	10.2	SD	NS 50043000	5	5	5	5	B	Agriculture Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems	*Chromium VI* *Enterococci* *pH* *Temperature* *Total, Phosphorus* *Turbidity* **Cyanide**
	RÍO DE LA PLATA PRER10A5	92.7	SD	NS 50042500	5	5	5	5	B	Collection System Failure Confined Animal Feeding Operations Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban/Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Total, Phosphorus* **Cyanide** **Temperature** **Total, Nitrogen** **Turbidity**
	RÍO LAJAS PRER10B	16.6	SD		4a	4a	3	3	B H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Surface Mining	
	RÍO BUCARABONES PRER10C	19.2	SD		4a	4a	3	3	B H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems	
	RÍO CAÑAS PRER10D	10.4	SD		4a	4a	3	3	B H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems	
	RÍO GUADIANA PRER10E	21.8	SD	NS 50044850	5	5	5	5	B	Collection System Failure Confined Animal Feeding Operations Minor Municipal Point Sources Onsite Wastewater Systems	*Chromium VI* *Enterococci* *Total, Nitrogen* *Total, Phosphorus* **Cyanide** **Temperature**

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	RÍO CUESTA ARRIBA PRER10F	10.6	SD		4a	4a	1	3	B D H	Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems	
	RÍO ARROYATA PRER10G	36.8	SD	NS 50043998	5	5	5	5	B	Agriculture Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems	*Chromium VI* *Enterococci* *Total, Phosphorus* **Cyanide**
	RÍO HONDO PRER10H	25.6	SD		4a	4a	3	3	B H	Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems	
	RÍO USABÓN PRER10I1	54.6	SD		4a	4a	3	3	B H	Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	
	RÍO AIBONITO PRER10I2	18.7	SD		4a	4a	3	3	B H	Confined Animal Feeding Operations Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	
	RÍO MATÓN PRER10J	15.8	SD	NS 50042800	5	5	5	5	B	Confined Animal Feeding Operations Onsite Wastewater Systems	*Chromium VI* *Enterococci* *Total, Nitrogen* **Cyanide**

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment R1	R2	AL	DW	Notes	Potential Sources of Pollution	Causes of Impairment
	RÍO GUAVATE PRER10K	19.8	SD		4a	4a	5	3	B D H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	*pH*
RÍO HONDO	RÍO HONDO PRER11A	22.0	SD		4a	4a	5	3	D F, H	Collection System Failure Urban Runoff/Storm Sewers	*Dissolved Oxygen* *Surfactants*
RÍO BAYAMÓN	RÍO BAYAMÓN PRER12A1	33.6	SD	NS 50048510	5	5	5	5	F	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *pH* *Temperature* *Total, Nitrogen* **Cyanide**
	RÍO BAYAMÓN PRER12A2	83.7	SD	NS 50047820	5	5	5	5	F	Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci*
	RÍO GUAYNABO PRER12B	50.7	SD	NS 50047990	5	5	5	5	F	Collection System Failure Confined Animal Feeding Operations Landfill Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Total, Nitrogen* *Total, Phosphorus* **pH** **Temperature**
	RÍO MINILLAS PRER12C	8.7	SD		4a	4a	3	3	F H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RÍO GRANDE DE LOIZA	RÍO GRANDE DE LOIZA PRER14A1	31.0	SD	NS 50059100	5	5	5	5	F	Collection System Failure Confined Animal Feeding Operations Major Industrial Point Sources Onsite Wastewater Systems Surfaces Mining Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Temperature* *Turbidity* **Surfactants** **Total, Nitrogen**
	RÍO GRANDE DE LOIZA PRER14A2	86.6	SD	NS 50055000	5	5	5	5	C E G	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems Surfaces Mining Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Pesticides* *Temperature* *Total, Phosphorus* *Turbidity*
	RÍO CANÓVANAS PRER14B	32.6	SD		4a	4a	5	3	D F H	Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Dissolved Oxygen*
	RÍO CANOVANILLAS PRER14C	27.9	SD		4a	4a	5	3	D F H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Dissolved Oxygen*
	QUEBRADA MARACUTO PREQ14D	22.9	SD		4a	4a	1	3	D F H	Confined Animal Feeding Operations Minor Municipal Point Sources Onsite Wastewater Systems	
	QUEBRADA GRANDE PREQ14E	17.7	SD		4a	4a	1	3	F H	Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	RÍO CAÑAS PRER14F	9.4	SD		4a	4a	1	3	C H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems	
	RÍO GURABO PRER14G1	124.3	SD	NS 50057025	5	5	5	5	C E	Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems Surfaces Mining	*Chromium VI* *Enterococci* *Temperature* *Total, Nitrogen* *Total, Phosphorus* *Turbidity*
	RÍO VALENCIANO PRER14G2	42.8	SD	NS 50056500	5	5	5	5	C	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Total, Nitrogen* *Total, Phosphorus* *Turbidity*
	RÍO BAIROA PRER14H	16.3	SD	NS 50055410	5	5	5	5	C E G I	Collection System Failure Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Total, Nitrogen* *Total, Phosphorus*
	RÍO CAGÜITAS PRER14I	33.9	SD	NS 50055250	5	5	5	5	C E G I	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Surfaces Mining Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Temperature* *Total, Nitrogen* *Total, Phosphorus* *Turbidity*

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	RÍO TURABO PRER14J	54.7	SD	NS 50054500	5	5	5	5	C	Agriculture Collection System Failure Confined Animal Feeding Operations Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Copper* *Enterococci* *Lead* *Temperature* *Total, Phosphorus* *Turbidity*
	RÍO CAYAGUAS PRER14K	38.5	SD	NS 50051500	5	5	5	5	C	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	*Chromium VI* *Copper* *Enterococci* *Temperature* *Total, Nitrogen* *Total, Phosphorus* *Turbidity*
	RÍO EMAJAGUA PRER14L	8.5	SD		4a	4a	3	3	C H	Minor Industrial Point Sources Onsite Wastewater Systems	
RÍO HERRERA	RÍO HERRERA PRER15A	17.0	SD		4a	4a	5	5	D F H	Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Dissolved Oxygen* *Turbidity*
RÍO ESPÍRITU SANTO	RÍO ESPÍRITU SANTO PRER16A	53.9	SD	NS 50063800	5	5	5	5	F	Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems	*Chromium VI* *Enterococci* **Ammonia**
	RÍO ESPÍRITU SANTO PRER16A1	4.5	SD		4a	4a	3	3	F H	Confined Animal Feeding Operations Major Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RÍO MAMEYES	RÍO MAMEYES PRER17A	35.6	SD		4a	4a	3	3	F H	Confined Animal Feeding Operations Landfill Onsite Wastewater Systems	
	RIO MAMEYES PRER17A1	3.3	SD		4a	4a	3	3	F H	Onsite Wastewater Systems	
QUEBRADA MATA DE PLÁTANO	QUEBRADA MATA DE PLÁTANO PREQ18A	4.0	SD		4a	4a	5	3	D F H	Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Dissolved Oxygen* *Surfactants*
RÍO SÁBANA	RÍO SÁBANA PRER19A	15.1	SD		4a	4a	1	3	D H J	Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems Surfaces Mining	
	RÍO SÁBANA PRER19A1	18.0	SD		4a	4a	3	3	D H J	Confined Animal Feeding Operations Onsite Wastewater Systems	
RÍO JUAN MARTÍN	RÍO JUAN MARTÍN PRER20A	7.8	SD		4a	4a	3	3	D H, J	Onsite Wastewater Systems	
QUEBRADA FAJARDO	QUEBRADA FAJARDO PREQ21A	10.0	SD		4a	4a	5	3	D H J	Collection System Failure Onsite Wastewater Systems	*Dissolved Oxygen* *pH* *Temperature*
RÍO FAJARDO	RÍO FAJARDO PRER22A	59.0	SD	NS 50072500	5	5	5	5	J	Confined Animal Feeding Operations Landfill Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Temperature* *Total, Nitrogen* *Total, Phosphorus* **Turbidity**
RÍO DEMAJAGUA	RÍO DEMAJAGUA PRER23A	2.8	SD		4a	4a	5	3	D H, J	Onsite Wastewater Systems	*Dissolved Oxygen*
QUEBRADA CEIBA	QUEBRADA CEIBA PREQ24A	5.0	SD		4a	4a	5	3	D H, J	Onsite Wastewater Systems	*Dissolved Oxygen* *Surfactants*

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
QUEBRADA AGUAS CLARAS	QUEBRADA AGUAS CLARAS PREQ25A	4.8	SD		4a	4a	5	3	D H J	Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Dissolved Oxygen*
RÍO DAGUAO	RÍO DAGUAO PRER26A	13.8	SD		4a	4a	5	3	D H J	Confined Animal Feeding Operations Onsite Wastewater Systems	*Dissolved Oxygen*
QUEBRADA PALMA	QUEBRADA PALMA PREQ27A	11.8	SD		4a	4a	3	3	H J	Confined Animal Feeding Operations Onsite Wastewater Systems	
QUEBRADA BOTIJAS	QUEBRADA BOTIJAS PREQ28A	7.4	SD		4a	4a	5	3	D H J	Confined Animal Feeding Operations Onsite Wastewater Systems	*Dissolved Oxygen*
RÍO SANTIAGO	RÍO SANTIAGO PRER29A	12.7	SD		4a	4a	3	3	D H J	Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	
	RÍO SANTIAGO PRER29A1	2.6	SD		4a	4a	3	3	H J	Confined Animal Feeding Operations Onsite Wastewater Systems	
RÍO BLANCO	RÍO BLANCO PRER30A	45.0	SD		4a	4a	5	5	D H J	Agriculture Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Turbidity*
	QUEBRADA PEÑA POBRE PREQ30B	13.4	SD		4a	4a	5	3	D H J	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	*Dissolved Oxygen*

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RÍO ANTÓN RUIZ	RÍO ANTÓN RUIZ PRER31A	16.9	SD		4a	4a	5	3	D H J	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	*Dissolved Oxygen* *Temperature*
	QUEBRADA MULAS PREQ31A1	3.5	SD		4a	4a	3	3	H J	Confined Animal Feeding Operations Onsite Wastewater Systems	
QUEBRADA FRONTERA	QUEBRADA FRONTERA PREQ32A	8.5	SD		4a	4a	5	3	D H J	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems	*Dissolved Oxygen*
RÍO HUMACAO	RÍO HUMACAO PRER33A	55.8	SD	NS 50082000	5	5	5	5	F	Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Copper* *Enterococci* *Temperature* *Total, Nitrogen* *Total, Phosphorus* *Turbidity* **Surfactants**
RÍO CANDELERO	RÍO CANDELERO PRER34A	10.4	SD		4a	4a	5	3	D F H	Confined Animal Feeding Operations Onsite Wastewater Systems	*Dissolved Oxygen*
RÍO GUAYANÉS	RÍO GUAYANÉS PRER35A	62.0	SD	NS 50085000	5	5	5	5	F	Agriculture Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems	*Chromium VI* *Copper* *Enterococci* *Temperature* *Total, Nitrogen* *Total, Phosphorus* *Turbidity*
	RÍO INGENIO PRER35A1	32.6	SD		4a	4a	3	3	F H	Confined Animal Feeding Operations Onsite Wastewater Systems	
QUEBRADA EMAJAGUA	QUEBRADA EMAJAGUA PREQ36A	2.5	SD		4a	4a	3	3	H J	Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RÍO MAUNABO	RÍO MAUNABO PRER37A	36.0	SD	NS 50091000	5	5	5	5	F	Agriculture Collection System Failure Landfill Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Temperature* *Total, Nitrogen* *Total, Phosphorus* *Turbidity* **Copper** **Cyanide**
QUEBRADA MANGLILLO	QUEBRADA MANGLILLO PRSQ38A	1.0	SD		4a	4a	3	3	H J	Onsite Wastewater Systems	
QUEBRADA FLORIDA	QUEBRADA FLORIDA PRSQ39A	3.0	SD		N/A	N/A	N/A	N/A	H L		
RÍO JACABOA	RÍO JACABOA PRSR40A	13.0	SD		4a	4a	3	3	H J L	Confined Animal Feeding Operations Onsite Wastewater Systems	
QUEBRADA PALENQUE	QUEBRADA PALENQUE PRSQ41A	1.0	SD		4a	4a	5	3	D, H J, L	Onsite Wastewater Systems	*Dissolved Oxygen*
RÍO CHICO	RÍO CHICO PRSR42A	14.6	SD		4a	4a	5	5	D H J L	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Ammonia* *Copper* *Dissolved Oxygen* *Silver* *Surfactants* *Total, Phosphorus*
RÍO GRANDE DE PATILLAS	RÍO GRANDE DE PATILLAS PRSR43A1	4.0	SD		4a	4a	3	3	H J	Major Municipal Point Sources Onsite Wastewater Systems	
	RÍO GRANDE DE PATILLAS PRSR43A2	35.9	SD	NS 50092000	5	5	5	1	J	Onsite Wastewater Systems	*Chromium VI* *Enterococci* **Copper** **Cyanide**
	RÍO MARÍN PRSR43B	8.7	SD		4a	4a	3	3	H J	Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
QUEBRADA YAUREL	QUEBRADA YAUREL PRSQ44A	6.0	SD		4a	4a	3	3	H J, L	Onsite Wastewater Systems	
RÍO NIGUAS DE ARROYO	RÍO NIGUAS DE ARROYO PRSR45A	21.0	SD		4a	4a	3	3	D H J	Confined Animal Feeding Operations Onsite Wastewater Systems Package Plants (Small Flow) Urban Runoff/Storm Sewers	
QUEBRADA SALADA	QUEBRADA SALADA PRSQ46A	1.7	SD		4a	4a	3	3	H J, L	Onsite Wastewater Systems Surface Mining	
QUEBRADA CORAZÓN	QUEBRADA CORAZÓN PRSQ47A	9.7	SD		4a	4a	3	3	H J L	Confined Animal Feeding Operations Onsite Wastewater Systems	
QUEBRADA BRANDERI	QUEBRADA BRANDERI PRSQ48A	4.5	SD		4a	4a	3	3	H J, L	Collection System Failure Onsite Wastewater Systems	
RÍO GUAMANÍ	RÍO GUAMANÍ PRSR49A	22.0	SD		4a	4a	5	3	D H J L	Collection System Failure Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Temperature*
QUEBRADA MELANÍA	QUEBRADA MELANÍA PRSQ50A	7.0	SD		4a	4a	5	3	D H J, L	Landfill Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Dissolved Oxygen*
RÍO SECO	RÍO SECO PRSR51A	24.7	SD		4a	4a	5	3	D, H J, L	Agriculture Onsite Wastewater Systems	*Dissolved Oxygen*
QUEBRADA AMORÓS	QUEBRADA AMORÓS PRSQ52A	0.7	SD		4a	4a	5	3	D H J, L	Agriculture Collection System Failure Onsite Wastewater Systems	*Dissolved Oxygen* pH
QUEBRADA AGUAS VERDES	QUEBRADA AGUAS VERDES PRSQ53A	15.0	SD		4a	4a	5	3	D F H, L	Confined Animal Feeding Operations Onsite Wastewater Systems	*Dissolved Oxygen*

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RÍO NIGUAS DE SALINAS	RÍO NIGUAS DE SALINAS PRSR54A	102.5	SD		4a	4a	5	3	D F H L	Confined Animal Feeding Operations Onsite Wastewater Systems Surfaces Mining Urban Runoff/Storm Sewers	*Dissolved Oxygen*
RÍO JUEYES	RÍO JUEYES PRSR55A	11.0	SD		4a	4a	3	3	H J L	Agriculture Confined Animal Feeding Operations Landfill Onsite Wastewater Systems Urban Runoff/Storm Sewers	
RÍO CAYURES	RÍO CAYURES PRSR56A	5.0	SD		4a	4a	5	3	D, H J, L	Agriculture Onsite Wastewater Systems	*Dissolved Oxygen* *Surfactants*
RÍO COAMO	RÍO COAMO PRSR57A1	7.5	SD		4a	4a	3	3	H J L	Agriculture Landfill Onsite Wastewater Systems Urban Runoff/Storm Sewers	
	RIO COAMO PRSR57A2	59.0	SD	NS 50106500	5	5	5	5	J	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Cyanide* *Enterococci* Temperature *Total, Nitrogen* **Surfactants** **Total, Phosphorus**
	RÍO CUYÓN PRSR57B	49.2	SD		4a	4a	5	3	D H J	Agriculture Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Temperature*

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RÍO DESCALABRADO	RÍO DESCALABRADO PRSR58A	18.8	SD		4a	4a	3	3	D H J L	Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	
RÍO CAÑAS	RÍO CAÑAS PRSR59A	8.0	SD		4a	4a	3	3	H J, L	Agriculture Onsite Wastewater Systems	
RÍO JACAGUAS	RÍO JACAGUAS PRSR60A1	22.8	SD		4a	4a	3	3	F H L	Agriculture Collection System Failure Landfill Onsite Wastewater Systems Urban Runoff/Storm Sewers	
	RÍO JACAGUAS PRSR60A2	29.3	SD		4a	4a	3	3	F H L	Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	
RÍO INABÓN	RÍO INABÓN PRSR61A	66.7	SD		4a	4a	3	3	F H	Agriculture Collection System Failure Minor Industrial Point Sources Onsite Wastewater Systems Surface Mining Urban Runoff/Storm Sewers	
RÍO BUCANÁ-CERRILLOS	RIO BUCANÁ-CERRILLOS PRSR62A1	27.8	SD	NS 50114400	5	5	5	5	J	Collection System Failure Onsite Wastewater Systems Surfaces Mining Urban Runoff/Storm Sewers	*Chromium VI* *Dissolved Oxygen* *Enterococci* **Cyanide**
	RIO BUCANÁ-CERRILLOS PRSR62A2	32.6	SD	NS 50113800	5	5	5	5	J	Agriculture Minor Industrial Point Sources Onsite Wastewater Systems	*Chromium VI* *Enterococci* **Cyanide** **Surfactants**
RIO PORTUGUÉS	RIO PORTUGUÉS PRSR63A	54.0	SD	NS 50114900 50116200	5	5	5	5	J	Collection System Failure Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* **Cyanide** **Dissolved Oxygen**

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RÍO MATILDE – PASTILLO	RÍO MATILDE-PASTILLO PRSR64A	43.2	SD		4a	4a	5	3	D H J L	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Major Industrial Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Temperature*
	QUEBRADA DEL AGUA PRSQ64A1	8.0	SD		4a	4a	3	3	H J, L	Onsite Wastewater Systems	
RÍO TALLABOA	RÍO TALLABOA PRSR65A	59.6	SD		4a	4a	5	1	D H J L	Agriculture Collection System Failure Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*pH* *Temperature*
RÍO MACANÁ	RÍO MACANÁ PRSR66A	21.7	SD		4a	4a	3	3	H J L	Agriculture Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	
RÍO GUAYANILLA	RÍO GUAYANILLA PRSR67A	60.0	SD	NS 50124700	5	5	5	5	F	Agriculture Collection System Failure Landfill Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Ammonia* *Chromium VI* *Dissolved Oxygen* *Enterococci* *Temperature* *Total, Nitrogen* *Total, Phosphorus* **Cyanide**

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RÍO YAUCO	RÍO YAUCO PRSR68A1	61.4	SD		4a	4a	5	5	D F H L	Agriculture Collection System Failure Landfill Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Dissolved Oxygen* *Total, Phosphorus*
	RÍO YAUCO PRSR68A2	18.3	SD		4a	4a	3	3	F H, L	Agriculture Onsite Wastewater Systems	
RÍO LOCO	RÍO LOCO PRSR69A1	92.4	SD		4a	4a	5	5	D F H	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Dissolved Oxygen* *Temperature* *Turbidity*
	RÍO LOCO PRSR69A2	19.5	SD		4a	4a	3	3	F H	Agriculture Onsite Wastewater Systems	
RÍO ARROYO CAJUL	RÍO ARROYO CAJUL PRSR70A	7.4	SD		4a	4a	3	3	H J, L	Onsite Wastewater Systems	
QUEBRADA BOQUERÓN	QUEBRADA BOQUERÓN RWQ71A	11.7	SD		4a	4a	3	3	H J	Minor Industrial Point Sources Onsite Wastewater Systems	
QUEBRADA ZUMBÓN	QUEBRADA ZUMBÓN PRWQ72A	1.7	SD		4a	4a	5	3	D, H J, L	Collection System Failure Onsite Wastewater Systems	*Dissolved Oxygen* *Surfactants*
QUEBRADA GONZÁLEZ	QUEBRADA GONZÁLEZ PRWQ73A	1.8	SD		4a	4a	5	3	D, H J, L	Onsite Wastewater Systems	*Dissolved Oxygen*
QUEBRADA LOS PAJARITOS	QUEBRADA LOS PAJARITOS PRWQ74A	2.7	SD		4a	4a	5	3	D H J, L	Onsite Wastewater Systems	*Dissolved Oxygen*
CAÑO CONDE ÁVILA	CAÑO CONDE ÁVILA PRWK75A	4.0	SD		4a	4a	3	3	H J	Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment R1	R2	AL	DW	Notes	Potential Sources of Pollution	Causes of Impairment
QUEBRADA IRIZARRY	QUEBRADA IRIZARRY PRWQ76A	2.0	SD		4a	4a	3	3	H J	Onsite Wastewater Systems	
RIO GUANAJIBO	RIO GUANAJIBO PRWR77A	119.3	SD	NS 50138000	5	5	5	5	F	Collection System Failure Confined Animal Feeding Operations Landfill Major Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Dissolved Oxygen* *Enterococci* *Total, Phosphorus* **Cyanide** **Tubidity**
	RIO HONDO PRWR77B	17.2	SD		4a	4a	3	3	F H	Onsite Wastewater Systems Urban Runoff/Storm Sewers	
	RÍO ROSARIO PRWR77C	58.3	SD	NS 50136700	5	5	5	5	F	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Pesticides* Total, Phosphorus Turbidity **Cyanide**
	RÍO VIEJO PRWR77D	21.1	SD	NS 50135625	5	5	5	5	F	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Cyanide* *Dissolved Oxygen* *Enterococci* *Total, Phosphorus* **Surfactants** **Temperature**
	RÍO DUEY Y RÍO HOCONUCO PRWR77E	39.9	SD		4a	4a	3	3	F H	Agriculture Onsite Wastewater Systems	
	RÍO CAÍN PRWR77F	24.5	SD		4a	4a	3	3	F H	Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	RÍO CUPEYES PRWR77G	8.0	SD		4a	4a	5	5	D F H	Agriculture Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Pesticides*
	RÍO CRUCES PRWR77H	13.8	SD		4a	4a	3	3	F H	Collection System Failure Onsite Wastewater Systems Urban Runoff/Storm Sewers	
	RÍO GRANDE PRWR77I	22.5	SD		4a	4a	3	3	F H	Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	
CAÑO MERLE	CAÑO MERLE PRWK78A	1.6	SD		4a	4a	5	3	D H J L	Collection System Failure Onsite Wastewater Systems Surface Mining Urban Runoff/Storm Sewers	*Dissolved Oxygen* *Surfactants*
	QUEBRADA SÁBALO PRWQ78A1	9.5	SD		4a	4a	3	3	H J, L	Onsite Wastewater Systems	
RÍO YAGÜEZ	RÍO YAGÜEZ PRWR79A	42.2	SD	NS 50139000	5	5	5	1	J	Agriculture Collection System Failure Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems Package Plants (Small Flow) Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* **Cyanide** **Temperature** **Total, Nitrogen,** **Total, Phosphorus** **Turbidity**
QUEBRADA DEL ORO	QUEBRADA DEL ORO PRWQ80A	10.0	SD		4a	4a	3	3	H J	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	
CAÑO MANÍ	CAÑO MANÍ PRWK81A	3.0	SD		3	3	3	3	H	Onsite Wastewater Systems	
CAÑO BOQUILLA	CAÑO BOQUILLA PRWK82A	5.4	SD		3	3	3	3	H L	Landfill Onsite Wastewater Systems	
	CAÑO BOQUILLA PRWK82A1	3.0	SD		3	3	3	3	H L	Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	CAÑO BOQUILLA PRWK82A2	3.9	SD		3	3	3	3	H L	Major Industrial Point Sources Onsite Wastewater Systems	
RÍO GRANDE DE AÑASCO	RÍO GRANDE DE AÑASCO PRWR83A	126.0	SD	NS 50144000 50146000	5	5	5	5	K	Agriculture Collection System Failure Confined Animal Feeding Operations Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* pH *Turbidity* **Copper** **Cyanide** **Temperature** **Total, Phosphorus**
	RÍO CAÑAS PRWR83B	54.4	SD		4a	4a	3	3	H K	Agriculture Onsite Wastewater Systems	
	RÍO CASEY PRWR83C	38.1	SD		4a	4a	3	3	H K	Agriculture Onsite Wastewater Systems	
	RÍO HUMATA PRWR83D	13.3	SD		4a	4a	1	1	D H K	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	
	RÍO ARENAS PRWR83E	18.3	SD		4a	4a	3	3	H K	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	
	RÍO MAYAGUECILLO PRWR83F	18.0	SD		4a	4a	3	3	H K	Agriculture Onsite Wastewater Systems	
	RÍO GUABA PRWR83G	68.1	SD		4a	4a	3	3	H K	Agriculture Onsite Wastewater Systems	
	RÍO BLANCO PRWR83H	79.9	SD		4a	4a	3	3	H K	Agriculture Minor Industrial Point Sources Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	RÍO PRIETO PRWR83I	59.8	SD		4a	4a	5	5	D H K	Agriculture Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems	*Pesticides*
QUEBRADA JUSTO	QUEBRADA JUSTO PRWQ84A	1.0	SD		3	3	3	3	H L	Onsite Wastewater Systems	
QUEBRADA ICACOS	QUEBRADA ICACOS PRWQ85A	1.4	SD		3	3	3	3	H L	Onsite Wastewater Systems	
QUEBRADA CAGUABO	QUEBRADA CAGUABO PRWQ86A	1.0	SD		3	3	3	3	H L	Onsite Wastewater Systems	
CAÑO GARCÍA	CAÑO GARCÍA PRWK87A	2.0	SD		3	3	3	3	H L	Onsite Wastewater Systems	
QUEBRADA GRANDE DE CALVACHE	QUEBRADA GRANDE DE CALVACHE PRWQ88A	14.8	SD		3	3	3	3	D H L	Onsite Wastewater Systems	
QUEBRADA LOS RAMOS	QUEBRADA LOS RAMOS PRWQ89A	6.9	SD		3	3	5	3	D H L	Confined Animal Feeding Operations Landfill Onsite Wastewater Systems	*Dissolved Oxygen*
QUEBRADA PUNTA ENSENADA	QUEBRADA PUNTA ENSENADA PRWQ90A	5.0	SD		3	3	3	3	H L	Collection System Failure Onsite Wastewater Systems	
QUEBRADA PILETAS	QUEBRADA PILETAS PRWQ91A	2.0	SD		3	3	5	3	D H, L	Onsite Wastewater Systems	*Dissolved Oxygen*
RÍO GRANDE	RÍO GRANDE RWR92A	21.8	SD		3	3	3	3	H L	Onsite Wastewater Systems	
CAÑO DE SANTI PONCE	CAÑO DE SANTI PONCE PRWK93A	4.8	SD		4a	4a	3	3	H J, L	Collection System Failure Onsite Wastewater Systems	
RÍO GUAYABO	RÍO GUAYABO PRWR94A	43.1	SD		4a	4a	3	3	H J	Collection System Failure Onsite Wastewater Systems Urban Runoff/Storm Sewers	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment R1	R2	AL	DW	Notes	Potential Sources of Pollution	Causes of Impairment
RIO CULEBRINAS	RIO CULEBRINAS PRWR95A	142.6	SD	NS 50149100	5	5	5	5	K	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Major Municipal Point Sources Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Chromium VI* *Enterococci* *Pesticides* *Total, Nitrogen* *Total, Phosphorus* *Turbidity* **Cyanide** **Temperature**
	RIO CAÑO (RÍO CAÑAS) PRWR95B	33.3	SD		4a	4a	3	3	H K	Onsite Wastewater Systems Urban Runoff/Storm Sewers	
	QUEBRADA GRANDE (SECTOR CUCHILLAS) PRWQ95C	11.4	SD		4a	4a	3	3	H K	Agriculture Onsite Wastewater Systems	
	QUEBRADA LAS MARIAS PRWQ95D	9.8	SD		4a	4a	3	3	H K	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	
	QUEBRADA YAGRUMA PRWQ95E	20.6	SD		4a	4a	3	3	H K	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	
	QUEBRADA LA SALLE PRWQ95F	11.8	SD		4a	4a	5	5	D H K	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	*Dissolved Oxygen* *Pesticides*
	QUEBRADA EL SALTO PRWQ95G	7.8	SD		4a	4a	5	3	D H. K	Agriculture Onsite Wastewater Systems	*Dissolved Oxygen*
	QUEBRADA GRANDE DE LA MAJAGUA PRWQ95H	5.6	SD		4a	4a	5	5	D H K	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	*Pesticides*

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	QUEBRADA SALADA PRWQ95I	7.9	SD		4a	4a	1	3	D H K	Confined Animal Feeding Operations Onsite Wastewater Systems	
	RÍO SONADOR PRWR95J	37.7	SD		4a	4a	3	3	H K	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	
	RÍO GUATEMALA PRWR95K	20.3	SD		4a	4a	3	3	H K	Collection System Failure Confined Animal Feeding Operations Landfill Onsite Wastewater Systems Urban Runoff/Storm Sewers	
CAÑO CORAZONES	CAÑO CORAZONES PRWK96A	1.3	SD		4a	4a	3	3	H J	Collection System Failure Onsite Wastewater Systems Urban Runoff/Storm Sewers	

Notes:
Bold and Red causes were listed into 2024 Cycle (New added causes).
Italicized and black causes were listed into and/or prior to 2024 Cycle. (Old causes)
A - Watershed that has an approved TMDL for Río Cibuco, the TMDL was approved in September 2002, the pollutant was Fecal Coliform.
B - Watershed that has an approved TMDL for Río de la Plata, the TMDL was approved in September 2003, the pollutant was Fecal Coliform.
C - Watershed that has an approved TMDL for Río Grande de Loíza, the TMDL was approved in September 2007, the pollutant was Fecal Coliform.
D - Watershed and subwatershed that do not have a permanent monitoring station but were included in prior cycles as part of the 303(d) List by a synoptic study or special monitoring project.
E - Watershed that has an approved TMDL for Río Grande de Loíza a TMDL was approved in August 2007, the pollutant was Dissolved Oxygen.
F - Watersheds that have approved TMDL in September 2012, the pollutant was Fecal Coliform.
G - Watershed that has an approved TMDL. Río Grande de Loíza, the TMDL was approved in August 2007, the pollutant was Copper.
H - If the Monitoring Station column is left blank, the Assessment Unit was not monitored for 2024 cycle.
I - Watershed that has approved TMDL from Río Grande de Loíza, a TMDL was approved in August 2007, the pollutant was Ammonia.
J - Watersheds that have approved TMDL in September 2011, the pollutant was Fecal Coliform.
K - Watersheds that have an approved TMDL in September 2010, the pollutant was Fecal Coliform. The watersheds are Río Grande de Arecibo, Río Grande de Manatí, Río Grande de Añasco, Río Culebrinas
L – Watershed and subwatersheds, are waterbodies that lack adequate flow, which impaired some of the designated uses.
R1 - Primary Contact Recreation
R2 - Secondary Contact Recreation
AL - Aquatic Life
DW - Raw Source for Drinking Water

Estuaries

Table 26: Size of Waters Impaired by Causes (Monitored squares miles for Estuaries)

Causes of Impairments 2021-2023 Cycle		Causes of Impairments Summary
Causes of Impairments	**Size of Waters Impaired (sq. mi)**	**Size of Waters Impaired (sq. mi.)**
Arsenic	0	0.0364
Dissolved Oxygen	0	0.8618
Surfactants	0	1.0130
Temperature	0	0.0780
Turbidity	0	0.2932

Table 27: Size of Waters Impaired by Sources (Monitored and Unmonitored Estuaries)

Potential Sources of Pollution 2021-2023 Cycle		Potential Sources of Pollution Summary
Potential Sources of Pollution	**Size of Waters Impaired (sq. mi.)**	**Size of Waters Impaired (sq. mi.)**
Agriculture	0.263	0.263
Collection System Failure	3.226	3.226
Confined Animal Feeding Operations	2.283	2.283
Landfill	0.930	0.930
Major Industrial Point Sources	0.296	0.296
Major Municipal Point Sources	1.529	1.529
Minor Industrial Point Sources	0.223	0.223
Onsite Wastewater Systems	4.308	4.308
Surface Mining	0.229	0.229
Upstream Impoundment	0.459	0.459
Urban Runoff/Storm Sewers	3.067	3.067

Table 28: Estuaries Assessment (Except San Juan Estuary System)

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi.)	Class	2024 Monitoring Stations	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RÍO GUAJATACA PRNR3A	RÍO GUAJATACA PRNE3A	0.048	SB		3	3	3	N/A	H	Onsite Wastewater Systems Surface Mining Urban Runoff/Storm Sewers	
QUEBRADA BELLACA PRNQ4A	QUEBRADA BELLACA PRNE4A	0.0042	SB		3	3	3	N/A	H	Onsite Wastewater Systems	
RÍO CAMUY PRNR5A	RÍO CAMUY PRNE5A	0.042	SB		4a	4a	3	N/A	F H	Onsite Wastewater Systems	
RÍO GRANDE DE ARECIBO PRNR7A	RÍO GRANDE DE ARECIBO PRNE7A	0.0847	SB		4a	4a	3	N/A	H K	Agriculture Urban Runoff/Storm Sewers	
CAÑO TIBURONES PRNE7.1	CAÑO TIBURONES PRNE7.1	0.2924	SB		4a	4a	3	N/A	H J	Confined Animal Feeding Operations Landfill Onsite Wastewater Systems Urban Runoff/Storm Sewers	
RÍO GRANDE DE MANATÍ PRNR8A	RÍO GRANDE DE MANATÍ PRNE8A	0.2576	SB		4a	4a	3	N/A	H K	Urban Runoff/Storm Sewers	
RÍO CIBUCO PRNR9A	RÍO CIBUCO PRNE9A	0.2964	SB		N/A	N/A	3	N/A	A H	Collection System Failure Confined Animal Feeding Operations Landfill Major Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	
RÍO DE LA PLATA PRER10A	RÍO DE LA PLATA PREE10A	0.8256	SB		4a	4a	3	N/A	B H	Collection System Failure Confined Animal Feeding Operations Major Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi.)	Class	2024 Monitoring Stations	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RÍO GRANDE DE LOIZA PRER14A	RÍO GRANDE DE LOIZA PREE14A	0.8685	SB		4a	4a	3	N/A	F H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	
RÍO HERRERA PRER15A	RÍO HERRERA PREE15A	0.102	SB		4a	4a	5	N/A	D F, H	Landfill Onsite Wastewater Systems	*Surfactants*
RÍO ESPÍRITU SANTO PRER16A	RÍO ESPÍRITU SANTO PREE16A	0.5758	SB		4a	4a	5	N/A	D F H	Collection System Failure Onsite Wastewater Systems	*Dissolved Oxygen* *Surfactants*
CAÑO RODRÍGUEZ PREK16.1	CAÑO RODRÍGUEZ PREE16.1	0.108	SB		3	3	3	N/A	H	Minor Industrial Point Sources Onsite Wastewater Systems	
RÍO MAMEYES PRER17A	RÍO MAMEYES PREE17A	0.1674	SB		4a	4a	3	N/A	F H	Onsite Wastewater Systems Surface Mining	
RÍO SABANA PRER19A	RÍO SABANA PREE19A	0.0288 mi^2	SB		4a	4a	3	N/A	H J	Urban Runoff/Storm Sewers	
RÍO JUAN MARTÍN PRER20A	RÍO JUAN MARTÍN PREE20A	0.0028	SB		4a	4a	3	N/A	H J	Urban Runoff/Storm Sewers	
RÍO FAJARDO PRER22A	RÍO FAJARDO PREE22A	0.068	SB		4a	4a	3	N/A	H J	Collection System Failure Urban Runoff/Storm Sewers	
RÍO DEMAJAGUA PRER23A	RÍO DEMAJAGUA PREE23A	0.0028	SB		4a	4a	5	N/A	D H, J	Collection System Failure Urban Runoff/Storm Sewers	*Turbidity*
QUEBRADA AGUAS CLARAS PREQ25A	QUEBRADA AGUAS CLARAS PREE25A	0.0024	SB		4a	4a	3	N/A	H J	Upstream Impoundment	
RÍO DAGUAO PRER26A	RÍO DAGUAO PREE26A	0.0672	SB		4a	4a	3	N/A	H J	Upstream Impoundment	
QUEBRADA PALMA PREQ27A	QUEBRADA PALMA PREE27A	0.005	SB		4a	4a	3	N/A	H J	Upstream Impoundment	

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi.)	Class	2024 Monitoring Stations	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
QUEBRADA BOTIJAS PREQ28A	QUEBRADA BOTIJAS PREE28A	0.0192	SB		4a	4a	3	N/A	H J	Upstream Impoundment	
RÍO SANTIAGO PRER29A	RÍO SANTIAGO PREE29A	0.0252	SB		4a	4a	3	N/A	H J	Onsite Wastewater Systems	
RÍO BLANCO PRER30A	RÍO BLANCO PREE30A	0.0512	SB		4a	4a	3	N/A	H J	Upstream Impoundment	
RÍO ANTON RUIZ PRER31A	RÍO ANTÓN RUIZ PREE31A	0.1296	SB		4a	4a	3	N/A	H J	Upstream Impoundment	
RÍO HUMACAO PRER33A	RÍO HUMACAO PREE33A	0.124	SB		4a	4a	3	N/A	F H	Collection System Failure Landfill Onsite Wastewater Systems	
RÍO CANDELERO PRER34A	RÍO CANDELERO PREE34A	0.078	SB		4a	4a	5	N/A	D F, H	Collection System Failure	*Dissolved Oxygen* *Temperature*
RÍO GUAYANÉS PRER35A	RÍO GUAYANÉS PREE35A	0.0364	SB		4a	4a	5	N/A	F H	Agriculture Collection System Failure Onsite Wastewater Systems	*Arsenic* *Turbidity*
CAÑO SANTIAGO PREK35.1	CAÑO SANTIAGO PREE35.1	0.1152	SB		4a	4a	5	N/A	D F H	Agriculture Collection System Failure Landfill Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Dissolved Oxygen* *Surfactants* *Turbidity*
RÍO CHICO PRSR42A	RÍO CHICO PRSE42A	0.008	SB		4a	4a	3	N/A	H J, L	Onsite Wastewater Systems	
RÍO GRANDE DE PATILLAS PRSR43A	RÍO GRANDE DE PATILLAS PRSE43A	0.0136	SB		4a	4a	3	N/A	H J	Upstream Impoundment Urban Runoff/Storm Sewers	
QUEBRADA SALADA PRSQ46A	QUEBRADA SALADA PRSE46A	0.006	SB		4a	4a	3	N/A	H J L	Onsite Wastewater Systems Surface Mining	

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi.)	Class	2024 Monitoring Stations	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
QUEBRADA CORAZÓN PRSQ47A	QUEBRADA CORAZÓN PRSE47A	0.0054	SB		4a	4a	3	N/A	H J L	Onsite Wastewater Systems	
QUEBRADA BRANDERI PRSQ48A	QUEBRADA BRANDERI PRSE48A	0.012	SB		4a	4a	3	N/A	H J L	Onsite Wastewater Systems	
QUEBRADA MELANÍA PRSQ50A	QUEBRADA MELANÍA PRSE50A	0.012	SB		4a	4a	3	N/A	H J L	Onsite Wastewater Systems	
RÍO SECO PRSR51A	RÍO SECO PRSE51A	0.0036	SB		4a	4a	3	N/A	H J, L	Urban Runoff/Storm Sewers	
QUEBRADA AMORÓS PRSQ52A	QUEBRADA AMORÓS PRSE52A	0.0042	SB		4a	4a	3	N/A	H J L	Urban Runoff/Storm Sewers	
QUEBRADA AGUAS VERDES PRSQ53A	QUEBRADA AGUAS VERDES PRSE53A	0.0036	SB		4a	4a	3	N/A	F H L	Upstream Impoundment Urban Runoff/Storm Sewers	
RÍO NIGUAS DE SALINAS PRSR54A	RÍO NIGUAS DE SALINAS PRSE54A	0.011	SB		4a	4a	3	N/A	F H L	Onsite Wastewater Systems Upstream Impoundment	
RÍO COAMO PRSR57A	RÍO COAMO PRSE57A	0.0114	SB		4a	4a	3	N/A	H J, L	Agriculture Upstream Impoundment	
RÍO DESCALABRADO PRSR58A	RÍO DESCALABRADO PRSE58A	0.0048	SB		4a	4a	3	N/A	H J	Agriculture	
RÍO JACAGUAS PRSR60A	RÍO JACAGUAS PRSE60A	0.011	SB		4a	4a	3	N/A	F H, L	Agriculture Onsite Wastewater Systems	
RÍO INABÓN PRSR61A	RÍO INABÓN PRSE61A	0.0036	SB		4a	4a	3	N/A	F H	Urban Runoff/Storm Sewers	
RÍO MATILDE-PASTILLO PRSR64A	RÍO MATILDE-PASTILLO PRSE64A	0.0432	SB		4a	4a	5	N/A	D H J, L	Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Turbidity*

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi.)	Class	2024 Monitoring Stations	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RÍO TALLABOA PRSR65A	RÍO TALLABOA PRSE65A	0.0336	SB		4a	4a	5	N/A	D, H J, L	Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Turbidity*
RÍO MACANÁ PRSR66A	RÍO MACANÁ PRSE66A	0.0036	SB		4a	4a	3	N/A	H J, L	Urban Runoff/Storm Sewers	
RÍO YAUCO PRSR68A	RÍO YAUCO PRSE68A	0.003	SB		4a	4a	3	N/A	F H, L	Upstream Impoundment	
RÍO LOCO PRSR69A	RÍO LOCO PRSE69A	0.0084	SB		4a	4a	3	N/A	F H	Onsite Wastewater Systems Surface Mining Urban Runoff/Storm Sewers	
QUEBRADA BOQUERÓN PRWQ71A	QUEBRADA BOQUERÓN PRWE71A	0.0096	SB		4a	4a	3	N/A	H J	Urban Runoff/Storm Sewers	
QUEBRADA ZUMBÓN PRWQ72A	QUEBRADA ZUMBÓN PRWE72A	0.003	SB		4a	4a	3	N/A	H J L	Onsite Wastewater Systems	
QUEBRADA GONZÁLEZ PRWQ73A	QUEBRADA GONZÁLEZ PRWE73A	0.008	SB		4a	4a	3	N/A	H J L	Upstream Impoundment	
QUEBRADA LOS PAJARITOS PRWQ74A	QUEBRADA LOS PAJARITOS PRWE74A	0.003	SB		4a	4a	3	N/A	H J L		
RIO GUANAJIBO PRWR77A	RIO GUANAJIBO PRWE77A	0.0576	SB		4a	4a	3	N/A	H J	Collection System Failure Onsite Wastewater Systems	
CAÑO MERLE PRWK78A	CAÑO MERLE PRWE78A	0.158	SB		4a	4a	5	N/A	D, H J, L	Collection System Failure	*Surfactants*
RIO YAGÜEZ PRWR79A	RIO YAGÜEZ PRWE79A	0.0192	SB		4a	4a	3	N/A	H J	Collection System Failure Urban Runoff/Storm Sewers	
CAÑO BOQUILLA PRWK82A	CAÑO BOQUILLA PRWE82A	0.062	SB		3	3	5	N/A	D H L	Onsite Wastewater Systems	*Dissolved Oxygen* *Surfactants* *Turbidity*

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi.)	Class	2024 Monitoring Stations	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RÍO GRANDE DE AÑASCO PRWR83A	RÍO GRANDE DE AÑASCO PRWE83A	0.2376	SB		4a	4a	3	N/A	H K	Onsite Wastewater Systems	
QUEBRADA GRANDE CALVACHE PRWQ88A	QUEBRADA GRANDE CALVACHE PRWE88A	0.002	SB		4a	4a	5	N/A	D H L	Urban Runoff/Storm Sewers	*Dissolved Oxygen*
QUEBRADA LOS RAMOS PRWQ89A	QUEBRADA LOS RAMOS PRWE89A	0.0006	SB		3	3	3	N/A	H L	Collection System Failure	
RÍO GRANDE PRWR92A	RÍO GRANDE PRWE92A	0.0028	SB		4a	4a	3	N/A	H J, L		
CAÑO DE SANTI PONCE PRWK93A	CAÑO DE SANTI PONCE PRWE93A	0.0032	SB		4a	4a	3	N/A	H J L	Onsite Wastewater Systems	
RÍO GUAYABO PRWR94A	RÍO GUAYABO PRWE94A	0.0288	SB		4a	4a	5	N/A	D H, J	Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Dissolved Oxygen*
RÍO CULEBRINAS PRWR95A	RÍO CULEBRINAS PRWE95A	0.1344	SB		4a	4a	3	N/A	H K	Onsite Wastewater Systems Upstream Impoundment	

Notes:

Bold and Red causes were listed into 2024 Cycle (New added causes).

Italicized and black causes were listed into and/or prior to 2024 Cycle. (Old causes)

A - Watershed that has an approved TMDL for Río Cibuco, the TMDL was approved in September 2002, the pollutant was Fecal Coliform.

B - Watershed that has an approved TMDL for Río de la Plata, the TMDL was approved in September 2003, the pollutant was Fecal Coliform.

D - Watershed and subwatershed that do not have a permanent monitoring station but were included in prior cycles as part of the 303(d) List by a synoptic study or special monitoring project.

F - Watersheds that have approved TMDL in September 2012, the pollutant was Fecal Coliform.

H - If the Monitoring Station column is left blank, the Assessment Unit was not monitored for 2024 cycle

J - Watersheds that have approved TMDL in September 2011, the pollutant was Fecal Coliform

K - Watersheds that have an approved TMDL in September 2010, the pollutant was Fecal Coliform. The watersheds are Río Grande de Arecibo, Río Grande de Manatí, Río Grande de Añasco and Río Culebrinas.

L – Watershed and subwatersheds, are waterbodies that lack adequate flow, which impaired some of the designated uses.

R1 - Primary Contact Recreation

R2 - Secondary Contact Recreation

AL - Aquatic Life

DW - Raw Source for Drinking Water
N/A - Not applicable

San Juan Bay Estuary System

Table 29: Size of Waters Impaired by Causes San Juan Bay Estuary System

Causes of Impairments 2021-2023 Cycle		Causes of Impairments Summary
Causes of Impairments	**Size of Waters Impaired (sq. mi., miles)**	**Size of Waters Impaired (sq. mi., miles)**
Ammonia	0	0
Chromium VI	0	3.8340 sq. mi.
Copper	0.1009 sq. mi.	0.1009 sq. mi., 18.8 mi.
Dissolved Oxygen	3.8340 sq. mi., 18.8 mi.	3.8340 sq. mi., 18.8 mi.
Enterococci	3.8340 sq. mi.	3.8340 sq. mi., 18.8 mi.
Lead	0.1009 sq. mi.	0.1009 sq. mi.
Mercury	3.8340 sq. mi.	3.8340
Oil and Grease	3.8340 sq. mi.,18.8 mi	3.8340 sq. mi. 18.8 mi.
pH	3.7331 sq. mi., 18.8 mi.	3.7331 sq. mi., 18.8 mi.
Surfactants	0.1009 sq. mi.	0.1009 sq. mi.
Temperature	3.8340 sq. mi., 18.8 mi.	3.8340 sq. mi., 18.8 mi.
Total, Nitrogen	3.8340 sq. mi.	3.8340 sq. mi.
Total, Phosphorus	3.8340 sq. mi.	3.8340 sq. mi.
Turbidity	3.8340 sq. mi., 18.8 mi.	3.8340 sq. mi., 18.8 mi.

Table 30: Size of Waters Impaired by Sources San Juan Bay Estuary System

Potential Sources of Pollution 2021-2023 Cycle		Potential Sources of Pollution Summary
Potential Sources of Pollution	**Size of Waters Impaired (sq. mi., miles)**	**Size of Waters Impaired (sq. mi., miles)**
Collection System Failure	3.8340 sq. mi., 18.8 mi	3.8340 sq. mi., 18.8 mi
Confined Animal Feeding Operations	3.8340 sq. mi, 18.8 mi	3.8340 sq. mi., 18.8 mi
Landfill	0.1009 sq. mi.	0.1009 sq. mi.
Major Industrial Point Sources	18.8 mi	18.8 mi
Major Municipal Point Sources	18.8 mi	18.8 mi
Marinas and Recreational Boating	18.8 mi	18.8 mi
Onsite Wastewater Systems	3.7331 sq. mi., 18.8 mi	3.7331 sq. mi., 18.8 mi
Urban Runoff/Storm Sewers	3.8340 sq. mi., 18.8 mi	3.8340 sq. mi., 18.8 mi

Table 31: San Juan Bay Estuary System Assessment

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi., miles)	2024 Monitoring Stations NS = Network ED = External Data	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL	DW			
ESTUARY SYSTEM	**PREE13A1** - Caño Control de La Malaria - Bahía de San Juan - Caño San Antonio - Laguna Del Condado - Península La Esperanza	18.8 miles	NS ED – BSJ 1, 2, 3 LC 1, 2 CSA La Malaria PLE	5	5	5	N/A	F M	Collection System Failure Confined Animal Feeding Operations Major Industrial Point Sources Major Municipal Point Sources Marinas and Recreational Boating Onsite Wastewater System Urban Runoff/Storm Sewers	*Copper* *Dissolved Oxygen* *Enterococci* *Oil & Grease* *pH* *Temperature* *Turbidity*
ESTUARY SYSTEM	**PREE13A2** - Río Piedras - Lago Las Curías	0.1009 sq. mi.	NS 89027 50049100 ED – RP 01, 02, 03 RPN Lago Las Curías	5	5	5	5	F M	Collection System Failure Confined Animal Feeding Operations Landfill Urban Runoff/Storm Sewers	*Chromium VI* *Copper* *Dissolved Oxygen* *Enterococci* *Lead* *Surfactants* *Temperature* *Total, Nitrogen* *Total, Phosphorus* *Turbidity* **Mercury** **Oil and Grease**
ESTUARY SYSTEM	**PREE13A3** - Caño Martín Peña - Quebrada Juan Méndez - Quebrada San Antón - Quebrada Blasina - Canal Machicote	3.7331 sq. mi.	NS 50050300 ED – CS 1, 2 CMP LSJ 1, 2 Blasina San Antón Laguna Los Corozos	5	5	5	N/A	M	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater System Urban Runoff/Storm Sewers	Chromium VI *Dissolved Oxygen* *Enterococci* *pH* *Temperature* *Total, Nitrogen* *Total, Phosphorus* *Turbidity*

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi., miles)	2024 Monitoring Stations NS = Network ED = External Data	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL	DW			
	- Canal Suárez - Laguna San José - Laguna Torrecillas - Laguna de Piñones - Laguna Los Corozos		LagunaTorrecilla 1, 2, 3							**Mercury** **Oil and Grease**

Notes:
Bold and Red causes were listed into 2024 Cycle (New added causes).
Italicized and black causes were listed into and/or prior to 2024 Cycle. (Old causes)
F - Watersheds that have approved TMDL in September 2012, the pollutant was Fecal Coliform.
M - External Data
R1 - Primary Contact Recreation
R2 - Secondary Contact Recreation
AL - Aquatic Life
DW - Raw Source for Drinking Water
N/A - Not applicable

Lagoons

Table 32: Size of Waters Impaired by Causes (Monitored square miles for Lagoons)

Causes of Impairments 2021-2023 Cycle		Causes of Impairments Summary
Causes of Impairments	**Size of Waters Impaired (sq. mi.)**	**Size of Waters Impaired (sq. mi.)**
Copper	0	2.6172
Dissolved Oxygen	0	3.8781
Enterococci	0	0.5250
pH	0	1.2703
Temperature	0	0.4016
Turbidity	0	1.4344

Table 33: Size of Waters Impaired by Sources (Monitored and Unmonitored square miles for Lagoons)

Potential Sources of Pollution 2021-2023 Cycle		Potential Sources of Pollution Summary
Potential Sources of Pollution	**Size of Waters Impaired (sq. mi.)**	**Size of Waters Impaired (sq. mi.)**
Landfill	0.0219	0.0219
Marinas and Recreational Boating	0.6234	0.6234
Minor Industrial Point Sources	0.2859	0.2859
Onsite Wastewater Systems	2.3125	2.3125
Unknown Source	2.3657	2.3657
Urban Runoff/Storm Sewers	2.6328	2.6328

Table 34: Lagoons Assessment (Monitored and Unmonitored)

Municipality	Waterbody Name (AU ID)	Class	2024 Monitoring Stations	WB Size (sq. mi.)	Overall Designated Uses and Categories			Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL			
MAYAGÜEZ	Laguna Joyudas PRWN0005	SB		0.5297	4a	4a	5	H J	Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	*Copper* *Dissolved Oxygen*
VEGA BAJA-MANATÍ	Laguna Tortuguero PRNN0006	SE		0.8656	3	3	5	H	Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Dissolved Oxygen*
DORADO	Laguna Mata Redonda PRNN0007	SB		0.0234	3	3	5	H	Urban Runoff/Storm Sewers	*Dissolved Oxygen* *pH*
FAJARDO	Laguna Aguas Prietas PREN0011	SB		0.2	3	3	5	H	Unknown Source	*Copper* *Dissolved Oxygen* *Turbidity*
FAJARDO	Laguna Grande PREN0012	SB		0.3375	5	5	5	H	Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Dissolved Oxygen* *Enterococci* *pH*
CEIBA	Laguna Ceiba PREN0013	SB		0.1875	5	5	5	H	Unknown Source	*Copper* *Dissolved Oxygen* *Enterococci* *pH*
GUAYAMA	Laguna Pozuelo PRSN0014	SB		0.0547	3	3	5	H	Unknown Source Urban Runoff/Storm Sewers	*Copper* *Dissolved Oxygen* *pH* *Temperature*
SALINAS	Laguna Mar Negro PRSN0015	SB		0.325	3	3	5	H	Urban Runoff/Storm Sewers Unknown Source	*Copper* *Dissolved Oxygen* *pH*
SALINAS	Laguna Punta Arenas PRSN0016	SB		0.0281	3	3	5	H	Unknown Source Urban Runoff/Storm Sewers	*Copper* *Dissolved Oxygen* *Temperature* *Turbidity*

Municipality	Waterbody Name (AU ID)	Class	2024 Monitoring Stations	WB Size (sq. mi.)	Overall Designated Uses and Categories			Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL			
SALINAS	Laguna Tiburones PRSN0017	SB		0.0219	3	3	5	H	Landfill Unknown Source	*Copper* *Dissolved Oxygen* *pH* *Temperature* *Turbidity*
PONCE	Laguna Salinas PRSN0018	SB		0.1203	3	3	5	H	Onsite Wastewater Systems Unknown Source	*Copper* *Dissolved Oxygen*
CABO ROJO	Laguna Salinas I (Fraternidad) PRSN0019	SB		0.4594	3	3	5	H	Onsite Wastewater Systems Unknown Source	*Copper* *Dissolved Oxygen* *Turbidity*
CABO ROJO	Laguna Cabo Rojo 2 (Candelaria) PRSN0020	SB		0.2969	3	3	5	H	Unknown Source	*Copper* *Dissolved Oxygen* *Temperature* *Turbidity*
CABO ROJO	Laguna Cabo Rojo 3 (El Faro) PRSN0021	SB		0.1078	3	3	5	H	Unknown Source	*Copper* *Dissolved Oxygen* *Turbidity*
CABO ROJO	Caño Boquerón PRSN0022	SB		0.2859	3	3	5	H	Marinas and Recreational Boating Minor Industrial Point Sources Unknown Source	*Copper* *Dissolved Oxygen* *pH* *Turbidity*
CABO ROJO	Laguna Guaniquilla PRSN0023	SB		0.0344	3	3	5	H	Unknown Source	*Dissolved Oxygen* *pH* *Turbidity*
LAJAS	Laguna Cartagena PRSN0024	SE		0.4688	3	3	3	H	Urban Runoff/Storm Sewers	

Notes:
Bold and Red causes were listed into 2024 Cycle (New added causes).
Italicized and black causes were listed into and/or prior to 2024 Cycle. (Old causes)
H - If the Monitoring Station column is left blank, the Assessment Unit was not monitored for 2024 cycle.
J - Watersheds that have approved TMDL in September 2011, the pollutant was Fecal Coliform.
R1 - Primary Contact Recreation
R2 - Secondary Contact Recreation
AL - Aquatic Life

Lakes

Table 35: Size of waters Impaired by Causes (Monitored Acres for Lakes)

Causes of Impairments 2021-2023 Cycle		Causes of Impairments Summary
Causes of Impairments	**Size of Waters Impaired (acres)**	**Size of Waters Impaired (acres)**
Arsenic	0	1,194
Copper	0	2,500
Dissolved Oxygen	7,269	7,323
Enterococci	0	35
Lead	0	1,726
Mercury	0	35
Pesticides	0	2,133
pH	3,888	6,301
Surfactants	0	634
Temperature	4,090	4,790
Total, Nitrogen	5,772	6,849
Total, Phosphorus	4,365	7,269
Turbidity	4,446	5,080

Table 36: Size of waters Impaired by Sources (Monitored Acres for Lakes)

Potential Sources of Pollution 2021-2023 Cycle		Potential Sources of Pollution Summary
Potential Sources of Pollution	**Size of Waters Impaired (acres)**	**Size of Waters Impaired (acres)**
Agriculture	3,680	3,680
Collection System Failure	1,914	1,914
Confined Animal Feeding Operations	3,870	3,870
Landfill	560	560
Major Industrial Point Sources	285	285
Minor Industrial Point Sources	2,949	2,949
Onsite Wastewater Systems	6,623	6,623
Unknown Source	108	1,232
Urban Runoff/Storm Sewers	1,413	1,413

Table 37: Lakes Assessment

Basin	Waterbody Name (AU ID)	Waterbody Size (acres)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RIO GUAJATACA	LAGO GUAJATACA PRNL3A1	1000	SD	NS 10720 10790 10790C	4a	4a	5	5	F	Confined Animal Feeding Operations Minor industrial Point Sources Onsite Wastewater Systems	*Dissolved Oxygen* *pH* *Temperature* *Total, Nitrogen* *Total, Phosphorus*
RIO GRANDE DE ARECIBO	LAGO DOS BOCAS PRNL$_1$7A1	634	SD	NS 25110 27090 27090E	4a	4a	5	5	K N	Agriculture Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems Unknown Source (9000)	*Arsenic* *Copper* *Dissolved Oxygen* *pH* *Surfactants* *Temperature* *Total, Nitrogen* *Total, Phosphorus* *Turbidity*
RIO GRANDE DE ARECIBO	LAGO CAONILLAS PRNL$_2$7C1	700	SD	NS 89001 89002 89003	4a	4a	5	5	K	Agriculture Onsite Wastewater Systems	*Copper* *Dissolved Oxygen* *Pesticides* *Total, Nitrogen* *Total, Phosphorus* **Turbidity**
RIO GRANDE DE ARECIBO	LAGO GARZAS PRNL$_3$7A3	108	SD	NS 20050	4a	4a	5	5	K	Agriculture Onsite Wastewater Systems	*Copper* *Dissolved Oxygen* *Lead* *Pesticides* *Total, Phosphorus* **pH**
RIO GRANDE DE MANATÍ	LAGO GUINEO PRNL$_1$8C1	54	SD		4a	4a	5	5	H K	Agriculture Onsite Wastewater Systems	*Dissolved Oxygen* *Pesticides*

Basin	Waterbody Name (AU ID)	Waterbody Size (acres)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RIO GRANDE DE MANATÍ	LAGO MATRULLAS $PRNL_28C1$	77	SD	NS 89009 89010	4a	4a	5	5	K	Agriculture Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems	*Copper* *Dissolved Oxygen* *Lead* *pH* *Total, Nitrogen* *Total, Phosphorus* **Turbidity**
RIO DE LA PLATA	LAGO DE LA PLATA $PREL_110A1$	560	SD	NS 44400 44950 44950C	4a	4a	5	5	B N	Collection System Failure Confined Animal Feeding Operations Landfill Onsite Wastewater Systems	*Arsenic* *Dissolved Oxygen* *Lead* *pH* *Temperature* *Total, Nitrogen* *Total, Phosphorus* **Turbidity**
RIO DE LA PLATA	LAGO CARITE $PREL_210A5$	333	SD	NS 39900 39950 39950C	4a	4a	5	5	B	Confined Animal Feeding Operations Onsite Wastewater Systems	*Dissolved Oxygen* *pH* *Total, Phosphorus* *Total, Nitrogen* **Turbidity**
RIO BAYAMON	LAGO CIDRA PREL12A2	268	SD	NS 89029 89030 89031	4a	4a	5	5	F	Collection System Failure Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems	*Copper* *Dissolved Oxygen* *Lead* *Total, Nitrogen* *Total, Phosphorus* **Turbidity**

Basin	Waterbody Name (AU ID)	Waterbody Size (acres)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RIO GRANDE DE LOIZA	LAGO LOIZA PREL14A1	713	SD	NS 57500 58800 58800D	4a	4a	5	5	C	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper* *Dissolved Oxygen* *Lead* *pH* *Temperature* *Total, Nitrogen* *Total, Phosphorus* *Turbidity*
RIO GRANDE DE PATILLAS	LAGO PATILLAS PRSL43A1	312	SD	NS 89022 89023 89024	4a	4a	5	5	J	Agriculture Onsite Wastewater Systems	*Dissolved Oxygen* *Pesticides* *pH* *Temperature* *Total, Phosphorus*
QUEBRADA MELANIA	LAGO MELANIA PRSL50A	35	SD	NS 89026	4a	4a	5	5	J	Agriculture Onsite Wastewater Systems	*Enterococci* *Mercury* *Pesticides* *Temperature* *Total, Nitrogen* *Total, Phosphorus* **Dissolved Oxygen** **pH** **Turbidity**
RIO JACAGUAS	LAGO GUAYABAL PRSL$_{1}$60A1	373	SD	NS 89011 89012 89013	4a	4a	5	5	F	Agriculture Collection System Failure Minor Industrial Point Sources Onsite Wastewater Systems	*Dissolved Oxygen* *Pesticides* *pH* *Total, Nitrogen* *Total, Phosphorus* **Turbidity**

Basin	Waterbody Name (AU ID)	Waterbody Size (acres)	Class	2024 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
RIO JACAGUAS	LAGO TOA VACA PRSL$_2$60A1	836	SD	NS 89014 89015 89016	4a	4a	5	5	F	Agriculture Onsite Wastewater Systems	*Dissolved Oxygen* pH *Total, Nitrogen* *Total, Phosphorus* *Temperature* ***Turbidity***
RIO BUCANA-CERRILLOS	LAGO CERRILLOS PRSL62A1	700	SD	NS 89032 89033 89034	4a	4a	5	5	J	Urban Runoff/Storm Sewers	*Dissolved Oxygen* *pH* *Temperature* *Total, Nitrogen* *Total, Phosphorus*
RIO YAUCO	LAGO LUCHETTI PRSL68A1	266	SD	NS 89017 89018 89019	4a	4a	5	5	F	Agriculture Onsite Wastewater Systems	*Dissolved Oxygen* *Pesticides* *pH* *Total, Nitrogen* *Total, Phosphorus* *Turbidity*
RIO LOCO	LAGO LOCO PRSL69A	69	SD	NS 89021C	4a	4a	5	5	F	Onsite Wastewater Systems	*Dissolved Oxygen* *pH* *Total, Nitrogen* *Total, Phosphorus*
RIO GRANDE DE AÑASCO	LAGO GUAYO PRWL83H	285	SD	NS 89004 89005 89006	4a	4a	5	5	K	Agriculture Confined Animal Feeding Operations Major Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems	*Dissolved Oxygen* *Pesticides* *pH* *Total, Nitrogen* *Total, Phosphorus* *Turbidity*

Notes:

Bold and Red causes were listed into 2024 Cycle (New added causes).

Italicized and black causes were listed into and/or prior to 2024 Cycle. (Old causes)

B - Watershed that has an approved TMDL for Río de la Plata, the TMDL was approved in September 2003, the pollutant was Fecal Coliform.
C - Watershed that has an approved TMDL for Río Grande de Loíza, the TMDL was approved in September 2007, the pollutant was Fecal Coliform.
F - Watersheds that have approved TMDL in September 2012, the pollutant was Fecal Coliform.

H - If the Monitoring Station column is left blank, the Assessment Unit was not monitored for 2024 cycle.
J - Watersheds that have approved TMDL in September 2011, the pollutant was Fecal Coliform.
K - Watersheds that have an approved TMDL in September 2010, the pollutant was Fecal Coliform. The watersheds are Río Grande de Arecibo, Río Grande de Manatí, Río Grande de Añasco, Río Culebrinas.
N - Remains in 2020 303(d) list due to old segmentation evaluation.
R1 - Primary Contact Recreation
R2 - Secondary Contact Recreation
AL - Aquatic Life
DW - Raw Source for Drinking Water

Coastal Shoreline

Table 38: Size of Waters Impaired by Causes (Monitored Miles for Coastal Waters)

Causes of Impairments 2021-2023 Cycle		Causes of Impairments Summary
Causes of Impairments	**Size of Waters Impaired (miles)**	**Size of Waters Impaired (miles)**
Arsenic	0	49.19
Copper	0	380.83
Dissolved Oxygen	43.9	92.65
Enterococci	212.8	331.0
Fecal Coliforms	0	7.79
Lead	0	152.17
Mercury	0	213.37
Nickel	0	170.90
Oil and Grease	0	82.42
pH	50.5	190.52
Temperature	196.9	280.8
Thallium	0	203.74
Turbidity	248.3	434.94
Zinc	0	43.80

Table 39: Size of Waters Impaired by Sources (Monitored and Unmonitored Coastal waters)

Potential Sources of Pollution 2021-2023 Cycle		Potential Sources of Pollution Summary
Potential Sources of Pollution	**Size of Waters Impaired (miles)**	**Size of Waters Impaired (miles)**
Agriculture	40.96	40.96
Collection System Failure	39.80	39.80
Debris and bottom deposits	100.30	100.30
Hazardous wastes	100.30	100.30
Highway/Road/Bridge Construction	4.20	4.20
Landfills	7.00	7.0
Major Industrial Point Sources	107.27	107.27
Major Municipal Point Sources	74.22	74.22
Marinas and Recreational Boating	211.13	211.13
Minor Municipal Point Sources	98.19	98.19
Onsite Wastewater Systems	436.49	436.49
Surface Mining	7.50	7.50
Unknown Source	91.29	91.29
Upstream Impoundment	138.01	138.01
Urban Runoff/Storm Sewer	373.14	373.14

Table 40: Coastal Shoreline Waters Assessment (Monitored and Unmonitored waters)

Waterbody Name (AU ID)	Size of AU (miles)	Class	2024 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PRNC01 (Punta Borinquén to Punta Sardina)	11.75	SB	NS MAC-044 SBZ-003 SBZ-004 SBZ-005	1	1	5		Onsite Wastewater Systems	Copper Thallium
PRNC02 (Punta Sardina to Punta Manglillo)	14.1	SB	NS MAC-047 MAC-086 SBZ-006	5	5	5		Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper Enterococci Lead Thallium Turbidity*
PRNC03 (Punta Manglillo to Punta Morrillos)	9.65	SB	NS SBZ-007 SEG3-01	5	5	5		Collection System Failure Onsite Wastewater Systems Upstream Impoundment Urban Runoff/Storm Sewers	*Copper Enterococci Temperature Turbidity*
PRNC04 (Punta Morrillos to Punta Manatí)	13.66	SB	NS MAC-049 MAC-055 SBZ-008	5	5	5		Collection System Failure Onsite Wastewater Systems Upstream Impoundment Urban Runoff/Storm Sewers	*Copper Enterococci Mercury Nickel pH Thallium Turbidity*
PRNC05 (Punta Manatí to Punta Chivato)	7.46	SB	NS SBZ-010 SEG5-01	5	5	5		Unknown Source	*Copper Enterococci Mercury pH Thallium Turbidity* **Temperature**
PRNC06 (Punta Chivato to Punta Puerto Nuevo)	3.23	SB	NS MAC-087 RW-23	5	5	5		Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	*Copper Enterococci Mercury Temperature Turbidity*

Waterbody Name (AU ID)	Size of AU (miles)	Class	2024 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PRNC07 (Punta Puerto Nuevo to Punta Cerro Gordo)	5.05	SB	NS MAC-088 SEG7-01 RW-17	1	1	5		Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	*Copper* *Mercury* *pH* *Temperature* *Turbidity*
PRNC08 (Punta Cerro Gordo to Punta Boca Juana)	7.32	SB	NS SBZ-013 SBZ-014 RW-18	5	5	5		Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	*Arsenic* *Copper* *Enterococci* *Lead* *Nickel* *Turbidity* Zinc
PREC09 (Punta Boca Juana to Punta Salinas)	5.78	SB	NS MAC-077 SEG9-01 RW-19	5	5	5		Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	*Arsenic* *Copper* *Enterococci* *Lead* *Nickel* *Turbidity* *pH*
PREC10B (Punta Salinas to Río Bayamón Mouth)	2.91	SB	NS MAC-063	5	5	5		Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper* *Enterococci* *Lead* *Mercury* *Nickel* *Turbidity*
PREC10C (Río Bayamon Mouth to Isla de Cabras)	6.63	SB	NS SEG10C-01 SEG10C-02	5	5	5		Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper* *Enterococci* *Lead* *Mercury* *Nickel* *pH* *Temperature* *Thallium* *Turbidity* *Zinc*

Waterbody Name (AU ID)	Size of AU (miles)	Class	2024 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PREC11 (Isla de Cabras to Punta del Morro)	7.79	SB		5	5	5	H	Major Industrial Point Sources Major Municipal Point Sources Marinas and Recreational Boating Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Arsenic* *Copper* *Dissolved Oxygen* *Fecal Coliforms*
PREC12 (Punta del Morro to West side of Condado Bridge)	3.5	SB	NS SBZ-018, SBZ-019, RW-20B, RW-20A, ED- CariCoos Buoy	5	5	1	M		*Enterococci* *pH* *Turbidity* **Temperature**
PREC13 (East side of Condado Bridge to Punta Las Marías)	4.31	SB	NS B-1 B-2 RW-26 RW-27	5	5	5		Urban Runoff/Storm Sewers	*Copper* *Enterococci* *Lead* *Mercury* *Temperature* *Thallium* *Turbidity*
PREC14 (Punta Las Marías to Punta Cangrejos)	4.19	SB	NS EB-40 B-3 SEG14-01 SEG14-02 RW-21C	1	1	5		Marinas and Recreational Boating Urban Runoff/Storm Sewers	*Arsenic* *Copper* *Lead* *Temperature* *Thallium* *Turbidity*
PREC15 (Punta Cangrejos to Punta Vacía Talega)	6.23	SB	NS SBZ-024 SBZ-026	5	5	5		Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Arsenic* *Copper* *Enterococci* *Mercury* *Nickel* *Thallium* *Temperature* *Turbidity*

Waterbody Name (AU ID)	Size of AU (miles)	Class	2024 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PREC16 (Punta Vacía Talega to Punta Miquillo)	9.46	SB	NS SBZ-027 SBZ-028	5	5	5		Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Arsenic* *Copper* *Enterococci* *Lead* *Mercury* *Nickel* *Temperature* *Thallium* *Turbidity* *Zinc*
PREC17 (Punta Miquillo to Punta La Bandera)	8.41	SB	NS MAC-009 SEG17-01 RW-1A RW-1C	1	1	5		Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper* *Mercury* *Temperature* *Turbidity*
PREC18 (Punta La Bandera to Cabezas de San Juan)	10.46	SB	NS MAC-010 SBZ-030 RW-2	1	1	5		Unknown Source	*Copper* *pH* *Temperature* *Thallium* *Turbidity*
PREC19 (Cabezas de San Juan to Punta Barrancas)	7.08	SB	NS MAC-078	5	5	5		Marinas and Recreational Boating Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	*Copper* *Enterococci* *Oil & Grease* *Temperature* *Turbidity*
PREC20 (Punta Barrancas to Punta Medio Mundo)	5.33	SB	NS SEG20-01 SEG20-02	5	5	5		Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper* *Dissolved Oxygen* *Enterococci* *Temperature* *Thallium* *Turbidity*
PREC21 (Punta Medio Mundo to Punta Puerca)	3.0	SB		3	3	3	H		

Waterbody Name (AU ID)	Size of AU (miles)	Class	2024 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PREC22 (Punta Puerca to Isla Cabras)	3.3	SB		3	3	3	H		
PREC23 (Isla Cabras to Punta Cascajo)	8.83	SB	NS SEG23-01	1	1	5		Major Industrial Point Sources Marinas and Recreational Boating	*Copper* *Turbidity*
PREC24 (Punta Cascajo to Punta Lima)	9.07	SB	SEG24-02	5	5	5		Major Industrial Point Sources Upstream Impoundment	*Copper* *Dissolved Oxygen* *Enterococci* *Temperature* *Turbidity*
PREC25 (Punta Lima to Morro de Humacao)	9.83	SB	NS MAC-080 MAC-081 SEG25-01 RW-4 RW-31	5	5	5		Major Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper* *Enterococci* *Mercury* *Temperature* *Turbidity*
PREC26 (Morro de Humacao to Punta Candelero)	1.84	SB	NS SEG26-01	5	5	5		Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper* *Enterococci* *Temperature* *Turbidity*
PREC27 (Punta Candelero to Punta Guayanés)	3.74	SB	NS SEG27-01	5	5	5		Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Arsenic* *Copper* *Enterococci* *Thallium* *Turbidity*
PREC28B (Punta Quebrada Honda to Punta Yeguas)	0.74	SB	NS SBZ-038	5	5	5		Onsite Wastewater Systems Unknown Source	*Copper* *Enterococci* *Thallium* *Turbidity*

Waterbody Name (AU ID)	Size of AU (miles)	Class	2024 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PREC28C (Punta Guayanés to Punta Quebrada Honda)	4.68	SB	NS MAC-012 SBZ-037	5	5	5		Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Arsenic* *Copper* *Enterococci* *Mercury* *Oil & Grease* *Temperature* *Thallium* *Turbidity*
PREC29 (Punta Yeguas to Punta Tuna)	4.35	SB	NS SEG29-01 SEG29-02	5	5	5		Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	*Copper* *Enterococci* *Lead* *pH* *Thallium* *Turbidity* **Temperature**
PREC30 (Punta Tuna to Cabo Mala Pascua)	2.65	SB	NS MAC-082	5	5	5		Unknown Source	*Copper* *Enterococci* *Turbidity*
PRSC31 (Cabo Mala Pascua to Punta Viento)	4.06	SB	SEG31-01	5	5	5		Onsite Wastewater Systems Upstream Impoundment Urban Runoff/Storm Sewers	*Copper* *Enterococci* *Temperature* *Thallium* *Turbidity*
PRSC32 (Punta Viento to Punta Figuras)	6.16	SB	NS MAC-083 SBZ-040 RW-6 RW-7	5	5	5		Onsite Wastewater Systems Upstream Impoundment Urban Runoff/Storm Sewers	*Copper* *Dissolved Oxygen* *Enterococci* *Mercury* *Temperature* *Thallium* *Turbidity*

Waterbody Name (AU ID)	Size of AU (miles)	Class	2024 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PRSC33 (Punta Figuras to Punta Ola Grande)	8.1	SB	NS MAC-017 SEG33-01	5	5	5		Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper* *Enterococci* *Lead* *Mercury* *Temperature* *Turbidity*
PRSC34 (Punta Ola Grande to Punta Petrona)	40.96	SB	NS MAC-019 SEG34-01 SEG34-02 ED - Stations 09, 10, 19 and 20 from Natural Reserve of Jobos Bay	5	5	5	M	Agriculture Major Industrial Point Sources Onsite Wastewater Systems Upstream Impoundment Urban Runoff/Storm Sewers	*Copper* *Dissolved Oxygen* *Enterococci* *Lead* *Mercury* *Nickel* *Oil & Grease* *pH* *Temperature* *Turbidity*
PRSC35 (Punta Petrona to Punta Cabullones)	16.19	SB	NS MAC-020 SEG35-01 SEG35-02 ED - CariCoos Buoy	5	5	5	M	Major Municipal Point Sources Onsite Wastewater Systems Upstream Impoundment Urban Runoff/Storm Sewers	*Copper* *Enterococci* *Lead* *Mercury* *Nickel* *Thallium* *Turbidity* *Zinc*
PRSC36B (Punta Cabullones to Punta Carenero)	2.53	SB	NS SEG36B-01	1	1	5		Major Municipal Point Sources Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper* *Enterococcus* *Mercury* *pH* *Temperature* *Turbidity*
PRSC36C (Punta Carenero to Punta Cuchara)	6.70	SB	NS MAC-022 MAC-023	5	5	5		Major Municipal Point Sources Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper* *Enterococci* *Mercury* *Oil & Grease* *Turbidity*

Waterbody Name (AU ID)	Size of AU (miles)	Class	2024 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PRSC37B (Punta Cuchara to Cayo Parguera)	3.3	SB	NS MAC-084	5	5	5		Surface Mining Unknown Source Upstream Impoundment Urban Runoff/Storm Sewers	*Copper* *Enterococci* *Mercury* *Nickel* *pH* *Turbidity*
PRSC37C (Cayo Parguera to Punta Guayanilla)	4.2	SB	NS MAC-024 MAC-025	5	5	5		Major Industrial Point Sources Major Municipal Point Sources Marinas and Recreational Boating Onsite Wastewater Systems Surface Mining Upstream Impoundment Urban Runoff/Storm Sewers	*Copper* *Lead* *Mercury* *Nickel* *Oil & Grease* *Thallium* *Turbidity* *Zinc*
PRSC38 (Punta Guayanilla to Punta Verraco)	13.2	SB	NS MAC-027 MAC-028 MAC-089	5	5	5		Major Municipal Point Sources Marinas and Recreational Boating Onsite Wastewater Systems Upstream Impoundment Urban Runoff/Storm Sewers	*Copper* *Mercury* *Enterococci* *Oil & Grease* *Temperature* *Thallium* *Turbidity*
PRSC39 (Punta Verraco to Punta Ballena)	6.41	SB	NS MAC-030 SEG39-01 G1	1	1	5		Unknown Source	*Copper* *Thallium* *Turbidity*
PRSC40 (Punta Ballena to Punta Brea)	13.26	SB	NS MAC-034 MAC-085 RW-9	1	1	5		Marinas and Recreational Boating Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper* *Enterococci* *Nickel* *pH* *Temperature* *Turbidity*

Waterbody Name (AU ID)	Size of AU (miles)	Class	2024 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PRSC41B1 (Punta Brea to Bahía Fosforescente La Parguera)	10.93	SB	NS SBZ-045 SEG41B1-01 RW-10	1	1	5		Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper* *Enterococci* *pH* *Temperature* *Thallium* *Turbidity*
PRSC41A1 (Bahía Fosforescente La Parguera)	2.0	SA		3	3	3	H		
PRSC41B2 (Bahía Fosforescente La Parguera to Punta Cueva de Ayala)	7.0	SB	NS SBZ-046 SEG41B2-01 RW-33	1	1	5	M	Landfill Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper* *Dissolved Oxygen* *Enterococci* *pH* *Temperature* *Thallium* *Turbidity*
PRSC41A2 (Bahía Monsio José)	3.72	SA		3	3	3	H		
PRSC41B3 (Bahía Monsio José to Faro de Cabo Rojo)	13.45	SB	NS SEG41B3-01 SEG41B3-02	5	5	5		Unknown Source	*Dissolved Oxygen* *Enterococci* *Mercury* *Nickel* *Temperature* *Thallium* *Turbidity*
PRWC42 (Faro de Cabo Rojo to Punta Águila)	2.89	SB	NS SEG42-01	1	1	5		Unknown Source	*Dissolved Oxygen* *Enterococci* *pH* *Temperature* *Turbidity*

Waterbody Name (AU ID)	Size of AU (miles)	Class	2024 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PRWC43 (Punta Águila to Punta Guaniquilla)	9.54	SB	NS MAC-037 SBZ-047, SBZ-048 RW-12A RW-12B RW-13 RW-14A	1	1	5		Collection System Failure Marinas and Recreational Boating Minor Municipal Point Sources Onsite Wastewater Systems	*Enterococci* *Temperature* *Turbidity*
PRWC44 (Punta Guaniquilla to Punta La Mela)	2.5	SB	NS SBZ-050 SBZ-051, RW-8	1	1	5		Onsite Wastewater Systems	*Enterococci* *pH* *Temperature* *Thallium* *Turbidity*
PRWC45 (Punta La Mela to Punta Carenero)	2.95	SB	NS SEG45-01	5	5	5		Collection System Failure Marinas and Recreational Boating Onsite Wastewater Systems	*Copper* *Enterococci* *Lead* *Thallium* *Turbidity*
PRWC46 (Punta Carenero to front of Cayo Ratones)	4.0	SB	NS SBZ-052	5	5	5		Collection System Failure Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper* *Lead* *Temperature* *Thallium* *Turbidity*
PRWC47 (In front of Cayo Ratones to Punta Guanajibo)	3.85	SB	NS SEG47-01	1	1	5		Onsite Wastewater Systems	*Copper* *Nickel* *Turbidity* **Temperature**
PRWC48 (Punta Guanajibo to Punta Algarrobo)	5.6	SB	NS MAC-038 MAC-040	5	5	5		Onsite Wastewater Systems Upstream Impoundment Urban Runoff/Storm Sewers	*Copper* *Enterococci* *Lead* *Mercury* *Nickel* *Oil & Grease* *pH* *Thallium* *Turbidity* **Temperature**

Waterbody Name (AU ID)	Size of AU (miles)	Class	2024 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PRWC49 (Punta Algarrobo to Punta Cadena)	6.98	SB	NS MAC-041 SEG49-01 RW-15	5	5	5		Major Municipal Point Sources Onsite Wastewater Systems Upstream Impoundment Urban Runoff/Storm Sewers	*Copper* *Enterococci* *Nickel* *pH* *Temperature* *Turbidity*
PRWC50 (Punta Cadena to Punta Higüero)	4.98	SB	NS SBZ-054 SBZ-055 RW-5	5	5	5		Onsite Wastewater Systems Unknown Source Upstream Impoundment	*Copper* *Enterococci* *Lead* *Mercury* *Nickel* *Turbidity* *pH* **Temperature**
PRWC51 (Punta Higüero to Punta del Boquerón)	6.14	SB	NS SEG51-01 SEG51-02 RW-22	5	5	5		Onsite Wastewater Systems Unknown Source	*Copper* *Enterococci* *Lead* *Mercury* *Nickel* *Turbidity*
PRWC52 (Punta del Boquerón to Punta Borinquén)	6.8	SB	NS MAC-043 SBZ-002 SBZ-003 SBZ004 RW-16 RW-16A	1	1	5		Major Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	*Copper* *Turbidity*
PRCC53 (Culebra Island)	32.7	SB	NS RW-3	2	2	5	H	Debris and bottom deposits Hazardous Wastes Marinas and Recreational Boating Onsite Wastewater Systems	*pH* *Turbidity*
PRVC54A (Bahía Mosquito)	3.0	SA		3	3	3	H		

Waterbody Name (AU ID)	Size of AU (miles)	Class	2024 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PRVC54B (Vieques Island)	67.6	SB		1	1	2		Debris and bottom deposits Hazardous Wastes Marinas and Recreational Boating Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	
PRMC55 (Mona Island)	18.6	SB		3	3	3	H		

Notes:
Bold and Red causes were listed into 2024 Cycle (New added causes).
I*talicized and black causes were listed into and/or prior to 2024 Cycle. (Old causes)*

H - If the Monitoring Station column is left blank, the Assessment Unit was not monitored for 2024 cycle.
M – External Data
R1 - Primary Contact Recreation
R2 - Secondary Contact Recreation
AL - Aquatic Life

PART C. CWA Section 314 (Clean Lakes Program)

The reservoirs in PR were constructed in the main rivers basins to store water for domestic and industrial consumption, irrigation, production of electrical power, floods control, and recreation. The recreational activities performed in the reservoirs include direct contact (swimming), indirect contact (recreational fishing and strolls in boats). Also, and more important is that lakes are mostly used as raw sources of drinking water supply and for protection and propagation of fish, shellfish, and wildlife (aquatic life).

The Clean Lakes Monitoring Network operated by DNRE monitors the water quality in the 18 major lakes or reservoirs that are mostly used as raw sources of drinking water (Table 12). Water quality monitoring is also used to identify trends in lake water quality improvement or contamination and to update lake trophic status.

Lakes trophic status is determined as follows. Table 41 to

Table **43** show the criteria for the determination of the trophic status.

Oligotrophic (O) - Low levels of nutrients in lakes, poor primary production, and sunlight.
Mesotrophic (M) - Moderate levels of nutrients in lakes, primary production, and moderate penetration of sunlight.
Eutrophic (E) - High levels of nutrients, high primary production, dense aquatic plants growth, low sunlight penetration.

Table 41: OPSI/CEPIS Criteria for the Determination of the Trophic Status

Trophic Status	**Phosphorus concentration** (mg/L)
Oligotrophic (O)	< 0.03
Mesotrophic (M)	0.03 – 0.05
Eutrophic (E)	> 0.05

Table 42: Trophic Status of Significant Lakes/Reservoirs

Description	**Number of Lakes/Reservoirs**	**Acres of Lakes/Reservoirs**
Total in State	19 *	7,378
Assessed	18 **	7,324
Oligotrophic	7	3,688
Mesotrophic	3	220
Eutrophic	8	3,416

* Including Las Curias Lake (55 acres) (SJBES)
** Lago Guineo (54 acres) not assess for this cycle

Table 43: Puerto Rico Lakes Trophic Status

Lake	Lake Size (acres)	AU	Trophic Status[1] [P mg/L][2]	
			2022 Cycle (Oct.2019-Sept. 2021)	2024 Cycle (Oct.2021-Sept.2023)
Guajataca	1000	PRNL3A1	(0.08) E	0.01 O
Dos Bocas	634	$PRNL_17A1$	(0.13) E	0.14 E
Caonillas	700	$PRNL_27C1$	(0.06) E	0.02 O
Garzas	108	$PRNL_37A3$	(0.38) E	0.04 M
Matrullas	77	$PRNL_28C1$	(0.04) M	0.07 M
La Plata	560	$PREL_110A1$	(0.04) M	0.14 E
Carite	333	$PREL_210A5$	(0.03) M	0.01 O
Cidra	268	PREL12A2	(0.10) E	0.02 O
Las Curias	55	PREE13A2	(0.10) E	0.11 E
Loíza	713	PREL14A1	(0.18) E	0.18 E
Patillas	312	PRSL43A1	(0.04) M	0.11 E
Melanía	35	PRSL50A	(0.10) E	0.03 M
Guayabal	373	$PRSL_160A$	(0.08) E	0.07 E
Toa Vaca	836	$PRSL_260A$	(0.04) M	0.02 O
Cerrillos	700	PRSL62A	(0.06) E	0.07 E
Luchetti	266	PRSL68A1	(0.09) E	0.02 O
Loco	69	PRSL69A	(0.02) O	0.18 E
Guayo	285	PRWL83H	Not assessed	0.02 O

(1) LAKES TROPHIC STATUS:

Oligotrophic (O) - Low levels of nutrients in lakes, poor primary production, and sunlight.

Mesotrophic (M) - Moderate levels of nutrients in lakes, primary production, and moderate penetration of sunlight.

Eutrophic (E) - High levels of nutrients, high primary production, dense aquatic plants growth, low sunlight penetration.

(2) Phosphorous value corresponds to the average data during two-year period.

Following is the trend analysis for low dissolved oxygen (DO) for each monitored lake (Table 44). This trend analysis was based on *Oficina Panamericana de la Salud e Ingeniería / Centro Panamericano de Ingeniería Sanitaria y Ciencias del Ambiente* (OPSI/CEPIS, in spanish) criteria.

Table 44: Trend Analysis for Low Dissolve Oxygen Parameter in Puerto Rico Lakes

Lakes	Lake Size (acres)	DO* (mg/L)			Trend
		2020 Cycle	2022 Cycle	2024 Cycle	
Caonillas	**700**	4.4	4.2	4.5	Improved
Guayo	**285**	3.8	4.1	4.4	Stable
Matrullas	**77**	4.4	5.2	4.3	Degraded
Guayabal	**373**	5.4	5.9	5.3	Degraded
Toa Vaca	**836**	3.5	5.1	4.9	Stable
Luchetti	**266**	4.9	7.6	4.9	Degraded
Loco	**69**	5.4	3.7	5.4	Improved
Patillas	**312**	4.6	4.4	4.3	Stable
Las Curias	**55**	1.8	2.4	2.5	Stable
Cidra	**268**	4.9	3.9	4.3	Improved
Cerrillos	**700**	5.2	4.7	3.6	Degraded
Loíza	**713**	4.0	4.9	4.2	Degraded
Guajataca	**1000**	5.7	4.8	4.4	Degraded

Lakes	Lake Size (acres)	DO* (mg/L)			Trend
		2020 Cycle	2022 Cycle	2024 Cycle	
Dos Bocas	**634**	5.3	5.2	5.0	Stable
Carite	**333**	4.3	5.2	5.1	Stable
La Plata	**560**	4.3	4.4	3.8	Degraded
Garzas	**108**	3.6	3.5	3.8	Stable
Melanía	**35**	7.1	7.7	6.5	Degraded

* Dissolved oxygen value corresponds to the average data during two-year period.

PART D. Wetlands and Coral Reefs

1.0 Wetlands

Public policy on wetlands in PR defines wetlands as those saturated by surface and groundwater systems, in an interval and duration, sufficient to support vegetation typically adapted to saturated soil conditions, flooding or engulf. For the protection of wetlands, there are no specific parameters of water quality, however in the PRWQSR, as amendment on August 8, 2022, in order to be consistent with the anti-degradation policy, classification SE of waters: “surface water and wetlands of exceptional ecological value, whose existing conditions shall be altered in order to preserve its natural characteristics”. The concentration of any parameter, whether considered in Rule 1303.2(E), shall not be altered, except by natural phenomena, as defined in PRWQSR. In PR the protection and conservation of wetlands is the result of the efforts of several local and federal agencies, namely PRDRNA, Corps of Engineers (COE), United States Fish and Wildlife Service (USFWS) and the USEPA, as well as community groups and environmental organizations.

Wetlands are the coastal ecosystems that are most abundant in PR. Examples of estuarine wetlands are those close to coastal rivers, salt flats and mangroves. Freshwater wetlands comprise about 24% of the total area of wetlands. Freshwater wetlands include swamps, ponds, marshes, and humid grasslands (Figure 8). Other wetlands categories comprise 11% of the total area of wetlands. Estuarine and freshwater wetlands are most abundant in the eastern, 2/3 of the north coast of the island, and all along the south coast, although examples are found on all coasts of the main island Vieques and Culebra have no freshwater wetlands (Figure 9). The estuarine wetlands comprise about 65% of the total area of wetlands. Examples of estuarine wetlands are those close to coastal rivers, salt flats and mangroves.

Wetlands provide habitat for thousands of species of fish, wildlife and plants, and act as nurseries for many saltwater and freshwater fishes and shellfish of commercial significance. They also provide important ecological services such as flood control, water filtration and the supply of groundwater, and they provide recreational and wildlife viewing opportunities for millions of people. Wetlands are facing numerous, ongoing challenges, such as agriculture, development, and resource extraction, as well as sea level rise, increasing storm severity and drought due to climate change.

The factors that most influence coastal wetlands are drainage, channelization and filling, disposal of industrial, agricultural, and domestic waste, civil constructions, tourism expansion, storms and hurricanes, global climate change. The value of wetlands in PR for wildlife is well documented. For example, the salt flats of Cabo Rojo, on the southwest coast, provide areas for rest and feeding of hundreds of migratory birds en route between North and South America. This area is one of the most valuable wetlands of the island. Before the drainage of coastal wetlands for agricultural purposes, freshwater marshes such as the Laguna Cartagena, Guánica Lagoon and swamp supplied water-logged habitat for hundreds of species of resident and migratory birds.

The wetlands of the highlands of central area are the last refuge of the Puerto Rican parrot, an endangered species. Even wetlands of metropolitan San Juan (Laguna La Torrecilla, Torrecilla Baja, Laguna de Piñones to Vacía Talega) provide excellent habitats for wildlife, fish hatcheries maintain high economic value and provide recreational and educational opportunities to population.

Thirty-eight (38) species of vertebrates, mollusks and crustaceans and forty-six (46) species of birds, some rare or endangered species, such as the ladybug, the gannet, the Dominican duck, duck, and pigeon-headed Warbler have been seen in these areas. Beaches, also associated with these urban wetlands provide nesting sites for Hawksbill turtles and leatherback shell, both endangered species (Del Llano et al, 1986). In PR, each acre impacted is mitigated by 0.79 acres instead of 1.01 acres as required by public policy of zero losses; indeed, the practice adopted by proponents of creating wetlands followed by the improvement, restoration, and preservation, represents a threat to these systems by the time it takes to reach its former productivity and functionality (Perez, 2003).

U.S. Fish and Wildlife Service completed the most comprehensive and detailed U.S. wetland data set ever produced, capping a thirty- five (35) year effort by the Service to map the extent of the nation's wetlands. The Wetlands Inventory Mapper has digitally mapped and made publicly available wetlands in the lower forty-eight (48) states, including PR. It is an invaluable aid to landowners, developers, government planners and permitting authorities, conservation organizations and academic institutions in their collective efforts to ensure wetland conservation and inform economic development.

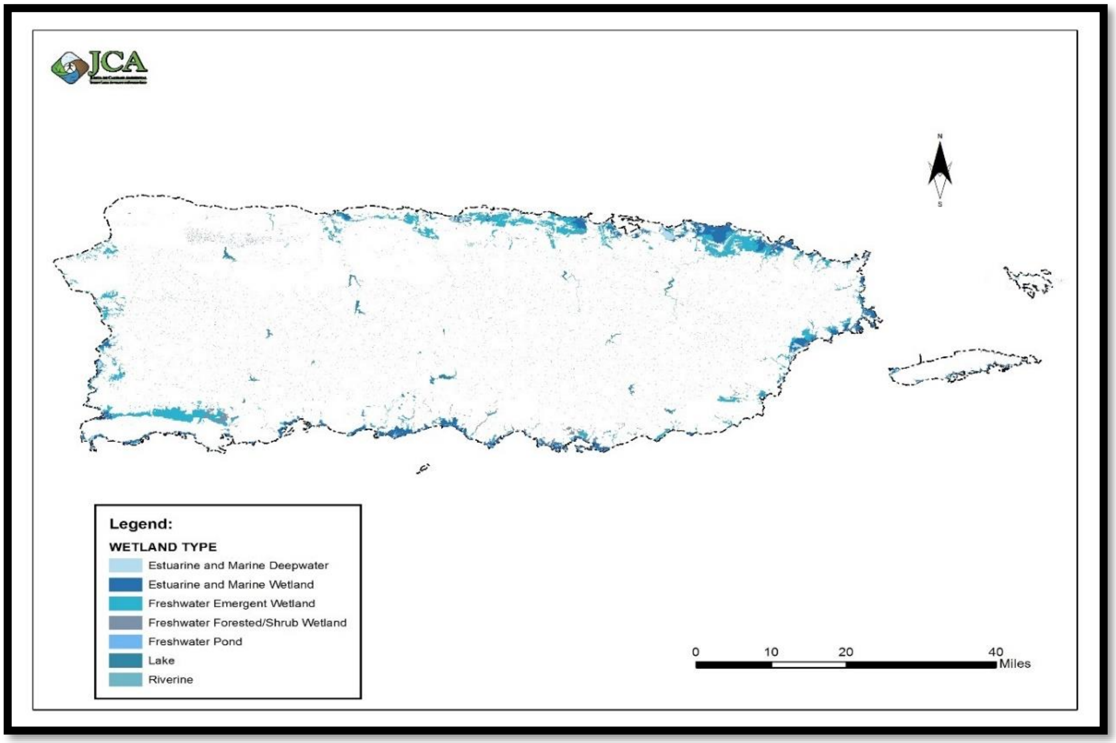

Figure 8: Puerto Rico Wetlands Type

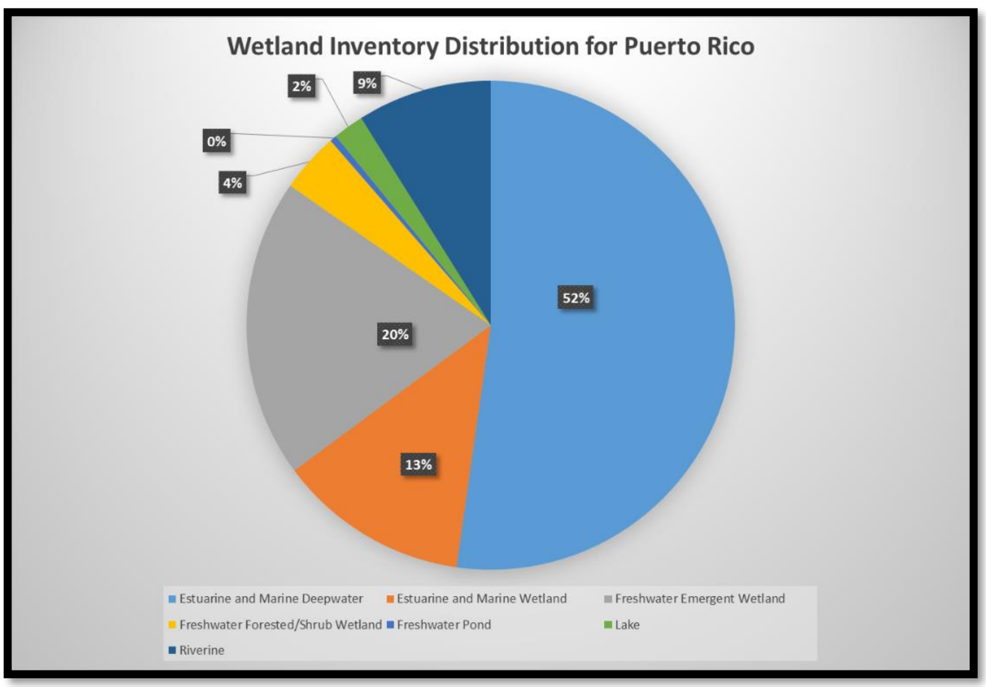

Figure 9: Puerto Rico Wetlands Distribution

2.0 Coral Reef Ecosystem

Coral reefs are the most productive ecosystems in the marine environment. They are closely related to other terrestrial and marine ecosystems. Some of these associated ecosystems are coastal wetlands, which include mangroves, marine wetlands, such as seagrasses, beaches among others. Coral reefs provide an extraordinary amount of goods and services, such as: protection of the coast, habitats for fishing craft, commercial and recreational fishing, spaces for education, research, recreation and tourism, food (Alvarez-Filip L., 2009; Barbier, E.B., 2011; Kennedy, E.V et al., 2013; Ferrario, F., et al. 2014). Furthermore, are a source of natural products of high pharmacological value in food production and in biomedical investigation (Goenaga and Boulon, 1992).

However, the coral reefs in PR are significantly degraded due to a variety of anthropogenic factors that exacerbate the impacts of natural factors (e.g., hurricanes, diseases, syndromes in corals) (Hernandez-Delgado, 2005). The anthropogenic factors that could affect the coral reef ecosystem are the following: deforestation, and sedimentation. The deterioration of the water quality is mainly associated with a combination of precise and dispersed sources of pollution. Indiscriminate extraction and overfishing could destabilize the ecosystem.

PR is surrounded by approximately 500,000 hectares of coral reef ecosystems of easy access, whose depth does not exceed 20 meters (PMZC, 2009). The biodiversity at the coral reefs of P R is representative of this region of the Caribbean. The most extensive development of coral reefs is observed in the Southwest and northeast of the insular shelf of PR. The northeast coast is partially protected from wave action by a string of emerging reefs that provide protection, (DNER-PMZC 2011). The natural reserve, in Fajardo and La Reserve Natural of Luis Peña Channel in Culebra contain the most diverse coral reefs in this region. (Hernández - Delgado E.A. 2005; Schärer-M.T., M.I. Németh, C. ten 2009; García - Sais, et al.2008a). The importance of coral reefs and their status in PR is not different to what happens elsewhere. Coral reefs, according to the Management Plan for the Conservation and Protection of Coral Reefs of PR of 2009, present conditions of lower coral cover, increased disease, significant algal colonization of all kinds, species invasion exotic and overall loss of biodiversity in the ecosystem (Strategic Management Plan of the Coral Reefs in PR, DNER, 2014).

In PR the Law 147, *Ley para la Protección, Conservación y Manejo de los Arrecifes de Coral en PR*, to develop a conservation program, management, and protection of coral reefs, and it promotes the development of a sustainable management plan. The act defines a coral reef as the ecosystem of coral, skeleton of this and other marine species associated with the same, such as seagrass and marine herbs.

The PRDNER in collaboration with NOAA developed a Benthic Habitat of PR and the U.S. Virgin Island (Figure 10). These images were used to create maps of the region's coral reefs, seagrass beds, mangrove forests, and other important marine habitats that are related with the coral reef ecosystem (Figure 11 thru Figure 13).

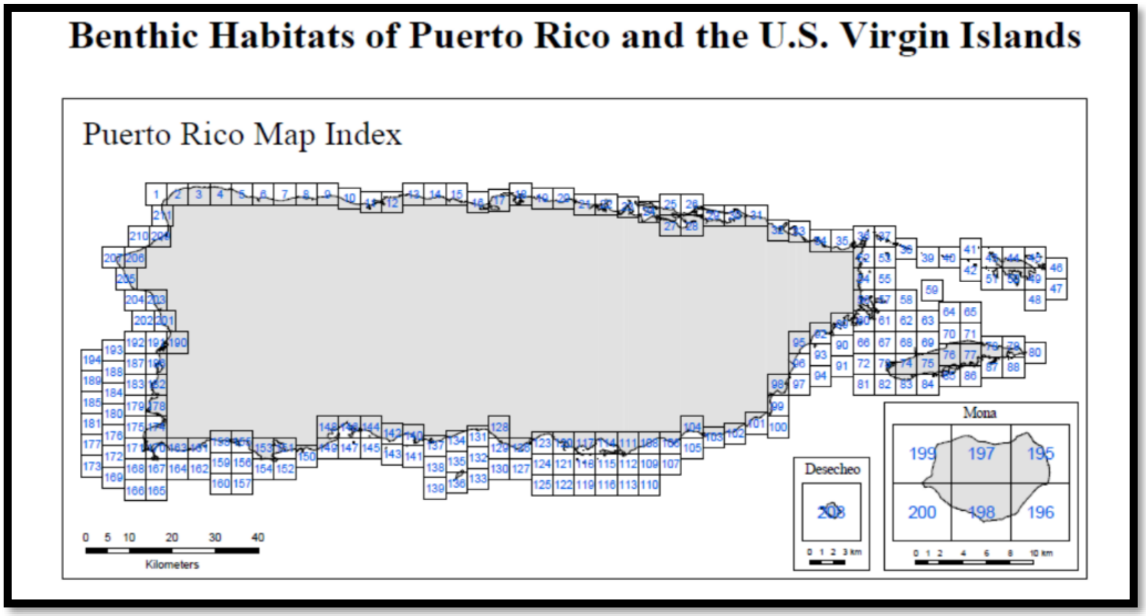

Figure 10: Benthic Habitats of Puerto Rico and the U.S. Virgin Islands

On the other hand, the PRDNER are conducting inspections at different basins throughout all PR with the purpose of maintain an inventories of the discharging of points and non points sources of contamination. These inspections are intended to identify all possible sources of contamination and lead to fulfillment of the facilities that represent potential sources of pollution. These actions improve the water quality of the water body and will protect the marine ecosystems including the coral reef ecosystem.

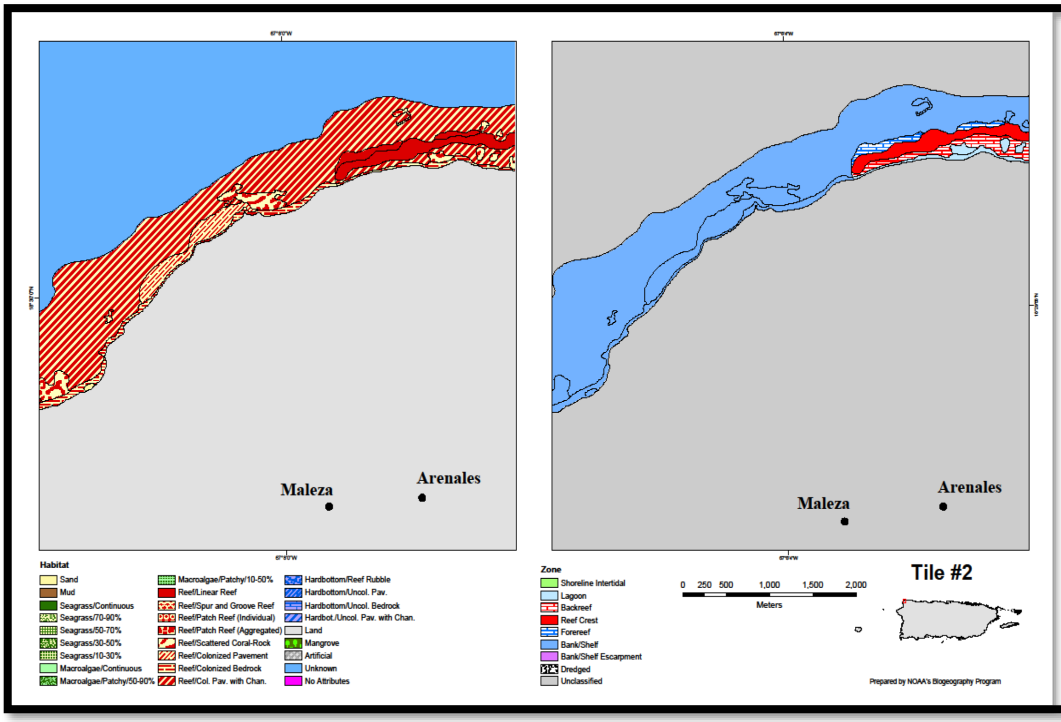

Figure 11: Example of one tile of the Benthic Map and the habitat classification

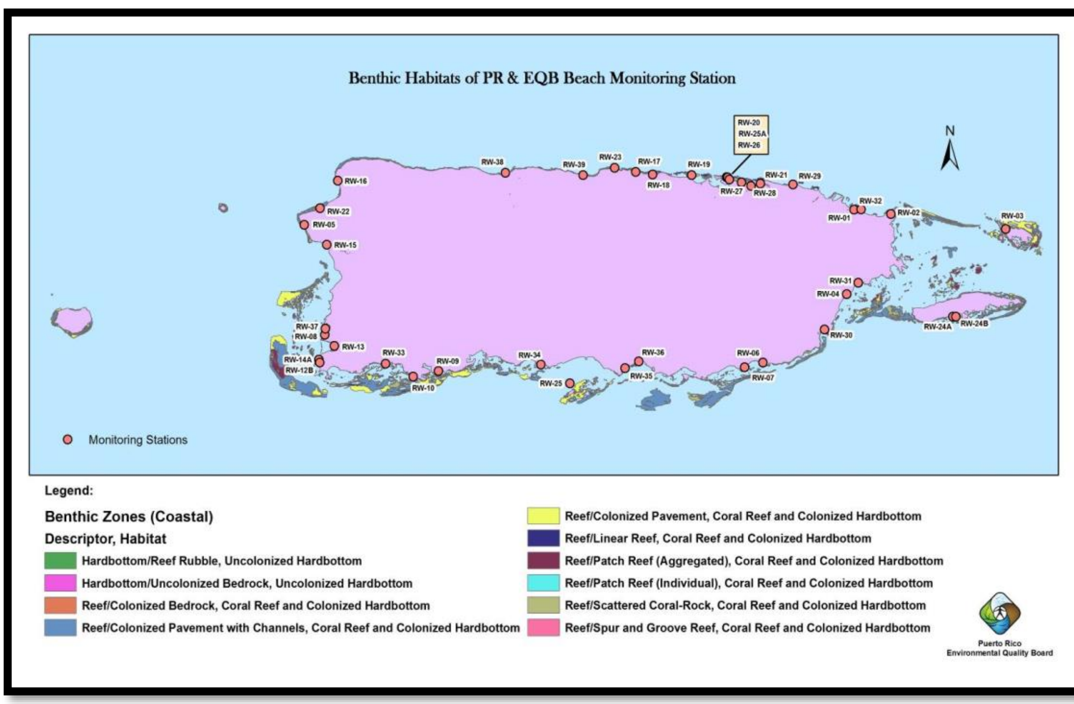

Figure 12: Benthic Habitats of PR and the Location of the PREQB Beach Monitoring Station

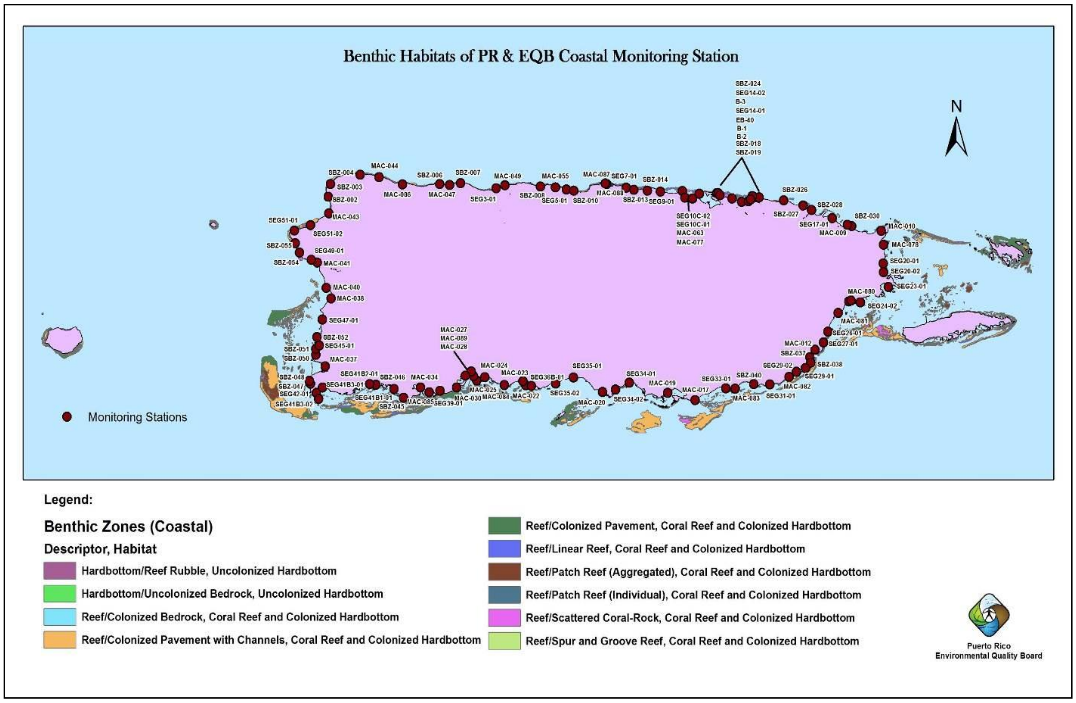

Figure 13: Benthic Habitats of PR and the Location of the PREQB Coastal Monitoring Station

PART E. 303(d) List

1.0 Listing Criteria

The PR 2024 List of Impaired Waters (303(d) List) is based on the water quality data generated through the water quality monitoring networks, as explained in Section 2.0 Monitoring Program. In the case of the 2024 303(d) List, we considered the most recent available water quality data for each parameter in each AU (either new data or collected during October 1, 2021, to September 30, 2023). In this assessment, the AU will be assessed as established in *Section V. Five – Part Categorization of Water of the Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of Clean Water Act.*

A segment (AU) is considered impaired when WQS are not being supported and/ or met and is considered threatened when WQS are not expected to be fully supported and/or met in the next listing cycle. In classifying the status of water quality in 2006, states have the option to report each AU in one or more categories (multiple categories option).

When monitoring results are below the detection level, half of the detection level will be used to determine compliance with the applicable standard. In cases where the detection level is above the water quality standard, DNER will not include the parameter on the 303(d) list unless definitive data above the detection level is available.

In the case of Oils and Grease parameter, the applicable water quality narrative standard establishes that: “The waters of Puerto Rico will be substantially free of floating oils and grease not derived from petroleum, as well as oils and grease derived from petroleum". This narrative standard is interpreted as zero concentration to reflect the absence of oils and grease. Since the lowest possible detection level for the analysis of oils and grease is 5 mg/L, the DRNA will not include this parameter in list 303(d) unless definitive data are available above the detection level.

The waters considered to be impaired have been included in Category 5 and it is necessary to develop and implement a TMDL for the parameter not in compliance. In the case of basin for which TMDLs have been developed, the AU will continue to be listed for those parameters that were not addressed in the TMDL. Those parameters addressed in the TMDL are delisted from the respective AU.

If any of the parameters listed in the 2022 cycle exceed the applicable water quality standard at least once in 2024 Cycle, the parameter continues to appear as an impairment cause and the AU continues to be listed in Category 5. The 303(d) List 2024 will be included in Appendix I of this Integrated Report.

2.0 Delisting Criteria

If a previously listed parameter complied fully with the applicable water quality standard during the 2022 (October 1, 2019, to September 30, 2021) and 2024 (October 1, 2021, to September 30, 2023) cycles, that specific parameter will be delisted from 303(d) List.

PRDNER will remove a specific parameter from the list when the TMDL for the corresponding AU has been approved by USEPA. Among other valid delisting reasons are change in water quality standard, original basis for listing was incorrect, hydrological and habitat alteration (4c).

During this cycle it is proposed to remove forty-six (46) parameter/assessment unit's combination from the 303(d) List (Table 45).

Table 45: Parameter/AU Combinations to be delisted

AU ID	TYPE OF WATER	PARAMETER	REASON FOR DELISTING
1. PRNR7A1	River	Temperature	Water Quality Standard met
2. PRNR7A1	River	Total, Phosphorus	Water Quality Standard met
3. PRNR7C1	River	Total, Nitrogen	Water Quality Standard met
4. PRNR7C1	River	Turbidity	Water Quality Standard met
5. PRNR7C2	River	Total, Nitrogen	Water Quality Standard met
6. PRNR7C2	River	Turbidity	Water Quality Standard met
7. PRNR7C3	River	Total, Nitrogen	Water Quality Standard met
8. PRNR7C3	River	Total, Phosphorus	Water Quality Standard met
9. PRNR7C3	River	Turbidity	Water Quality Standard met
10. PRNR8E1	River	Total, Nitrogen	Water Quality Standard met
11. PRNR8E1	River	Turbidity	Water Quality Standard met
12. PRER10A3	River	pH	Water Quality Standard met
13. PRER10A5	River	Copper	Water Quality Standard met
14. PRER10A5	River	Lead	Water Quality Standard met
15. PRER10A5	River	pH	Water Quality Standard met
16. PRER10J	River	pH	Water Quality Standard met
17. PRER10J	River	Total, Phosphorus	Water Quality Standard met
18. PRER12A1	River	Ammonia	Water Quality Standard met
19. PRER12B	River	Dissolved Oxygen	Water Quality Standard met
20. PRER14A1	River	Total, Phosphorus	Water Quality Standard met
21. PRER14G2	River	Ammonia	Water Quality Standard met
22. PRER14G2	River	pH	Water Quality Standard met
23. PRER14G2	River	Surfactants	Water Quality Standard met
24. PRER14I	River	Surfactants	Water Quality Standard met
25. PRER33A	River	Ammonia	Water Quality Standard met
26. PRER33A	River	Mercury	Water Quality Standard met
27. PRER33A	River	pH	Water Quality Standard met
28. PRER35A	River	pH	Water Quality Standard met
29. PRER35A	River	Lead	Water Quality Standard met
30. PRSR43A2	River	pH	Water Quality Standard met
31. PRSR57A2	River	pH	Water Quality Standard met

AU ID	TYPE OF WATER	PARAMETER	REASON FOR DELISTING
32. PRSR62A1	River	Temperature	Water Quality Standard met
33. PRSR62A2	River	pH	Water Quality Standard met
34. PRSR62A2	River	Total, Phosphorus	Water Quality Standard met
35. PRSR62A2	River	Turbidity	Water Quality Standard met
36. PRSR63A	River	Temperature	Water Quality Standard met
37. PRSR63A	River	Total, Nitrogen	Water Quality Standard met
38. PRSR63A	River	Total, Phosphorus	Water Quality Standard met
39. PRSR63A	River	Turbidity	Water Quality Standard met
40. PRSR67A	River	Turbidity	Water Quality Standard met
41. PRWR77D	River	Turbidity	Water Quality Standard met
42. PRWR95A	River	Copper	Water Quality Standard met
43. PREE13A2	SJBES	Ammonia	Water Quality Standard met
44. PREE13A3	SJBES	Ammonia	Water Quality Standard met
45. PREE13A3	SJBES	Surfactants	Water Quality Standard met
46. PRNL27C1	Lake	pH	Water Quality Standard met

3.0 Priority Ranking and TMDL Development Status

As result of the development of PR Unified Watershed Assessment and Restoration Activities (PRUWARA), eighteen (18) main basins, which correspond to one hundred – fifteen (115) AU were identified as high priority where the PRDNER would implement restoration activities including developing TMDLs. The criteria used to establish the priority ranking and selection of basins appear in the document PRUWARA. Table 46 identifies the priority basins according to the corresponding regions.

Table 46: Priority Basins

BASIN	REGION	AU PER BASIN
Quebrada Blasina	East	1
Río Bayamón	East	5
Río Blanco	East	2
Río Grande de Loíza	East	15
Río Hondo	East	1
Río De La Plata	East	18
Río Piedras	East	1
Río Cibuco	North	6
Río Grande de Arecibo	North	12
Río Grande de Manatí	North	11
Río Guajataca	North	4
Río Coamo	South	3
Río Grande de Patillas	South	4
Río Guayanilla	South	1
Río Culebrinas	West	11
Río Grande de Añasco	West	10
Río Guanajibo	West	9
Río Yagüez	West	1

In the 2002 303 (d) List, the PRDNER established a priority ranking to determine the sequence of development for restoration activities, including the development and implementation of the TMDL. This priority ranking considered the priority of basins restoration and established three levels of priority:

- ✓ **High Priority**: basins including in the PRUWARA as basins of priority due to the high pollution level related to all the designated uses.
- ✓ **Intermediate (moderate) Priority**: basins that were not included in the PRUWARA and have 50% or more of its waters as impaired for some designated use.
- ✓ **Low Priority**: basins that were not included in the PRUWARA and have less than 50% of its waters listed as impaired for some designated use.

In determining the priority for the development of TMDLs for listings watersheds ranking priorities, pollution severity, and changes in regulations applicable to water quality standards are taken into consideration. For the 2024 cycle, three hundred forty-eight (348) AU / parameter is evaluated as a high priority for the development of the TMDLs (Table 47) and five hundred thirty (530) with intermediate (moderate) and low priority (Table 48).

Table 47: Basin Assessment Units/Parameter Combination with high priority to development of TMDL

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
1. Río Guajataca	Río Guajataca	PRNR3A1	Chromium VI	H
2. Río Guajataca	Río Guajataca	PRNR3A1	Cyanide	H
3. Río Guajataca	Río Guajataca	PRNR3A1	Dissolved Oxygen	H
4. Río Guajataca	Río Guajataca	PRNR3A1	Enterococci	H
5. Río Guajataca	Río Guajataca	PRNR3A1	Surfactants	H
6. Río Guajataca	Río Guajataca	PRNR3A1	Total, Nitrogen	H
7. Río Guajataca	Río Guajataca	PRNR3A2	Chromium VI	H
8. Río Guajataca	Río Guajataca	PRNR3A2	Cyanide	H
9. Río Guajataca	Río Guajataca	PRNR3A2	Enterococci	H
10. Río Guajataca	Río Guajataca	PRNR3A2	pH	H
11. Río Guajataca	Río Guajataca	PRNR3A2	Total, Nitrogen	H
12. Río Guajataca	Río Guajataca	PRNR3A2	Total, Phosphorus	H
13. Río Guajataca	Río Guajataca	PRNR3A2	Turbidity	H
14. Río Guajataca	Quebrada Las Sequías	PRNQ3B	Arsenic	H
15. Río Guajataca	Quebrada Las Sequías	PRNQ3B	Dissolved Oxygen	H
16. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A1	Chromium VI	H
17. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A1	Enterococci	H
18. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A1	Turbidity	H
19. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A2	Chromium VI	H
20. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A2	Enterococci	H
21. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A2	Pesticides	H

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
22. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A2	Temperature	H
23. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A2	Total, Nitrogen	H
24. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A2	Total, Phosphorus	H
25. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A2	Turbidity	H
26. Río Grande de Arecibo	Túnel	PRNR7A3	Chromium VI	H
27. Río Grande de Arecibo	Túnel	PRNR7A3	Cyanide	H
28. Río Grande de Arecibo	Túnel	PRNR7A3	Enterococci	H
29. Río Grande de Arecibo	Túnel	PRNR7A3	pH	H
30. Río Grande de Arecibo	Túnel	PRNR7A3	Total, Phosphorus	H
31. Río Grande de Arecibo	Río Caonillas	PRNR7C1	Chromium VI	H
32. Río Grande de Arecibo	Río Caonillas	PRNR7C1	Enterococci	H
33. Río Grande de Arecibo	Río Caonillas	PRNR7C1	Total, Phosphorus	H
34. Río Grande de Arecibo	Río Limón	PRNR7C2	Chromium VI	H
35. Río Grande de Arecibo	Río Limón	PRNR7C2	Enterococci	H
36. Río Grande de Arecibo	Río Limón	PRNR7C2	Temperature	H
37. Río Grande de Arecibo	Río Yunes	PRNR7C3	Chromium VI	H
38. Río Grande de Arecibo	Río Yunes	PRNR7C3	Enterococci	H
39. Río Grande de Arecibo	Río Yunes	PRNR7C3	Temperature	H
40. Río Grande de Arecibo	Río Tanamá	PRNR7B2	Chromium VI	H
41. Río Grande de Arecibo	Río Tanamá	PRNR7B2	Copper	H
42. Río Grande de Arecibo	Río Tanamá	PRNR7B2	Enterococci	H
43. Río Grande de Arecibo	Río Tanamá	PRNR7B2	Lead	H
44. Río Grande de Arecibo	Río Tanamá	PRNR7B2	Total, Phosphorus	H
45. Río Grande de Arecibo	Río Tanamá	PRNR7B2	Turbidity	H
46. Río Grande de Manatí	Río Grande de Manatí	PRNR8A1	Chromium VI	H
47. Río Grande de Manatí	Río Grande de Manatí	PRNR8A1	Enterococci	H
48. Río Grande de Manatí	Río Grande de Manatí	PRNR8A1	pH	H
49. Río Grande de Manatí	Río Grande de Manatí	PRNR8A1	Temperature	H
50. Río Grande de Manatí	Río Grande de Manatí	PRNR8A1	Total, Phosphorus	H
51. Río Grande de Manatí	Río Grande de Manatí	PRNR8A1	Turbidity	H
52. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Chromium VI	H
53. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Copper	H
54. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Cyanide	H
55. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Enterococci	H
56. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Lead	H
57. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Mercury	H
58. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Temperature	H
59. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Total, Nitrogen	H
60. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Total, Phosphorus	H
61. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Turbidity	H
62. Río Grande de Manatí	Río Cialito	PRNR8B	Chromium VI	H
63. Río Grande de Manatí	Río Cialito	PRNR8B	Enterococci	H
64. Río Grande de Manatí	Río Cialito	PRNR8B	Total, Phosphorus	H
65. Río Grande de Manatí	Río Cialito	PRNR8B	Turbidity	H

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
66. Río Grande de Manatí	Río Orocovis	PRNR8E1	Chromium VI	H
67. Río Grande de Manatí	Río Orocovis	PRNR8E1	Cyanide	H
68. Río Grande de Manatí	Río Orocovis	PRNR8E1	Enterococci	H
69. Río Grande de Manatí	Río Orocovis	PRNR8E1	Total, Phosphorus	H
70. Río Grande de Manatí	Río Botijas	PRNR8E2	pH	H
71. Río Cibuco	Río Cibuco	PRNR9A	Chromium VI	H
72. Río Cibuco	Río Cibuco	PRNR9A	Enterococci	H
73. Río Cibuco	Río Cibuco	PRNR9A	Lead	H
74. Río Cibuco	Río Cibuco	PRNR9A	Temperature	H
75. Río Cibuco	Río Cibuco	PRNR9A	Total, Nitrogen	H
76. Río Cibuco	Río Cibuco	PRNR9A	Total, Phosphorus	H
77. Río Cibuco	Río Cibuco	PRNR9A	Turbidity	H
78. Río Cibuco	Río Morovis	PRNR9B2	Dissolved Oxygen	H
79. Río De La Plata	Río De La Plata	PRER10A1	Chromium VI	H
80. Río De La Plata	Río De La Plata	PRER10A1	Dissolved Oxygen	H
81. Río De La Plata	Río De La Plata	PRER10A1	Enterococci	H
82. Río De La Plata	Río De La Plata	PRER10A1	Surfactants	H
83. Río De La Plata	Río De La Plata	PRER10A1	Temperature	H
84. Río De La Plata	Río De La Plata	PRER10A1	Total, Phosphorus	H
85. Río De La Plata	Río De La Plata	PRER10A1	Turbidity	H
86. Río De La Plata	Río De La Plata	PRER10A3	Chromium VI	H
87. Río De La Plata	Río De La Plata	PRER10A3	Enterococci	H
88. Río De La Plata	Río De La Plata	PRER10A3	Temperature	H
89. Río De La Plata	Río De La Plata	PRER10A3	Total, Phosphorus	H
90. Río De La Plata	Río De La Plata	PRER10A4	Chromium VI	H
91. Río De La Plata	Río De La Plata	PRER10A4	Cyanide	H
92. Río De La Plata	Río De La Plata	PRER10A4	Enterococci	H
93. Río De La Plata	Río De La Plata	PRER10A4	pH	H
94. Río De La Plata	Río De La Plata	PRER10A4	Temperature	H
95. Río De La Plata	Río De La Plata	PRER10A4	Total, Phosphorus	H
96. Río De La Plata	Río De La Plata	PRER10A4	Turbidity	H
97. Río De La Plata	Río De La Plata	PRER10A5	Chromium VI	H
98. Río De La Plata	Río De La Plata	PRER10A5	Cyanide	H
99. Río De La Plata	Río De La Plata	PRER10A5	Enterococci	H
100. Río De La Plata	Río De La Plata	PRER10A5	Temperature	H
101. Río De La Plata	Río De La Plata	PRER10A5	Total, Nitrogen	H
102. Río De La Plata	Río De La Plata	PRER10A5	Total, Phosphorus	H
103. Río De La Plata	Río De La Plata	PRER10A5	Turbidity	H
104. Río De La Plata	Río Guadiana	PRER10E	Chromium VI	H
105. Río De La Plata	Río Guadiana	PRER10E	Cyanide	H
106. Río De La Plata	Río Guadiana	PRER10E	Enterococci	H
107. Río De La Plata	Río Guadiana	PRER10E	Temperature	H
108. Río De La Plata	Río Guadiana	PRER10E	Total, Nitrogen	H
109. Río De La Plata	Río Guadiana	PRER10E	Total, Phosphorus	H

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
110. Río De La Plata	Río Arroyata	PRER10G	Chromium VI	H
111. Río De La Plata	Río Arroyata	PRER10G	Cyanide	H
112. Río De La Plata	Río Arroyata	PRER10G	Enterococci	H
113. Río De La Plata	Río Arroyata	PRER10G	Total, Phosphorus	H
114. Río De La Plata	Río Matón	PRER10J	Chromium VI	H
115. Río De La Plata	Río Matón	PRER10J	Cyanide	H
116. Río De La Plata	Río Matón	PRER10J	Enterococci	H
117. Río De La Plata	Río Matón	PRER10J	Total, Nitrogen	H
118. Río De La Plata	Río Guavate	PRER10K	pH	H
119. Río Hondo	Río Hondo	PRER11A	Dissolved Oxygen	H
120. Río Hondo	Río Hondo	PRER11A	Surfactants	H
121. Río Bayamón	Río Bayamón	PRER12A1	Chromium VI	H
122. Río Bayamón	Río Bayamón	PRER12A1	Cyanide	H
123. Río Bayamón	Río Bayamón	PRER12A1	Enterococci	H
124. Río Bayamón	Río Bayamón	PRER12A1	pH	H
125. Río Bayamón	Río Bayamón	PRER12A1	Temperature	H
126. Río Bayamón	Río Bayamón	PRER12A1	Total, Nitrogen	H
127. Río Bayamón	Río Bayamón	PRER12A2	Chromium VI	H
128. Río Bayamón	Río Bayamón	PRER12A2	Enterococci	H
129. Río Bayamón	Rio Guaynabo	PRER12B	Chromium VI	H
130. Río Bayamón	Rio Guaynabo	PRER12B	Enterococci	H
131. Río Bayamón	Rio Guaynabo	PRER12B	pH	H
132. Río Bayamón	Rio Guaynabo	PRER12B	Temperature	H
133. Río Bayamón	Rio Guaynabo	PRER12B	Total, Nitrogen	H
134. Río Bayamón	Río Guaynabo	PRER12B	Total, Phosphorus	H
135. Río Grande de Loíza	Río Grande de Loíza	PRER14A1	Chromium VI	H
136. Río Grande de Loíza	Río Grande de Loíza	PRER14A1	Enterococci	H
137. Río Grande de Loíza	Río Grande de Loíza	PRER14A1	Surfactants	H
138. Río Grande de Loíza	Río Grande de Loíza	PRER14A1	Temperature	H
139. Río Grande de Loíza	Río Grande de Loíza	PRER14A1	Total, Nitrogen	H
140. Río Grande de Loíza	Río Grande de Loíza	PRER14A1	Turbidity	H
141. Río Grande de Loíza	Río Grande de Loíza	PRER14A2	Chromium VI	H
142. Río Grande de Loíza	Río Grande de Loíza	PRER14A2	Enterococci	H
143. Río Grande de Loíza	Río Grande de Loíza	PRER14A2	Pesticides	H
144. Río Grande de Loíza	Río Grande de Loíza	PRER14A2	Temperature	H
145. Río Grande de Loíza	Río Grande de Loíza	PRER14A2	Total, Phosphorus	H
146. Río Grande de Loíza	Río Grande de Loíza	PRER14A2	Turbidity	H
147. Río Grande de Loíza	Río Canóvanas	PRER14B	Dissolved Oxygen	H
148. Río Grande de Loíza	Río Canovanillas	PRER14C	Dissolved Oxygen	H
149. Río Grande de Loíza	Río Gurabo	PRER14G1	Chromium VI	H
150. Río Grande de Loíza	Río Gurabo	PRER14G1	Enterococci	H
151. Río Grande de Loíza	Río Gurabo	PRER14G1	Temperature	H
152. Río Grande de Loíza	Río Gurabo	PRER14G1	Total, Nitrogen	H
153. Río Grande de Loíza	Río Gurabo	PRER14G1	Total, Phosphorus	H

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
154. Río Grande de Loíza	Río Gurabo	PRER14G1	Turbidity	H
155. Río Grande de Loíza	Río Valenciano	PRER14G2	Chromium VI	H
156. Río Grande de Loíza	Río Valenciano	PRER14G2	Enterococci	H
157. Río Grande de Loíza	Río Valenciano	PRER14G2	Total, Nitrogen	H
158. Río Grande de Loíza	Río Valenciano	PRER14G2	Total, Phosphorus	H
159. Río Grande de Loíza	Río Valenciano	PRER14G2	Turbidity	H
160. Río Grande de Loíza	Río Bairoa	PRER14H	Chromium VI	H
161. Río Grande de Loíza	Río Bairoa	PRER14H	Enterococci	H
162. Río Grande de Loíza	Río Bairoa	PRER14H	Total, Nitrogen	H
163. Río Grande de Loíza	Río Bairoa	PRER14H	Total, Phosphorus	H
164. Río Grande de Loíza	Río Cagüitas	PRER14I	Chromium VI	H
165. Río Grande de Loíza	Río Cagüitas	PRER14I	Enterococci	H
166. Río Grande de Loíza	Río Cagüitas	PRER14I	Temperature	H
167. Río Grande de Loíza	Río Cagüitas	PRER14I	Total, Nitrogen	H
168. Río Grande de Loíza	Río Cagüitas	PRER14I	Total, Phosphorus	H
169. Río Grande de Loíza	Río Cagüitas	PRER14I	Turbidity	H
170. Río Grande de Loíza	Rio Turabo	PRER14J	Chromium VI	H
171. Río Grande de Loíza	Rio Turabo	PRER14J	Copper	H
172. Río Grande de Loíza	Rio Turabo	PRER14J	Enterococci	H
173. Río Grande de Loíza	Rio Turabo	PRER14J	Lead	H
174. Río Grande de Loíza	Rio Turabo	PRER14J	Temperature	H
175. Río Grande de Loíza	Rio Turabo	PRER14J	Total, Phosphorus	H
176. Río Grande de Loíza	Rio Turabo	PRER14J	Turbidity	H
177. Río Grande de Loíza	Río Cayaguas	PRER14K	Chromium VI	H
178. Río Grande de Loíza	Río Cayaguas	PRER14K	Copper	H
179. Río Grande de Loíza	Río Cayaguas	PRER14K	Enterococci	H
180. Río Grande de Loíza	Río Cayaguas	PRER14K	Temperature	H
181. Río Grande de Loíza	Río Cayaguas	PRER14K	Total, Nitrogen	H
182. Río Grande de Loíza	Río Cayaguas	PRER14K	Total, Phosphorus	H
183. Río Grande de Loíza	Río Cayaguas	PRER14K	Turbidity	H
184. Río Blanco	Río Blanco	PRER30A	Turbidity	H
185. Río Blanco	Quebrada Peña Pobre	PREQ30B	Dissolved Oxygen	H
186. Río Grande de Patillas	Río Grande de Patillas	PRSR43A2	Chromium VI	H
187. Río Grande de Patillas	Río Grande de Patillas	PRSR43A2	Copper	H
188. Río Grande de Patillas	Río Grande de Patillas	PRSR43A2	Cyanide	H
189. Río Grande de Patillas	Río Grande de Patillas	PRSR43A2	Enterococci	H
190. Río Coamo	Río Coamo	PRSR57A2	Chromium VI	H
191. Río Coamo	Río Coamo	PRSR57A2	Cyanide	H
192. Río Coamo	Río Coamo	PRSR57A2	Enterococci	H
193. Río Coamo	Río Coamo	PRSR57A2	Surfactants	H
194. Río Coamo	Río Coamo	PRSR57A2	Temperature	H
195. Río Coamo	Río Coamo	PRSR57A2	Total, Nitrogen	H
196. Río Coamo	Río Coamo	PRSR57A2	Total, Phosphorus	H
197. Río Coamo	Río Cuyón	PRSR57B	Temperature	H

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
198. Río Guayanilla	Río Guayanilla	PRSR67A	Ammonia	H
199. Río Guayanilla	Río Guayanilla	PRSR67A	Chromium VI	H
200. Río Guayanilla	Río Guayanilla	PRSR67A	Cyanide	H
201. Río Guayanilla	Río Guayanilla	PRSR67A	Dissolved Oxygen	H
202. Río Guayanilla	Río Guayanilla	PRSR67A	Enterococci	H
203. Río Guayanilla	Río Guayanilla	PRSR67A	Temperature	H
204. Río Guayanilla	Río Guayanilla	PRSR67A	Total, Nitrogen	H
205. Río Guayanilla	Río Guayanilla	PRSR67A	Total, Phosphorus	H
206. Río Guanajibo	Río Guanajibo	PRWR77A	Chromium VI	H
207. Río Guanajibo	Río Guanajibo	PRWR77A	Cyanide	H
208. Río Guanajibo	Río Guanajibo	PRWR77A	Dissolved Oxygen	H
209. Río Guanajibo	Río Guanajibo	PRWR77A	Enterococci	H
210. Río Guanajibo	Río Guanajibo	PRWR77A	Total, Phosphorus	H
211. Río Guanajibo	Río Guanajibo	PRWR77A	Turbidity	H
212. Río Guanajibo	Río Rosario	PRWR77C	Chromium VI	H
213. Río Guanajibo	Río Rosario	PRWR77C	Cyanide	H
214. Río Guanajibo	Río Rosario	PRWR77C	Enterococci	H
215. Río Guanajibo	Río Rosario	PRWR77C	Pesticides	H
216. Río Guanajibo	Río Rosario	PRWR77C	Total, Phosphorus	H
217. Río Guanajibo	Río Rosario	PRWR77C	Turbidity	H
218. Río Guanajibo	Río Viejo	PRWR77D	Chromium VI	H
219. Río Guanajibo	Río Viejo	PRWR77D	Cyanide	H
220. Río Guanajibo	Río Viejo	PRWR77D	Dissolved Oxygen	H
221. Río Guanajibo	Río Viejo	PRWR77D	Enterococci	H
222. Río Guanajibo	Río Viejo	PRWR77D	Surfactants	H
223. Río Guanajibo	Río Viejo	PRWR77D	Temperature	H
224. Río Guanajibo	Río Viejo	PRWR77D	Total, Phosphorus	H
225. Río Guanajibo	Río Cupeyes	PRWR77G	Pesticides	H
226. Río Yagüez	Río Yagüez	PRWR79A	Chromium VI	H
227. Río Yagüez	Río Yagüez	PRWR79A	Cyanide	H
228. Río Yagüez	Río Yagüez	PRWR79A	Enterococci	H
229. Río Yagüez	Río Yagüez	PRWR79A	Temperature	H
230. Río Yagüez	Río Yagüez	PRWR79A	Total, Nitrogen	H
231. Río Yagüez	Río Yagüez	PRWR79A	Total Phosphorus	H
232. Río Yagüez	Río Yagüez	PRWR79A	Turbidity	H
233. Río Grande de Añasco	Río Grande de Añasco	PRWR83A	Chromium VI	H
234. Río Grande de Añasco	Río Grande de Añasco	PRWR83A	Copper	H
235. Río Grande de Añasco	Río Grande de Añasco	PRWR83A	Cyanide	H
236. Río Grande de Añasco	Río Grande de Añasco	PRWR83A	Enterococci	H
237. Río Grande de Añasco	Río Grande de Añasco	PRWR83A	pH	H
238. Río Grande de Añasco	Río Grande de Añasco	PRWR83A	Temperature	H
239. Río Grande de Añasco	Río Grande de Añasco	PRWR83A	Total Phosphorus	H
240. Río Grande de Añasco	Río Grande de Añasco	PRWR83A	Turbidity	H
241. Río Grande de Añasco	Río Prieto	PRWR83I	Pesticides	H

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
242. Río Culebrinas	Río Culebrinas	PRWR95A	Chromium VI	H
243. Río Culebrinas	Río Culebrinas	PRWR95A	Cyanide	H
244. Río Culebrinas	Río Culebrinas	PRWR95A	Enterococci	H
245. Río Culebrinas	Río Culebrinas	PRWR95A	Pesticides	H
246. Río Culebrinas	Río Culebrinas	PRWR95A	Temperature	H
247. Río Culebrinas	Río Culebrinas	PRWR95A	Total, Nitrogen	H
248. Río Culebrinas	Río Culebrinas	PRWR95A	Total, Phosphorus	H
249. Río Culebrinas	Río Culebrinas	PRWR95A	Turbidity	H
250. Río Culebrinas	Quebrada La Salle	PRWQ95F	Dissolved Oxygen	H
251. Río Culebrinas	Quebrada La Salle	PRWQ95F	Pesticides	H
252. Río Culebrinas	Quebrada El Salto	PRWQ95G	Dissolved Oxygen	H
253. Río Culebrinas	Quebrada Grande De La Majagua	PRWQ95H	Pesticides	H
254. Río Guajataca	Lago Guajataca	PRNL3A1	Dissolved Oxygen	H
255. Río Guajataca	Lago Guajataca	PRNL3A1	pH	H
256. Río Guajataca	Lago Guajataca	PRNL3A1	Temperature	H
257. Río Guajataca	Lago Guajataca	PRNL3A1	Total, Nitrogen	H
258. Río Guajataca	Lago Guajataca	PRNL3A1	Total, Phosphorus	H
259. Río Grande de Arecibo	Lago Dos Bocas	PRNL$_1$7A1	Arsenic	H
260. Río Grande de Arecibo	Lago Dos Bocas	PRNL$_1$7A1	Copper	H
261. Río Grande de Arecibo	Lago Dos Bocas	PRNL$_1$7A1	Dissolved Oxygen	H
262. Río Grande de Arecibo	Lago Dos Bocas	PRNL$_1$7A1	pH	H
263. Río Grande de Arecibo	Lago Dos Bocas	PRNL$_1$7A1	Surfactants	H
264. Río Grande de Arecibo	Lago Dos Bocas	PRNL$_1$7A1	Temperature	H
265. Río Grande de Arecibo	Lago Dos Bocas	PRNL$_1$7A1	Total, Nitrogen	H
266. Río Grande de Arecibo	Lago Dos Bocas	PRNL$_1$7A1	Total, Phosphorus	H
267. Río Grande de Arecibo	Lago Dos Bocas	PRNL$_1$7A1	Turbidity	H
268. Río Grande de Arecibo	Lago Caonillas	PRNL$_2$7C1	Copper	H
269. Río Grande de Arecibo	Lago Caonillas	PRNL$_2$7C1	Dissolved Oxygen	H
270. Río Grande de Arecibo	Lago Caonillas	PRNL$_2$7C1	Pesticides	H
271. Río Grande de Arecibo	Lago Caonillas	PRNL$_2$7C1	Total, Nitrogen	H
272. Río Grande de Arecibo	Lago Caonillas	PRNL$_2$7C1	Total, Phosphorus	H
273. Río Grande de Arecibo	Lago Caonillas	PRNL$_2$7C1	Turbidity	H
274. Río Grande de Arecibo	Lago Garzas	PRNL$_3$7A3	Copper	H
275. Río Grande de Arecibo	Lago Garzas	PRNL$_3$7A3	Dissolved Oxygen	H
276. Río Grande de Arecibo	Lago Garzas	PRNL$_3$7A3	Lead	H
277. Río Grande de Arecibo	Lago Garzas	PRNL$_3$7A3	pH	H
278. Río Grande de Arecibo	Lago Garzas	PRNL$_3$7A3	Pesticides	H
279. Río Grande de Arecibo	Lago Garzas	PRNL$_3$7A3	Total, Phosphorus	H
280. Río Grande de Manatí	Lago Guineo	PRNL$_1$8C1	Dissolved Oxygen	H
281. Río Grande de Manatí	Lago Guineo	PRNL$_1$8C1	Pesticides	H
282. Río Grande de Manatí	Lago Matrullas	PRNL$_2$8C1	Copper	H
283. Río Grande de Manatí	Lago Matrullas	PRNL$_2$8C1	Dissolved Oxygen	H
284. Río Grande de Manatí	Lago Matrullas	PRNL$_2$8C1	Lead	H

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
285. Río Grande de Manatí	Lago Matrullas	$PRNL_28C1$	pH	H
286. Río Grande de Manatí	Lago Matrullas	$PRNL_28C1$	Total, Nitrogen	H
287. Río Grande de Manatí	Lago Matrullas	$PRNL_28C1$	Total, Phosphorus	H
288. Río Grande de Manatí	Lago Matrullas	$PRNL_28C1$	Turbidity	H
289. Río De La Plata	Lago La Plata	$PREL_110A1$	Arsenic	H
290. Río De La Plata	Lago La Plata	$PREL_110A1$	Dissolved Oxygen	H
291. Río De La Plata	Lago La Plata	$PREL_110A1$	Lead	H
292. Río De La Plata	Lago La Plata	$PREL_110A1$	pH	H
293. Río De La Plata	Lago La Plata	$PREL_110A1$	Temperature	H
294. Río De La Plata	Lago La Plata	$PREL_110A1$	Total, Nitrogen	H
295. Río De La Plata	Lago La Plata	$PREL_110A1$	Total, Phosphorus	H
296. Río De La Plata	Lago La Plata	$PREL_110A1$	Turbidity	H
297. Río De La Plata	Lago Carite	$PREL_210A5$	Dissolved Oxygen	H
298. Río De La Plata	Lago Carite	$PREL_210A5$	pH	H
299. Río De La Plata	Lago Carite	$PREL_210A5$	Total, Nitrogen	H
300. Río De La Plata	Lago Carite	$PREL_210A5$	Total, Phosphorus	H
301. Río De La Plata	Lago Carite	$PREL_210A5$	Turbidity	H
302. Río Bayamón	Lago Cidra	PREL12A2	Copper	H
303. Río Bayamón	Lago Cidra	PREL12A2	Dissolved Oxygen	H
304. Río Bayamón	Lago Cidra	PREL12A2	Lead	H
305. Río Bayamón	Lago Cidra	PREL12A2	Total, Nitrogen	H
306. Río Bayamón	Lago Cidra	PREL12A2	Total, Phosphorus	H
307. Río Bayamón	Lago Cidra	PREL12A2	Turbidity	H
308. Río Grande de Loíza	Lago Loíza	PREL14A1	Copper	H
309. Río Grande de Loíza	Lago Loíza	PREL14A1	Dissolved Oxygen	H
310. Río Grande de Loíza	Lago Loíza	PREL14A1	Lead	H
311. Río Grande de Loíza	Lago Loíza	PREL14A1	pH	H
312. Río Grande de Loíza	Lago Loíza	PREL14A1	Temperature	H
313. Río Grande de Loíza	Lago Loíza	PREL14A1	Total, Nitrogen	H
314. Río Grande de Loíza	Lago Loíza	PREL14A1	Total, Phosphorus	H
315. Río Grande de Loíza	Lago Loíza	PREL14A1	Turbidity	H
316. Río Grande de Patillas	Lago Patillas	PRSL43A1	Dissolved Oxygen	H
317. Río Grande de Patillas	Lago Patillas	PRSL43A1	Pesticides	H
318. Río Grande de Patillas	Lago Patillas	PRSL43A1	pH	H
319. Río Grande de Patillas	Lago Patillas	PRSL43A1	Temperature	H
320. Río Grande de Patillas	Lago Patillas	PRSL43A1	Total, Phosphorus	H
321. Río Grande de Añasco	Lago Guayo	PRWL83H	Dissolved Oxygen	H
322. Río Grande de Añasco	Lago Guayo	PRWL83H	Pesticides	H
323. Río Grande de Añasco	Lago Guayo	PRWL83H	pH	H
324. Río Grande de Añasco	Lago Guayo	PRWL83H	Total, Nitrogen	H
325. Río Grande de Añasco	Lago Guayo	PRWL83H	Total, Phosphorus	H
326. Río Grande de Añasco	Lago Guayo	PRWL83H	Turbidity	H
327. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Chromium VI	H
328. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Copper	H

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
329. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Dissolved Oxygen	H
330. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Enterococci	H
331. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Mercury	H
332. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Lead	H
333. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Oil and Grease	H
334. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Surfactants	H
335. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Temperature	H
336. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Total, Nitrogen	H
337. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Total, Phosphorus	H
338. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Turbidity	H
339. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Chromium VI	H
340. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Dissolved Oxygen	H
341. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Enterococci	H
342. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Mercury	H
343. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Oil and Grease	H
344. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	pH	H
345. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Temperature	H
346. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Total, Nitrogen	H
347. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Total, Phosphorus	H
348. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Turbidity	H

Table 48: AU/ Parameter Combination with intermediate (moderate) and low priority to development of TMDL

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
1. Río Herrera	Río Herrera	PRER15A	Dissolved Oxygen	M
2. Río Herrera	Río Herrera	PRER15A	Turbidity	M
3. Río Espíritu Santo	Río Espíritu Santo	PRER16A	Ammonia	M
4. Río Espíritu Santo	Río Espíritu Santo	PRER16A	Chromium VI	M
5. Río Espíritu Santo	Río Espíritu Santo	PRER16A	Enterococci	M
6. Quebrada Mata de Plátano	Quebrada Mata de Plátano	PREQ18A	Dissolved Oxygen	M
7. Quebrada Mata de Plátano	Quebrada Mata de Plátano	PREQ18A	Surfactants	M
8. Quebrada Fajardo	Quebrada Fajardo	PREQ21A	Dissolved Oxygen	M
9. Quebrada Fajardo	Quebrada Fajardo	PREQ21A	pH	M
10. Quebrada Fajardo	Quebrada Fajardo	PREQ21A	Temperature	M
11. Río Fajardo	Río Fajardo	PRER22A	Chromium VI	M
12. Río Fajardo	Río Fajardo	PRER22A	Enterococci	M
13. Río Fajardo	Río Fajardo	PRER22A	Temperature	M
14. Río Fajardo	Río Fajardo	PRER22A	Total, Nitrogen	M
15. Río Fajardo	Río Fajardo	PRER22A	Total, Phosphorus	M
16. Río Fajardo	Río Fajardo	PRER22A	Turbidity	M
17. Río Demajagua	Río Demajagua	PRER23A	Dissolved Oxygen	M
18. Quebrada Ceiba	Quebrada Ceiba	PREQ24A	Dissolved Oxygen	M
19. Quebrada Ceiba	Quebrada Ceiba	PREQ24A	Surfactants	M
20. Quebrada Aguas Claras	Quebrada Aguas Claras	PREQ25A	Dissolved Oxygen	M

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
21. Río Daguao	Río Daguao	PRER26A	Dissolved Oxygen	M
22. Quebrada Botijas	Quebrada Botijas	PREQ28A	Dissolved Oxygen	M
23. Río Antón Ruiz	Río Antón Ruiz	PRER31A	Dissolved Oxygen	M
24. Río Antón Ruiz	Río Antón Ruiz	PRER31A	Temperature	M
25. Quebrada Frontera	Quebrada Frontera	PREQ32A	Dissolved Oxygen	M
26. Río Humacao	Río Humacao	PRER33A	Chromium VI	M
27. Río Humacao	Río Humacao	PRER33A	Copper	M
28. Río Humacao	Río Humacao	PRER33A	Enterococci	M
29. Río Humacao	Río Humacao	PRER33A	Surfactants	M
30. Río Humacao	Río Humacao	PRER33A	Temperature	M
31. Río Humacao	Río Humacao	PRER33A	Total, Nitrogen	M
32. Río Humacao	Río Humacao	PRER33A	Total, Phosphorus	M
33. Río Humacao	Río Humacao	PRER33A	Turbidity	M
34. Río Candelero	Río Candelero	PRER34A	Dissolved Oxygen	M
35. Río Guayanés	Río Guayanés	PRER35A	Chromium VI	M
36. Río Guayanés	Río Guayanés	PRER35A	Copper	M
37. Río Guayanés	Río Guayanés	PRER35A	Enterococci	M
38. Río Guayanés	Río Guayanés	PRER35A	Temperature	M
39. Río Guayanés	Río Guayanés	PRER35A	Total, Nitrogen	M
40. Río Guayanés	Río Guayanés	PRER35A	Total, Phosphorus	M
41. Río Guayanés	Río Guayanés	PRER35A	Turbidity	M
42. Río Maunabo	Río Maunabo	PRER37A	Chromium VI	M
43. Río Maunabo	Río Maunabo	PRER37A	Copper	M
44. Río Maunabo	Río Maunabo	PRER37A	Cyanide	M
45. Río Maunabo	Río Maunabo	PRER37A	Enterococci	M
46. Río Maunabo	Río Maunabo	PRER37A	Temperature	M
47. Río Maunabo	Río Maunabo	PRER37A	Total, Nitrogen	M
48. Río Maunabo	Río Maunabo	PRER37A	Total, Phosphorus	M
49. Río Maunabo	Río Maunabo	PRER37A	Turbidity	M
50. Quebrada Palenque	Quebrada Palenque	PRSQ41A	Dissolved Oxygen	M
51. Río Chico	Río Chico	PRSR42A	Ammonia	M
52. Río Chico	Río Chico	PRSR42A	Copper	M
53. Río Chico	Río Chico	PRSR42A	Dissolved Oxygen	M
54. Río Chico	Río Chico	PRSR42A	Silver	M
55. Río Chico	Río Chico	PRSR42A	Surfactants	M
56. Río Chico	Río Chico	PRSR42A	Total, Phosphorus	M
57. Río Guamaní	Río Guamaní	PRSR49A	Temperature	M
58. Quebrada Melanía	Quebrada Melanía	PRSQ50A	Dissolved Oxygen	M
59. Río Seco	Río Seco	PRSR51A	Dissolved Oxygen	M
60. Quebrada Amorós	Quebrada Amorós	PRSQ52A	Dissolved Oxygen	M
61. Quebrada Amorós	Quebrada Amorós	PRSQ52A	pH	M
62. Quebrada Aguas Verdes	Quebrada Aguas Verdes	PRSQ53A	Dissolved Oxygen	M
63. Río Niguas de Salinas	Río Niguas de Salinas	PRSR54A	Dissolved Oxygen	M
64. Río Cayures	Río Cayures	PRSR56A	Dissolved Oxygen	M

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
65. Río Cayures	Río Cayures	PRSR56A	Surfactants	M
66. Río Bucaná-Cerrillos	Río Bucaná Cerrillos	PRSR62A1	Chromium VI	M
67. Río Bucaná-Cerrillos	Río Bucaná Cerrillos	PRSR62A1	Cyanide	M
68. Río Bucaná-Cerrillos	Río Bucaná Cerrillos	PRSR62A1	Dissolved Oxygen	M
69. Río Bucaná-Cerrillos	Río Bucaná Cerrillos	PRSR62A1	Enterococci	M
70. Río Bucaná-Cerrillos	Río Bucaná Cerrillos	PRSR62A2	Chromium VI	M
71. Río Bucaná-Cerrillos	Río Bucaná Cerrillos	PRSR62A2	Cyanide	M
72. Río Bucaná-Cerrillos	Río Bucaná Cerrillos	PRSR62A2	Enterococci	M
73. Río Bucaná-Cerrillos	Río Bucaná Cerrillos	PRSR62A2	Surfactants	M
74. Río Portugués	Río Portugués	PRSR63A	Chromium VI	M
75. Río Portugués	Río Portugués	PRSR63A	Cyanide	M
76. Río Portugués	Río Portugués	PRSR63A	Dissolved Oxygen	M
77. Río Portugués	Río Portugués	PRSR63A	Enterococci	M
78. Río Matilde-Pastillo	Río Matilde-Pastillo	PRSR64A	Temperature	M
79. Río Tallaboa	Río Tallaboa	PRSR65A	pH	M
80. Río Tallaboa	Río Tallaboa	PRSR65A	Temperature	M
81. Río Yauco	Río Yauco	PRSR68A1	Dissolved Oxygen	M
82. Río Yauco	Río Yauco	PRSR68A1	Total, Phosphorus	M
83. Río Loco	Río Loco	PRSR69A1	Dissolved Oxygen	M
84. Río Loco	Río Loco	PRSR69A1	Temperature	M
85. Río Loco	Río Loco	PRSR69A1	Turbidity	M
86. Quebrada Zumbón	Quebrada Zumbón	PRWQ72A	Dissolved Oxygen	M
87. Quebrada Zumbón	Quebrada Zumbón	PRWQ72A	Surfactants	M
88. Quebrada González	Quebrada González	PRWQ73A	Dissolved Oxygen	M
89. Quebrada Los Pajaritos	Quebrada Los Pajaritos	PRWQ74A	Dissolved Oxygen	M
90. Caño Merle	Caño Merle	PRWK78A	Dissolved Oxygen	M
91. Caño Merle	Caño Merle	PRWK78A	Surfactants	M
92. Río Herrera	Río Herrera	PREE15A	Surfactants	M
93. Río Espíritu Santo	Río Espíritu Santo	PREE16A	Dissolved Oxygen	M
94. Río Espíritu Santo	Río Espíritu Santo	PREE16A	Surfactants	M
95. Río Demajagua	Río Demajagua	PREE23A	Turbidity	M
96. Río Candelero	Río Candelero	PREE34A	Dissolved Oxygen	M
97. Río Candelero	Río Candelero	PREE34A	Temperature	M
98. Río Guayanés	Río Guayanés	PREE35A	Arsenic	M
99. Río Guayanés	Río Guayanés	PREE35A	Turbidity	M
100. Caño Santiago	Caño Santiago	PREE35.1	Dissolved Oxygen	M
101. Caño Santiago	Caño Santiago	PREE35.1	Surfactants	M
102. Caño Santiago	Caño Santiago	PREE35.1	Turbidity	M
103. Río Matilde-Pastillo	Río Matilde-Pastillo	PRSE64A	Turbidity	M
104. Río Tallaboa	Río Tallaboa	PRSE65A	Turbidity	M
105. Caño Merle	Caño Merle	PRWE78A	Surfactants	M
106. Quebrada Grande de Calvache	Quebrada Grande de Calvache	PRWE88A	Dissolved Oxygen	M
107. Río Guayabo	Río Guayabo	PRWE94A	Dissolved Oxygen	M

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
108. Quebrada Melanía	Lago Melanía	PRSL50A	Dissolved Oxygen	M
109. Quebrada Melanía	Lago Melanía	PRSL50A	Enterococci	M
110. Quebrada Melanía	Lago Melanía	PRSL50A	Mercury	M
111. Quebrada Melanía	Lago Melanía	PRSL50A	Pesticides	M
112. Quebrada Melanía	Lago Melanía	PRSL50A	pH	M
113. Quebrada Melanía	Lago Melanía	PRSL50A	Temperature	M
114. Quebrada Melanía	Lago Melanía	PRSL50A	Total, Nitrogen	M
115. Quebrada Melanía	Lago Melanía	PRSL50A	Total, Phosphorus	M
116. Quebrada Melanía	Lago Melanía	PRSL50A	Turbidity	M
117. Río Jacaguas	Lago Guayabal	$PRSL_160A1$	Dissolved Oxygen	M
118. Río Jacaguas	Lago Guayabal	$PRSL_160A1$	Pesticides	M
119. Río Jacaguas	Lago Guayabal	$PRSL_160A1$	pH	M
120. Río Jacaguas	Lago Guayabal	$PRSL_160A1$	Total, Nitrogen	M
121. Río Jacaguas	Lago Guayabal	$PRSL_160A1$	Total, Phosphorus	M
122. Río Jacaguas	Lago Guayabal	$PRSL_160A1$	Turbidity	M
123. Río Jacaguas	Lago Toa vaca	$PRSL_260A1$	Dissolved Oxygen	M
124. Río Jacaguas	Lago Toa vaca	$PRSL_260A1$	pH	M
125. Río Jacaguas	Lago Toa vaca	$PRSL_260A1$	Temperature	M
126. Río Jacaguas	Lago Toa vaca	$PRSL_260A1$	Total, Nitrogen	M
127. Río Jacaguas	Lago Toa vaca	$PRSL_260A1$	Total, Phosphorus	M
128. Río Jacaguas	Lago Toa vaca	$PRSL_260A1$	Turbidity	M
129. Río Bucaná-Cerrillos	Lago Cerrillos	PRSL62A1	Dissolved Oxygen	M
130. Río Bucaná-Cerrillos	Lago Cerrillos	PRSL62A1	pH	M
131. Río Bucaná-Cerrillos	Lago Cerrillos	PRSL62A1	Temperature	M
132. Río Bucaná-Cerrillos	Lago Cerrillos	PRSL62A1	Total, Nitrogen	M
133. Río Bucaná-Cerrillos	Lago Cerrillos	PRSL62A1	Total, Phosphorus	M
134. Río Yauco	Lago Luchetti	PRSL68A1	Dissolved Oxygen	M
135. Río Yauco	Lago Luchetti	PRSL68A1	Pesticides	M
136. Río Yauco	Lago Luchetti	PRSL68A1	pH	M
137. Río Yauco	Lago Luchetti	PRSL68A1	Total, Nitrogen	M
138. Río Yauco	Lago Luchetti	PRSL68A1	Total, Phosphorus	M
139. Río Yauco	Lago Luchetti	PRSL68A1	Turbidity	M
140. Río Loco	Lago Loco	PRSL69A	Dissolved Oxygen	M
141. Río Loco	Lago Loco	PRSL69A	pH	M
142. Río Loco	Lago Loco	PRSL69A	Total, Nitrogen	M
143. Río Loco	Lago Loco	PRSL69A	Total, Phosphorus	M
144. Quebrada Los Ramos	Quebrada Los Ramos	PRWQ89A	Dissolved Oxygen	L
145. Quebrada Piletas	Quebrada Piletas	PRWQ91A	Dissolved Oxygen	L
146. Caño Boquilla	Caño Boquilla	PRWE82A	Dissolved Oxygen	L
147. Caño Boquilla	Caño Boquilla	PRWE82A	Surfactants	L
148. Caño Boquilla	Caño Boquilla	PRWE82A	Turbidity	L
149. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A1	Copper	L
150. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A1	Dissolved Oxygen	L
151. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A1	Enterococci	L

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
152. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A1	Oil and Grease	L
153. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A1	pH	L
154. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A1	Temperature	L
155. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A1	Turbidity	L
156. Laguna Joyudas	Laguna Joyudas	PRWN0005	Copper	L
157. Laguna Joyudas	Laguna Joyudas	PRWN0005	Dissolved Oxygen	L
158. Laguna Tortuguero	Laguna Tortuguero	PRNN0006	Dissolved Oxygen	L
159. Laguna Mata Redonda	Laguna Mata Redonda	PRNN0007	Dissolved Oxygen	L
160. Laguna Mata Redonda	Laguna Mata Redonda	PRNN0007	pH	L
161. Laguna Aguas Prieta	Laguna Aguas Prieta	PREN0011	Copper	L
162. Laguna Aguas Prieta	Laguna Aguas Prieta	PREN0011	Dissolved Oxygen	L
163. Laguna Aguas Prieta	Laguna Aguas Prieta	PREN0011	Turbidity	L
164. Laguna Grande	Laguna Grande	PREN0012	Dissolved Oxygen	L
165. Laguna Grande	Laguna Grande	PREN0012	Enterococci	L
166. Laguna Grande	Laguna Grande	PREN0012	pH	L
167. Laguna Ceiba	Laguna Ceiba	PREN0013	Copper	L
168. Laguna Ceiba	Laguna Ceiba	PREN0013	Dissolved Oxygen	L
169. Laguna Ceiba	Laguna Ceiba	PREN0013	Enterococci	L
170. Laguna Ceiba	Laguna Ceiba	PREN0013	pH	L
171. Laguna Pozuelo	Laguna Pozuelo	PRSN0014	Copper	L
172. Laguna Pozuelo	Laguna Pozuelo	PRSN0014	Dissolved Oxygen	L
173. Laguna Pozuelo	Laguna Pozuelo	PRSN0014	pH	L
174. Laguna Pozuelo	Laguna Pozuelo	PRSN0014	Temperature	L
175. Laguna Mar Negro	Laguna Mar Negro	PRSN0015	Copper	L
176. Laguna Mar Negro	Laguna Mar Negro	PRSN0015	Dissolved Oxygen	L
177. Laguna Mar Negro	Laguna Mar Negro	PRSN0015	pH	L
178. Laguna Punta Arenas	Laguna Punta Arenas	PRSN0016	Copper	L
179. Laguna Punta Arenas	Laguna Punta Arenas	PRSN0016	Dissolved Oxygen	L
180. Laguna Punta Arenas	Laguna Punta Arenas	PRSN0016	Temperature	L
181. Laguna Punta Arenas	Laguna Punta Arenas	PRSN0016	Turbidity	L
182. Laguna Tiburones	Laguna Tiburones	PRSN0017	Copper	L
183. Laguna Tiburones	Laguna Tiburones	PRSN0017	Dissolved Oxygen	L
184. Laguna Tiburones	Laguna Tiburones	PRSN0017	pH	L
185. Laguna Tiburones	Laguna Tiburones	PRSN0017	Temperature	L
186. Laguna Tiburones	Laguna Tiburones	PRSN0017	Turbidity	L
187. Laguna Salinas	Laguna Salinas	PRSN0018	Copper	L
188. Laguna Salinas	Laguna Salinas	PRSN0018	Dissolved Oxygen	L
189. Laguna Salinas 1	Fraternidad	PRSN0019	Copper	L
190. Laguna Salinas 1	Fraternidad	PRSN0019	Dissolved Oxygen	L
191. Laguna Salinas 1	Fraternidad	PRSN0019	Turbidity	L
192. Laguna Cabo Rojo 2	Candelaria	PRSN0020	Copper	L
193. Laguna Cabo Rojo 2	Candelaria	PRSN0020	Dissolved Oxygen	L
194. Laguna Cabo Rojo 2	Candelaria	PRSN0020	Temperature	L
195. Laguna Cabo Rojo 2	Candelaria	PRSN0020	Turbidity	L
196. Laguna Cabo Rojo 3	El Faro	PRSN0021	Copper	L
197. Laguna Cabo Rojo 3	El Faro	PRSN0021	Dissolved Oxygen	L

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
198. Laguna Cabo Rojo 3	El Faro	PRSN0021	Turbidity	L
199. Caño Boquerón	Caño Boquerón	PRSN0022	Copper	L
200. Caño Boquerón	Caño Boquerón	PRSN0022	Dissolved Oxygen	L
201. Caño Boquerón	Caño Boquerón	PRSN0022	pH	L
202. Caño Boquerón	Caño Boquerón	PRSN0022	Turbidity	L
203. Laguna Guaniquilla	Laguna Guaniquilla	PRSN0023	Dissolved Oxygen	L
204. Laguna Guaniquilla	Laguna Guaniquilla	PRSN0023	pH	L
205. Laguna Guaniquilla	Laguna Guaniquilla	PRSN0023	Turbidity	L
206. Punta Borinquén to Punta Sardina	Punta Borinquén to Punta Sardina	PRNC01	Copper	L
207. Punta Borinquén to Punta Sardina	Punta Borinquén to Punta Sardina	PRNC01	Thallium	L
208. Punta Sardina to Punta Manglillo	Punta Sardina to Punta Manglillo	PRNC02	Copper	L
209. Punta Sardina to Punta Manglillo	Punta Sardina to Punta Manglillo	PRNC02	Enterococci	L
210. Punta Sardina to Punta Manglillo	Punta Sardina to Punta Manglillo	PRNC02	Lead	L
211. Punta Sardina to Punta Manglillo	Punta Sardina to Punta Manglillo	PRNC02	Thallium	L
212. Punta Sardina to Punta Manglillo	Punta Sardina to Punta Manglillo	PRNC02	Turbidity	L
213. Punta Manglillo to Punta Morillos	Punta Manglillo to Punta Morillos	PRNC03	Copper	L
214. Punta Manglillo to Punta Morillos	Punta Manglillo to Punta Morillos	PRNC03	Enterococci	L
215. Punta Manglillo to Punta Morillos	Punta Manglillo to Punta Morillos	PRNC03	Temperature	L
216. Punta Manglillo to Punta Morillos	Punta Manglillo to Punta Morillos	PRNC03	Turbidity	L
217. Punta Morrillos to Punta Manatí	Punta Morrillos to Punta Manatí	PRNC04	Copper	L
218. Punta Morrillos to Punta Manatí	Punta Morrillos to Punta Manatí	PRNC04	Enterococci	L
219. Punta Morrillos to Punta Manatí	Punta Morrillos to Punta Manatí	PRNC04	Mercury	L
220. Punta Morrillos to Punta Manatí	Punta Morrillos to Punta Manatí	PRNC04	Nickel	L
221. Punta Morrillos to Punta Manatí	Punta Morrillos to Punta Manatí	PRNC04	pH	L
222. Punta Morrillos to Punta Manatí	Punta Morrillos to Punta Manatí	PRNC04	Thallium	L
223. Punta Morrillos to Punta Manatí	Punta Morrillos to Punta Manatí	PRNC04	Turbidity	L
224. Punta Manatí to Punta Chivato	Punta Manatí to Punta Chivato	PRNC05	Copper	L
225. Punta Manatí to Punta Chivato	Punta Manatí to Punta Chivato	PRNC05	Enterococci	L
226. Punta Manatí to Punta Chivato	Punta Manatí to Punta Chivato	PRNC05	Mercury	L

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227. Punta Manatí to Punta Chivato	Punta Manatí to Punta Chivato	PRNC05	pH	L
228. Punta Manatí to Punta Chivato	Punta Manatí to Punta Chivato	PRNC05	Temperature	L
229. Punta Manatí to Punta Chivato	Punta Manatí to Punta Chivato	PRNC05	Thallium	L
230. Punta Manatí to Punta Chivato	Punta Manatí to Punta Chivato	PRNC05	Turbidity	L
231. Punta Chivato to Punta Cerro Gordo	Punta Chivato to Punta Cerro Gordo	PRNC06	Copper	L
232. Punta Chivato to Punta Cerro Gordo	Punta Chivato to Punta Cerro Gordo	PRNC06	Enterococci	L
233. Punta Chivato to Punta Cerro Gordo	Punta Chivato to Punta Cerro Gordo	PRNC06	Mercury	L
234. Punta Chivato to Punta Cerro Gordo	Punta Chivato to Punta Cerro Gordo	PRNC06	Temperature	L
235. Punta Chivato to Punta Cerro Gordo	Punta Chivato to Punta Cerro Gordo	PRNC06	Turbidity	L
236. Punta Puerto Nuevo to Punta Cerro Gordo	Punta Puerto Nuevo to Punta Cerro Gordo	PRNC07	Copper	L
237. Punta Puerto Nuevo to Punta Cerro Gordo	Punta Puerto Nuevo to Punta Cerro Gordo	PRNC07	Mercury	L
238. Punta Puerto Nuevo to Punta Cerro Gordo	Punta Puerto Nuevo to Punta Cerro Gordo	PRNC07	pH	L
239. Punta Puerto Nuevo to Punta Cerro Gordo	Punta Puerto Nuevo to Punta Cerro Gordo	PRNC07	Temperature	L
240. Punta Puerto Nuevo to Punta Cerro Gordo	Punta Puerto Nuevo to Punta Cerro Gordo	PRNC07	Turbidity	L
241. Punta Cerro Gordo to Punta Boca Juana	Punta Cerro Gordo to Punta Boca Juana	PRNC08	Arsenic	L
242. Punta Cerro Gordo to Punta Boca Juana	Punta Cerro Gordo to Punta Boca Juana	PRNC08	Copper	L
243. Punta Cerro Gordo to Punta Boca Juana	Punta Cerro Gordo to Punta Boca Juana	PRNC08	Enterococci	L
244. Punta Cerro Gordo to Punta Boca Juana	Punta Cerro Gordo to Punta Boca Juana	PRNC08	Lead	L
245. Punta Cerro Gordo to Punta Boca Juana	Punta Cerro Gordo to Punta Boca Juana	PRNC08	Nickel	L
246. Punta Cerro Gordo to Punta Boca Juana	Punta Cerro Gordo to Punta Boca Juana	PRNC08	Turbidity	L
247. Punta Cerro Gordo to Punta Boca Juana	Punta Cerro Gordo to Punta Boca Juana	PRNC08	Zinc	L
248. Punta Boca Juana to Punta Salinas	Punta Boca Juana to Punta Salinas	PREC09	Arsenic	L
249. Punta Boca Juana to Punta Salinas	Punta Boca Juana to Punta Salinas	PREC09	Copper	L
250. Punta Boca Juana to Punta Salinas	Punta Boca Juana to Punta Salinas	PREC09	Enterococci	L
251. Punta Boca Juana to Punta Salinas	Punta Boca Juana to Punta Salinas	PREC09	Lead	L

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252. Punta Boca Juana to Punta Salinas	Punta Boca Juana to Punta Salinas	PREC09	Nickel	L
253. Punta Boca Juana to Punta Salinas	Punta Boca Juana to Punta Salinas	PREC09	pH	L
254. Punta Boca Juana to Punta Salinas	Punta Boca Juana to Punta Salinas	PREC09	Turbidity	L
255. Punta Salinas to Río Bayamón Mouth	Punta Salinas to Río Bayamón Mouth	PREC10B	Copper	L
256. Punta Salinas to Río Bayamón Mouth	Punta Salinas to Río Bayamón Mouth	PREC10B	Enterococci	L
257. Punta Salinas to Río Bayamón Mouth	Punta Salinas to Río Bayamón Mouth	PREC10B	Lead	L
258. Punta Salinas to Río Bayamón Mouth	Punta Salinas to Río Bayamón Mouth	PREC10B	Mercury	L
259. Punta Salinas to Río Bayamón Mouth	Punta Salinas to Río Bayamón Mouth	PREC10B	Nickel	L
260. Punta Salinas to Río Bayamón Mouth	Punta Salinas to Río Bayamón Mouth	PREC10B	Turbidity	L
261. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Copper	L
262. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Enterococci	L
263. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Lead	L
264. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Mercury	L
265. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Nickel	L
266. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	pH	L
267. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Temperature	L
268. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Thallium	L
269. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Turbidity	L
270. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Zinc	L
271. Isla de Cabras to Punta Del Morro	Isla de Cabras to Punta Del Morro	PREC11	Arsenic	L
272. Isla de Cabras to Punta Del Morro	Isla de Cabras to Punta Del Morro	PREC11	Copper	L
273. Isla de Cabras to Punta Del Morro	Isla de Cabras to Punta Del Morro	PREC11	Dissolved Oxygen	L
274. Isla de Cabras to Punta Del Morro	Isla de Cabras to Punta Del Morro	PREC11	Fecal Coliform	L
275. Punta Del Morro to West Side of Condado Bridge	Punta Del Morro to West Side of Condado Bridge	PREC12	Enterococci	L
276. Punta Del Morro to West Side of Condado Bridge	Punta Del Morro to West Side of Condado Bridge	PREC12	pH	L

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277. Punta Del Morro to West Side of Condado Bridge	Punta Del Morro to West Side of Condado Bridge	PREC12	Temperature	L
278. Punta Del Morro to West Side of Condado Bridge	Punta Del Morro to West Side of Condado Bridge	PREC12	Turbidity	L
279. East side of Condado Bridge to Punta Las Marías	East side of Condado Bridge to Punta Las Marías	PREC13	Copper	L
280. East side of Condado Bridge to Punta Las Marías	East side of Condado Bridge to Punta Las Marías	PREC13	Enterococci	L
281. East side of Condado Bridge to Punta Las Marías	East side of Condado Bridge to Punta Las Marías	PREC13	Lead	L
282. East side of Condado Bridge to Punta Las Marías	East side of Condado Bridge to Punta Las Marías	PREC13	Mercury	L
283. East side of Condado Bridge to Punta Las Marías	East side of Condado Bridge to Punta Las Marías	PREC13	Temperature	L
284. East side of Condado Bridge to Punta Las Marías	East side of Condado Bridge to Punta Las Marías	PREC13	Thallium	L
285. East side of Condado Bridge to Punta Las Marías	East side of Condado Bridge to Punta Las Marías	PREC13	Turbidity	L
286. Punta Las Marías to Punta Cangrejos	Punta Las Marías to Punta Cangrejos	PREC14	Arsenic	L
287. Punta Las Marías to Punta Cangrejos	Punta Las Marías to Punta Cangrejos	PREC14	Copper	L
288. Punta Las Marías to Punta Cangrejos	Punta Las Marías to Punta Cangrejos	PREC14	Lead	L
289. Punta Las Marías to Punta Cangrejos	Punta Las Marías to Punta Cangrejos	PREC14	Temperature	L
290. Punta Las Marías to Punta Cangrejos	Punta Las Marías to Punta Cangrejos	PREC14	Thallium	L
291. Punta Las Marías to Punta Cangrejos	Punta Las Marías to Punta Cangrejos	PREC14	Turbidity	L
292. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Arsenic	L
293. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Copper	L
294. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Enterococci	L
295. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Mercury	L
296. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Nickel	L
297. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Temperature	L

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298. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Thallium	L
299. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Turbidity	L
300. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Arsenic	L
301. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Copper	L
302. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Enterococci	L
303. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Lead	L
304. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Mercury	L
305. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Nickel	L
306. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Temperature	L
307. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Thallium	L
308. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Turbidity	L
309. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Zinc	L
310. Punta Miquillo to Punta La Bandera	Punta Miquillo to Punta La Bandera	PREC17	Copper	L
311. Punta Miquillo to Punta La Bandera	Punta Miquillo to Punta La Bandera	PREC17	Mercury	L
312. Punta Miquillo to Punta La Bandera	Punta Miquillo to Punta La Bandera	PREC17	Temperature	L
313. Punta Miquillo to Punta La Bandera	Punta Miquillo to Punta La Bandera	PREC17	Turbidity	L
314. Punta La Bandera to Cabezas de San Juan	Punta La Bandera to Cabezas de San Juan	PREC18	Copper	L
315. Punta La Bandera to Cabezas de San Juan	Punta La Bandera to Cabezas de San Juan	PREC18	pH	L
316. Punta La Bandera to Cabezas de San Juan	Punta La Bandera to Cabezas de San Juan	PREC18	Temperature	L
317. Punta La Bandera to Cabezas de San Juan	Punta La Bandera to Cabezas de San Juan	PREC18	Thallium	L
318. Punta La Bandera to Cabezas de San Juan	Punta La Bandera to Cabezas de San Juan	PREC18	Turbidity	L
319. Cabezas de San Juan to Punta Barrancas	Cabezas de San Juan to Punta Barrancas	PREC19	Copper	L
320. Cabezas de San Juan to Punta Barrancas	Cabezas de San Juan to Punta Barrancas	PREC19	Enterococci	L
321. Cabezas de San Juan to Punta Barrancas	Cabezas de San Juan to Punta Barrancas	PREC19	Oil and Grease	L
322. Cabezas de San Juan to Punta Barrancas	Cabezas de San Juan to Punta Barrancas	PREC19	Temperature	L

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323. Cabezas de San Juan to Punta Barrancas	Cabezas de San Juan to Punta Barrancas	PREC19	Turbidity	L
324. Punta Barrancas to Punta Medio Mundo	Punta Barrancas to Punta Medio Mundo	PREC20	Copper	L
325. Punta Barrancas to Punta Medio Mundo	Punta Barrancas to Punta Medio Mundo	PREC20	Dissolved Oxygen	L
326. Punta Barrancas to Punta Medio Mundo	Punta Barrancas to Punta Medio Mundo	PREC20	Enterococci	L
327. Punta Barrancas to Punta Medio Mundo	Punta Barrancas to Punta Medio Mundo	PREC20	Temperature	L
328. Punta Barrancas to Punta Medio Mundo	Punta Barrancas to Punta Medio Mundo	PREC20	Thallium	L
329. Punta Barrancas to Punta Medio Mundo	Punta Barrancas to Punta Medio Mundo	PREC20	Turbidity	L
330. Isla Cabras to Punta Cascajo	Isla Cabras to Punta Cascajo	PREC23	Copper	L
331. Isla Cabras to Punta Cascajo	Isla Cabras to Punta Cascajo	PREC23	Turbidity	L
332. Punta Cascajo to Punta Lima	Punta Cascajo to Punta Lima	PREC24	Copper	L
333. Punta Cascajo to Punta Lima	Punta Cascajo to Punta Lima	PREC24	Dissolved Oxygen	L
334. Punta Cascajo to Punta Lima	Punta Cascajo to Punta Lima	PREC24	Enterococci	L
335. Punta Cascajo to Punta Lima	Punta Cascajo to Punta Lima	PREC24	Temperature	L
336. Punta Cascajo to Punta Lima	Punta Cascajo to Punta Lima	PREC24	Turbidity	L
337. Punta Lima to Morro de Humacao	Punta Lima to Morro de Humacao	PREC25	Copper	L
338. Punta Lima to Morro de Humacao	Punta Lima to Morro de Humacao	PREC25	Enterococci	L
339. Punta Lima to Morro de Humacao	Punta Lima to Morro de Humacao	PREC25	Mercury	L
340. Punta Lima to Morro de Humacao	Punta Lima to Morro de Humacao	PREC25	Temperature	L
341. Punta Lima to Morro de Humacao	Punta Lima to Morro de Humacao	PREC25	Turbidity	L
342. Morro de Humacao to Punta Candelero	Morro de Humacao to Punta Candelero	PREC26	Copper	L
343. Morro de Humacao to Punta Candelero	Morro de Humacao to Punta Candelero	PREC26	Enterococci	L
344. Morro de Humacao to Punta Candelero	Morro de Humacao to Punta Candelero	PREC26	Temperature	L
345. Morro de Humacao to Punta Candelero	Morro de Humacao to Punta Candelero	PREC26	Turbidity	L
346. Punta Candelero to Punta Guayanés	Punta Candelero to Punta Guayanés	PREC27	Arsenic	L
347. Punta Candelero to Punta Guayanés	Punta Candelero to Punta Guayanés	PREC27	Copper	L

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348. Punta Candelero to Punta Guayanés	Punta Candelero to Punta Guayanés	PREC27	Enterococci	L
349. Punta Candelero to Punta Guayanés	Punta Candelero to Punta Guayanés	PREC27	Thallium	L
350. Punta Candelero to Punta Guayanés	Punta Candelero to Punta Guayanés	PREC27	Turbidity	L
351. Punta Quebrada Honda to Punta Yeguas	Punta Quebrada Honda to Punta Yeguas	PREC28B	Copper	L
352. Punta Quebrada Honda to Punta Yeguas	Punta Quebrada Honda to Punta Yeguas	PREC28B	Enterococci	L
353. Punta Quebrada Honda to Punta Yeguas	Punta Quebrada Honda to Punta Yeguas	PREC28B	Thallium	L
354. Punta Quebrada Honda to Punta Yeguas	Punta Quebrada Honda to Punta Yeguas	PREC28B	Turbidity	L
355. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Arsenic	L
356. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Copper	L
357. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Enterococci	L
358. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Mercury	L
359. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Oil and Grease	L
360. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Temperature	L
361. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Thallium	L
362. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Turbidity	L
363. Punta Yeguas to Punta Tuna	Punta Yeguas to Punta Tuna	PREC29	Copper	L
364. Punta Yeguas to Punta Tuna	Punta Yeguas to Punta Tuna	PREC29	Enterococci	L
365. Punta Yeguas to Punta Tuna	Punta Yeguas to Punta Tuna	PREC29	Lead	L
366. Punta Yeguas to Punta Tuna	Punta Yeguas to Punta Tuna	PREC29	pH	L
367. Punta Yeguas to Punta Tuna	Punta Yeguas to Punta Tuna	PREC29	Temperature	L
368. Punta Yeguas to Punta Tuna	Punta Yeguas to Punta Tuna	PREC29	Thallium	L
369. Punta Yeguas to Punta Tuna	Punta Yeguas to Punta Tuna	PREC29	Turbidity	L
370. Punta Tuna to Cabo Mala Pascua	Punta Tuna to Cabo Mala Pascua	PREC30	Copper	L
371. Punta Tuna to Cabo Mala Pascua	Punta Tuna to Cabo Mala Pascua	PREC30	Enterococci	L
372. Punta Tuna to Cabo Mala Pascua	Punta Tuna to Cabo Mala Pascua	PREC30	Turbidity	L

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373. Cabo Mala Pascua to Punta Viento	Cabo Mala Pascua to Punta Viento	PRSC31	Copper	L
374. Cabo Mala Pascua to Punta Viento	Cabo Mala Pascua to Punta Viento	PRSC31	Enterococci	L
375. Cabo Mala Pascua to Punta Viento	Cabo Mala Pascua to Punta Viento	PRSC31	Temperature	L
376. Cabo Mala Pascua to Punta Viento	Cabo Mala Pascua to Punta Viento	PRSC31	Thallium	L
377. Cabo Mala Pascua to Punta Viento	Cabo Mala Pascua to Punta Viento	PRSC31	Turbidity	L
378. Punta Viento to Punta Figuras	Punta Viento to Punta Figuras	PRSC32	Copper	L
379. Punta Viento to Punta Figuras	Punta Viento to Punta Figuras	PRSC32	Dissolved Oxygen	L
380. Punta Viento to Punta Figuras	Punta Viento to Punta Figuras	PRSC32	Enterococci	L
381. Punta Viento to Punta Figuras	Punta Viento to Punta Figuras	PRSC32	Mercury	L
382. Punta Viento to Punta Figuras	Punta Viento to Punta Figuras	PRSC32	Temperature	L
383. Punta Viento to Punta Figuras	Punta Viento to Punta Figuras	PRSC32	Thallium	L
384. Punta Viento to Punta Figuras	Punta Viento to Punta Figuras	PRSC32	Turbidity	L
385. Punta Figuras to Punta Ola Grande	Punta Figuras to Punta Ola Grande	PRSC33	Copper	L
386. Punta Figuras to Punta Ola Grande	Punta Figuras to Punta Ola Grande	PRSC33	Enterococci	L
387. Punta Figuras to Punta Ola Grande	Punta Figuras to Punta Ola Grande	PRSC33	Lead	L
388. Punta Figuras to Punta Ola Grande	Punta Figuras to Punta Ola Grande	PRSC33	Mercury	L
389. Punta Figuras to Punta Ola Grande	Punta Figuras to Punta Ola Grande	PRSC33	Temperature	L
390. Punta Figuras to Punta Ola Grande	Punta Figuras to Punta Ola Grande	PRSC33	Turbidity	L
391. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Copper	L
392. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Dissolved Oxygen	L
393. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Enterococci	L
394. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Lead	L
395. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Mercury	L
396. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Nickel	L
397. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Oil and Grease	L

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398. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	pH	L
399. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Temperature	L
400. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Turbidity	L
401. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Copper	L
402. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Enterococci	L
403. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Lead	L
404. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Mercury	L
405. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Nickel	L
406. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Thallium	L
407. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Turbidity	L
408. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Zinc	L
409. Punta Cabullones to Punta Carenero	Punta Cabullones to Punta Carenero	PRSC36B	Copper	L
410. Punta Cabullones to Punta Carenero	Punta Cabullones to Punta Carenero	PRSC36B	Enterococci	L
411. Punta Cabullones to Punta Carenero	Punta Cabullones to Punta Carenero	PRSC36B	Mercury	L
412. Punta Cabullones to Punta Carenero	Punta Cabullones to Punta Carenero	PRSC36B	pH	L
413. Punta Cabullones to Punta Carenero	Punta Cabullones to Punta Carenero	PRSC36B	Temperature	L
414. Punta Cabullones to Punta Carenero	Punta Cabullones to Punta Carenero	PRSC36B	Turbidity	L
415. Punta Carenero to Punta Cuchara	Punta Carenero to Punta Cuchara	PRSC36C	Copper	L
416. Punta Carenero to Punta Cuchara	Punta Carenero to Punta Cuchara	PRSC36C	Enterococci	L
417. Punta Carenero to Punta Cuchara	Punta Carenero to Punta Cuchara	PRSC36C	Mercury	L
418. Punta Carenero to Punta Cuchara	Punta Carenero to Punta Cuchara	PRSC36C	Oil and Grease	L
419. Punta Carenero to Punta Cuchara	Punta Carenero to Punta Cuchara	PRSC36C	Turbidity	L
420. Punta Cuchara to Cayo Parguera	Punta Cuchara to Cayo Parguera	PRSC37B	Copper	L
421. Punta Cuchara to Cayo Parguera	Punta Cuchara to Cayo Parguera	PRSC37B	Enterococci	L
422. Punta Cuchara to Cayo Parguera	Punta Cuchara to Cayo Parguera	PRSC37B	Mercury	L

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
423. Punta Cuchara to Cayo Parguera	Punta Cuchara to Cayo Parguera	PRSC37B	Nickel	L
424. Punta Cuchara to Cayo Parguera	Punta Cuchara to Cayo Parguera	PRSC37B	pH	L
425. Punta Cuchara to Cayo Parguera	Punta Cuchara to Cayo Parguera	PRSC37B	Turbidity	L
426. Cayo Parguera to Punta Guayanilla	Cayo Parguera to Punta Guayanilla	PRSC37C	Copper	L
427. Cayo Parguera to Punta Guayanilla	Cayo Parguera to Punta Guayanilla	PRSC37C	Mercury	L
428. Cayo Parguera to Punta Guayanilla	Cayo Parguera to Punta Guayanilla	PRSC37C	Lead	L
429. Cayo Parguera to Punta Guayanilla	Cayo Parguera to Punta Guayanilla	PRSC37C	Nickel	L
430. Cayo Parguera to Punta Guayanilla	Cayo Parguera to Punta Guayanilla	PRSC37C	Oil and Grease	L
431. Cayo Parguera to Punta Guayanilla	Cayo Parguera to Punta Guayanilla	PRSC37C	Thallium	L
432. Cayo Parguera to Punta Guayanilla	Cayo Parguera to Punta Guayanilla	PRSC37C	Turbidity	L
433. Cayo Parguera to Punta Guayanilla	Cayo Parguera to Punta Guayanilla	PRSC37C	Zinc	L
434. Punta Guayanilla to Punta Verraco	Punta Guayanilla to Punta Verraco	PRSC38	Copper	L
435. Punta Guayanilla to Punta Verraco	Punta Guayanilla to Punta Verraco	PRSC38	Enterococci	L
436. Punta Guayanilla to Punta Verraco	Punta Guayanilla to Punta Verraco	PRSC38	Mercury	L
437. Punta Guayanilla to Punta Verraco	Punta Guayanilla to Punta Verraco	PRSC38	Oil and Grease	L
438. Punta Guayanilla to Punta Verraco	Punta Guayanilla to Punta Verraco	PRSC38	Temperature	L
439. Punta Guayanilla to Punta Verraco	Punta Guayanilla to Punta Verraco	PRSC38	Thallium	L
440. Punta Guayanilla to Punta Verraco	Punta Guayanilla to Punta Verraco	PRSC38	Turbidity	L
441. Punta Verraco to Punta Ballena	Punta Verraco to Punta Ballena	PRSC39	Copper	L
442. Punta Verraco to Punta Ballena	Punta Verraco to Punta Ballena	PRSC39	Thallium	L
443. Punta Verraco to Punta Ballena	Punta Verraco to Punta Ballena	PRSC39	Turbidity	L
444. Punta Ballena to Punta Brea	Punta Ballena to Punta Brea	PRSC40	Copper	L
445. Punta Ballena to Punta Brea	Punta Ballena to Punta Brea	PRSC40	Enterococci	L
446. Punta Ballena to Punta Brea	Punta Ballena to Punta Brea	PRSC40	Nickel	L
447. Punta Ballena to Punta Brea	Punta Ballena to Punta Brea	PRSC40	pH	L

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
448. Punta Ballena to Punta Brea	Punta Ballena to Punta Brea	PRSC40	Temperature	L
449. Punta Ballena to Punta Brea	Punta Ballena to Punta Brea	PRSC40	Turbidity	L
450. Punta Brea to Bahía Fosforescente La Parguera	Punta Brea to Bahía Fosforescente La Parguera	PRSC41B1	Copper	L
451. Punta Brea to Bahía Fosforescente La Parguera	Punta Brea to Bahía Fosforescente La Parguera	PRSC41B1	Enterococci	L
452. Punta Brea to Bahía Fosforescente La Parguera	Punta Brea to Bahía Fosforescente La Parguera	PRSC41B1	pH	L
453. Punta Brea to Bahía Fosforescente La Parguera	Punta Brea to Bahía Fosforescente La Parguera	PRSC41B1	Temperature	L
454. Punta Brea to Bahía Fosforescente La Parguera	Punta Brea to Bahía Fosforescente La Parguera	PRSC41B1	Thallium	L
455. Punta Brea to Bahía Fosforescente La Parguera	Punta Brea to Bahía Fosforescente La Parguera	PRSC41B1	Turbidity	L
456. Bahía Fosforescente La Parguera to Punta Cueva de Ayala	Bahía Fosforescente La Parguera to Punta Cueva de Ayala	PRSC41B2	Copper	L
457. Bahía Fosforescente La Parguera to Punta Cueva de Ayala	Bahía Fosforescente La Parguera to Punta Cueva de Ayala	PRSC41B2	Dissolved Oxygen	L
458. Bahía Fosforescente La Parguera to Punta Cueva de Ayala	Bahía Fosforescente La Parguera to Punta Cueva de Ayala	PRSC41B2	Enterococci	L
459. Bahía Fosforescente La Parguera to Punta Cueva de Ayala	Bahía Fosforescente La Parguera to Punta Cueva de Ayala	PRSC41B2	pH	L
460. Bahía Fosforescente La Parguera to Punta Cueva de Ayala	Bahía Fosforescente La Parguera to Punta Cueva de Ayala	PRSC41B2	Temperature	L
461. Bahía Fosforescente La Parguera to Punta Cueva de Ayala	Bahía Fosforescente La Parguera to Punta Cueva de Ayala	PRSC41B2	Thallium	L
462. Bahía Fosforescente La Parguera to Punta Cueva de Ayala	Bahía Fosforescente La Parguera to Punta Cueva de Ayala	PRSC41B2	Turbidity	L
463. Bahía Monsio José to Faro de Cabo Rojo	Bahía Monsio José to Faro de Cabo Rojo	PRSC41B3	Dissolved Oxygen	L
464. Bahía Monsio José to Faro de Cabo Rojo	Bahía Monsio José to Faro de Cabo Rojo	PRSC41B3	Enterococci	L
465. Bahía Monsio José to Faro de Cabo Rojo	Bahía Monsio José to Faro de Cabo Rojo	PRSC41B3	Mercury	L

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
466. Bahía Monsio José to Faro de Cabo Rojo	Bahía Monsio José to Faro de Cabo Rojo	PRSC41B3	Nickel	L
467. Bahía Monsio José to Faro de Cabo Rojo	Bahía Monsio José to Faro de Cabo Rojo	PRSC41B3	Temperature	L
468. Bahía Monsio José to Faro de Cabo Rojo	Bahía Monsio José to Faro de Cabo Rojo	PRSC41B3	Thallium	L
469. Bahía Monsio José to Faro de Cabo Rojo	Bahía Monsio José to Faro de Cabo Rojo	PRSC41B3	Turbidity	L
470. Faro de Cabo Rojo to Punta Águila	Faro de Cabo Rojo to Punta Águila	PRWC42	Dissolved Oxygen	L
471. Faro de Cabo Rojo to Punta Águila	Faro de Cabo Rojo to Punta Águila	PRWC42	Enterococci	L
472. Faro de Cabo Rojo to Punta Águila	Faro de Cabo Rojo to Punta Águila	PRWC42	pH	L
473. Faro de Cabo Rojo to Punta Águila	Faro de Cabo Rojo to Punta Águila	PRWC42	Temperature	L
474. Faro de Cabo Rojo to Punta Águila	Faro de Cabo Rojo to Punta Águila	PRWC42	Turbidity	L
475. Punta Águila to Punta Guaniquilla	Punta Águila to Punta Guaniquilla	PRWC43	Enterococci	L
476. Punta Águila to Punta Guaniquilla	Punta Águila to Punta Guaniquilla	PRWC43	Temperature	L
477. Punta Águila to Punta Guaniquilla	Punta Águila to Punta Guaniquilla	PRWC43	Turbidity	L
478. Punta Guaniquilla to Punta La Mela	Punta Guaniquilla to Punta La Mela	PRWC44	Enterococci	L
479. Punta Guaniquilla to Punta La Mela	Punta Guaniquilla to Punta La Mela	PRWC44	pH	L
480. Punta Guaniquilla to Punta La Mela	Punta Guaniquilla to Punta La Mela	PRWC44	Temperature	L
481. Punta Guaniquilla to Punta La Mela	Punta Guaniquilla to Punta La Mela	PRWC44	Thallium	L
482. Punta Guaniquilla to Punta La Mela	Punta Guaniquilla to Punta La Mela	PRWC44	Turbidity	L
483. Punta La Mela to Punta Carenero	Punta La Mela to Punta Carenero	PRWC45	Copper	L
484. Punta La Mela to Punta Carenero	Punta La Mela to Punta Carenero	PRWC45	Enterococci	L
485. Punta La Mela to Punta Carenero	Punta La Mela to Punta Carenero	PRWC45	Lead	L
486. Punta La Mela to Punta Carenero	Punta La Mela to Punta Carenero	PRWC45	Thallium	L
487. Punta La Mela to Punta Carenero	Punta La Mela to Punta Carenero	PRWC45	Turbidity	L
488. Punta Carenero to front of Cayo Ratones	Punta Carenero to front of Cayo Ratones	PRWC46	Copper	L
489. Punta Carenero to front of Cayo Ratones	Punta Carenero to front of Cayo Ratones	PRWC46	Lead	L
490. Punta Carenero to front of Cayo Ratones	Punta Carenero to front of Cayo Ratones	PRWC46	Temperature	L

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
491. Punta Carenero to front of Cayo Ratones	Punta Carenero to front of Cayo Ratones	PRWC46	Thallium	L
492. Punta Carenero to front of Cayo Ratones	Punta Carenero to front of Cayo Ratones	PRWC46	Turbidity	L
493. In front of Cayo Ratones to Punta Guanajibo	In front of Cayo Ratones to Punta Guanajibo	PRWC47	Copper	L
494. In front of Cayo Ratones to Punta Guanajibo	In front of Cayo Ratones to Punta Guanajibo	PRWC47	Nickel	L
495. In front of Cayo Ratones to Punta Guanajibo	In front of Cayo Ratones to Punta Guanajibo	PRWC47	Temperature	L
496. In front of Cayo Ratones to Punta Guanajibo	In front of Cayo Ratones to Punta Guanajibo	PRWC47	Turbidity	L
497. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Copper	L
498. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Enterococci	L
499. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Lead	L
500. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Mercury	L
501. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Nickel	L
502. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Oil and Grease	L
503. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	pH	L
504. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Temperature	L
505. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Thallium	L
506. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Turbidity	L
507. Punta Algarrobo to Punta Cadena	Punta Algarrobo to Punta Cadena	PRWC49	Copper	L
508. Punta Algarrobo to Punta Cadena	Punta Algarrobo to Punta Cadena	PRWC49	Enterococci	L
509. Punta Algarrobo to Punta Cadena	Punta Algarrobo to Punta Cadena	PRWC49	Nickel	L
510. Punta Algarrobo to Punta Cadena	Punta Algarrobo to Punta Cadena	PRWC49	pH	L
511. Punta Algarrobo to Punta Cadena	Punta Algarrobo to Punta Cadena	PRWC49	Temperature	L
512. Punta Algarrobo to Punta Cadena	Punta Algarrobo to Punta Cadena	PRWC49	Turbidity	L
513. Punta Cadena to Punta Higüero	Punta Cadena to Punta Higüero	PRWC50	Copper	L
514. Punta Cadena to Punta Higüero	Punta Cadena to Punta Higüero	PRWC50	Enterococci	L
515. Punta Cadena to Punta Higüero	Punta Cadena to Punta Higüero	PRWC50	Lead	L

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
516. Punta Cadena to Punta Higüero	Punta Cadena to Punta Higüero	PRWC50	Mercury	L
517. Punta Cadena to Punta Higüero	Punta Cadena to Punta Higüero	PRWC50	Nickel	L
518. Punta Cadena to Punta Higüero	Punta Cadena to Punta Higüero	PRWC50	pH	L
519. Punta Cadena to Punta Higüero	Punta Cadena to Punta Higüero	PRWC50	Temperature	L
520. Punta Cadena to Punta Higüero	Punta Cadena to Punta Higüero	PRWC50	Turbidity	L
521. Punta Higüero to Punta del Boquerón	Punta Higüero to Punta del Boquerón	PRWC51	Copper	L
522. Punta Higüero to Punta del Boquerón	Punta Higüero to Punta del Boquerón	PRWC51	Enterococci	L
523. Punta Higüero to Punta del Boquerón	Punta Higüero to Punta del Boquerón	PRWC51	Lead	L
524. Punta Higüero to Punta del Boquerón	Punta Higüero to Punta del Boquerón	PRWC51	Mercury	L
525. Punta Higüero to Punta del Boquerón	Punta Higüero to Punta del Boquerón	PRWC51	Nickel	L
526. Punta Higüero to Punta del Boquerón	Punta Higüero to Punta del Boquerón	PRWC51	Turbidity	L
527. Punta del Boquerón to Punta Borinquén	Punta del Boquerón to Punta Borinquén	PRWC52	Copper	L
528. Punta del Boquerón to Punta Borinquén	Punta del Boquerón to Punta Borinquén	PRWC52	Turbidity	L
529. Culebra Island	Culebra Island	PRCC53	pH	L
530. Culebra Island	Culebra Island	PRCC53	Turbidity	L

The following table lists TMDLs for specific segment/pollutant combination which will be developed in the next two years. (Table 49).

Table 49: TMDL Development Status

AU/POLLUTANT	AU ID	PROJECT STATUS
1. RÍO BAIROA/TOTAL, PHOSPHORUS	PRER14H	FINAL DRAFT
2. RÍO BAIROA/TOTAL, NITROGEN	PRER14H	FINAL DRAFT
3. RÍO GUAYANILLA/TOTAL, PHOSPHORUS	PRSR67A	FINAL DRAFT
4. RÍO GUAYANILLA/TOTAL, NITROGEN	PRSR67A	FINAL DRAFT
5. RÍO YAUCO/TOTAL, PHOSPHORUS	PRSR68A1	FINAL DRAFT
6. RÍO YAUCO/TOTAL, NITROGEN	PRSR68A1	FINAL DRAFT
7. RÍO GUAYABO/TOTAL, NITROGEN	PRWR94A	FINAL DRAFT
8. LAGO LA PLATA/TOTAL, PHOSPHORUS	$PREL_1 10A1$	FINAL DRAFT
9. LAGO LA PLATA/TOTAL, NITROGEN	$PREL_1 10A1$	FINAL DRAFT
10. LAGO LOIZA/TOTAL, PHOSPHORUS	PREL14A	FINAL DRAFT
11. LAGO LOIZA/TOTAL, NITROGEN	PREL14A	FINAL DRAFT
12. RÍO GRANDE DE MANATI/COPPER	PRNR8A3	FINAL DRAFT
13. RÍO GRANDE DE ARECIBO/COPPER	PRNR7A2	FINAL DRAFT
14. RÍO BAUTA/COPPER	PRNR8C2	FINAL DRAFT
15. RÍO GUAYNABO/COPPER	PRER12B	FINAL DRAFT
16. RÍO GUAYNABO/LEAD	PRER12B	FINAL DRAFT
17. RÍO GRANDE DE LOIZA/COPPER	PRER14A1	FINAL DRAFT
18. RÍO GURABO/COPPER	PRER14G1	FINAL DRAFT
19. RÍO TURABO/COPPER	PRER14J	FINAL DRAFT
20. RÍO GRANDE DE AÑASCO/COPPER	PRWR83A	FINAL DRAFT
21. RÍO VALENCIANO/COPPER	PRER14G2	FINAL DRAFT
22. RÍO VALENCIANO/LEAD	PRER14G2	FINAL DRAFT
23. RÍO CULEBRINAS/COPPER	PRWR95A	FINAL DRAFT
24. RÍO DE LA PLATA/COPPER	PRER10A5	FINAL DRAFT

4.0 Clean Water Act 303(d) Program Vision Long – Term Vision

The 2022-2032 Vision for the CWA Section 303(d) Program ("2022 Vision") communicated the expectation that states, territories, and authorized tribes would engage in a long-term planning process and document their decisions in a Prioritization Framework. The Prioritization Framework is a planning document that serves two key objectives: (1) to describe long-term Vision priorities and a rationale for selecting those Vision priorities; and (2) outline a general strategy for implementing the Goals of the 2022 Vision over the next decade. This 2022 – 2032 Long – Term Vision is under development.

PART F. Public Participation

The List of Impacted Water Bodies draft for the 2024 cycle and the Assessment Methodology will be available to the public for examination, at the request of the interested party by sending an email to the following address: waterquality@drna.pr.gov , no later than thirty (30) days from the publication of the notice. The deadline for submitting comments may be extended if deemed necessary or appropriate in the public interest. All interested or affected parties may request a public hearing. Said request must be submitted in writing to the Secretary of the PRDNER through the Secretary's Office at the following email address: ayudaciudadano@drna.pr.gov , no later than thirty (30) days from the date of publication of this notice and the reason or reasons that in the opinion of the applicant merit the holding of the public hearing must be indicated.

The public notice was appropriated published in two local newspaper of island wide circulation, PRIMERA HORA and EL VOCERO on May 6, 2024, (Public Notice in Spanish and English, Appendix III).

The Public participation element serves to encourage the involvement of universities, private institutions, government agencies, non-government entities and the public in water quality issues.

Enclosed in Appendix IV you will find the determination of the Governing Board of PRDNER.

APPENDIX I – 2024 Cycle 303(d) List

RIVERS, STREAMS AND CREEKS

Size of waters Impaired by Causes all cycles (Monitored Miles for Rivers and Streams)	
Causes of Impairments	**Size of Waters Impaired (miles)**
Ammonia	128.5
Arsenic	25.4
Chromium VI	2,555.1
Copper	600.9
Cyanide	1, 144.4
Dissolved Oxygen	1,139.1
Enterococcus	2,555.1
Lead	259.5
Mercury	141.9
Oil and Grease	103.8
Pesticides	544.3
pH	573.8
Silver	14.6
Surfactants	347.1
Temperature	2,075.1
Total, Nitrogen	1,477.4
Total, Phosphorus	2,291.5
Turbidity	1,959.4

2024 Cycle 303(d) List – List of Rivers and Streams
Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.

Basin	Waterbody Name	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
RÍO GUAJATACA	RÍO GUAJATACA PRNR3A1	9.9	SD	NS 50011400	5	5	5	5		H	Collection System Failure Landfill Minor Industrial Point Sources Onsite Wastewater Systems	Chromium VI	2022, 2020
												Cyanide	2024, 2022
												Dissolved Oxygen	2024, 2022
												Enterococci	2024, 2022, 2020, 2018
												Surfactants	2024
												Total, Nitrogen	2024, 2022, 2020, 2018, 2016
	RÍO GUAJATACA PRNR3A2	22	SD	NS 50010600	5	5	5	5	F	H	Agriculture Collection System Failure Confined Animal Feeding Operations Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Cyanide	2024
												Enterococci	2024, 2022, 2020, 2018
												pH	2024
												Total, Phosphorus	2024
												Total, Nitrogen	2024, 2022, 2020, 2018, 2016
												Turbidity	2024
	QUEBRADA LAS SEQUÍAS PRNQ3B	3.5	SD		4a	4a	5	5	D F H, L	H	Confined Animal Feeding Operations Onsite Wastewater Systems	Arsenic	2006
												Dissolved Oxygen	2006
RÍO GRANDE DE ARECIBO	RIO GRANDE DE ARECIBO PRNR7A1	22.4	SD	NS 50027600	5	5	5	5	K	H	Agriculture Collection System Failure Confined Animal Feeding Operations	Chromium VI	2022, 2020
												Enterococci	2024, 2022, 2020, 2018
												Turbidity	2024, 2020, 2018, 2014,

2024 Cycle 303(d) List – List of Rivers and Streams
Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.

Basin	Waterbody Name	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	A L	DW					
											Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers		2012, 2010, 2006
	RÍO GRANDE DE ARECIBO PRNR7A2	122.8	SD	NS 50025000	5	5	5	5	K	H	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Major Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Enterococci	2024, 2022, 2020, 2018
												Pesticide	2008
												Temperature	2024, 2020
												Total, Nitrogen	2022
												Total, Phosphorus	2022, 2020
												Turbidity	2024, 2022, 2020, 2018, 2014, 2012, 2008
	TÚNEL PRNR7A3	28.9	SD	NS 50020500	5	5	5	5	K	H	Agriculture Collection System Failure Confined Animal Feeding Operations Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Cyanide	2024
												Enterococci	2024, 2022, 2020, 2018
												pH	2022
												Total, Phosphorus	2022

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	Waterbody Name	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
	RÍO CAONILLAS PRNR7C1	87.0	SD	NS 50026000	5	5	5	5	K	H	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Surface Mining Urban Runoff/Storm Sewers	Chromium VI Enterococci Total, Phosphorus	2022, 2020 2024, 2022, 2020, 2018 2022, 2020
	RÍO LIMÓN PRNR7C2	40.7	SD	NS 50026350	5	5	5	1	K	H	Agriculture Minor Industrial Point Sources Onsite Wastewater Systems	Chromium VI Enterococci Temperature	2022, 2020 2024, 2022, 2020, 2018 2024
	RÍO YUNES PRNR7C3	32.7	SD	NS 50026950	5	5	5	1	K	H	Agriculture Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI Enterococci Temperature	2022, 2020 2024, 2022, 2020, 2018 2024, 2020
	RÍO TANAMÁ PRNR7B2	43.5	SD	NS 50028000	5	5	5	5	K	H	Agriculture Collection System Failure Minor Industrial Point Sources	Chromium VI Copper Enterococci Lead	2022, 2020 2024 2024, 2022, 2020, 2018 2024

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
											Onsite Wastewater Systems	Total, Phosphorus	2024, 2022, 2018
												Turbidity	2024, 2022, 2018, 2014, 2012, 2008
RÍO GRANDE DE MANATÍ	RÍO GRANDE DE MANATÍ PRNR8A1	31	SD	NS 50038100	5	5	5	5	K	H	Collection System Failure Confined Animal Feeding Operations Landfill Major Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Enterococci	2024, 2022, 2018
												pH	2024
												Temperature	2024, 2022
												Total, Phosphorus	2024, 2022, 2018, 2016
												Turbidity	2024, 2022, 2018, 2014, 2012, 2010, 2008, 2006
	RÍO GRANDE DE MANATÍ PRNR8A2	38.1	SD	NS 50035500	5	5	5	5	K	H	Collection System Failure Confined Animal Feeding Operations Landfills Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Copper	2024, 2022, 2018
												Cyanide	2024
												Enterococci	2024, 2022, 2020, 2018
												Lead	2024
												Mercury	2024
												Temperature	2024, 2020
												Total, Nitrogen	2024, 2022
												Total, Phosphorus	2024, 2022

2024 Cycle 303(d) List – List of Rivers and Streams
Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.

Basin	Waterbody Name	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
												Turbidity	2024, 2022, 2018, 2014, 2012, 2010, 2008, 2006
	RÍO CIALITO PRNR8B	25.8	SD	NS 50035950	5	5	5	5	K	H	Agriculture Collection System Failure Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Enterococci	2024, 2022, 2020, 2018
												Total, Phosphorus	2024
												Turbidity	2024, 2022, 2018, 2014, 2012, 2010
	RÍO OROCOVIS PRNR8E1	19.8	SD	NS 50030700	5	5	5	5	K	H	Collection System Failure Landfill Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Cyanide	2024
												Enterococci	2024, 2022, 2020, 2018
												Total, Phosphorus	2024, 2022, 2020, 2018, 2016
	RÍO BOTIJAS PRNR8E2	19.1	SD		4a	4a	5	3	D H K	H	Confined Animal Feeding Operations Onsite Wastewater Systems	pH	2020
RÍO CIBUCO		31.1	SD		5	5	5	5	A	H	Agriculture	Chromium VI	2022, 2020

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
	RÍO CIBUCO PRNR9A			NS 50039500							Collection System Failure Confined Animal Feeding Operations Landfill Major Municipal Point Sources Onsite Wastewater Systems	Lead	2024
												Enterococci	2024, 2022, 2020, 2018
												Temperature	2022
												Total, Nitrogen	2022, 2020, 2018, 2016
												Total, Phosphorus	2024, 2022, 2020, 2018
												Turbidity	2024, 2020, 2018, 2014, 2012, 2010, 2008, 2006
	RÍO MOROVIS PRNR9B2	25.5	SD		4a	4a	5	3	A D H	H	Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen	2020, 2014
RÍO DE LA PLATA	RÍO DE LA PLATA PRER10A1	21	SD	NS 50046000	5	5	5	5	B	H	Collection System Failure Confined Animal Feeding Operations Major Industrial Point Sources Minor Municipal Point Sources	Chromium VI	2022, 2020
												Dissolved Oxygen	2024, 2022, 2020, 2018, 2016
												Enterococci	2024, 2022, 2020, 2018
												Surfactants	2024
												Temperature	2024, 2020

2024 Cycle 303(d) List – List of Rivers and Streams
Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.

Basin	Waterbody Name	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	A L	DW					
											Onsite Wastewater Systems Surfaces Mining	Total, Phosphorus	2024
												Turbidity	2024
	RÍO DE LA PLATA PRER10A3	55.7	SD	NS 50044000	5	5	5	5	B	H	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Major Municipal Point Sources Onsite Wastewater Systems	Chromium VI	2022, 2020
												Enterococci	2024, 2022, 2020, 2018
												Temperature	2024
												Total, Phosphorus	2022, 2018, 2016
	RÍO DE LA PLATA PRER10A4	10.2	SD	NS 50043000	5	5	5	5	B	H	Agriculture Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems	Chromium VI	2022, 2020
												Cyanide	2024
												Enterococci	2024, 2022, 2020, 2018
												pH	2024, 2020
												Temperature	2024, 2020
												Total, Phosphorus	2024, 2022, 2020, 2018, 2016
												Turbidity	2024, 2020, 2018, 2016, 2014, 2010, 2008
	RÍO DE LA PLATA PRER10A5	92.7	SD	NS 50042500	5	5	5	5	B	H	Collection System Failure Confined Animal Feeding Operations Major Municipal Point Sources	Chromium VI	2022, 2020
												Cyanide	2024
												Enterococci	2024, 2022, 2020, 2018
												Temperature	2024
												Total, Nitrogen	2024

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
											Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Total, Phosphorus	2024, 2022, 2020, 2018, 2016
												Turbidity	2024
	RÍO GUADIANA PRER10E	21.8	SD	NS 50044850	5	5	5	5	B	H	Collection System Failure Confined Animal Feeding Operations Minor Municipal Point Sources Onsite Wastewater Systems	Chromium VI	2022, 2020
												Cyanide	2024
												Enterococci	2024, 2022, 2020, 2018
												Temperature	2024
												Total, Nitrogen	2024, 2022, 2018, 2016
												Total, Phosphorus	2024, 2022, 2020, 2018, 2016
	RÍO ARROYATA PRER10G	36.8	SD	NS 50043998	5	5	5	5	B	H	Agriculture Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems	Chromium VI	2022, 2020
												Cyanide	2024
												Enterococci	2024, 2022, 2020, 2018
												Total, Phosphorus	2024, 2022, 2020, 2018, 2016
	RÍO MATÓN PRER10J	15.8	SD	NS 50042800	5	5	5	5	B	H	Confined Animal Feeding Operations Onsite Wastewater Systems	Chromium VI	2022, 2020
												Cyanide	2024
												Enterococci	2024, 2022, 2020, 2018
												Total, Nitrogen	2024, 2020
	RÍO GUAVATE PRER10K	19.8	SD		4a	4a	5	3	B D H	H	Collection System Failure Confined Animal Feeding Operations	pH	2020, 2012

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
											Onsite Wastewater Systems Urban Runoff/Storm Sewers		
RÍO HONDO	RÍO HONDO PRER11A	22	SD		4a	4a	5	3	D F H	H	Collection System Failure Urban Runoff/Storm Sewers	Dissolved Oxygen Surfactants	2016, 2014, 2008, 2006 2016, 2008, 2006
RÍO BAYAMÓN	RÍO BAYAMÓN PRER12A1	33.6	SD	NS 50048510	5	5	5	5	F	H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI Cyanide Enterococci pH Temperature Total, Nitrogen	2022, 2020 2024 2024, 2022, 2020, 2018 2024, 2020 2024, 2022 2024, 2022, 2020
	RÍO BAYAMÓN PRER12A2	83.7	SD	NS 50047820	5	5	5	1	F	H	Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI Enterococci	2022, 2020 2024, 2022, 2020, 2018
	RÍO GUAYNABO PRER12B	50.7	SD	NS 50047990	5	5	5	5	F	H	Collection System Failure Confined Animal Feeding Operations Landfill	Chromium VI Enterococci pH Temperature	2022, 2020 2024, 2022, 2020, 2018 2024 2024

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
											Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Total, Nitrogen	2024, 2022, 2018, 2016
												Total, Phosphorus	2024, 2022, 2020, 2018, 2016
RÍO GRANDE DE LOIZA	RÍO GRANDE DE LOIZA PRER14A1	31	SD	NS 50059100	5	5	5	5	F	H	Collection System Failure Confined Animal Feeding Operations Major Industrial Point Sources Onsite Wastewater Systems Surfaces Mining Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Enterococci	2024, 2022, 2018
												Surfactants	2024
												Temperature	2024, 2022
												Total, Nitrogen	2024
												Turbidity	2024, 2020, 2018, 2016, 2014, 2010, 2008, 2006
	RÍO GRANDE DE LOIZA PRER14A2	86.6	SD	NS 50055000	5	5	5	5	C E G	H	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems Surfaces Mining Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Enterococci	2024, 2022, 2020, 2018
												Pesticides	2008
												Temperature	2024, 2022
												Total, Phosphorus	2022, 2018, 2016
												Turbidity	2024, 2022, 2018
	RÍO CANÓVANAS PRER14B	32.6	SD		4a	4a	5	3	D F H	H	Confined Animal Feeding Operations	Dissolved Oxygen	2016

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
											Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers		
	RÍO CANOVANILLAS PRER14C	27.9	SD		4a	4a	5	3	D F H	H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen	2016, 2014
	RÍO GURABO PRER14G1	124.3	SD	NS 50057025	5	5	5	5	C E	H	Collection System Failure Confined Animal Feeding Operations Landfills Minor Industrial Point Sources Onsite Wastewater Systems Surfaces Mining	Chromium VI	2022, 2020
												Enterococci	2024, 2022, 2020, 2018
												Temperature	2024, 2022, 2020
												Total, Nitrogen	2022, 2020, 2018
												Total, Phosphorus	2022, 2020, 2018, 2016
												Turbidity	2022, 2020, 2018, 2014, 2012, 2010, 2008, 2006
	RÍO VALENCIANO PRER14G2	42.8	SD	NS 50056500	5	5	5	5	C	H	Agriculture Collection System Failure Confined Animal Feeding Operations	Chromium VI	2022, 2020
												Enterococci	2024, 2022, 2020, 2018
												Total, Nitrogen	2024, 2022

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
											Landfills Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Total, Phosphorus	2024, 2022, 2020, 2018, 2016
												Turbidity	2024, 2022, 2018, 2014, 2010, 2008
	RÍO BAIROA PRER14H	16.3	SD	NS 50055410	5	5	5	5	C E G I	H	Collection System Failure Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Enterococci	2024, 2022, 2020, 2018
												Total, Phosphorus	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008
												Total, Nitrogen	2024, 2022, 2018, 2016
	RÍO CAGÜITAS PRER14I	33.9	SD	NS 50055250	5	5	5	5	C E G I	H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Surfaces Mining Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Enterococci	2024, 2022, 2020, 2018
												Temperature	2022
												Total, Nitrogen	2022, 2020, 2018, 2016
												Total, Phosphorus	2022, 2020, 2018, 2016
												Turbidity	2022, 2018, 2014, 2010, 2008
	RÍO TURABO PRER14J	54.7	SD	NS 50054500	5	5	5	5	C	H	Agriculture Collection System Failure Confined Animal Feeding Operations	Chromium VI	2022, 2020
												Copper	2022, 2018, 2014
												Enterococci	2024, 2022, 2020, 2018
												Lead	2022, 2018

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
											Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Temperature	2024, 2022, 2020
												Total, Phosphorus	2022, 2018
												Turbidity	2024, 2022, 2018, 2014, 2006
	RÍO CAYAGUAS PRER14K	38.5	SD	NS 50051500	5	5	5	5	C	H	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	Chromium VI	2022, 2020
												Copper	2022, 2018
												Enterococci	2024, 2022, 2020, 2018
												Temperature	2022
												Total, Nitrogen	2022
												Total, Phosphorus	2022, 2018, 2016
												Turbidity	2024, 2022, 2018
RÍO HERRERA	RÍO HERRERA PRER15A	17	SD		4a	4a	5	5	D F H	M	Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen	2016, 2006
												Turbidity	2014, 2012
RÍO ESPIRITU SANTO	RÍO ESPÍRITU SANTO PRER16A	53.9	SD	NS 50063800	5	5	5	1	F	M	Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources	Ammonia	2024
												Chromium VI	2022, 2020
												Enterococci	2024, 2022, 2020, 2018

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	Waterbody Name	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
											Onsite Wastewater Systems		
QUEBRADA MATA DE PLÁTANO	QUEBRADA MATA DE PLÁTANO PREQ18A	4.0	SD		4a	4a	5	3	D F H	M	Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen	2016, 2014, 2012, 2006
												Surfactants	2016, 2012
QUEBRADA FAJARDO	QUEBRADA FAJARDO PREQ21A	10.0	SD		4a	4a	5	3	D H J	M	Collection System Failure Onsite Wastewater Systems	Dissolved Oxygen	2020, 2006
												pH	2020, 2018
												Temperature	2020
RÍO FAJARDO	RÍO FAJARDO PRER22A	59.0	SD	NS 50072500	5	5	5	5	J	M	Confined Animal Feeding Operations Landfill Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Enterococci	2024, 2022, 2020, 2018
												Temperature	2024, 2022, 2020
												Total, Nitrogen	2024, 2022, 2020, 2018, 2016
												Total, Phosphorus	2024, 2022, 2020, 2018, 2016
												Turbidity	2024
RÍO DEMAJAGUA	RÍO DEMAJAGUA PRER23A	2.8	SD		4a	4a	5	3	D H J	M	Onsite Wastewater Systems	Dissolved Oxygen	2020, 2016, 2012
QUEBRADA CEIBA	QUEBRADA CEIBA PREQ24A	5.0	SD		4a	4a	5	3	D H J	M	Onsite Wastewater Systems	Dissolved Oxygen	2016, 2014, 2012, 2006
												Surfactants	2016, 2014, 2012
QUEBRADA AGUAS CLARAS	QUEBRADA AGUAS CLARAS PREQ25A	4.8	SD		4a	4a	5	3	D H J	M	Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen	2020, 2012, 2006

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	Waterbody Name	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
RÍO DAGUAO	RÍO DAGUAO PRER26A	13.8	SD		4a	4a	5	3	D H J	M	Confined Animal Feeding Operations Onsite Wastewater Systems	Dissolved Oxygen	2016, 2012, 2006
QUEBRADA BOTIJAS	QUEBRADA BOTIJAS PREQ28A	7.4	SD		4a	4a	5	3	D H J	M	Confined Animal Feeding Operations Onsite Wastewater Systems	Dissolved Oxygen	2020, 2018, 2012, 2006
RÍO BLANCO	RÍO BLANCO PRER30A	45.0	SD		4a	4a	5	5	D H J	H	Agriculture Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Turbidity	2020, 2012
	QUEBRADA PEÑA POBRE PREQ30B	13.4	SD		4a	4a	5	3	D H J	H	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	Dissolved Oxygen	2020, 2018, 2006
RÍO ANTÓN RUIZ	RÍO ANTÓN RUIZ PRER31A	16.9	SD		4a	4a	5	3	D H J	M	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	Dissolved Oxygen	2020, 2016, 2014, 2012
												Temperature	2020
QUEBRADA FRONTERA	QUEBRADA FRONTERA PREQ32A	8.5	SD		4a	4a	5	3	D H J	M	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems	Dissolved Oxygen	2020, 2012, 2006
		55.8	SD		5	5	5	5	F	M		Chromium VI	2022, 2020

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
RÍO HUMACAO	RÍO HUMACAO PRER33A			NS 50082000							Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Copper	2022, 2018, 2014
												Enterococci	2024, 2022, 2020, 2018
												Surfactants	2024
												Temperature	2024, 2022, 2020
												Total, Nitrogen	2022, 2020, 2018
												Total, Phosphorus	2024, 2022, 2020, 2018, 2016
												Turbidity	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2008, 2006
RÍO CANDELERO	RÍO CANDELERO PRER34A	10.4	SD		4a	4a	5	3	D F H	M	Onsite Wastewater Systems Confined Animal Feeding Operations	Dissolved Oxygen	2020, 2018, 2012
RÍO GUAYANÉS	RÍO GUAYANÉS PRER35A	62.0	SD	NS 50085000	5	5	5	5	F	M	Agriculture Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems	Chromium VI	2022, 2020
												Copper	2024, 2020, 2016, 2014, 2012, 2006
												Enterococci	2024, 2022, 2020, 2018
												Temperature	2024, 2022
												Total, Nitrogen	2022
												Total, Phosphorus	2024, 2022, 2020

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
												Turbidity	2024, 2022, 2020, 2016, 2014, 2012, 2006
RÍO MAUNABO	RÍO MAUNABO PRER37A	36.0	SD	NS 50091000	5	5	5	5	F	M	Agriculture Collection System Failure Landfill Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewer	Chromium VI	2022, 2020
												Copper	2024
												Cyanide	2024
												Enterococci	2024, 2022, 2020, 2018
												Temperature	2024, 2022, 2020
												Total, Nitrogen	2024, 2022, 2020, 2016
												Total, Phosphorus	2022, 2020, 2016
												Turbidity	2022, 2020
QUEBRADA PALENQUE	QUEBRADA PALENQUE PRSQ41A	1.0	SD		4a	4a	5	3	D H J, L	M	Onsite Wastewater Systems	Dissolved Oxygen	2012
RÍO CHICO	RÍO CHICO PRSR42A	14.6	SD		4a	4a	5	5	D H J L	M	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	Ammonia	2016, 2014, 2012, 2006
												Copper	2016, 2006
												Dissolved Oxygen	2016, 2012, 2006
												Silver	2004
												Surfactants	2016, 2006
												Total, Phosphorus	2016, 2006
RÍO GRANDE DE PATILLAS	RÍO GRANDE DE PATILLAS PRSR43A2	35.9	SD	NS 50092000	5	5	5	5	J	H	Onsite Wastewater Systems	Chromium VI	2022, 2020
												Copper	2024
												Cyanide	2024

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
												Enterococci	2024, 2022, 2020, 2018
RÍO GUAMANÍ	RÍO GUAMANÍ PRSR49A	22.0	SD		4a	4a	5	3	D H J L	M	Collection System Failure Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Temperature	2012
QUEBRADA MELANÍA	QUEBRADA MELANÍA PRSQ50A	7.0	SD		4a	4a	5	3	D H J, L	M	Landfill Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen	2020, 2018, 2016, 2014, 2012, 2008
RÍO SECO	RÍO SECO PRSR51A	24.7	SD		4a	4a	5	3	D H J, L	M	Agriculture Onsite Wastewater Systems	Dissolved Oxygen	2012
QUEBRADA AMORÓS	QUEBRADA AMORÓS PRSQ52A	0.7	SD		4a	4a	5	3	D H J, L	M	Agriculture Collection System Failure Onsite Wastewater Systems	Dissolved Oxygen	2020, 2012, 2008
												pH	2020
QUEBRADA AGUAS VERDES	QUEBRADA AGUAS VERDES PRSQ53A	15.0	SD		4a	4a	5	3	D F H L	M	Confined Animal Feeding Operations Onsite Wastewater Systems	Dissolved Oxygen	2020, 2016, 2014, 2012
RÍO NIGUAS DE SALINAS	RÍO NIGUAS DE SALINAS PRSR54A	102.5	SD		4a	4a	5	3	D F H L	M	Confined Animal Feeding Operations Onsite Wastewater Systems	Dissolved Oxygen	2010

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
											Surfaces Mining Urban Runoff/Storm Sewers		
RÍO CAYURES	RÍO CAYURES PRSR56A	5.0	SD		4a	4a	5	3	D H J L	M	Agriculture Onsite Wastewater Systems	Dissolved Oxygen	2016, 2014, 2012
												Surfactants	2016, 2014, 2012
RÍO COAMO	RÍO COAMO PRSR57A2	59.0	SD	NS 50106500	5	5	5	5	J	H	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Cyanide	2024, 2022
												Enterococci	2024, 2022, 2020, 2018
												Surfactants	2024
												Temperature	2024, 2022
												Total, Nitrogen	2024, 2020, 2016
												Total, Phosphorus	2024
	RÍO CUYÓN PRSR57B	49.2	SD		4a	4a	5	3	D H J	H	Agriculture Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	Temperature	2020
RÍO BUCANÁ-CERRILLOS	RÍO BUCANÁ-CERRILLOS PRSR62A1	27.8	SD	NS 50114400	5	5	5	5	J	M	Collection System Failure Onsite Wastewater Systems	Chromium VI	2022, 2020
												Cyanide	2024
												Dissolved Oxygen	2024, 2022, 2020, 2018

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
											Surfaces Mining Urban Runoff/Storm Sewers	Enterococci	2024, 2022, 2020, 2018
	RÍO BUCANÁ-CERRILLOS PRSR62A2	32.6	SD	NS 50113800	5	5	5	5	J	M	Agriculture Minor Industrial Point Sources Onsite Wastewater Systems	Chromium VI	2022, 2020
												Cyanide	2024
												Enterococci	2024, 2022, 2020, 2018
												Surfactants	2024
RÍO PORTUGUÉS	RÍO PORTUGUÉS PRSR63A	54.0	SD	NS 50116200	5	5	5	5	J	M	Collection System Failure Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Cyanide	2024
												Dissolved Oxygen	2024
												Enterococci	2024, 2022, 2020, 2018
RÍO MATILDE – PASTILLO	RÍO MATILDE – PASTILLO PRSR64A	43.2	SD		4a	4a	5	3	D H J L	M	Agriculture Collection System Failure Confined Animal Feeding Operations Landfills Major Industrial Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Temperature	2020
	RÍO TALLABOA	59.6	SD		4a	4a	5	1		M	Agriculture	pH	2020

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
RÍO TALLABOA	PRSR65A								D H J L		Collection System Failure Minor Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Temperature	2020
RÍO GUAYANILLA	RÍO GUAYANILLA PRSR67A	60.0	SD	NS 50124700	5	5	5	5	F	H	Agriculture Collection System Failure Landfill Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Ammonia	2022, 2020, 2018, 2014
												Chromium VI	2022, 2020
												Cyanide	2024
												Dissolved Oxygen	2024, 2022, 2020, 2016, 2014, 2012, 2008
												Enterococci	2024, 2022, 2020, 2018
												Temperature	2022, 2020
												Total, Nitrogen	2024, 2022, 2020, 2018, 2016
												Total, Phosphorus	2024, 2022, 2020, 2018, 2016, 2012, 2010, 2008
RÍO YAUCO	RÍO YAUCO PRSR68A1	61.4	SD		4a	4a	5	5	D F	M	Agriculture	Dissolved Oxygen	2014

2024 Cycle 303(d) List – List of Rivers and Streams
Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.

Basin	Waterbody Name	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
									H L		Collection System Failure Landfill Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Total, Phosphorus	2016, 2012
RÍO LOCO	RÍO LOCO PRSR69A1	92.4	SD		4a	4a	5	5	D F H	M	Agriculture Collection System Failure Confined Animal Feeding Operation Landfills Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen	2020, 2016, 2014, 2012, 2006
												Temperature	2020
												Turbidity	2020
QUEBRADA ZUMBÓN	QUEBRADA ZUMBÓN PRWQ72A	1.7	SD		4a	4a	5	3	D H J, L	M	Collection System Failure Onsite Wastewater Systems	Dissolved Oxygen	2016, 2014
												Surfactants	2012
QUEBRADA GONZÁLEZ	QUEBRADA GONZÁLEZ PRWQ73A	1.8	SD		4a	4a	5	3	D H J, L	M	Onsite Wastewater Systems	Dissolved Oxygen	2020, 2018, 2012

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
QUEBRADA LOS PAJARITOS	QUEBRADA LOS PAJARITOS PRWQ74A	2.7	SD		4a	4a	5	3	D H J, L	M	Onsite Wastewater Systems	Dissolved Oxygen	2020, 2012
RÍO GUANAJIBO	RÍO GUANAJIBO PRWR77A	119.3	SD	NS 50138000	5	5	5	5	F	H	Collection System Failure Confined Animal Feeding Operations Landfill Major Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Cyanide	2024
												Dissolved Oxygen	2024, 2020
												Enterococci	2024, 2022, 2020, 2018
												Total, Phosphorus	2024, 2022, 2020, 2018, 2016
												Turbidity	2024
	RÍO ROSARIO PRWR77C	58.3	SD	NS 50136700	5	5	5	5	F	H	Agriculture Collection System Failure Confined Animal Feeding Operations Landfills Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Cyanide	2024
												Enterococci	2024, 2022, 2020, 2018
												Pesticides	2012
												Total, Phosphorus	2022
												Turbidity	2024, 2022
	RÍO VIEJO PRWR77D	21.1	SD	NS 50135625	5	5	5	5	F	H	Collection System Failure	Chromium VI	2022, 2020
												Cyanide	2024, 2022

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
											Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012
												Enterococci	2024, 2022, 2020, 2018
												Surfactants	2024
												Temperature	2024
												Total, Phosphorus	2024, 2022, 2020, 2018, 2016
	RÍO CUPEYES PRWR77G	8.0	SD		4a	4a	5	5	D F H	H	Agriculture Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Pesticides	2012
CAÑO MERLE	CAÑO MERLE PRWK78A	1.6	SD		4a	4a	5	3	D H J L	M	Collection System Failure Surfaces Mining Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen	2012
												Surfactants	2012
RÍO YAGÜEZ	RÍO YAGÜEZ PRWR79A	42.2	SD	NS 50139000	5	5	5	5	J	H	Agriculture Collection System Failure Confined Animal Feeding Operations Minor Industrial Point Sources	Chromium VI	2022, 2020
												Cyanide	2024
												Enterococci	2024, 2022, 2020, 2018
												Temperature	2024
												Total, Nitrogen	2024

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	Waterbody Name	Waterbody Size (miles)	Class	2024 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
											Onsite Wastewater Systems Urban Runoff/Storm Sewers	Total, Phosphorus	2024
												Turbidity	2024
RÍO GRANDE DE AÑASCO	RÍO GRANDE DE AÑASCO PRWR83A	126.0	SD	NS 50146000	5	5	5	5	K	H	Agriculture Collection System Failure Confined Animal Feeding Operations Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Copper	2024
												Cyanide	2024
												Enterococci	2024, 2022, 2020, 2018
												pH	2022
												Temperature	2024
												Total, Phosphorus	2024
												Turbidity	2024, 2020, 2018, 2016, 2014, 2012, 2010
	RÍO PRIETO PRWR83I	59.8	SD		4a	4a	5	5	D H K	H	Agriculture Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems	Pesticides	2012
QUEBRADA LOS RAMOS	QUEBRADA LOS RAMOS PRWQ89A	6.9	SD		3	3	5	3	D H L	L	Confined Animal Feeding Operations Landfill Onsite Wastewater Systems	Dissolved Oxygen	2020, 2018, 2012, 2008
QUEBRADA PILETAS	QUEBRADA PILETAS PRWQ91A	2.0	SD		3	3	5	3	D H L	L	Onsite Wastewater Systems	Dissolved Oxygen	2012
		142.6	SD	NS	5	5	5	5	K	H	Agriculture	Chromium VI	2022, 2020

2024 Cycle 303(d) List – List of Rivers and Streams Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**	**DW**					
RÍO CULEBRINAS	RÍO CULEBRINAS PRWR95A			50149100							Collection System Failure Confined Animal Feeding Operations Landfill Major Industrial Point Sources Major Municipal Point Sources Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Cyanide	2024
												Enterococci	2024, 2022, 2020, 2018
												Pesticides	2012
												Temperature	2024
												Total, Nitrogen	2024, 2022, 2018
												Total, Phosphorus	2024, 2022, 2020, 2018
												Turbidity	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
	QUEBRADA LA SALLE PRWQ95F	11.8	SD		4a	4a	5	5	D H K	H	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	Dissolved Oxygen	2016
												Pesticides	2012
	QUEBRADA EL SALTO PRWQ95G	7.8	SD		4a	4a	5	3	D H K	H	Agriculture Onsite Wastewater Systems	Dissolved Oxygen	2020, 2016
	QUEBRADA GRANDE DE LA MAJAGUA PRWQ95H	5.6	SD		4a	4a	5	5	D H K	H	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	Pesticides	2012

Notes:

A - Watershed that has an approved TMDL for Río Cibuco, the TMDL was approved in September 2002, the pollutant was Fecal Coliforms.

B - Watershed that has an approved TMDL for Río de la Plata, the TMDL was approved in September 2003, the pollutant was Fecal Coliforms.

C - Watershed that has an approved TMDL for Río Grande de Loíza, the TMDL was approved in September 2007, the pollutant was Fecal Coliforms**.**
D - Watershed and sub watershed that do not have a permanent monitoring station but were included in prior cycles as part of the 303(d) list by a synoptic study or a special monitoring project.
E - Watershed that has an approved TMDL for Río Grande de Loíza a TMDL was approved in August 2007, the pollutant was Dissolved Oxygen.
F - Watersheds that have approved TMDL in September 2012, the pollutant was Fecal Coliforms.
G - Watershed that has an approved TMDL. Río Grande de Loíza, the TMDL was approved in August 2007, the pollutant was Copper.
H - If the Monitoring Station column is left blank, the Assessment Unit was not monitored for 2024 cycle.
I - Watershed that has approved TMDL from Río Grande de Loíza, a TMDL was approved in August 2007, the pollutant was Ammonia.
J - Watersheds that have approved TMDL in September 2011, the pollutant was Fecal Coliform.
K - Watersheds that have an approved TMDL in September 2010, the pollutant was Fecal Coliforms. The watersheds are Río Grande de Arecibo, Río Grande de Manatí, Río Grande de Añasco and Río Culebrinas.
L - Watershed and sub watersheds who are or have been under Category 4c, are waterbodies that lack adequate flow, which impaired some of the designated uses.
R1 - Primary Contact Recreation
R2 - Secondary Contact Recreation
AL - Aquatic Life
DW - Raw Sources for Drinking Water
N/A - Not applicable
Priority:

H: High Priority: basins including in the Puerto Rico Unified Watershed Assessment and Restoration Activities (PRUWARA), as basins of priority due to the high pollution level related to all the designated uses.
M: Intermediate Priority: basins that were not included in the PRUWARA and have 50% or more of its waters as impaired for some designated use.
L: Low Priority: basins that were not included in the PRUWARA and have less than 50% of its waters as impaired for some designated use.

ESTUARY

Size of waters Impaired by Causes (Monitored sq. mi. for Estuaries)	
Causes of Impairments	**Size of Waters Impaired (sq. mi.)**
Arsenic	0.0364
Dissolved Oxygen	0.8618
Surfactants	1.0130
Temperature	0.0780
Turbidity	0.2932

2024 Cycle 303(d) List – List of Estuaries Note: The 2024 303(d) List is comprised of the causes of impairments included in assessments cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.												
Basin	**Waterbody Name**	**Waterbody Size (sq. miles)**	**Class**	**2024 Monitoring Stations**	**Designated Uses and Categories Summary**			**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**					
RÍO HERRERA PRER15A	RÍO HERRERA PREE15A	0.102	SB		4a	4a	5	D F, H	M	Landfill Onsite Wastewater Systems	Surfactants	2012
RÍO ESPÍRITU SANT PRER16A	RÍO ESPÍRITU SANTO PREE16A	0.5758	SB		4a	4a	5	D F, H	M	Collection System Failure Onsite Wastewater Systems	Dissolved Oxygen	2012, 2006
											Surfactants	2012
RÍO DEMAJAGUA PRER23A	RÍO DEMAJAGUA PREE23A	0.0028	SB		4a	4a	5	D H, J	M	Collection System Failure Urban Runoff/Storm Sewers	Turbidity	2012
RÍO CANDELERO PRER34A	RÍO CANDELERO PREE34A	0.078	SB		4a	4a	5	D F, H	M	Collection System Failure	Dissolved Oxygen	2006
											Temperature	2012
RÍO GUAYANÉS PRER35A	RÍO GUAYANÉS PREE35A	0.0364	SB		4a	4a	5	F H	M	Agriculture Collection System Failure Onsite Wastewater Systems	Arsenic	2010, 2008, 2006
											Turbidity	2010
CAÑO SANTIAGO PREK35.1	CAÑO SANTIAGO PREE35.1	0.1152	SB		4a	4a	5	D F H	M	Agriculture Collection System Failure Landfill Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen	2012, 2006
											Surfactants	2012
											Turbidity	2012

2024 Cycle 303(d) List – List of Estuaries Note: The 2024 303(d) List is comprised of the causes of impairments included in assessments cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.												
Basin	**Waterbody Name**	**Waterbody Size (sq. miles)**	**Class**	**2024 Monitoring Stations**	**Designated Uses and Categories Summary**			**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**					
RÍO MATILDE-PASTILLO PRSR64A	RÍO MATILDE-PASTILLO PRSE64A	0.0432	SB		4a	4a	5	D H J, L	M	Onsite Wastewater Systems Urban Runoff/Storm Sewers	Turbidity	2012
RÍO TALLABOA PRSR65A	RÍO TALLABOA PRSE65A	0.0336	SB		4a	4a	5	D, H J, L	M	Onsite Wastewater Systems Urban Runoff/Storm Sewers	Turbidity	2012
CAÑO MERLE PRWK78A	CAÑO MERLE PRWE78A	0.158	SB		4a	4a	5	D, H J, L	M	Collection System Failure	Surfactants	2014
CAÑO BOQUILLA PRWK82A	CAÑO BOQUILLA PRWE82A	0.062	SB		3	3	5	D H L	L	Onsite Wastewater Systems	Dissolved Oxygen	2012
											Surfactants	2012
											Turbidity	2012
QUEBRADA GRANDE DE CALVACHE PRWQ88A	QUEBRADA GRANDE DE CALVACHE PRWE88A	0.002	SB		4a	4a	5	D H L	M	Urban Runoff/Storm Sewers	Dissolved Oxygen	2016, 2012, 2008
RÍO GUAYABO PRWR94A	RÍO GUAYABO PRWE94A	0.0288	SB		4a	4a	5	D H, J	M	Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen	2012, 2008

Notes:
D - Watershed and sub watershed that do not have a permanent monitoring station but were included in prior cycles as part of the 303(d) list by a synoptic study or a special monitoring project.
F - Watersheds that have approved TMDL in September 2012, the pollutant was Fecal Coliforms.
H - If the Monitoring Station column is left blank, the Assessment Unit was not monitored for 2022 cycle.
J - Watersheds that have approved TMDL in September 2011, the pollutant was Fecal Coliform.
L - Watershed and sub watersheds who are or have been under Category 4c, are waterbodies that lack adequate flow, which impaired some of the designated uses.
R1 - Primary Contact Recreation
R2 - Secondary Contact Recreation
AL - Aquatic Life
Priority:

M: Intermediate Priority: basins that were not including in the Puerto Rico Unified Watershed Assessment and Restoration Activities (PRUWARA) and have 50% or more of its waters as impaired for some designated use.

L: Low Priority: basins that were not included in the PRUWARA and have less than 50% of its waters as impaired for some designated use.

SAN JUAN BAY ESTUARY

Size of waters Impaired by Causes San Juan Bay Estuary System	
Causes of Impairments	**Size of Waters Impaired (sq. mi., miles)**
Chromium VI	3.8340 sq. mi.
Copper	0.1009 sq. mi., 18.8 mi.
Dissolved Oxygen	3.8340 sq. mi., 18.8 mi.
Enterococci	3.8340 sq. mi., 18.8 mi.
Lead	0.1009 sq. mi.
Mercury	3.8340 sq. mi.
Oil and Grease	3.8340 sq. mi 18.8 mi.
pH	3.7331 sq. mi., 18.8 mi.
Surfactants	0.1009 sq. mi.
Temperature	3.8340 sq. mi., 18.8 mi.
Total, Nitrogen	3.8340 sq. mi.
Total, Phosphorous	3.8340 sq. mi.
Turbidity	3.8340 sq. mi., 18.8 mi

2024 Cycle 303(d) List – List of San Juan Bay Estuary System Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (miles/ sq. miles)**	**Class**	**2024 Monitoring Stations NS = Network ED = External Data**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R 1	**R 2**	**A L**	**D W**					
ESTUARY SYSTEM	**PREE13A1** * Caño Control de La Malaria * Bahía de San Juan * Caño San Antonio * Laguna Del Condado * Península La Esperanza	18.8 miles	SB	**ED SJBEP** - Bahía de San Juan 1, 2, 3 Laguna Del Condado 1, 2 Canal San Antonio Canal La Malaria Peninsula La Esperanza **ED USGS** – Monitoring Station 50048565 and 50048580	5	5	5	N/A	FM	L	Collection System Failure Confined Animal Feeding Operations Major Industrial Point Sources Major Municipal Point Sources Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	Copper	2006
												Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2006
												Enterococci	2022, 2020, 2018, 2016, 2014, 2012
												Oil & Grease	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010
												pH	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2006
												Temperature	2024, 2022, 2020, 2018, 2016, 2014, 2006
												Turbidity	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010
	PREE13A2 * Río Piedras * Embalse Las Curías	0.1009 sq. mi 55 miles	SD	NS 50049100 89027 **ED SJBEP** - Río Piedras 01, 02, 03 Río Puerto Nuevo Embalse Las Curias	5	5	5	5	FM	H	Collection System Failure Confined Animal Feeding Operations Landfill Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Copper	2024, 2020
												Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												Enterococci	2024, 2022, 2020, 2018
												Mercury	2024
												Lead	2024, 2020
												Oil and Grease	2024
												Surfactants	2024, 2020

2024 Cycle 303(d) List – List of San Juan Bay Estuary System
Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.

Basin	Waterbody Name	Waterbody Size (miles/ sq. miles)	Class	2024 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary R 1	R 2	A L	D W	Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
												Temperature	2024, 2022, 2018, 2016, 2014
												Total, Nitrogen	2024, 2022, 2020, 2018, 2016
												Total, Phosphorus	2024, 2022, 2020, 2018, 2016
												Turbidity	2024, 2022, 2020, 2018, 2014, 2012, 2010, 2008, 2006
	PREE13A3 * Caño Martín Peña * Quebrada Juan Méndez * Quebrada San Antón * Quebrada Blasina * Canal Machicote * Canal Suárez * Laguna San José * Laguna Torrecillas * Laguna Piñones * Laguna Los Corozos	3.7331 sq. mi 47.9 miles	SB SD	NS 50050300 **ED SJBEP** – Canal Suárez 1, 2 Caño Martín Peña Laguna San José 1, 2 Quebrada Blasina Quebrada San Antón Laguna Los Corozos Laguna Torrecillas 1, 2, 3 Laguna Piñones	5	5	5	N/A	M	H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												Enterococci	2024, 2022, 2020, 2018, 2014, 2012
												Mercury	2024
												Oil and Grease	2024
												pH	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2006
												Temperature	2024, 2022, 2020, 2018, 2016, 2014, 2012
												Total, Nitrogen	2024, 2020, 2018, 2016
												Total, Phosphorus	2024, 2022, 2020, 2018, 2016
												Turbidity	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2006

Notes:
F - Watersheds that have approved TMDL in September 2012, the pollutant was Fecal Coliforms.
M- External Data
ED SJBEP – External Data of San Juan Bay Estuary Program
ED USGS – External Data of US Geological Survey
R1 - Primary Contact Recreation
R2 - Secondary Contact Recreation
AL - Aquatic Life
DW -Raw Source for Drinking Water
N/A - Not applicable
Priority:

- **H:** High Priority: basins including in the Puerto Rico Unified Watershed Assessment and Restoration Activities (PRUWARA), as basins of priority due to the high pollution level related to all the designated uses.
- **L:** Low Priority: basins that were not included in the PRUWARA and have less than 50% of its waters as impaired for some designated use.

LAGOONS

Size of waters Impaired by Causes (Monitored Acres for Lagoons)	
Causes of Impairments	**Size of Waters Impaired (sq. mi.)**
Copper	2.6172
Dissolved Oxygen	3.8781
Enterococci	0.5250
pH	1.2703
Temperature	0.4016
Turbidity	1.4344

2024 Cycle 303(d) List – List of Lagoons Note: The 2024 303(d) List is comprised of the impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, and 2008.												
Waterbody Name	**AU - ID**	**Waterbody Size (sq. mi.)**	**Class**	**2024 Monitoring Stations**	**Designated Uses and Categories Summary**			**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**					
LAGUNA JOYUDAS	PRWN0005	0.5297	SB		4a	4a	5	H J	L	Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	Copper	2014
											Dissolved Oxygen	2014
LAGUNA TORTUGUERO	PRNN0006	0.8656	SE		3	3	5	H	L	Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen	2014, 2012
LAGUNA MATA REDONDA	PRNN0007	0.0234	SB		3	3	5	H	L	Urban Runoff/Storm Sewers	Dissolved Oxygen	2014
											pH	2014
LAGUNA AGUAS PRIETAS	PREN0011	0.2	SB		3	3	5	H	L	Unknown Source	Copper	2014
											Dissolved Oxygen	2014
											Turbidity	2014
LAGUNA GRANDE	PREN0012	0.3375	SB		5	5	5	H	L	Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen	2014, 2008
											Enterococci	2014
											pH	2008
LAGUNA CEIBA	PREN0013	0.1875	SB		5	5	5	H	L	Unknown Source	Copper	2014
											Dissolved Oxygen	2014
											Enterococci	2014
											pH	2014
LAGUNA POZUELO	PRSN0014	0.0547	SB		3	3	5	H	L	Unknown Source Urban Runoff/Storm Sewers	Copper	2014
											Dissolved Oxygen	2014
											pH	2014
											Temperature	2014
	PRSN0015	0.325	SB		3	3	5	H	L	Unknown Source	Copper	2014

2024 Cycle 303(d) List – List of Lagoons

Note: The 2024 303(d) List is comprised of the impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, and 2008.

Waterbody Name	AU - ID	Waterbody Size (sq. mi.)	Class	2024 Monitoring Stations	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL					
LAGUNA MAR NEGRO										Urban Runoff/Storm Sewers	Dissolved Oxygen pH	2014 2014
LAGUNA PUNTA ARENAS	PRSN0016	0.0281	SB		3	3	5	H	L	Unknown Source Urban Runoff/Storm Sewers	Copper Dissolved Oxygen Temperature Turbidity	2014 2014 2014 2014
LAGUNA TIBURONES	PRSN0017	0.0219	SB		3	3	5	H	L	Landfill Unknown Source	Copper Dissolved Oxygen pH Temperature Turbidity	2014 2014 2014 2014 2014
LAGUNA SALINAS	PRSN0018	0.1203	SB		3	3	5	H	L	Onsite Wastewater Systems Unknown Source	Copper Dissolved Oxygen	2014 2014
LAGUNA SALINAS I (FRATERNIDAD)	PRSN0019	0.4594	SB		3	3	5	H	L	Onsite Wastewater Systems Unknown Source	Copper Dissolved Oxygen Turbidity	2014 2014 2014
LAGUNA CABO ROJO 2 (CANDELARIA)	PRSN0020	0.2969	SB		3	3	5	H	L	Unknown Source	Copper Dissolved Oxygen Temperature Turbidity	2014 2014 2014 2014
LAGUNA CABO ROJO 3 (EL FARO)	PRSN0021	0.1078	SB		3	3	5	H	L	Unknown Source	Copper Dissolved Oxygen Turbidity	2014 2014 2014
CAÑO BOQUERÓN	PRSN0022	0.2859	SB		3	3	5	H	L	Marinas and Recreational Boating Minor Industrial Point Sources	Copper Dissolved Oxygen pH Turbidity	2014 2014 2014 2014
	PRSN0023	0.0344	SB		3	3	5	H	L	Unknown Source	Dissolved Oxygen	2014

2024 Cycle 303(d) List – List of Lagoons Note: The 2024 303(d) List is comprised of the impairments included in assessment cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, and 2008.												
Waterbody Name	**AU - ID**	**Waterbody Size (sq. mi.)**	**Class**	**2024 Monitoring Stations**	**Designated Uses and Categories Summary**			**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R1	**R2**	**AL**					
LAGUNA GUANIQUILLA											pH	2014
											Turbidity	2014

Notes:

H - If the Monitoring Station column is left blank, the Assessment Unit was not monitored for 2022 cycle.

J - Watersheds that have approved TMDL in September 2011, the pollutant was Fecal Coliform.

R1 - Primary Contact Recreation

R2 - Secondary Contact Recreation

AL - Aquatic Life

Priority:

L: Low Priority: basins that were not included in the Puerto Rico Unified Watershed Assessment and Restoration Activities (PRUWARA) and have less than 50% of its waters as impaired for some designated use.

LAKES

Size of waters Impaired by Causes (Monitored acres/miles for Lakes)	
Causes of Impairments	**Size of Waters Impaired (acres)**
Arsenic	1,194
Copper	2,500
Dissolved Oxygen	7,323
Enterococci	35
Lead	1,726
Mercury	35
Pesticides	2,133
pH	6,301
Surfactants	634
Temperature	4,790
Total, Nitrogen	6,849
Total, Phosphorus	7,269
Turbidity	5,080

2024 Cycle 303(d) List – List of Lakes

Note: The 2024 303(d) List is comprised of the impairments included in assessments cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.

Basin	Waterbody Name	Waterbody Size (acres/miles)	Class	2024 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R 1	R 2	AL	DW					
RÍO GUAJATACA	LAGO GUAJATACA PRNL3A1	1000 acres	SD	NS 10720 10790 10790C	4a	4a	5	5	F	H	Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems Unknown Sources	Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												pH	2022, 2020, 2016
												Temperature	2024, 2022, 2020
												Total, Nitrogen	2022, 2020
												Total, Phosphorus	2022, 2020, 2018
RÍO GRANDE DE ARECIBO	LAGO DOS BOCAS PRNL$_1$7A1	634 acres	SD	NS 25110 27090 27090E	4a	4a	5	5	K N	H	Agriculture Confined Animal Feeding Operations Minor Industrial Point Source Onsite Wastewater Systems Unknown Sources	Arsenic	2006
												Copper	2006
												Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												pH	2024, 2022, 2020, 2018, 2016, 2012
												Surfactants	2006
												Temperature	2024, 2022, 2020
												Total, Nitrogen	2024, 2022, 2020, 2018
												Total, Phosphorus	2024, 2022, 2020, 2018

2024 Cycle 303(d) List – List of Lakes Note: The 2024 303(d) List is comprised of the impairments included in assessments cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (acres/miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R 1	**R 2**	**AL**	**DW**					
												Turbidity	2022, 2020
RÍO GRANDE DE ARECIBO	LAGO CAONILLAS $PRNL_27C1$	700 acres	SD	NS 89001 89002 89003	4a	4a	5	5	K	H	Agriculture Onsite Wastewater Systems	Copper	2020, 2012
												Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												Pesticides	2008
												Total, Nitrogen	2024, 2022, 2020
												Total, Phosphorus	2024, 2022, 2020, 2018
												Turbidity	2024
RÍO GRANDE DE ARECIBO	LAGO GARZAS $PRNL_37A3$	108 acres	SD	NS 20050	4a	4a	5	5	K	H	Agriculture Onsite Wastewater Systems Unknown Sources	Copper	2020
												Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2006
												Lead	2020
												Pesticides	2008
												pH	2024
												Total, Phosphorus	2024, 2022, 2018
RÍO GRANDE DE MANATÍ	LAGO GUINEO $PRNL_18C1$	54 acres	SD		4a	4a	5	5	H K	H	Agriculture Onsite Wastewater Systems	Dissolved Oxygen	2012, 2010, 2006
												Pesticides	2008
			SD		4a	4a	5	5	K	H	Agriculture	Copper	2020

2024 Cycle 303(d) List – List of Lakes Note: The 2024 303(d) List is comprised of the impairments included in assessments cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (acres/miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R 1	**R 2**	**AL**	**DW**					
RÍO GRANDE DE MANATÍ	LAGO MATRULLAS PRNL$_{2}$8C1	77 acres		NS 89009 89010							Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems Unknown Sources	Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010
												Lead	2020
												pH	2024, 2020, 2018, 2014, 2012, 2010, 2006
												Total, Nitrogen	2022, 2020
												Total, Phosphorus	2024, 2022, 2020, 2018
												Turbidity	2024
RÍO DE LA PLATA	LAGO DE LA PLATA PREL$_{1}$10A1	560 acres	SD	NS 44400 44950 44950C	4a	4a	5	5	B N	H	Collection System Failure Confined Animal Feeding Operations Landfill Onsite Wastewater Systems	Arsenic	2006
												Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												Lead	2020
												pH	2024, 2022, 2020, 2018, 2016
												Temperature	2024, 2022, 2020
												Total, Nitrogen	2024, 2022, 2020
												Total, Phosphorus	2024, 2022, 2020, 2018, 2016, 2006
												Turbidity	2024

2024 Cycle 303(d) List – List of Lakes

Note: The 2024 303(d) List is comprised of the impairments included in assessments cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.

Basin	Waterbody Name	Waterbody Size (acres/miles)	Class	2024 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R 1	R 2	AL	DW					
RÍO DE LA PLATA	LAGO CARITE PREL$_{2}$10A5	333 acres	SD	NS 39900 39950 39950C	4a	4a	5	5	B	H	Confined Animal Feeding Operations Onsite Wastewater Systems	Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2006
												pH	2024, 2020
												Total, Phosphorus	2022, 2020, 2018
												Total, Nitrogen	2024, 2022
												Turbidity	2024
RÍO BAYAMÓN	LAGO CIDRA PREL12A2	268 acres	SD	NS 89029 89030 89031	4a	4a	5	5	F	H	Collection System Failure Confined Animal Feeding Operations Minor Industrial Point Source Onsite Wastewater Systems	Copper	2020
												Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												Lead	2020
												Total, Nitrogen	2024, 2022, 2020
												Total, Phosphorus	2024, 2022, 2020, 2018
												Turbidity	2024
RÍO GRANDE DE LOIZA	LAGO LOIZA PREL14A1	713 acres	SD	NS 57500 58800 58800D	4a	4a	5	5	C	H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	Copper	2020, 2014, 2012
												Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008

2024 Cycle 303(d) List – List of Lakes Note: The 2024 303(d) List is comprised of the impairments included in assessments cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (acres/miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R 1	**R 2**	**AL**	**DW**					
												Lead	2012
												pH	2022, 2020
												Temperature	2024, 2020
												Total, Nitrogen	2024, 2022, 2020, 2018
												Total, Phosphorus	2024, 2022, 2020, 2018
												Turbidity	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008
RÍO GRANDE DE PATILLAS	LAGO PATILLAS PRSL43A1	312 acres	SD	NS 89022 89023 89024	4a	4a	5	5	J	H	Agriculture Minor Industrial Point Source Onsite Wastewater Systems Unknown Sources	Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												pH	2024, 2020
												Pesticides	2008
												Temperature	2024, 2022, 2020
												Total, Phosphorus	2024, 2022, 2020, 2018
QUEBRADA MELANÍA	LAGO MELANÍA PRSL50A	35 acres	SD	NS 89026	4a	4a	5	5	J	M	Agriculture Onsite Wastewater Systems Unknown Sources	Dissolved Oxygen	2024
												Enterococci	2020
												Mercury	2020
												Pesticides	2008
												pH	2024
												Temperature	2024, 2020

2024 Cycle 303(d) List – List of Lakes Note: The 2024 303(d) List is comprised of the impairments included in assessments cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (acres/miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R 1	**R 2**	**AL**	**DW**					
												Total, Nitrogen	2024, 2022, 2020
												Total, Phosphorus	2022, 2020, 2018
												Turbidity	2024
RÍO JACAGUAS	LAGO GUAYABAL PRSL$_1$60A1	373 acres	SD	NS 89011 89012 89013	4a	4a	5	5	F	M	Agriculture Collection System Failure Minor Industrial Point Sources Onsite Wastewater Systems	Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												Pesticides	2008
												pH	2024, 2020
												Total, Nitrogen	2024, 2020
												Total, Phosphorus	2024, 2022, 2020, 2018
												Turbidity	2024
RÍO JACAGUAS	LAGO TOA VACA PRSL$_2$60A1	836 acres	SD	NS 89014 89015 89016	4a	4a	5	5	F	M	Agriculture Onsite Wastewater Systems	Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008
												pH	2024, 2020, 2016
												Temperature	2024, 2022
												Total, Nitrogen	2024, 2022, 2020
												Total, Phosphorus	2022, 2020, 2018
												Turbidity	2024

2024 Cycle 303(d) List – List of Lakes

Note: The 2024 303(d) List is comprised of the impairments included in assessments cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.

Basin	Waterbody Name	Waterbody Size (acres/miles)	Class	2024 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R 1	R 2	AL	DW					
RÍO BUCANÁ-CERRILLOS	LAGO CERRILLOS PRSL62A1	700 acres	SD	NS 89032 89033 89034	4a	4a	5	5	J	M	Unknown Sources Urban Runoff/Storm Sewers	Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												pH	2022
												Temperature	2022
												Total, Nitrogen	2024, 2022, 2020
												Total, Phosphorus	2022, 2020, 2018
RIO YAUCO	LAGO LUCHETTI PRSL68A1	266 acres	SD	NS 89017 89018 89019	4a	4a	5	5	F	M	Agriculture Onsite Wastewater Systems	Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												Pesticides	2008
												pH	2024, 2022, 2020, 2018
												Total, Nitrogen	2024, 2022, 2020
												Total, Phosphorus	2024, 2022, 2020, 2018
												Turbidity	2024, 2020
RÍO LOCO	LAGO LOCO PRSL69A	69 acres	SD	NS 89021C	4a	4a	5	5	F	M	Onsite Wastewater Systems	Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008
												pH	2024, 2020

2024 Cycle 303(d) List – List of Lakes Note: The 2024 303(d) List is comprised of the impairments included in assessments cycles 2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.													
Basin	**Waterbody Name**	**Waterbody Size (acres/miles)**	**Class**	**2024 Monitoring Stations NS = Network**	**Designated Uses and Categories Summary**				**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Impaired Cycles**
					R 1	**R 2**	**AL**	**DW**					
												Total, Nitrogen	2024, 2022, 2020
												Total, Phosphorus	2024, 2020, 2018
RÍO GRANDE DE AÑASCO	LAGO GUAYO PRWL83H	285 acres	SD	NS 89004 89005 89006	4a	4a	5	5	K	H	Agriculture Confined Animal Feeding Operations Major Industrial Point Sources Minor Municipal Point Source Onsite Wastewater Systems	Dissolved Oxygen	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												Pesticides	2008
												pH	2024, 2022, 2020, 2018
												Total, Nitrogen	2024, 2022, 2020, 2018
												Total, Phosphorus	2024, 2020, 2018
												Turbidity	2024, 2022, 2020

Notes:
B - Watershed that has an approved TMDL for Río de la Plata, the TMDL was approved in September 2003, the pollutant was Fecal Coliforms.
C - Watershed that has an approved TMDL for Río Grande de Loíza, the TMDL was approved in September 2007, the pollutant was Fecal Coliforms.
F - Watersheds that have approved TMDL in September 2012, the pollutant was Fecal Coliforms.
H - If the Monitoring Station column is left blank, the Assessment Unit was not monitored for 2024 cycle.
J - Watersheds that have approved TMDL in September 2011, the pollutant was Fecal Coliform.
K - Watersheds that have an approved TMDL in September 2010, the pollutant was Fecal Coliforms. The watersheds are Río Grande de Arecibo, Río Grande de Manatí, Río Grande de Añasco and Río Culebrinas.
N- Remains in 2024 303 (d) List due to old segmentation evaluation.
R1 - Primary Contact Recreation
R2 - Secondary Contact Recreation
AL - Aquatic Life
DW - Raw Source for Drinking Water
Priority:

H: High Priority: basins including in the Puerto Rico Unified Watershed Assessment and Restoration Activities (PRUWARA), as basins of priority due to the high pollution level related to all the designated uses.

M: Intermediate Priority: basins that were not included in the PRUWARA and have 50% or more of its waters as impaired for some designated use.

COASTAL SHORELINE

Size of Waters Impaired by Causes Coastal Shoreline	
Causes of Impairment	**Size of Waters Impaired (miles)**
Arsenic	49.19
Copper	380.83
Dissolved Oxygen	92.65
Enterococci	390.97
Fecal Coliforms	7.79
Lead	152.17
Mercury	213.37
Nickel	170.90
Oil and Grease	82.42
pH	190.52
Temperature	280.75
Thallium	203.74
Turbidity	434.94
Zinc	43.80

2024 Cycle 303(d) List – List of Coastal Shoreline Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2023, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008.											
Assessment Unit ID (AU)	**Size of AU (miles)**	**Class**	**2024 Monitoring Stations NS = Network ED = External Data**	**Designated Uses and Categories Summary**			**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Years Impaired**
				R1	**R2**	**AL**					
PRNC01 Punta Borinquén to Punta Sardina	11.75	SB	NS MAC-044, SBZ-003, SBZ-004, SBZ-005	1	1	5		L	Onsite Wastewater Systems	Copper	2020
										Thallium	2020
PRNC02 Punta Sardina to Punta Manglillo	14.10	SB	NS MAC-047 MAC-086 SBZ-006	5	5	5		L	Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Copper	2020, 2018
										Thallium	2020
										Lead	2020
										Enterococci	2024, 2022, 2020, 2018
										Turbidity	2024, 2022, 2020, 2018, 2016, 2014, 2012
PRNC03 Punta Manglillo to Punta Morrillos	9.65	SB	NS SBZ-007 SEG3-01	5	5	5		L	Collection System Failure Onsite Wastewater Systems Upstream Impoundment Urban Runoff/Storm Sewers	Copper	2020
										Enterococci	2024, 2022, 2020, 2018
										Temperature	2020
										Turbidity	2024, 2020, 2018, 2016
PRNC04 Punta Morrillos to Punta Manatí	13.66	SB	NS MAC-049 MAC-055 SBZ-008	1	1	5		L	Collection System Failure Onsite Wastewater Systems Urban Runoff/Storm Sewers Upstream Impoundment	Copper	2020, 2018
										Enterococci	2020, 2018
										Mercury	2020
										Nickel	2020
										pH	2022, 2018
										Thallium	2020, 2018
										Turbidity	2024, 2022, 2020, 2018, 2016, 2014, 2012
PRNC05	7.46	SB	NS SBZ-010	1	1	5		L	Unknown Source	Copper	2020, 2018
										Enterococci	2022, 2018

2024 Cycle 303(d) List – List of Coastal Shoreline

Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2023, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008.

Assessment Unit ID (AU)	Size of AU (miles)	Class	2024 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Years Impaired
				R1	R2	AL					
Punta Manatí to Punta Chivato			SEG5-01							Mercury	2020
										Thallium	2020
										pH	2022, 2020, 2018
										Turbidity	2022, 2018
										Temperature	2024
PRNC06 Punta Chivato to Punta Cerro Gordo	3.23	SB	NS MAC-087 RW23	1	1	5		L	Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	Copper	2018
										Enterococci	2022, 2018
										Mercury	2020
										Temperature	2024, 2022, 2020
										Turbidity	2024, 2022, 2018
PRNC07 Punta Puerto Nuevo to Punta Cerro Gordo	5.05	SB	NS MAC-088 SEG7-01 RW-17	1	1	5		L	Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	Copper	2020, 2018
										Mercury	2018
										pH	2022, 2020
										Temperature	2024, 2022, 2020
										Turbidity	2020, 2018
PRNC08 Punta Cerro Gordo to Punta Boca Juana	7.32	SB	NS SBZ-013 SBZ-014 RW-18	5	5	5		L	Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	Arsenic	2020
										Enterococci	2024, 2022, 2020, 2018
										Lead	2020
										Copper	2020, 2018
										Nickel	2020
										Zinc	2020
										Turbidity	2024, 2022, 2020, 2018, 2016
PREC09 Punta Boca Juana to Punta Salinas	5.78	SB	NS MAC-077 SEG9-01 RW-19	1	1	5		L	Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	Arsenic	2020q
										Copper	2020, 2018
										Enterococci	2022, 2020
										Lead	2020
										Nickel	2020, 2018
										pH	2022

2024 Cycle 303(d) List – List of Coastal Shoreline Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2023, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008.											
Assessment Unit ID (AU)	**Size of AU (miles)**	**Class**	**2024 Monitoring Stations NS = Network ED = External Data**	**Designated Uses and Categories Summary**			**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Years Impaired**
				R1	**R2**	**AL**					
										Turbidity	2024, 2022, 2020, 2018, 2016
PREC10B Punta Salinas to Rio Bayamón Mouth	2.91	SB	NS MAC-063	5	5	5		L	Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Copper	2020, 2018
										Enterococci	2024, 2022, 2020, 2016, 2014
										Lead	2020, 2018
										Mercury	2020, 2018
										Nickel	2020, 2018
										Turbidity	2024, 2022, 2020, 2018, 2016, 2014
PREC10C Rio Bayamón Mouth to Isla de Cabras	6.63	SB	NS SEG10C-01 SEG10C-02	5	5	5		L	Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Copper	2020, 2018
										Enterococci	2024, 2020, 2018
										Lead	2020, 2018
										Mercury	2020, 2018
										Nickel	2020, 2018
										Zinc	2020
										Thallium	2020
										pH	2022, 2018
										Temperature	2024, 2020
										Turbidity	2024, 2022, 2020, 2018, 2016
PREC11 Isla de Cabras to Punta Del Morro	7.79	SB		5	5	5	H	L	Major Industrial Point Sources Major Municipal Point Sources Minor Municipal Point Sources Marinas and Recreational Boating Onsite Wastewater Systems	Arsenic	2010
										Copper	2010
										Dissolved Oxygen	2010
										Fecal Coliforms	2010
PREC12	3.5	SB	NS	1	1	5		L	Unknown Sources	Enterococci	2022

2024 Cycle 303(d) List – List of Coastal Shoreline Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2023, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008.											
Assessment Unit ID (AU)	**Size of AU (miles)**	**Class**	**2024 Monitoring Stations NS = Network ED = External Data**	**Designated Uses and Categories Summary**			**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Years Impaired**
				R1	**R2**	**AL**					
Punta del Morro to West side of Condado Bridge			SBZ-018, SBZ-019, RW-20B, RW-20A, RW-25A, ED- CariCoos Buoy							Turbidity	2022
										pH	2022
										Temperature	2024
PREC13 East side of Condado Bridge to Punta Las Marías	4.31	SB	NS B-1 B-2 RW-26 RW-27	5	5	5		L	Urban Runoff/Storm Sewers	Copper	2020
										Enterococci	2024, 2022, 2020, 2018
										Lead	2020
										Mercury	2020
										Thallium	2020
										Temperature	2024, 2022, 2020
										Turbidity	2022
PREC14 Punta Las Marías to Punta Cangrejos	4.19	SB	NS EB-40, B-3, SEG14-01 SEG14-02, RW-21C	1	1	5		L	Marinas and Recreational Boating Urban Runoff/Storm Sewers	Arsenic	2020
										Lead	2020
										Copper	2020
										Thallium	2020
										Temperature	2024, 2022, 2020
										Turbidity	2024, 2022, 2020, 2018, 2016, 2014
PREC15 Punta Cangrejos to Punta Vacía Talega	6.23	SB	NS SBZ-024 SBZ-026	5	5	5		L	Onsite Wastewater Systems Urban Runoff/Storm Sewers	Arsenic	2020
										Copper	2020
										Enterococci	2024, 2022, 2020, 2018
										Mercury	2020
										Nickel	2020
										Temperature	2022, 2020
										Thallium	2020
										Turbidity	2022, 2020, 2018, 2016

2024 Cycle 303(d) List – List of Coastal Shoreline
Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2023, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008.

Assessment Unit ID (AU)	Size of AU (miles)	Class	2024 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Years Impaired
				R1	R2	AL					
PREC16 Punta Vacía Talega to Punta Miquillo	9.46	SB	NS SBZ-027 SBZ-028	5	5	5		L	Onsite Wastewater Systems Urban Runoff/Storm Sewers	Arsenic	2020
										Mercury	2020
										Copper	2020
										Lead	2020
										Nickel	2020
										Thallium	2020
										Zinc	2020
										Enterococci	2024, 2022, 2020, 2018
										Temperature	2020
										Turbidity	2024, 2022, 2020, 2018, 2016
PREC17 Punta Miquillo to Punta La Bandera	8.41	SB	NS MAC-009, SEG17-01 RW-1A	1	1	5		L	Onsite Wastewater Systems Urban Runoff/Storm Sewers	Copper	2020
										Mercury	2020
										Temperature	2022, 2020
										Turbidity	2024, 2022, 2018, 2016
PREC18 Punta La Bandera to Cabezas de San Juan	10.46	SB	NS MAC-010 SBZ-030 RW-2	1	1	5		L	Unknown Source	Copper	2020
										Thallium	2020
										pH	2020, 2018
										Temperature	2024, 2022, 2020
										Turbidity	2024, 2022, 2020, 2018, 2016, 2014, 2012
PREC19 Cabezas de San Juan to Punta Barrancas	7.08	SB	NS MAC-078	5	5	5		L	Marinas and Recreational Boating Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	Copper	2020, 2018
										Enterococci	2024, 2022, 2020, 2018, 2016
										Oil & Grease	2014
										Temperature	2024, 2022, 2020
										Turbidity	2022, 2020, 2018, 2016, 2014

2024 Cycle 303(d) List – List of Coastal Shoreline Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2023, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008.											
Assessment Unit ID (AU)	**Size of AU (miles)**	**Class**	**2024 Monitoring Stations NS = Network ED = External Data**	**Designated Uses and Categories Summary**			**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Years Impaired**
				R1	**R2**	**AL**					
PREC20 Punta Barrancas to Punta Medio Mundo	5.33	SB	NS SEG20-01 SEG20-02	1	1	5		L	Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	Copper	2020
										Thallium	2020
										Dissolved Oxygen	2022, 2018, 2016
										Enterococci	2020, 2018
										Temperature	2024, 2022, 2020
										Turbidity	2022, 2020, 2018, 2016
PREC23 Isla Cabras to Punta Cascajo	8.33	SB	NS SEG23-01	1	1	5		L	Major Industrial Point Sources Marinas and Recreational Boating	Copper	2020
										Turbidity	2020, 2016
PREC24 Punta Cascajo to Punta Lima	9.07	SB	NS SEG24-02	5	5	5		L	Major Industrial Point Sources Upstream Impoundment	Copper	2020
										Dissolved Oxygen	2018, 2016
										Enterococci	2020, 2018
										Temperature	2024, 2022, 2020
										Turbidity	2022, 2020, 2018, 2016
PREC25 Punta Lima to Morro de Humacao	9.83	SB	NS MAC-080 MAC-081 SEG25-01 RW-4, RW-31	5	5	5		L	Major Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Copper	2020, 2018
										Mercury	2020
										Temperature	2024, 2022, 2020
										Enterococci	2024, 2022, 2020, 2018
										Turbidity	2024, 2022, 2020, 2018, 2016, 2014, 2012
PREC26 Morro de Humacao to Punta Candelero	1.84	SB	NS SEG26-01	1	1	5		L	Onsite Wastewater Systems Urban Runoff/Storm Sewers	Copper	2020
										Enterococci	2020, 2018
										Temperature	2024, 2022, 2020
										Turbidity	2022, 2020, 2018, 2016
PREC27	3.74	SB	NS	5	5	5		L		Arsenic	2020

2024 Cycle 303(d) List – List of Coastal Shoreline Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2023, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008.											
Assessment Unit ID (AU)	**Size of AU (miles)**	**Class**	**2024 Monitoring Stations NS = Network ED = External Data**	**Designated Uses and Categories Summary**			**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Years Impaired**
				R1	**R2**	**AL**					
Punta Candelero to Punta Guayanés			SEG27-01						Onsite Wastewater Systems Urban Runoff/Storm Sewers	Copper	2020
										Thallium	2020
										Enterococci	2024, 2022, 2020, 2018, 2008
										Turbidity	2024, 2022, 2020, 2018, 2016
PREC28B Punta Quebrada Honda to Punta Yeguas	0.74	SB	NS SBZ-038	5	5	5		L	Onsite Wastewater Systems Unknown Source	Copper	2020, 2018
										Thallium	2020
										Enterococci	2020, 2018
										Turbidity	2022, 2020, 2016
PREC28C Punta Guayanés to Punta Quebrada Honda	4.68	SB	NS MAC-012 SBZ-037	5	5	5		L	Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Arsenic	2020
										Mercury	2020
										Copper	2020, 2018
										Thallium	2020
										Enterococci	2020, 2018
										Oil & Grease	2014
										Temperature	2020
										Turbidity	2022, 2020, 2018, 2016, 2014, 2012
PREC29 Punta Yeguas to Punta Tuna	4.35	SB	NS SEG29-02 SEG29-01	1	1	5		L	Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	Copper	2020, 2018
										Lead	2018
										Thallium	2020
										Enterococci	2020
										pH	2020, 2018
										Temperature	2024
										Turbidity	2024, 2022, 2020, 2018, 2016
PREC30 Punta Tuna to Cabo Mala Pascua	2.65	SB	NS MAC-082	5	5	5		L	Unknown Source	Copper	2020, 2018
										Enterococci	2024, 2022, 2020, 2018, 2016

2024 Cycle 303(d) List – List of Coastal Shoreline

Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2023, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008.

Assessment Unit ID (AU)	Size of AU (miles)	Class	2024 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Years Impaired
				R1	R2	AL					
										Turbidity	2022, 2020, 2018, 2016, 2014, 2012
PRSC31 Cabo Mala Pascua to Punta Viento	4.06	SB	NS SEG31-01	5	5	5		L	Onsite Wastewater Systems Urban Runoff/Storm Sewers Upstream Impoundment	Copper	2018
										Thallium	2020
										Enterococci	2024, 2022
										Turbidity	2022, 2020
										Temperature	2024, 2020
PRSC32 Punta Viento to Punta Figuras	6.16	SB	NS MAC-083 SBZ-040 RW-6 RW-7	5	5	1		L	Onsite Wastewater Systems Urban Runoff/Storm Sewers Upstream Impoundment	Copper	2020, 2018
										Mercury	2020
										Thallium	2020
										Dissolved Oxygen	2018, 2016
										Enterococci	2024, 2022, 2020, 2018, 2014, 2010
										Temperature	2022, 2020
										Turbidity	2022, 2020, 2018, 2016, 2014
PRSC33 Punta Figuras to Punta Ola Grande	8.10	SB	NS MAC-017 SEG33-01	5	5	5		L	Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Copper	2020, 2018
										Lead	2020
										Mercury	2020
										Enterococci	2024, 2022, 2020
										Temperature	2020
										Turbidity	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2008
PRSC34 Punta Ola Grande to Punta Petrona	40.9	SB	NS MAC-019 SEG34-01 SEG34-02 ED-Stations 09, 10, 19 and 20 from Natural	5	5	5	M	L	Agriculture Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storms sewers Upstream Impoundment	Copper	2020, 2018
										Lead	2020
										Mercury	2020
										Nickel	2020
										Dissolved Oxygen	2024, 2022, 2018, 2016, 2014, 2012, 2010

2024 Cycle 303(d) List – List of Coastal Shoreline

Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2023, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008.

Assessment Unit ID (AU)	Size of AU (miles)	Class	2024 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Years Impaired
				R1	R2	AL					
			Reserve of Jobos Bay							Enterococci	2024, 2022, 2018, 2012, 2010
										Oil & Grease	2014
										pH	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010
										Temperature	2024, 2022, 2020, 2016, 2014
										Turbidity	2024, 2022, 2020, 2018, 2016, 2014, 2012, 2010
PRSC35 Punta Petrona to Punta Cabullones	16.19	SB	NS MAC-020 SEG35-01 SEG35-02 ED-CariCoos Buoy	5	5	5	M	L	Major Municipal Point Sources Onsite Wastewater Systems Upstream Impoundment Urban Runoff/Storm Sewers	Copper	2020, 2018
										Lead	2020
										Nickel	2020
										Thallium	2020
										Zinc	2020
										Enterococci	2024, 2022, 2020, 2018, 2016
										Mercury	2020, 2018
										Turbidity	2024, 2022, 2020, 2018, 2016, 2014
PRSC36B Punta Cabullones to Punta Carenero	2.53	SB	NS SEG36B-01	5	5	5		L	Major Municipal Point Sources Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	pH	2024, 2022, 2020
										Temperature	2024, 2022, 2020
										Enterococci	2022
										Copper	2018
										Mercury	2018
										Turbidity	2022, 2020, 2018, 2016
PRSC36C	6.70	SB	NS MAC-022	5	5	5		L	Major Municipal Point Sources	Turbidity	2024, 2022, 2020
										Copper	2020, 2018

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Assessment Unit ID (AU)	**Size of AU (miles)**	**Class**	**2024 Monitoring Stations NS = Network ED = External Data**	**Designated Uses and Categories Summary**			**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Years Impaired**
				R1	**R2**	**AL**					
Punta Carenero to Punta Cuchara			MAC-023						Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	Enterococci	2024, 2022, 2020, 2018, 2014
										Mercury	2018
										Oil & Grease	2014
PRSC37B Punta Cuchara to Cayo Parguera	3.30	SB	NS MAC-084	5	5	5		L	Surface Mining Urban Runoff/Storm Sewers Upstream Impoundment Unknown Source	Turbidity	2024, 2022, 2020, 2018, 2016, 2014
										Enterococci	2024, 2020, 2018
										pH	2020
										Copper	2020, 2018
										Nickel	2020
										Mercury	2020, 2018
PRSC37C Cayo Parguera to Punta Guayanilla	4.20	SB	NS MAC-24 MAC-25	1	1	5		L	Major Municipal Point Sources Major Industrial Point Sources Surface Mining Onsite Wastewater Systems Upstream Impoundment Marinas and Recreational Boating Urban Runoff/Storm Sewers	Turbidity	2020, 2018, 2016, 2014
										Copper	2020, 2018
										Mercury	2020
										Lead	2018
										Nickel	2018
										Thallium	2020
										Oil & Grease	2014
										Zinc	2018
PRSC38 Punta Guayanilla to Punta Verraco	13.20	SB	NS MAC-027 MAC-028 MAC-089	5	5	5		L	Major Municipal Point Sources Marinas and Recreational Boating Onsite Wastewater Systems Upstream Impoundment	Copper	2020, 2018
										Mercury	2020
										Thallium	2020
										Oil & Grease	2014
										Enterococci	2024, 2022, 2020, 2018
										Turbidity	2024, 2022, 2020

2024 Cycle 303(d) List – List of Coastal Shoreline

Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2023, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008.

Assessment Unit ID (AU)	Size of AU (miles)	Class	2024 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Years Impaired
				R1	R2	AL					
									Urban Runoff/Storm Sewers	Temperature	2024, 2022, 2020, 2018, 2016, 2014
PRSC39 Punta Verraco to Punta Ballena	6.41	SB	NS MAC-030, Seg39-01, G1	1	1	5		L	Unknown Source	Turbidity	2024, 2022, 2020, 2018, 2016, 2014, 2012
										Copper	2020
										Thallium	2020
PRSC40 Punta Ballena to Punta Brea	13.26	SB	NS MAC-034 MAC-085 RW-9	5	5	5		L	Marinas and Recreational Boating Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Turbidity	2022, 2020, 2012
										Copper	2020
										Nickel	2020, 2018
										pH	2020, 2018, 2016, 2012
										Enterococci	2022, 2020
										Temperature	2022, 2020, 2018, 2012
PRSC41B1 Punta Brea to Bahía Fosforescente La Parguera	10.93	SB	NS SBZ-045 SEG41B1-01 RW-10	5	5	5		L	Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	Turbidity	2022, 2020, 2018, 2016, 2014, 2012
										Copper	2020
										Thallium	2020
										Enterococci	2022
										Temperature	2022, 2020
										pH	2020
PRSC41B2 Bahía Fosforescente La Parguera to Punta Cueva de Ayala	7.00	SB	NS SBZ-046 Seg41B2-01, RW-33	5	5	5		L	Landfill Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	Copper	2020, 2018
										Thallium	2020
										Dissolved Oxygen	2022, 2020, 2016
										Enterococci	2022, 2020
										pH	2020, 2018
										Temperature	2022, 2020
										Turbidity	2024, 2022, 2018, 2016

2024 Cycle 303(d) List – List of Coastal Shoreline Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2023, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008.											
Assessment Unit ID (AU)	**Size of AU (miles)**	**Class**	**2024 Monitoring Stations NS = Network ED = External Data**	**Designated Uses and Categories Summary**			**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Years Impaired**
				R1	**R2**	**AL**					
PRSC41B3 Bahía Monsio José to Faro de Cabo Rojo	13.45	SB	NS SEG41B3-01 SEG41B3-02	5	5	5		L	Unknown Source	Turbidity	2024, 2022, 2020, 2018, 2016
										Mercury	2020
										Thallium	2020
										Nickel	2020
										Dissolved Oxygen	2020, 2016
										Enterococci	2024, 2022, 2020, 2018
										Temperature	2024, 2022, 2020
PRWC42 Faro de Cabo Rojo to Punta Águila	2.89	SB	NS SEG42-01	5	5	5		L	Unknown Source	Turbidity	2022, 2020, 2018, 2016
										Enterococci	2022
										Dissolved Oxygen	2024, 2022, 2020, 2018, 2016
										pH	2022, 2020, 2018
										Temperature	2024, 2022, 2020, 2018
PRWC43 Punta Águila to Punta Guaniquilla	9.54	SB	NS MAC-037, SBZ-047 SBZ-048 RW-12A, RW-12B, RW-13, RW-14A	5	5	5		L	Collection System Failure Marinas and Recreational Boating Minor Municipal Point Sources Onsite Wastewater Systems	Enterococci	2022, 2020
										Turbidity	2024, 2022, 2020, 2018, 2016
										Temperature	2024, 2022, 2020
PRWC44 Punta Guaniquilla to Punta La Mela	2.50	SB	NS SBZ-050 SBZ-051, RW-8	5	5	5		L	Onsite Wastewater Systems	Enterococci	2022, 2020
										Turbidity	2020, 2018, 2016
										Temperature	2024, 2022
										pH	2020
										Thallium	2020

2024 Cycle 303(d) List – List of Coastal Shoreline Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2023, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008.											
Assessment Unit ID (AU)	**Size of AU (miles)**	**Class**	**2024 Monitoring Stations NS = Network ED = External Data**	**Designated Uses and Categories Summary**			**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Years Impaired**
				R1	**R2**	**AL**					
PRWC45 Punta La Mela to Punta Carenero	2.95	SB	NS SEG45-01	5	5	5		L	Collection System Failure Marinas and Recreational Boating Onsite Wastewater Systems	Turbidity	2024, 2022, 2020, 2018, 2016
										Copper	2020, 2018
										Thallium	2020
										Lead	2020
										Enterococci	2020, 2018, 2016
PRWC46 Punta Carenero to front of Cayo Ratones	4.00	SB	NS SBZ-052	1	1	5		L	Collection System Failure Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	Turbidity	2020, 2018, 2016
										Copper	2020
										Lead	2020
										Thallium	2020
										Temperature	2024, 2020
PRWC47 In front of Cayo Ratones to Punta Guanajibo	3.85	SB	NS SEG47-01	1	1	5		L	Onsite Wastewater Systems	Turbidity	2020, 2018
										Nickel	2020
										Copper	2020
										Temperature	2024
PRWC48 Punta Guanajibo to Punta Algarrobo	5.60	SB	NS MAC-038 MAC-040	5	5	5		L	Onsite Wastewater Systems Upstream Impoundment Urban Runoff/Storm Sewers	pH	2018
										Turbidity	2022, 2020
										Oil and Grease	2022
										Copper	2020, 2018
										Lead	2020
										Mercury	2020
										Thallium	2020
										Enterococci	2024, 2022, 2020, 2018, 2016, 2014, 2010
										Nickel	2020, 2018
										Temperature	2024
PRWC49	6.98	SB	NS	5	5	5		L		Copper	2020, 2018

2024 Cycle 303(d) List – List of Coastal Shoreline Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2023, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008.											
Assessment Unit ID (AU)	**Size of AU (miles)**	**Class**	**2024 Monitoring Stations NS = Network ED = External Data**	**Designated Uses and Categories Summary**			**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Years Impaired**
				R1	**R2**	**AL**					
Punta Algarrobo to Punta Cadena			MAC-041 SEG49-01 RW-15						Major Municipal Point Sources Upstream Impoundment Urban Runoff/Storm Sewers Onsite Wastewater Systems	Enterococci	2022, 2020, 2018
										Nickel	2020
										pH	2024, 2022, 2018, 2012
										Temperature	2024, 2022, 2020
										Turbidity	2022, 2020, 2018, 2016, 2014
PRWC50 Punta Cadena to Punta Higüero	4.98	SB	NS SBZ-054 SBZ-055 RW-5	5	5	5		L	Onsite Wastewater Systems Unknown Sources Upstream Impoundment	Copper	2020, 2018
										Nickel	2020, 2018
										Enterococci	2024, 2022, 2018
										pH	2022
										Turbidity	2022, 2020, 2018, 2016
										Lead	2018
										Mercury	2020
										Temperature	2024
PRWC51 Punta Higüero to Punta del Boquerón	6.14	SB	NS SEG51-01 SEG51-02 RW-22	5	5	5		L	Onsite Wastewater Systems Unknown Source	Copper	2020, 2018
										Lead	2020
										Mercury	2020
										Nickel	2020, 2018
										Enterococci	2024, 2022, 2020, 2018
										Turbidity	2020, 2018, 2016
PRWC52 Punta del Boquerón to Punta Borinquén	6.80	SB	NS MAC-043 SBZ-002, SBZ-003, SBZ-004 RW-16, RW-16A	1	1	5		L	Major Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Turbidity	2024, 2022, 2020, 2016, 2018
										Copper	2020
PRCC53	32.70	SB	NS	1	1	5		L		Turbidity	2020, 2010

2024 Cycle 303(d) List – List of Coastal Shoreline Note: The 2024 303(d) List is comprised of the causes of impairments included in assessment cycles 2024, 2023, 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008.											
Assessment Unit ID (AU)	**Size of AU (miles)**	**Class**	**2024 Monitoring Stations NS = Network ED = External Data**	**Designated Uses and Categories Summary**			**Notes**	**Priority**	**Potential Pollution Sources**	**Causes of Impairment**	**Years Impaired**
				R1	**R2**	**AL**					
Culebra Island			RW-3						Onsite Wastewater Systems Marinas and Recreational Boating Debris and Bottom Deposits Hazardous Waste	pH	2018

Notes:

H - If the Monitoring Station column is left blank, the Assessment Unit was not monitored for 2022 cycle.
M - External Data
R1 - Primary Contact Recreation
R2 - Secondary Contact Recreation
AL – Aquatic Life
Priority:

L: Low Priority: basins that were not included in the Puerto Rico Unified Watershed Assessment and Restoration Activities (PRUWARA) and have less than 50% of its waters as impaired for some designated use.

APPENDIX II - 2024 Integrated Reporting (IR) Memo Comments

2024 INTEGRATED REPORTING (IR) MEMO - COMMENTS ON INFORMATION CONCERNING 2024 CLEAN WATER ACT SECTIONS 303(d), 305(b), AND 314 INTEGRATED REPORTING AND LISTING DECISIONS

The Puerto Rico Department of Natural and Environmental Resources (PRDNER) works continuously and consistently, both on the topics included in this Memorandum, and in compliance with the Clean Water Act (CWA), Sections 303(d), 305(b) and other laws and regulations.

Below is a brief explanation on how the different topics have been addressed on the Island.

1. 2022-2032 Section 303(d) Vision

Consistent with the new EPA's vision, PRDNER identifies those assessment units (AU) for priority restoration and protection activities since the 2018 305(b)/303(d) Integrated Report to present. Long-term Prioritization from 2016 to 2022 provides a framework to focus the location and timing for the development of, alternative restoration, protection plans and total maximum daily load (TMDL). Many alternatives approaches were implemented to achieve the overall water quality goals:

- PRDNER obtained other data and information, of water quality monitoring sampling from different government agencies and non-government entities, as part of the effort to increase the information regarding the percentage of monitored waters in PR.
- PRDNER have taken all appropriate enforcement actions against owners of sites where activities are being performed in violation of the Regulation for the Control of Erosion and Prevention of Sedimentation, the *Reglamento para el Control de los Desperdicios Fecales de Animales de Empresas Pecuarias* and the Underground Injection Control Regulation among others.
- To continue with the compliance and implementation of the applicable regulations, permits evaluation and inspections; compliances inspections, notification of violations and enforcement actions were carried out.
- As part of the water quality information requested from different government agencies, the DRNER is working in the development of a series of workshops to train personnel on land use activities that could impact water bodies.

Continuing the activities and control measures will demonstrate progress over time in achieving protection and restoration of PR watersheds.

2. Clarification Regarding Priority Rankings and total maximum daily load (TMDL) Submission Schedules

To comply with the requirements established in CWA Section 305(b), the Department performs the required assessment in terms of the current water quality in the different water resources throughout Puerto Rico (PR). For water bodies that do not meet the applicable standard for a designated use, the Act requires that the state develop control measures for pollutants. These water bodies will be included in 303(d) List. Each impairment reflected on the 303(d) List requires a calculation of the maximum amount of the impairing pollutant that a water body can receive and still meet water quality standards. This calculation is called the TMDL. TMDL's include reduction of pollution sources impacting the water body which, when achieved, will result in the attainment of the water quality standard in the impaired water body. PRDNER is working with the implementation of the development of TMDL in the impaired basins.

3. Participatory Science

To comply with the *Participatory Science* topics, since May 2016 was approved the **Quality Assurance Project Plan (QAPP) For the Use of Water Quality Existing Data for The Development of the 303(d)/305(b) Integrated Report**. The development of the IR requires the assessment of existing and readily available water quality-related data and information. In addition, PR is required to evaluate and consider any other readily available information. The assessment determination must include all relevant data that is consistent with the QA/QC requirements established in the QAPP for the use of Water Quality Existing Data for the Development of the 303(d)/305(b) IR (revised in March 2021). For the development of the IR in addition to the water quality data obtained by the routine monitoring network, secondary or external data requested from governmental agencies, non-governmental entities and/or reliable sources of the web should be considered.

Existing data will be gathered and used to address the following objectives related to the assessment of the quality of the water bodies:

- **Objective 1**: Determine compliance with the water quality criteria and attainment with the designated uses.
- **Objective 2**: Develop the 303(d) list and the AUs to be delisted.
- **Objective 3**: Develop and publish the 303(d)/305(b) IR.

4. Environmental Justice and Climate Change

PRDNER addresses both *Climate Change and Environmental Justice* in the 2021 revision of the Puerto Rico Nonpoint Sources Management Program and in others Department workplans. Also, since climate change is impacting attainment of multiple water quality uses, including drinking water, recreation, traditional/cultural, navigation, and aquatic life, and attainment of criteria for pollutant, such as temperature, nutrients and sediment is also necessary maintain the existing regulations updated.

5. CWA Section 303(d) Assessment/Listing for Nutrient-related Impairments

In 1994, the USEPA established the National Nutrient Criteria Program. The goal of this program is to reduce eutrophication by developing guidelines for the establishment of numeric nutrient criteria at a state (tribal) level. The criteria, which represent conditions of water minimally impacted by human activities, will enable regulatory agencies to identify, prioritize and restore nutrient impaired waters. The development of the Puerto Rico Nutrient Standard Plan (PRNSP) describes the approach to addressing nutrient over-enrichment, along with the plan to refine its current nutrient criteria in response to the USEPA requirements that states/territories adopt nutrient criteria for their waterbodies.

Since 2016 Puerto Rico Water Quality Standard Regulation (PRWQSR), has incorporated the new standards for Total Phosphorus (TP) and Total Nitrogen (TN) applicable to the rivers and streams of PR.

The amendment to the Regulation propitiates the moment to develop specific TMDLs for TP, in the assessment that even with the previous standard were exceeding the standard of the parameter of TP. Also, the Regulation amended, leads properly identify the assessment units that are (in the top) in the first place in the priority list to develop TMDLs for TP.

The outcome will be gathering data to identify those AU that accomplished the parameters and therefore support the delist candidate assessment unit from the list 303 (d).

6. CWA Section 303(d) Assessment/Listing for Trash-Related Impairments

PRWQSR provides the narrative criteria to address the concerns of Trash-Related Impairments:

- Regla 1303.1A **Solids and other matter:** *"The water of PR should 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."*
- Regla 1303.1E **Suspended, Colloidal or Settleable Solids:** *"Solids from wastewater sources shall not cause deposition in or be deleterious to the existing or designated uses of the water body."*
- *Regla 1304.3* **Requirement for Granting Relief:** No relief from complying with the applicable provisions of Rule 1303 of this Regulation shall be granted, unless the following requirements are met:

  A. The intermittent stream shall not contain substances or materials, including floating debris, oil, scum, and other matter attributable to point sources, in amounts or concentrations that:

1. Form objectionable deposits;
2. Create nuisances;
3. Produce objectionable color, taste, or odor;
4. Produce undesirable aquatic life or result in a dominance of nuisance species;
5. Cause injuries to be hazardous to, or produce adverse physiological responses in humans, animals or plants;
6. Interfere with or impair existing uses downstream of the water body.

APPENDIX III - Public Notice

20< CLASIFICADOS

LUNES, 6 DE MAYO DE 2024 — El Vocero

GOBIERNO DE PUERTO RICO
Departamento de Recursos Naturales y Ambientales

AVISO PÚBLICO

Lista 303(d) de Cuerpos de agua que exceden los Estándares de Calidad de Agua de Puerto Rico

La Sección 303(d) de la Ley Federal de Agua Limpia (CWA, por sus siglas en inglés) de 1972, según enmendada, requiere que las jurisdicciones desarrollen y sometan cada dos años a la Agencia Federal de Protección Ambiental (EPA, por sus siglas en inglés) una lista de los cuerpos de agua que no cumplieron con los estándares de calidad de agua aplicables para los usos designados. Los usos designados para las aguas de Puerto Rico son: contacto primario (natación), contacto secundario (pesca y paseo en botes), propagación y preservación de especies deseables incluyendo especies amenazadas y en peligro (vida acuática) y abasto crudo de agua potable. Para los cuerpos de agua que no cumplen con la norma aplicable a algún uso designado, la Ley requiere que se implanten medidas de control para los contaminantes. Las medidas de control deben ser aquellas que atiendan el problema causado por el incumplimiento al estándar aplicable al uso designado. Cada incumplimiento reflejado en la Lista 303(d) requiere el cálculo de la cantidad máxima del contaminante en incumplimiento que un cuerpo de agua puede recibir y aún así cumplir con los estándares de calidad de agua. Este cálculo se conoce como TMDL (por sus siglas en inglés). Los TMDL's incluyen reducciones para las fuentes de contaminación que están impactando al cuerpo de agua, las cuales cuando son alcanzadas, resultarán en el cumplimiento de los estándares de calidad de agua del cuerpo de agua impactado.

El Departamento de Recursos Naturales y Ambientales de Puerto Rico (DRNA) ha desarrollado el borrador de la Lista 303(d) para el ciclo 2024 e invita a las agencias gubernamentales, entidades no-gubernamentales y público en general a someter sus comentarios y recomendaciones.

El borrador de la Lista de Cuerpos de Agua Impactados para el ciclo 2024 y la Metodología de Evaluación estarán a la disposición del público para ser examinados, a petición del interesado mediante el envío de un correo electrónico a la siguiente dirección: waterquality@drna.pr.gov. Las partes interesadas o afectadas pueden someter sus comentarios por escrito a la Sra. Wanda E. García Hernández, Ejecutivo Programático Ambiental del Área de Calidad de Agua, a la dirección electrónica antes mencionada no más de **treinta (30) dias** a partir de la publicación de este aviso. La fecha límite para someter comentarios puede extenderse si se estima necesario o apropiado para el interés público.

Todas las partes interesadas o afectadas podrán solicitar una vista pública. Dicha solicitud debe someterse por escrito al secretario del DRNA a través de la Oficina de Secretaría a la siguiente dirección electrónica: ayudaciudadano@drna.pr.gov, no más tarde de **treinta (30) dias** a partir de la fecha de publicación de este aviso y deberá señalarse la razón o las razones que en la opinión del solicitante ameritan la celebración de la vista pública.

En San Juan, Puerto Rico, hoy 1 de abril de 2024.

Autorizado por la Oficina del Contralor Electoral: OCE-SA-2024-05879.

Anaïs Rodríguez Vega
Secretaria

DRNA

Este anuncio se publicó conforme a lo requerido por la Ley sobre Política Pública Ambiental, Ley Núm. 416 del 22 de septiembre de 2004, según enmendada. El costo del Aviso Público es sufragado por el DRNA.

Carr. 8838 Km 6.3 Sector El Cinco, Río Piedras, PR 00926
San José Industrial Park, 1375 Ave Ponce de León, San Juan, PR 00926
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GOVERNMENT OF PUERTO RICO
Department of Natural and Environmental Resources

PUBLIC NOTICE

303(D) LIST WATER BODIES THAT EXCEED PUERTO RICO'S WATER QUALITY STANDARDS

Section 303(d) of the Clean Water Act (CWA) of 1972, as amended requires that the jurisdictions develop and submit a list of water bodies that do not meet the applicable water quality standards for designated uses every two years to EPA. The designated uses for waters of Puerto Rico are: primary contact (swimming), secondary contact (fishing and boating), propagation and preservation of desirable species, including threatened and endangered species (aquatic life) and raw source for drinking water. For water bodies that do not meet the applicable standard for a designated use, the Act requires that the state develop control measures for pollutants. Control measures should address the problem that caused the non-compliance of the standard for the designated use. Each impairment reflected on the 303(d) List requires a calculation of the maximum amount of the impairing pollutant that a water body can receive and still meet water quality standards. This calculation is called the TMDL. TMDL's include reduction for pollution sources impacting the water body which, when achieved, will result in the attainment of the water quality standard in the impaired water body.

The Puerto Rico Department of Natural and Environmental Resources (PRDNER) has developed the 303(d) draft List, for the 2024 cycle and invites governmental agencies, non-governmental agencies, and the general public to submit their comments and recommendations.

The List of Impacted Water Bodies draft for the 2024 cycle and the Assessment Methodology will be available to the public for examination, at the request of the interested party by sending an email to the following address: waterquality@drna.pr.gov. Interested or affected parties may submit their comments in writing to Mrs. Wanda E. Garcia Hernández, Environmental Programmatic Executive of the Water Quality Area, at the electronic address no later than **thirty (30) days** from the publication of this notice. The deadline for submitting comments may be extended if deemed necessary or appropriate in the public interest.

All interested or affected parties may request a public hearing. Said request must be submitted in writing to the Secretary of the DRNA through the Secretary's Office at the following email address: ayudaalciudadano@drna.pr.gov, no later than **thirty (30) days** from the date of publication of this notice and the reason or reasons that in the opinion of the applicant merit the holding of the public hearing must be indicated.

In San Juan, Puerto Rico, April 1, 2024.

Authorized by the Office of the Election Comptroller: OCE-SA-2024-05879.

Anaïs Rodríguez Vega
Secretary

DNER

This announcement was published as required by the Law on Environmental Public Policy, Law No. 416 of September 22, 2004, as amended. The cost of the Public Notice is defrayed by the DRNA.

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GOVERNMENT OF PUERTO RICO
Department of Natural and Environmental Resources

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GOBIERNO DE PUERTO RICO
Departamento de Recursos Naturales y Ambientales

AVISO PÚBLICO

LISTA 303(D) DE CUERPOS DE AGUA QUE EXCEDEN LOS ESTÁNDARES DE CALIDAD DE AGUA DE PUERTO RICO

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El Departamento de Recursos Naturales y Ambientales de Puerto Rico (DRNA) ha desarrollado el borrador de la Lista 303(d) para el ciclo 2024 e invita a las agencias gubernamentales, entidades no-gubernamentales y público en general a someter sus comentarios y recomendaciones.

El borrador de la Lista de Cuerpos de Agua Impactados para el ciclo 2024 y la Metodología de Evaluación estarán a la disposición del público para ser examinados, a petición del interesado mediante el envío de un correo electrónico a la siguiente dirección: waterquality@drna.pr.gov. Las partes interesadas o afectadas pueden someter sus comentarios por escrito a la Sra. Wanda E. García Hernández, Ejecutivo Programático Ambiental del Área de Calidad de Agua, a la dirección electrónica antes mencionada no más de **treinta (30) días** a partir de la publicación de este aviso. La fecha límite para someter comentarios puede extenderse si se estima necesario o apropiado para el interés público.

Todas las partes interesadas o afectadas podrán solicitar una vista pública. Dicha solicitud debe someterse por escrito al secretario del DRNA a través de la Oficina de Secretaría a la siguiente dirección electrónica: ayudaciudadano@drna.pr.gov, no más tarde de **treinta (30) días** a partir de la fecha de publicación de este aviso y deberá señalarse la razón o las razones que en la opinión del solicitante ameritan la celebración de la vista pública.

En San Juan, Puerto Rico, hoy 1 de abril de 2024.

Autorizado por la Oficina del Contralor Electoral: OCE-SA-2024-05879.

Anaïs Rodríguez Vega
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APPENDIX IV - Department of Natural and Environmental Resources Determination

GOBIERNO DE PUERTO RICO
DEPARTAMENTO DE RECURSOS NATURALES Y AMBIENTALES

IN RE:	RES. NÚM.: 2024-06-002
PROMULGACIÓN DE LA LISTA DE CUERPOS DE AGUA IMPACTADOS PARA PUERTO RICO PARA EL CICLO 2024	SOBRE LISTA 303(d) DE PUERTO RICO
ÁREA DE CALIDAD DE AGUA	REF: DIVISIÓN PLANES Y PROYECTOS ESPECIALES

RESOLUCIÓN Y NOTIFICACIÓN

Se presentó ante la consideración de la Secretaria del Departamento de Recursos Naturales y Ambientales el 13 de junio de 2024, el memorando del Ing. Ángel R. Meléndez Aguilar, Gerente Interino del Área de Calidad de Agua, relacionado a la Lista de Cuerpos de Agua Impactados de Puerto Rico propuesta para el ciclo 2024, Lista 303(d), según la Ley Federal de Agua Limpia, 33 U.S.C., secc. 1313(d). La misma fue sometida a comentario público el 6 de mayo de 2024. Las partes interesadas o afectadas podían someter sus comentarios por escrito, no más tarde de treinta (30) a partir de la publicación de los avisos. Pasado el período de comentarios establecido no se recibieron comentarios. Anteriormente, la Agencia de Protección Ambiental (*EPA*, por sus siglas en inglés) había presentado sus comentarios a la Lista propuesta, los cuales fueron acogidos e incorporados.

I. RESOLUCIÓN

Luego de evaluar la totalidad del expediente administrativo sobre la Lista de Cuerpos de Agua Impactados de Puerto Rico para el ciclo 2024, Lista 303(d), en virtud de los poderes y facultades que concede la Ley 416-2004, según enmendada, conocida como la Ley de Política Pública Ambiental, y los reglamentos promulgados a su amparo se RESUELVE:

A: Se ACOGEN las recomendaciones del Área de Calidad de Agua, cuya copia se hace formar parte de la presente resolución.

B: Se APRUEBA la Lista de Cuerpos de Agua Impactados de Puerto Rico para el ciclo 2024, Lista 303(d).

C: Se ordena a la División de Planes y Proyectos Especiales del Área de Calidad de Agua proceder a tramitar la Lista 303(d), ante la *EPA*.

II. APERCIBIMIENTO

La parte adversamente afectada por una resolución u orden parcial o final podrá, dentro del término veinte (20) días desde la fecha de archivo en autos de la notificación de la resolución u orden, presentar una moción de reconsideración de la resolución u orden.

La agencia dentro de los quince (15) días de haberse presentado dicha moción deberá considerarla. Si la rechazare de plano o no actuare dentro de los quince (15) días, el término para solicitar revisión comenzará a correr nuevamente desde que se notifique dicha denegatoria o desde que expiren dichos quince (15) días, según sea el caso. Si se tomare alguna determinación en su consideración, el término de solicitar revisión empezará a contarse desde la fecha en que se archive en autos una copia de la notificación de la resolución de la agencia resolviendo definitivamente la moción de reconsideración. Tal resolución deberá ser emitida y archivada en autos dentro de los noventa (90) días siguientes a la radicación de la moción de reconsideración.

Si la agencia acoge la moción de reconsideración pero deja de tomar alguna acción con relación a la moción dentro de los noventa (90) días de ésta haber sido radicada, perderá jurisdicción sobre la misma y el término para solicitar la revisión judicial empezará a partir de la expiración de dicho término de noventa (90) días, salvo que la agencia, y por justa causa y dentro de esos noventa (90) días, prorrogue el término para resolver por un periodo que no excederá de treinta (30) días adicionales.

Si la fecha de archivo en autos de copia de la notificación de la orden o resolución es distinta a la del depósito en el correo de dicha notificación, el término se calculará a partir de la fecha del depósito del correo.

Una parte adversamente afectada por una orden o resolución final de una agencia y que haya agotado todos los remedios provistos por la agencia o por el organismo administrativo apelativo correspondiente podrá presentar una solicitud de revisión ante el Tribunal de Apelaciones, dentro del término de treinta (30) días contados a partir de la fecha del archivo en autos de la copia de la notificación o resolución final de la agencia a partir de la fecha aplicable de las dispuestas en la Sección 3.15 de esta Ley Núm. 38, de junio de 2017, según enmendada, y anteriormente expresada, cuando el término para solicitar la revisión judicial haya sido interrumpido mediante la presentación oportuna de una moción de reconsideración.

NOTIFIQUESE Y ARCHIVESE

En San Juan, Puerto Rico, a 17 de junio de 2024.

Anaís Rodríguez Vega
Secretaria

Appendix 6: USFWS "No Effect" Memo and supporting documentations

Date: April 30, 2025

Applicant ID: PR-ESP-00132
Street Address: Carretera 14 Km 46.7 Bo. Asomante, Aibonito PR, 00705
Municipality: Aibonito

RE: No Effect Determination for PR-ESP-00132

Executive Summary

Section 7 of the Endangered Species Act (ESA) mandates that federal agencies ensure the actions that they authorize, fund, or carry out shall not jeopardize the continued existence of federally listed plants and animals or result in the adverse modification or destruction of designated critical habitat. Where their actions may affect resources protected by the ESA, agencies must consult with the Fish and Wildlife Service and/or the National Marine Fisheries Service ("FWS" and "NMFS" or "the Services").

This memo serves to document the proposed project, PR-ESP-00132, located at Carretera 14 Km 46.7 Bo. Asomante, Aibonito PR, 00705 (Parcel ID# 297-075-178-01-001) was reviewed in accordance with Section 7 of the Endangered Species Act of 1973 (16 USC 1536) as well as the Fish and Wildlife Coordination Act (47 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*) by a qualified Biologist, resulting in a 'No Effect' determination.

The CDBG-DR Energy Electrical Power Reliability and Resilience (ER2) Program's objective is to enhance electric system reliability, affordability, and resiliency through the development and interconnection of projects that qualify as electric system enhancements or improvements.

Project Description

The subject property is a Commercial building located in Aibonito, PR. The project scope includes the installation of a photovoltaic (solar) panel system and appurtenant storage system (batteries) on the existing commercial building's roof and will be built at Latitude: 18.129686, Longitude: -66.285385 (see Site Map at Appendix A, Figure 1). All improvements will be limited to the roof, floors, and walls of existing commercial buildings. The Field Observation Form and Environmental Screening Checklist depicting and clarifying the extent and location of project activities are included in Appendix B.

As indicated by the Official Species List obtained from the Information for Planning and Consultation (IPaC) system (Appendix C) and USFWS Critical Habitat data (Appendix A, Figure 2), the proposed project lies within the ranges of the following federally listed species and critical habitats:

Species	Status
Puerto Rican Boa (*Chilabothrus inornatus*)	Endangered

Critical Habitat
None.

Existing Conditions:

The area where the activities will be taking place consists of approximately 0.30-acres of land located at Carretera 14 Km 46.7 Bo. Asomante, Aibonito PR, 00705. According to the U.S. Geological Survey National Land Cover Database (NLCD) (Appendix A, Figure 4) the majority of the project area consists of high intensity developed land. A structure matching project orientation and footprint is present on 1968 Earth Explorer and absent on 1958 Earth Explorer. The year build date is circa 1962. A topographic map is included (see Appendix A, Figure 3). The project is located in Zone X on the FEMA Flood map and ABFE map, panel number 72000C1170H dated 4/19/2005 (see Flood Map Appendix A, Figure 5 and ABFE map Appendix A, Figure 6). A Preliminary FIRM has not been developed for this area. There is a mapped NWI riverine, according to the Wetland Maps a riverine is 777 feet northeast where the commercial building is located. The project activities will not occur within a natural or manmade wetlands and no direct or indirect impacts are anticipated as a result of the project activities (see wetlands map Appendix A, Figure 7).

Effect Determination:

Based on a review of site photos and other information gathered during a site visit on March 19, 2025, none of the species listed above were observed in the vicinity of the proposed project activities and no critical habitat was identified within the proposed project area. Having carefully analyzed the project site and the information available, including the IPaC species list and available Dkey(s), critical habitat data, nature of the project, previous site disturbance, and scope of project activities, the following effect determinations have been made:

Species	Effect Determination	Conservation Measures to be Implemented (if needed)
Puerto Rican Boa (*Chilabothrus inornatus*)	No Effect	None required

SPECIES ANALYSIS

Puerto Rican Boa *(Chilabothrus inornatus)*

Considered to be a habitat generalist, the Puerto Rican Boa tolerates a wide variety terrestrial and arboreal habitat, including rocky areas, haystack hill, trees and branches, rotting stumps, caves, plantations, various types of forested areas such as karst and mangrove forests, forested urban and rural areas, and along streams and road edges. The IPaC Determination Key (Dkey) for the Puerto Rican Boa, dated April 28, 2025, was used to evaluate the potential impacts to federally listed species from this project. Based on the Dkey responses, it was determined that the proposed project will have 'No Effect' on the Puerto Rican Boa (Appendix C).

If a Puerto Rican Boa is found in the project activity site, work shall cease until the Boa moves off on its own. If the Boa does not move off, the Construction Manager shall contact the Puerto Rico Department of Natural and Environmental Resources and ask them to relocate the Boa.

Patricia Carmenatty / Senior Biologist

April 30, 2025
Date

Appendix A: Figures

BYA BEHAR-YBARRA AND ASSOCIATES LLC
ENGINEERING · ENVIRONMENTAL · ARCHITECTURE · PLANNING
554 Calle Perseo, Suite J-3, San Juan, P.R. 00920 Tel.(787)783-0290

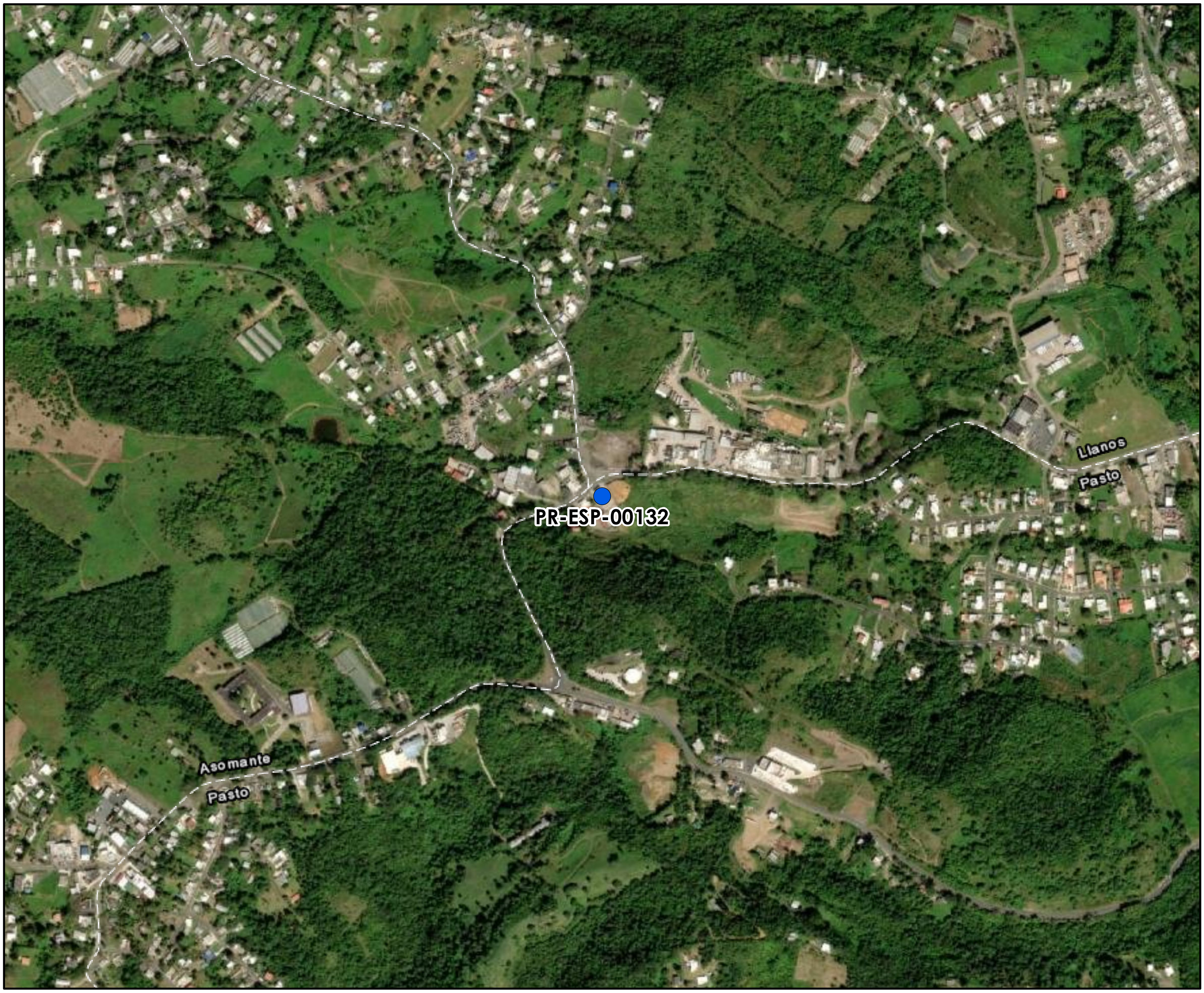
Application ID: PR-ESP-00132

AJC Service Stations, LLC (Asomante Service Stations)
Carretera 14 Km 46.7
Bo. Asomante,
Aibonito PR 00705
Catastro: 297-075-178-01-001
Lat: 18.129686, Lon: -66.285385

Figure 1

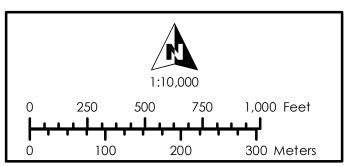
Location: Aerial Map

Electrical Power Reliability and Resilience Program (ER2)



Legend:

PR-ESP-00132



Service Layer Credits:
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Source:
Centro de Recaudación de Ingresos Municipales (CRIM)
https://catastro.crimpr.net/cdprpc/

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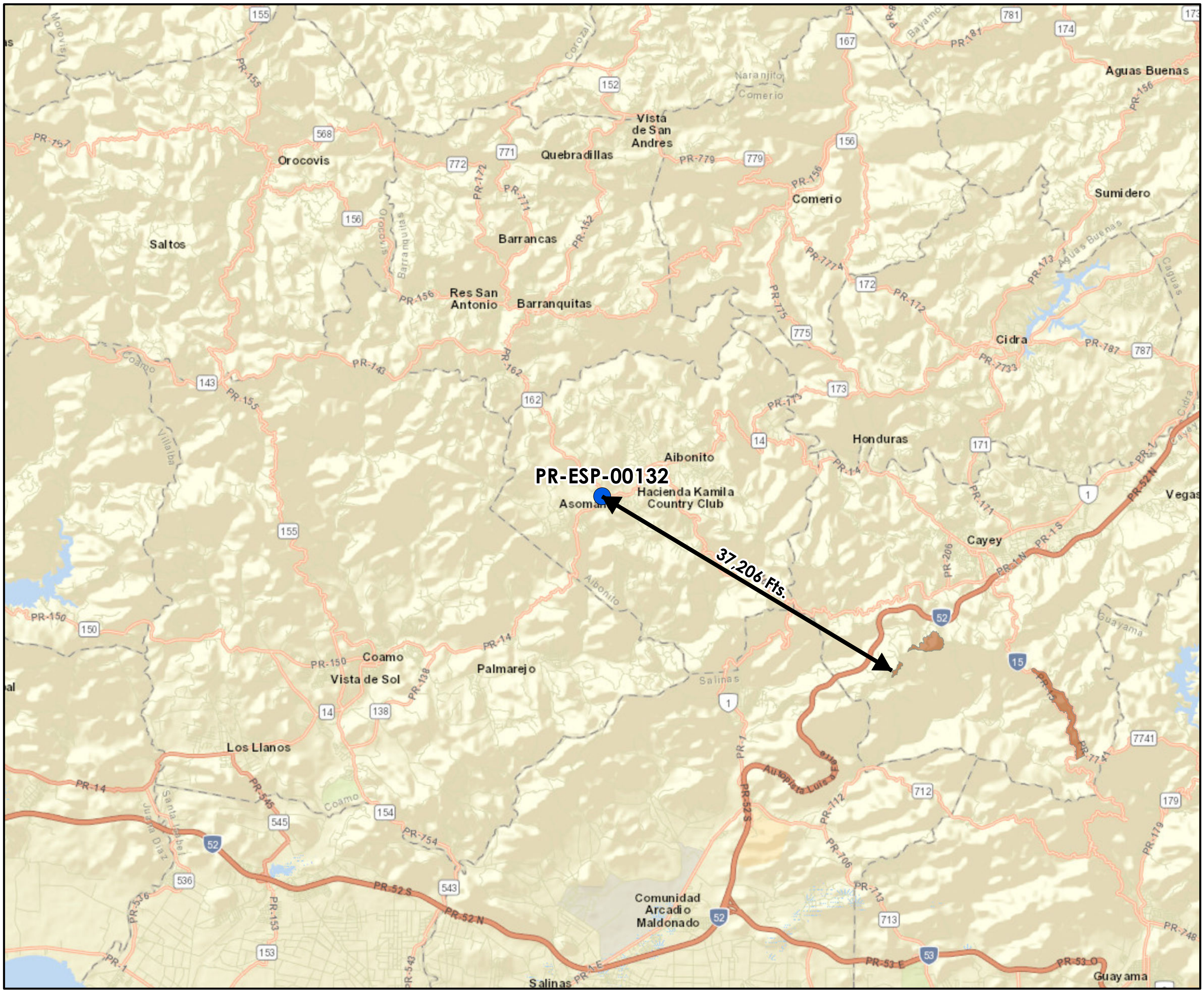
Lat: 18.129686, Lon: -66.285385

Figure 2

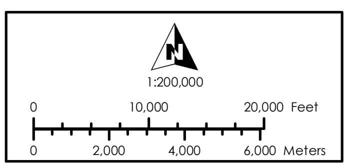
Threatened and Endangered Species Map

Electrical Power Reliability and Resilience Program (ER2)



Legend:

- PR-ESP-00132
- Critical Habitat



Service Layer Credits:
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Source:
NOAA Office of Response and Restoration
https://response.restoration.noaa.gov/

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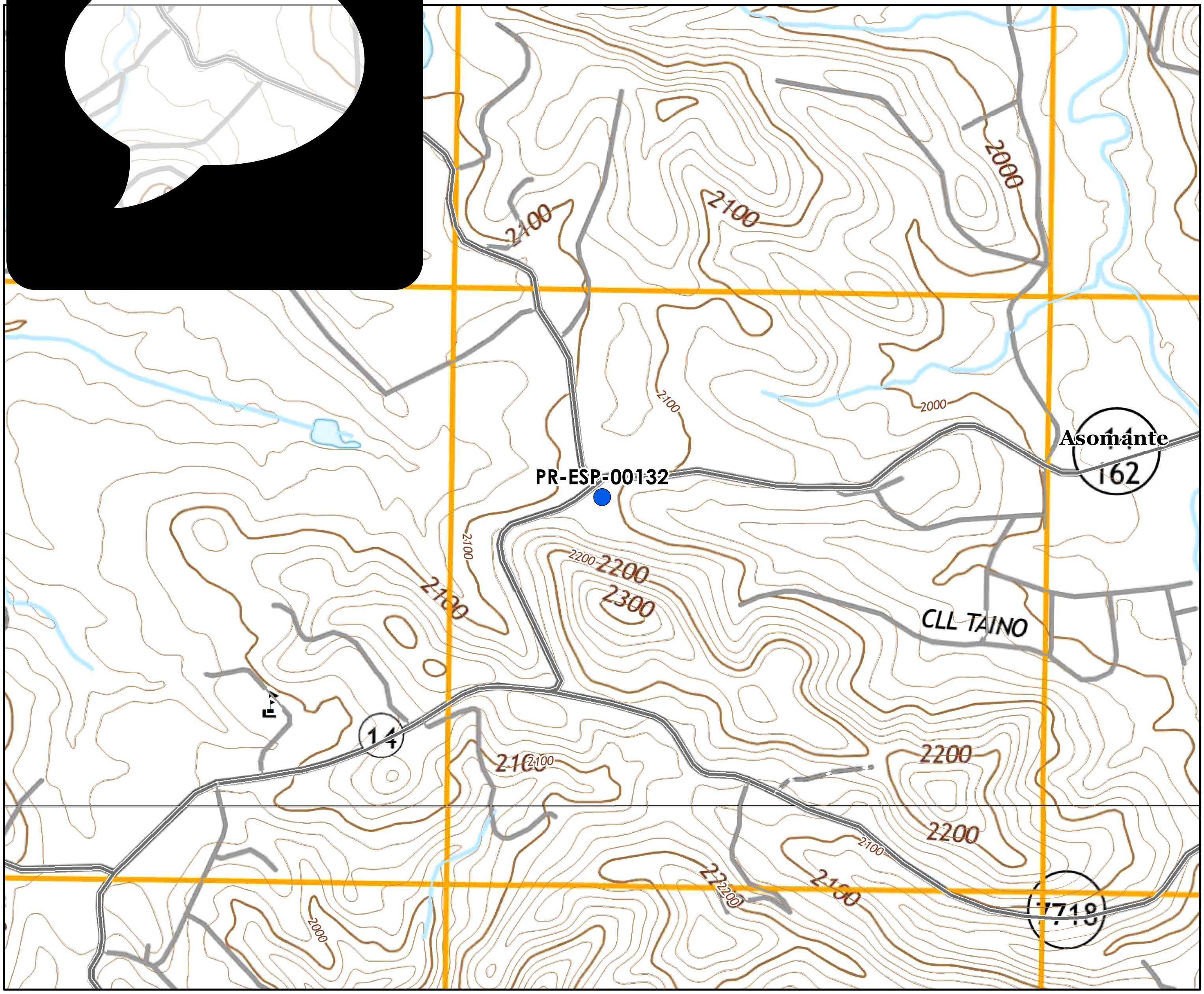
Bo. Asomante,
Aibonito PR 00705
Catastro: 297-075-178-01-001
Lat: 18.129686, Lon: -66.285385

[redacted]phic Map

[redacted] Resilience Program (ER2)



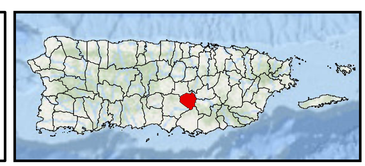
Legend:

PR-ESP-00132

Elev_Contour

Quadrangle: Barranquitas y Coamo

N
1:10,000
0 250 500 750 1,000 Feet
0 100 200 300 Meters



Service Layer Credits:
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Source:
Centro de Recaudación de Ingresos Municipales (CRIM)
https://catastro.crimpr.net/cdprpc/

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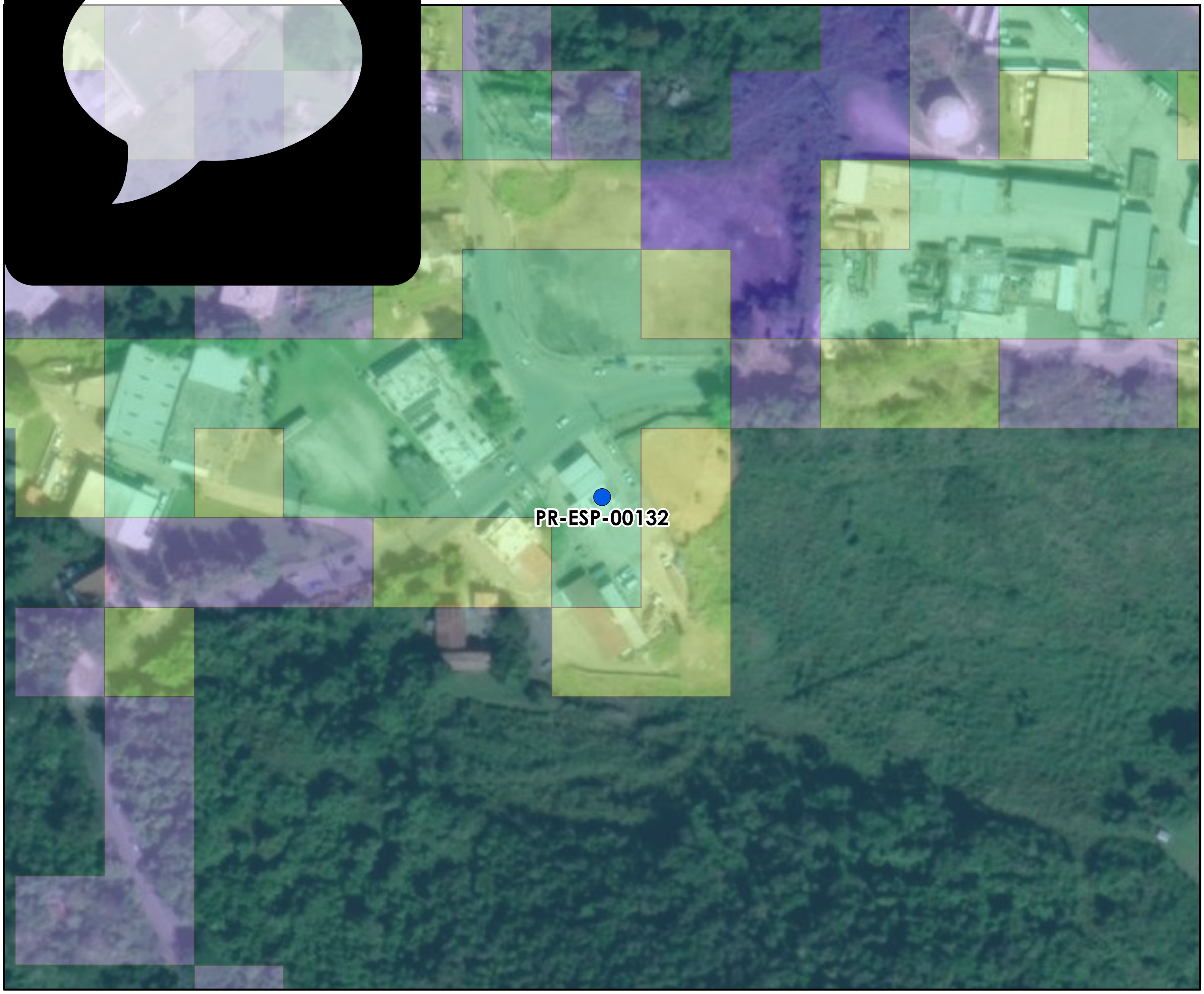
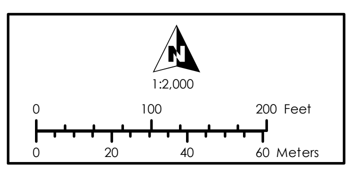
Aibonito PR 00705
Catastro: 297-075-178-01-001
Lat: 18.129686, Lon: -66.285385

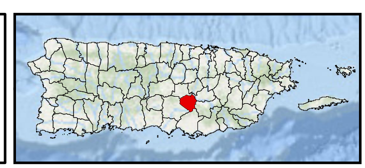
[redacted] Resilience Program (ER2)



Legend:

- PR-ESP-00132
- Developed Open Space
- High Intensity Developed
- Low Intensity Developed
- Medium Intensity Developed
- Mixed Forest





Service Layer Credits:
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Source:
Multi-Resolution Land Characteristics (MRLC) Consortium
https://www.mrlc.gov/viewer/

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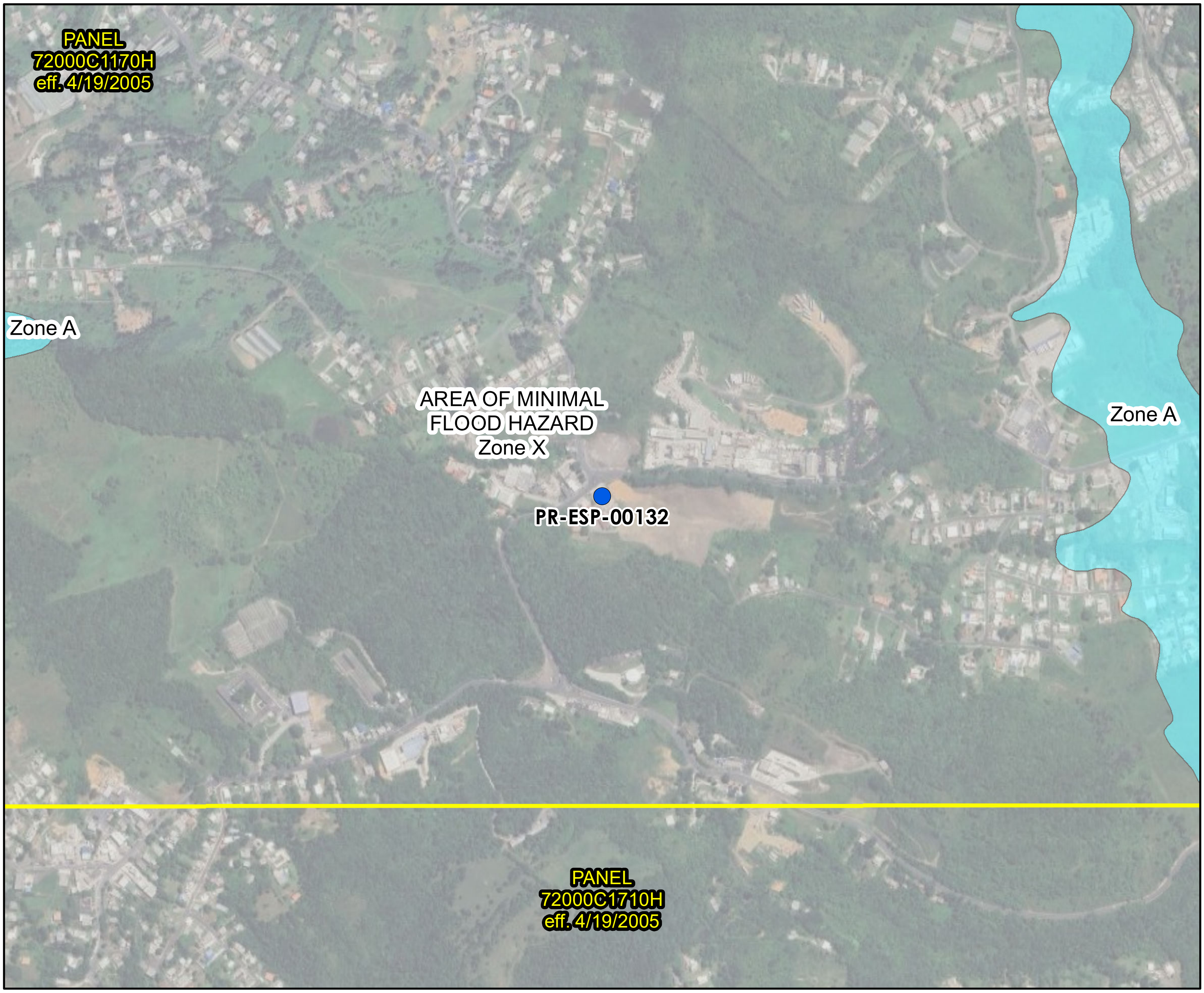
Figure 5

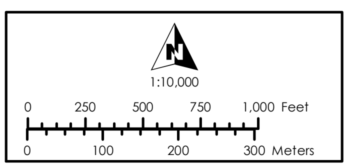
Flood Insurance Rate Map

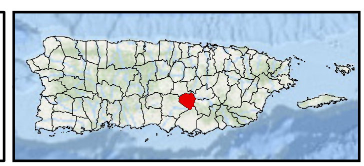
Electrical Power Reliability and Resilience Program (ER2)



Legend:

- PR-ESP-00132
- FIRM Panel
- Floodway
- 0.2% Annual Chance Flood Hazard
- Zone D Area of Undetermined Flood Hazard
- Zone A
- Zone AE
- Zone AH
- Zone AO
- Zone VE
- Zone X





Service Layer Credits:
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Source:
Federal Emergency Management Agency (FEMA)
https://msc.fema.gov/portal/home

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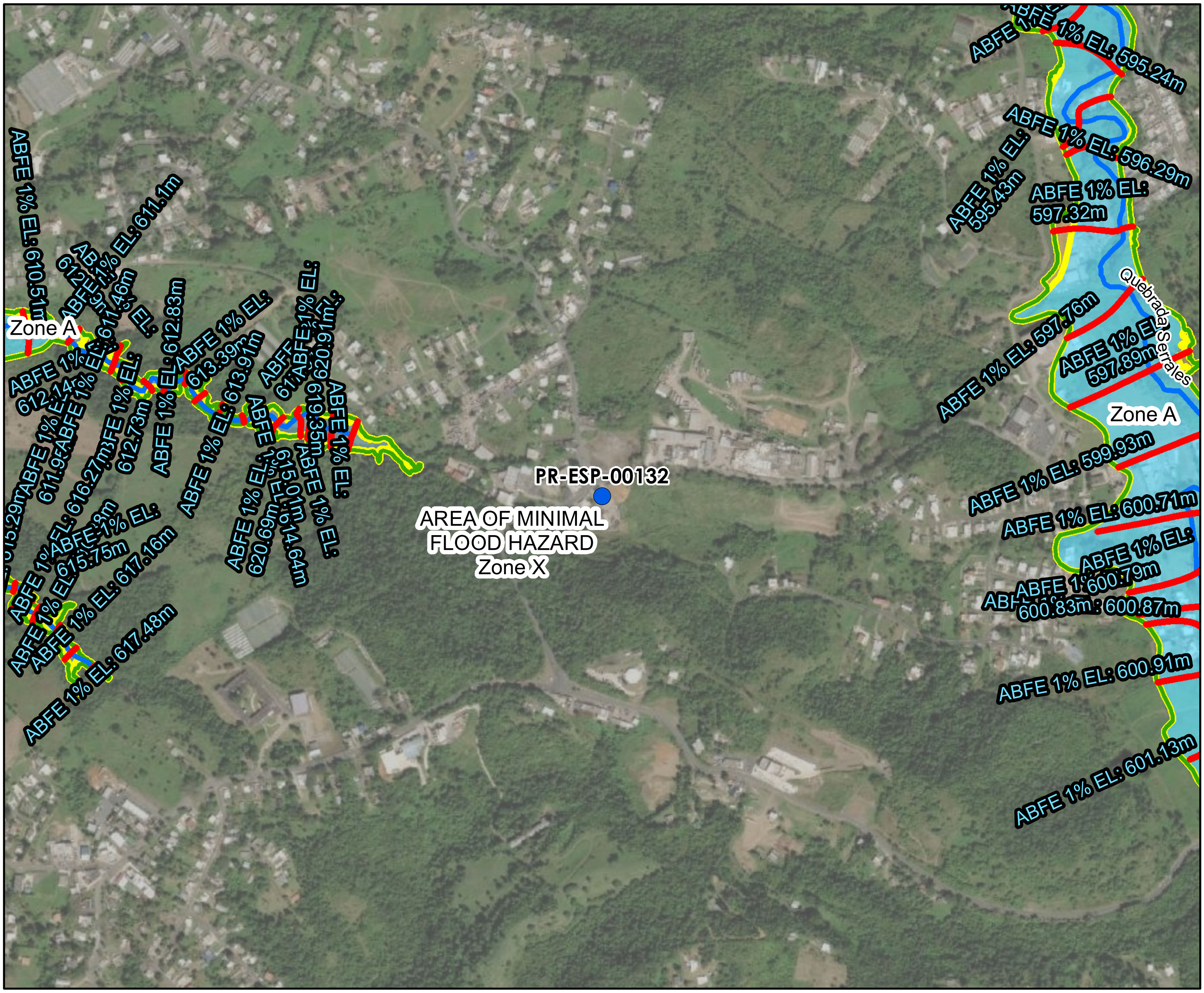
Figure 6

Advisory Base Flood Elevation Map

Electrical Power Reliability and Resilience Program (ER2)



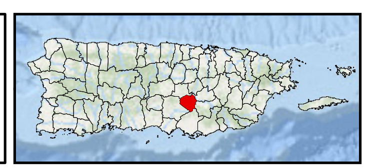
Legend:

- PR-ESP-00132
- Area Potential Effect (Building Footprint)
- CRIM-Parcel
- Advisory Base Flood Elevations (ABFE)
- 0.2 % Annual Chance Flood
- 1 % Annual Chance Flood

Flood Zone

- Zone A
- Zone AE
- Zone AO
- Zone VE
- Zone X - Area of Minimal Flood Hazard
- 0.2 % Annual Chance Flood
- Floodway

N
1:10,000
0 250 500 750 1,000 Feet
0 100 200 300 Meters



Service Layer Credits:
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Source:
Federal Emergency Management Agency (FEMA),
https://gis-r2-fema.hub.arcgis.com/
Junta de Planificacion de Puerto Rico (JP), https://maps.jp.pr.gov/
Mapas de Niveles de Inundacion Base Recomendados

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554 Calle Perseo, Suite J-3, San Juan, P.R. 00920 Tel.(787)783-0290

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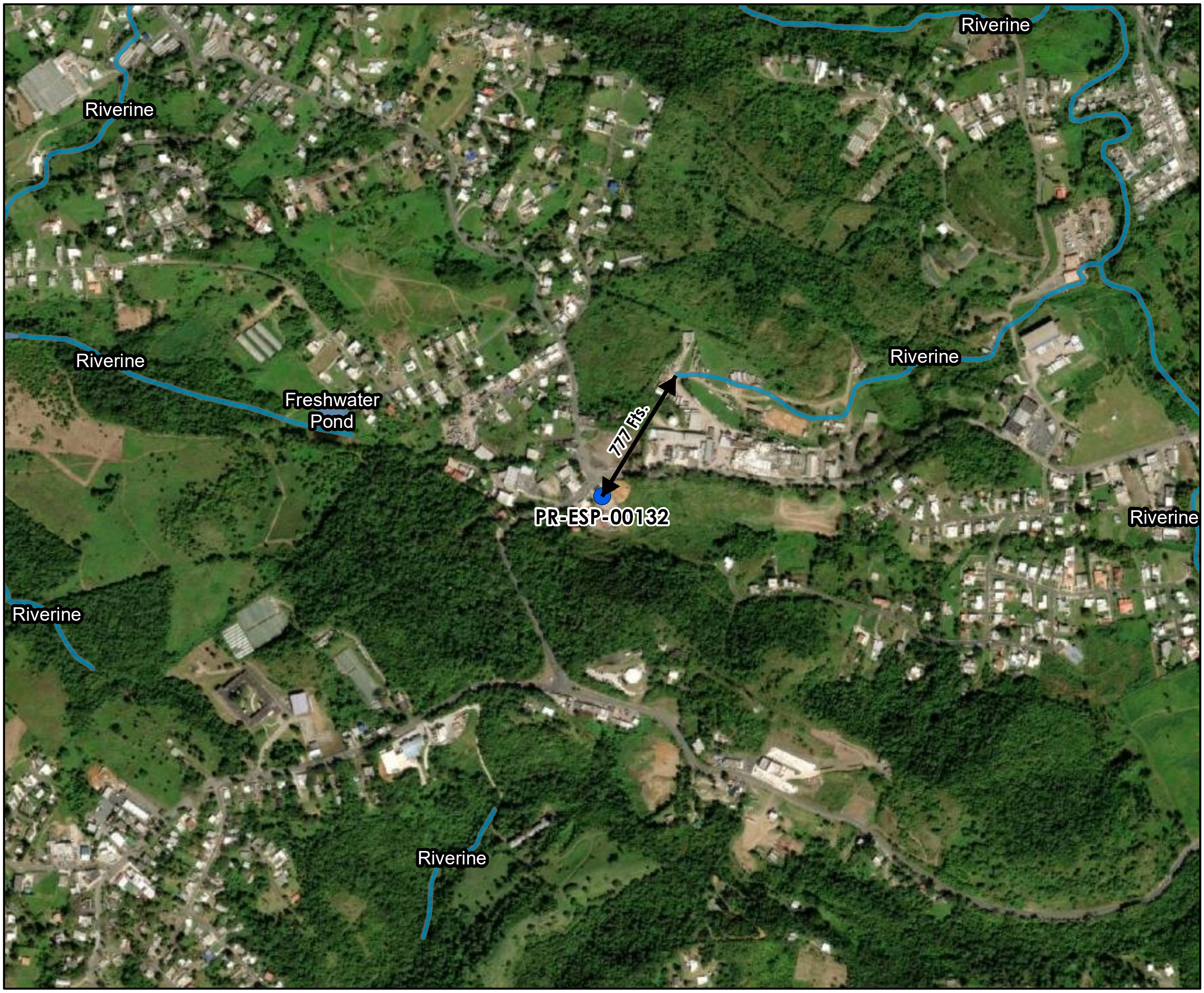
Aibonito PR 00705
Catastro: 297-075-178-01-001
Lat: 18.129686, Lon: -66.285385

Figure 7

Wetlands Map

Electrical Power Reliability and Resilience Program (ER2)

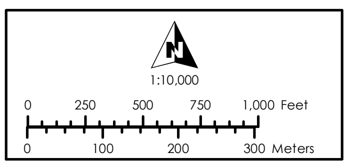


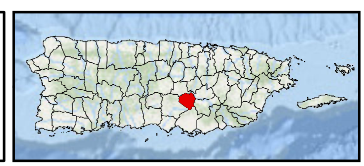
Legend:

PR-ESP-00132

National Wetlands Inventory

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine





Service Layer Credits:
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Source:
U.S. Fish and Wildlife Service - National Weatlands Inventory
https://www.fws.gov/program/national-wetlands-inventory

Environmental Screening Checklist

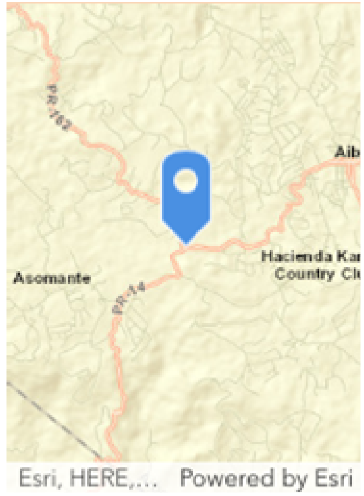
BYA BEHAR-YBARRA & ASSOCIATES LLC
CONSULTING ENGINEERS, ARCHITECTS AND PLANNERS

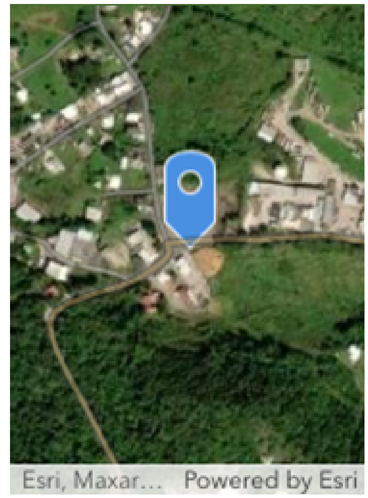
DEPARTMENT OF HOUSING

Environmental Field Assessment Form - PR-ESP-00132

APPLICANT/LOCATION INFORMATION

Applicant ID:	PR-ESP-00132
Applicant Name:	AJC Service Stations, LLC (Asomante Service Stations)
Parcel ID:	297-075-178-01-001
Coordinates:	18.129686, -66.285385
Street Address:	Carretera 14 Km 46.7 Bo. Asomante
Municipio:	Aibonito
Zip Code:	00705
Site Inspector:	Egon Gonzalez
Date of Visit:	March 19, 2025
Time of Visit:	12:39
Year Built:	circa 1985





Building Information

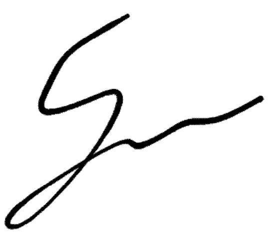
Question	Answer	Notes
1. Location verified:	Yes	18.129686, -66.285385
2. Is the building correct on GIS?	Yes	Building is correct on GIS
3. Building Type:	Commercial	
4. # of Stories:	1	
5. Building Foundation:	Concrete Slab	
6. Is the building in use?	Yes	Building is in use
7. Does the building have a detached garage / carport present?	No	
8. Is the electricity connected?	Yes	Electricity is connected
9. Is the water connected?	Yes	Water is connected
10. Are there signs of poor housekeeping on site? (mounds of rubble, garbage, storm debris, solid waste, petroleum products, paint, pesticides, cleaning fluids, vehicle batteries, abandoned vehicles, pits, pools, ponds of hazardous substances, electrical equipment etc.)	No	
11. Is a septic system present? If Yes report apparent condition.	No	
12. Are there any obvious signs of animals, birds nesting or burrows near the site?	No	

Parcel Conditions		
Question	**Answer**	**Notes**
1) Are there any 55-gallon drums visible on site? If yes, are they leaking?	No	
2) Are there any (or signs of any) underground storage tanks on the property?	Yes	10000gal Premium, 10000gal Regular, 6000gal Diesel Underground Storage tank located at back of structure
3) Are there signs of AST on the parcel or adjacent parcel? If yes, list approximate size and contents, if known.	Yes	200gal Diesel tank for generator located on roof of structure
4) Is there any stained soil or pavement on the parcel?		
5) Are there any potentially hazardous trees that could fall?		
6) Are there any groundwater monitoring wells on the site or adjacent parcel?	No	
7) Is there distressed vegetation on the parcel?		
8) Are any additional environmental or non-environmental site hazards observed?		
9) Is there any permanent standing water, such as a pond or stream, located on the site(do not include ponding from recent rain / weather events)?	No	
10) Does the subject property have water frontage?	No	
11) Is the applicant aware of any significant historical event or persons associated with the structure, or of it being located in a historic district/ area?	No	
12) Is a historic marker present?	No	
13) Based on the above finding, does additional information need to be obtained from the applicant to determine whether an environmental hazard is present?	No	

Building Environmental Conditions		
Question	**Answer**	**Notes**
1. Is there any visible evidence of asbestos, chipping, and flaking or peeling paint, or hazardous materials present in or on the structure?	No	
2. Is there any visible indication of mold?	No	
3. Are there any pungent, foul or noxious odors?	No	

Additional Needs Analysis		
Question	**Answer**	**Notes**
Based on the above findings, does additional information need to be obtained from the applicant to determine whether an environmental hazard is present?	No	

☑ I verify that I have physically visited this property and that the findings outlined above are accurate.



Inspector Signature

Egon Gonzalez

March 19, 2025

Front of Structure

Photo Direction: Southeast

Comments:

Facing Away from Front

Photo Direction: Northwest

Comments:

Side #1 of Structure	
Photo Direction: South Comments:	

Facing Away From Side #1	
Photo Direction: East Comments:	

<table>
<tr><th colspan="2">Back of Structure</th></tr>
<tr><td>Photo Direction: Northwest

Comments:</td><td></td></tr>
<tr><th colspan="2">Facing Away from Back</th></tr>
<tr><td>Photo Direction: Southeast

Comments:</td><td></td></tr>
</table>

Side #2 of Structure	
Photo Direction: Southeast Comments:	

Facing Away from Side #2	
Photo Direction: Southeast Comments:	

Streetscape #1	
Photo Direction: Southeast Comments:	

Streetscape #2	
Photo Direction: Northwest Comments:	

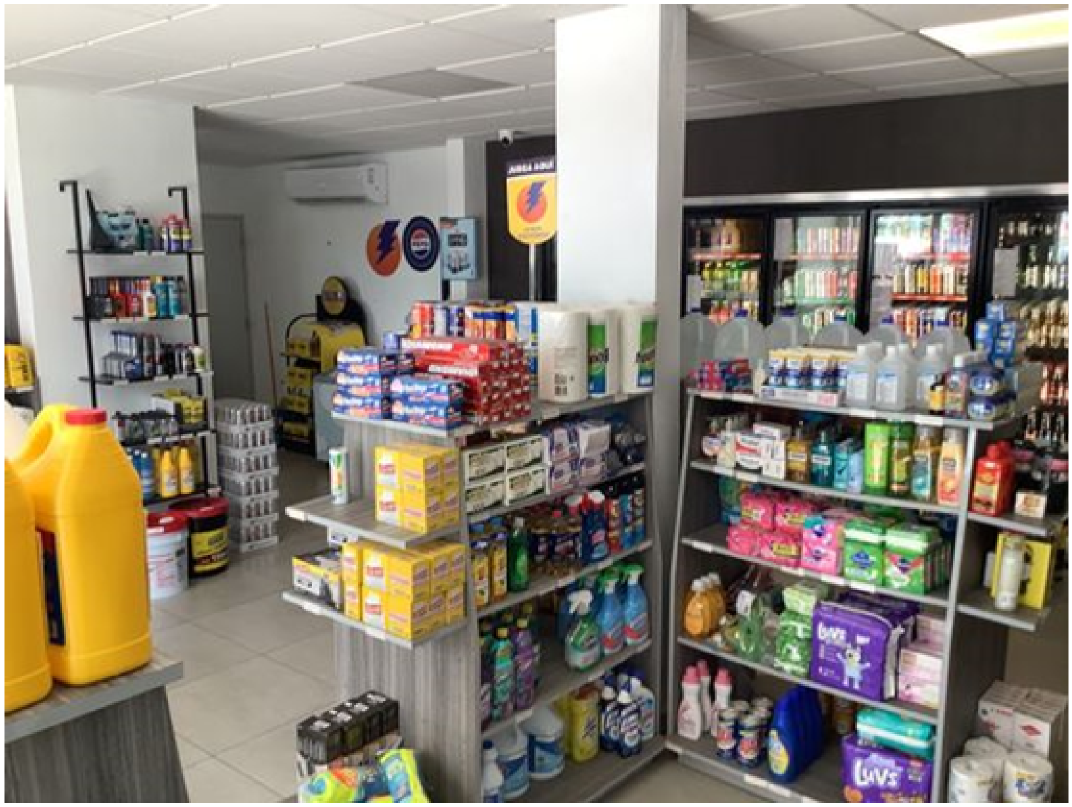
Address	
Photo Direction: Southeast Comments:	

Architectural Details 1	
Photo Direction: Photo Description: Electricity is connected	

Architectural Details 2	
Photo Direction: Photo Description: Water is connected	

Architectural Details 3	
Photo Direction: Photo Description: 200gal Diesel tank for generator located on roof of structure	

Architectural Details 4	
Photo Direction: Photo Description: General interior view	

Architectural Details 5	
Photo Direction: Photo Description: General interior view	

Architectural Details 6	
Photo Direction: Photo Description: 10000gal Regular Underground Storage tank located at back of structure	

Architectural Details 7	
Photo Direction: Photo Description: 6000gal Diesel Underground Storage tank located at back of structure	

Architectural Details 8	
Photo Direction: Photo Description: 10000gal Premium Underground Storage tank located at back of structure	

Architectural Details 9	
Photo Direction: Photo Description: Facing away from front	

Architectural Details 10	
Photo Direction: Photo Description:	

Consultation (IPaC) system

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Caribbean Ecological Services Field Office
Post Office Box 491
Boqueron, PR 00622-0491
Phone: (939) 320-3135 Fax: (787) 851-7440
Email Address: CARIBBEAN_ES@FWS.GOV

In Reply Refer To: 04/28/2025 20:22:15 UTC
Project Code: 2025-0089305
Project Name: PR-ESP-00132

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

THE FOLLOWING SPECIES LIST IS NOT A SECTION 7 CONSULTATION. PLEASE CONTACT OUR OFFICE TO COMPLETE THE CONSULTATION PROCESS

The purpose of the Endangered Species Act (Act) is to provide a means whereby threatened, and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect those species and/or their designated critical habitat.

Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action". The enclosed species list provides information to assist with the U.S. Fish and Wildlife Service (Service) consultation process under section 7 of the Act. However, **the enclosed species list does not complete the required consultation process.** The species list identifies threatened, endangered, proposed and candidate species, as well as proposed and designated critical habitats, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. A discussion between the Federal agency and the Service should include what types of listed species may occur in the proposed action area and what effect the proposed action may have on those species. This process initiates informal consultation.

Once a species list is obtained for the proposed project, an effect determination for endangered and threatened species should be made. The applicant could make an effect determination by using available keys on IPaC for specific species. For species with no determination keys, the applicant should request concurrence from the Service by sending a project package to caribbean_es@fws.gov. To obtain guidance for completing this process and the minimum requirements for project packages, please visit:

https://www.fws.gov/sites/default/files/documents/consultation-under-section-7-of-the-endangered-species-act-with-the-caribbean-ecological%20Services-field-office-template-letter.pdf

When a federal agency, after discussions with the Service, determines that the proposed action is not likely to adversely affect any listed species, or adversely modify any designated critical habitat, and the Service concurs, the informal consultation is complete, and the proposed project moves ahead. If the proposed action is suspected to affect a listed species or modify designated critical habitat, the Federal agency may then prepare a Biological Assessment (B.A.) to assist in its determination of the project's effects on species and their habitat. However, a B.A. is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a B.A. where the agency provides the Service with an evaluation on the likely effects of the action to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a B.A. are described at 50 CFR 402.12.

If a federal agency determines, based on its B.A. or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to further consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation process. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species.

This list is provided pursuant to Section 7 of the Endangered Species Act and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action". Please use this list to determine whether your project requires consultation and to make your effects determination. For more guidance, use the Guideline for Consultation under Section 7 of the Endangered Species Act with the Caribbean Ecological Services Field Office by clicking here.

This species list is provided by:

Caribbean Ecological Services Field Office
caribbean_es@fws.gov
Post Office Box 491
Boqueron, PR 00622-0491
(786) 244-0081

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Caribbean Ecological Services Field Office
Post Office Box 491
Boqueron, PR 00622-0491
(939) 320-3135

PROJECT SUMMARY

Project Code: 2025-0089305
Project Name: PR-ESP-00132
Project Type: Power Gen - Solar
Project Description: AJC Service Stations, LLC (Asomante Service Stations) / Commercial Building
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@18.12969665,-66.28536852055888,14z

Counties: Aibonito County, Puerto Rico

ENDANGERED SPECIES ACT SPECIES

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

REPTILES

NAME	STATUS
Puerto Rican Boa *Chilabothrus inornatus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6628 General project design guidelines: https://ipac.ecosphere.fws.gov/project/KZOK4IVQHJFDBA7NGQSO4ARQ4Y/documents/generated/7159.pdf	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

BALD & GOLDEN EAGLES INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

MIGRATORY BIRD INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency:	Private Entity
Name:	Patricia Carmenatty
Address:	Perseo St. 554 Cond. Iberia Suite J-3
City:	San Juan
State:	PR
Zip:	00920
Email	patricia.carmenatty@byaea.com
Phone:	7877830290

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Caribbean Ecological Services Field Office
Post Office Box 491
Boqueron, PR 00622-0491
Phone: (939) 320-3135 Fax: (787) 851-7440
Email Address: CARIBBEAN_ES@FWS.GOV

In Reply Refer To: 04/28/2025 20:27:12 UTC
Project code: 2025-0089305
Project Name: PR-ESP-00132

Subject: Technical Assistance letter for the project named 'PR-ESP-00132' for specified threatened and endangered species, that may occur in your proposed project location, pursuant to the IPaC determination key titled Caribbean Determination Key (DKey).

Dear Applicant:

Thank you for using the assisted evaluation keys in IPaC. This letter is provided pursuant to the Service's authority under the Endangered Species Act of 1973, as amended (ESA) (87 Stat. 884; 16 U.S.C. 1531et seq.). On April 28, 2025, Patricia Carmenatty used the Caribbean DKey; dated January 03, 2025, in the U.S. Fish and Wildlife Service's online IPaC application to evaluate potential impacts to federally listed species, from a project named 'PR-ESP-00132'. The project is located in Aibonito County, Puerto Rico (shown below).

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@18.12969665,-66.28536852055888,14z

The following description was provided for the project 'PR-ESP-00132':

AJC Service Stations, LLC (Asomante Service Stations) / Commercial Building

Based on your answers and the assistance of the Service's Caribbean DKey, you determined the proposed Action will have "No Effect" on the following species:

Species	Listing Status	Determination
Puerto Rican Boa (*Chilabothrus inornatus*)	Endangered	No effect

Thank you for informing the Service of your "No Effect" determination(s) for this project. No further consultation/coordination for this project is required for these species. However, be aware that reinitiation of consultation may be necessary if later modifications are made to the project so that it no longer meets the criteria or outcome described above, or if new information reveals effects of the action that could affect listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed.

This letter serves as documentation of your consideration of the federally listed species as required under section 7 of the ESA. However, effects to the other federally listed species or critical habitat as listed below from the "IPaC print-out for the project" (see below) should be considered as part of your ESA review for the project.

The Service will notify you within 30 calendar days if we determine that this proposed Action does not meet the criteria for a "No Effect" (NE) determination for Federally listed species in the Caribbean. If we do not notify you within that timeframe, you may proceed with the Action under the terms of the NE concurrence provided here. This verification period allows the Caribbean Ecological Services Field Office to apply local knowledge to evaluate the Action, as we may identify a small subset of actions having unanticipated impacts. In such instances, the Caribbean Ecological Services Field Office may request additional information to verify the effects determination reached through the DKey.

Note: Projects located within the range of the Puerto Rican boa or the Virgin Islands tree boa might encounter these species during project activities. **This letter does not provide take to handle or move these species**. If relocation of the species is needed, please contact either the Puerto Rico Department of Natural Resources (DNER) at 787-724-5700, 787-230-5550, or 787-771-1124 for projects in Puerto Rico, or the Virgin Islands Department of Planning and Natural Resources, Division of Fish and Wildlife (DFW) at 340-775-6762 for projects in the Virgin Islands. Otherwise, contact the Caribbean Ecological Services Field Office (caribbean_es@fws.gov) to determine whether the consultation needs to be reinitiated.

If the proposed project is located within species range where a DKey has not been developed for those species, please follow the established guidance for initiating section 7 consultation Caribbean Ecological Services Field Office.

We appreciate your interest in protecting endangered species and their habitats. It is the Service's mission to work with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of our people. If you have any questions or require additional information, please contact our office at Caribbean_es@fws.gov.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

PR-ESP-00132

2. Description

The following description was provided for the project 'PR-ESP-00132':

> AJC Service Stations, LLC (Asomante Service Stations) / Commercial Building

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@18.12969665,-66.28536852055888,14z

QUALIFICATION INTERVIEW

1. Is the proposed project an EPA Multi-Sector General Permit (MSGP) renewal for an existing project? (MSGP Fact Sheet)

   No

2. Is the proposed project within an urban developed area? (i.e., cities, downtowns, shopping malls etc.)

   Note: Urban and developed areas has one or more of the following characteristics: Presence of existing buildings, residential areas, and commercial establishments. Well-established infrastructure including roads, utilities, and urban facilities. High population density. Established neighborhoods and urban amenities ("urbanizaciones"). Developed landscape with paved surfaces, parking lots, and industrial areas. Signs of human activity and urbanization, such as shopping centers and recreational facilities. Location within the boundaries of a city or town ("casco urbano"). High concentration of built-up structures and limited open spaces. Aerial imagery might be requested to the applicant. .

   Yes

3. [Hidden Semantic] Does the proposed project intersect the Puerto Rican boa area of influence?

   Automatically answered
   Yes

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Patricia Carmenatty
Address: Perseo St. 554 Cond. Iberia Suite J-3
City: San Juan
State: PR
Zip: 00920
Email patricia.carmenatty@byaea.com
Phone: 7877830290

BEHAR-YBARRA AND ASSOCIAT

U.S. FISH AND WILDLIFE SERVICE
CARIBBEAN ECOLOGICAL SERVICES FIELD OFFICE

Conservation Measures for the Puerto Rican boa (*Chilabothrus inornatus*)

Section 7 (a)(1) of the Endangered Species Act (ESA) charges Federal agencies to aid in the conservation of listed species, and section 7 (a)(2) requires the agencies, through consultation with the U.S. Fish and Wildlife Service (Service), to ensure their activities are not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitats. Section 7 applies to the management of Federal lands as well as Federal actions that may affect federally listed species, such as Federal approval of private activities through the issuance of Federal funding, permits, licenses, or other actions. Any person that injures, captures, or kills a Puerto Rico boa is subject to penalties under the ESA. If Federal funds or permits are needed, the funding or permitting agency should initiate Section 7 consultation with the Service. To initiate a consultation under the Section 7 of the ESA, you must submit a project package with the established minimum requirements. These conservation measures should be incorporated into the project plans to minimize possible impacts to the species.

The endangered Puerto Rican (PR) boa (*Chilabothrus inornatus*, formerly *Epicrates inornatus*) is the largest endemic snake species that inhabits Puerto Rico. The PR boa is non-venomous and does not pose any life threatening danger to humans, but some individuals may try to bite if disturbed or during capture or handling. Its body color ranges from tan to dark brown with irregular diffuse marking on the dorsum, but some individuals lack marking and are uniformly dark. Juveniles may have a reddish color with more pronounced markings. In general, as they mature, their body color tends to darken.


Adult PR boa – *Chilabothrus inornatus*
Photo: Puerto Rico by JP Zegarra

The PR boa was federally listed in 1970. Currently, the species has an island-wide distribution and occurs in a wide variety of habitat types, ranging from wet montane to subtropical dry forest and can be found from mature forest to areas with different degrees of human disturbance such as roadsides or houses, especially if near their habitat in rural areas. The PR boa is considered mostly nocturnal, remaining less active, concealed or basking under the sun during the day.

The Service has developed the following conservation measures with the purpose of assisting others to avoid or minimize adverse effects to the PR boa and its habitat. These recommendations may be incorporated into new project plans and under certain circumstances into existing projects. Depending on the project, additional conservation measures can be implemented besides the ones presented in this document.

Conservation Measures:

1. Inform all project personnel about the potential presence of the PR boa in areas where the proposed work will be conducted. A pre-construction meeting should be conducted to inform all project personnel about the need to avoid harming the species as well as penalties for harassing or harming PR boas. An educational poster or sign with photo or illustration of the species should be displayed at the project site.

2. Prior to any construction activity, including removal of vegetation and earth movements, the boundaries of the project and areas to be excluded and protected should be clearly marked in the project plan and in the field in order to avoid further habitat degradation into forested and conservation areas.

3. Once areas are clearly marked, and prior to the use of heavy machinery and any construction activity (including removal of vegetation and earth movement), a biologist or project personnel with experience on this species should survey the areas to be cleared to verify the presence of any PR boa within the work area.

4. If a PR boa is found within any of the working or construction areas, activities should stop at that area and information recorded (see #5). **Do not capture the boa.** If boas need to be moved out of harm's way, designated personnel shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for safe capture and relocation of the animal (PRDNER phone #s: (787) 724-5700, (787) 230-5550, (787) 771-1124). **If immediate relocation is not an option, project-related activities at that area must stop until the boa moves out of harm's way on its own**. Activities at other work sites, where no boas have been found after surveying the area, may continue.

5. For all boa sightings (dead or alive), record the time and date of the sighting and the specific location where it was found. PR boa data should also include a photo of the animal (dead or alive), site GPS coordinates, the time and date, and comments on how the animal was detected and its behavior.

6. If a PR boa is captured by PRDNER personnel, record the name of that person and information on where the PR boa will be taken. This information should be reported to the Service.

7. Measures should be taken to avoid and minimize PR boa casualties by heavy machinery or motor vehicles being used on site. Any heavy machinery left on site (staging) or near potential PR boa habitat (within 50 meters of potential boa habitat), needs to be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the equipment. If PR boas are found within vehicles or equipment, do not capture the animal, and let it move on its own or call PRDNER Rangers for safe capture and relocation of the animal (see #4). If not possible, the animal should be left alone until it leaves the vehicle on its own.

8. PR boas may seek shelter in debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in debris piles as a result of project activities. Debris piles should be placed far away from forested areas. Prior to moving, disposing or shredding, debris piles should be carefully inspected for the presence of boas. If debris piles will be left on site, we recommend they be placed in areas that will not be disturbed in the future.

9. If a dead PR boa is found, immediately cease all work in that area and record the information accordingly (see #5). If the PR boa was accidentally killed as part of the project actions, please include information on what conservation measures had been implemented and what actions will be taken to avoid further killings. A dead boa report should be sent by email (see contacts below) to the Service within 48 hours of the event.

10. Projects must comply with all state laws and regulations. Please contact the PRDNER for further guidance.

If you have any questions regarding the above conservation measures, please contact the Service:

- José Cruz-Burgos, Endangered Species Program Coordinator
  - Email: jose_cruz-burgos@fws.gov
  - Office phone (305) 304-1386
- Jan Zegarra, Fish and Wildlife Biologist
  - Email: jan_zegarra@fws.gov
  - Office phone (786) 933-1451

Appendix 7: SECTION 106 CONSULTATION PACKAGE

Executive Director | Carlos A. Rubio Cancela | carubio@prshpo.pr.gov

Tuesday, June 17, 2025

Kristin Sanders
Historic Preservation Manager
269 Avenida Ponce de León, San Juan, PR, 00917

SHPO-CF-06-04-25-01 PRDOH CDBG-DR_ESP Program_20250604_17 Improvements_NHPA

Dear Ms. Sanders,

Our Office has received and reviewed the above referenced project in accordance with 54 U.S.C. 306108 (commonly known as Section 106 of the National Historic Preservation Act) and 36 CFR Part 800: Protection of Historic Properties.

Our records support your finding of "no historic properties affected" within the following properties' Area of Potential Effects (APE):

Aguadilla PR-ESP-00208 Bo. Caimital Abajo Carr 2 Km 121.6
Aibonito PR-ESP-00132 Carretera 14 Km 46.7 Bo. Asomante
Bayamón PR-ESP-00154 Ave. Santa Juanita AK6 Urb. Santa Juanita
Bayamón PR-ESP-00217 MARGINAL A-3 URB FOREST HILLS BAY
Bayamón PR-ESP-00230 URB MIRAFLORES 3-9 CALLE 2
Bayamón PR-ESP-00362 REPARTO TERESITA AL-2 CALLE 23
Caguas PR-ESP-00128 Ave Gautier Benitez B-13 Urb Villa Carmen
Lajas PR-ESP-00119 Carr 303 Km 3.2 Bo. Olivares
Lajas PR-ESP-00212 CARR 102 KM 17.2 INT SECTOR PALMER #8
Manatí PR-ESP-00139 1 D2 Villa Maria
Moca PR-ESP-00229 CARR 125 KM 3.5
San Juan PR-ESP-00125 V3-22 AVE SAN ALFONSO
San Juan PR-ESP-00200 Urb Monte Carlos 1265 Ave Monte Carlos
San Juan PR-ESP-00257 773 AVE SAN PATRICIO
San Juan PR-ESP-00264 CALLE 15 1265 EXT SAN AGUSTIN
San Juan PR-ESP-00356 1727 Avenida Jesus T. Pinero
Villalba PR-ESP-00149 CARR. 149 ESQUINA BORINQUEN #44

If you have any questions regarding our comments, please do not hesitate to contact our Office.

Sincerely,

Carlos A. Rubio Cancela

State Historic Preservation Officer

CARC/GMO/ SG

SHPO
OFICINA ESTATAL DE CONSERVACIÓN HISTÓRICA
OFICINA DEL GOBERNADOR
STATE HISTORIC PRESERVATION OFFICE
OFFICE OF THE GOVERNOR
OECH

June 4, 2025

Carlos A. Rubio Cancela
Director Ejecutivo
Oficina Estatal de Conservación Histórica
Cuartel de Ballajá (Tercer Piso)
San Juan, PR 00902-3935

Puerto Rico Disaster Recovery, CDBG-DR Program: ENERGY POWER RELIABILITY AND RESILIENCE/DDEC ENERGY SUPPORT PROGRAM (ESP)

Section 106 NHPA Effect Determination Submittal – Seventeen (17) Non-Historic Case(s) – *No Historic Properties Affected*

Dear Architect Rubio Cancela,

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, HORNE is providing information for your review and requesting your concurrence regarding the above-referenced projects on behalf of the Puerto Rico Department of Housing (PRDOH) and the Energy Power Reliability and Resilience/DDEC Energy Support Program (ESP). On February 9, 2018, an allocation of Community Development Block Grant - Disaster Recovery (CDBG-DR) funds was approved by the United States Department of Housing and Urban Development (HUD) under the Federal Register Volume 83, No. 28, 83 FR 5844, to assist the Commonwealth of Puerto Rico in meeting unmet needs in the wake of Hurricanes Irma and Maria. On August 14, 2018, an additional $8.22 billion recovery allocation was allocated to Puerto Rico under the Federal Register Volume 83, No. 157, 83 FR 40314. With these funding allocations, the Puerto Rico Department of Housing (Housing) aims to lead a comprehensive and transparent recovery for the benefit of Puerto Rico residents.

The purpose of the ESP is to benefit Puerto Rican communities by funding projects that enhance electric system reliability, affordability, and resiliency. The Program's design will be carried out through the development and interconnection of microgrids and distributed energy resources, including renewable energy generation, combined heat and power (CHP) systems, phototovoltaic systems (PVS), and battery storage systems (BSS), among other eligible project types.

HORNE
Puerto Rico

On behalf of PRDOH, we are submitting the following seventeen (17) cases for Section 106 consultation as it cannot be cleared with Programmatic Agreement allowances. These cases consist of the installation of PV systems with battery backup systems. The prepared excel file presents all information for these properties for your review including the ESP Case ID, locational data, photographs, a link to the google map, key dates and supporting imagery, and the PRDOH Eligibility and Effect Determinations.

Municipality	Case ID	Address
Aguadilla	PR-ESP-00208	Bo. Caimital Abajo Carr 2 Km 121.6
Aibonito	PR-ESP-00132	Carretera 14 Km 46.7 Bo. Asomante
Bayamón	PR-ESP-00154	Ave. Santa Juanita AK6 Urb. Santa Juanita
Bayamón	PR-ESP-00217	MARGINAL A-3 URB FOREST HILLS BAY
Bayamón	PR-ESP-00230	URB MIRAFLORES 3-9 CALLE 2
Bayamón	PR-ESP-00362	REPARTO TERESITA AL-2 CALLE 23
Caguas	PR-ESP-00128	Ave Gautier Benitez B-13 Urb Villa Carmen
Lajas	PR-ESP-00119	Carr 303 Km 3.2 Bo. Olivares
Lajas	PR-ESP-00212	CARR 102 KM 17.2 INT SECTOR PALMER #8
Manatí	PR-ESP-00139	1 D2 Villa Maria
Moca	PR-ESP-00229	CARR 125 KM 3.5
San Juan	PR-ESP-00125	V3-22 AVE SAN ALFONSO
San Juan	PR-ESP-00200	Urb Monte Carlos 1265 Ave Monte Carlos
San Juan	PR-ESP-00257	773 AVE SAN PATRICIO
San Juan	PR-ESP-00264	CALLE 15 1265 EXT SAN AGUSTIN
San Juan	PR-ESP-00356	1727 Avenida Jesus T. Pinero
Villalba	PR-ESP-00149	CARR. 149 ESQUINA BORINQUEN #44

The properties are not individually eligible, listed in the National Register of Historic Places (NRHP) or located within or adjacent to an eligible or listed Historic District. A recommendation of "No Historic Properties Affected", pursuant to 36 CFR 800.4(d)(1), has been made for these proposed projects.

We look forward to your review and concurrence. Please contact me with any questions or concerns by email at kristin.sanders@horne.com or phone at 225-276-2109.

Kindest regards,

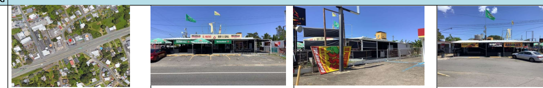
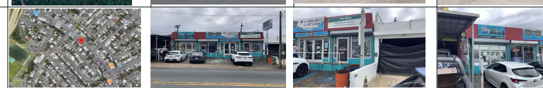
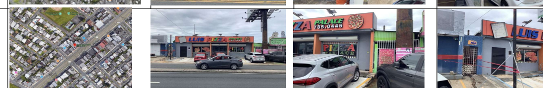
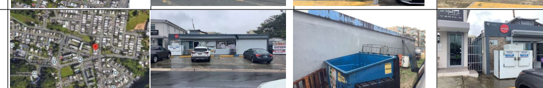
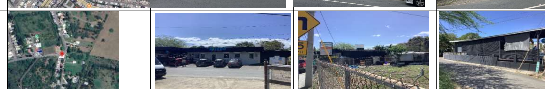
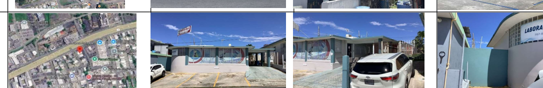
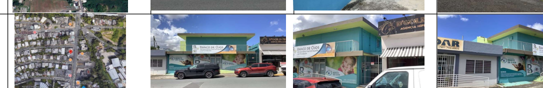
Kristin P. Sanders

Kristin P. Sanders

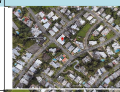
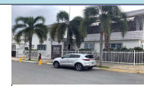
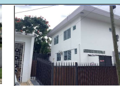
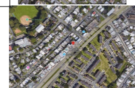
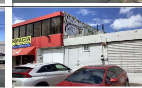
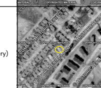
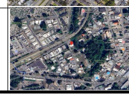
Historic Preservation Manager

Enclosures

HOUSING	Puerto Rico Department of Housing
	CDBG-DR Energy Power Reliability and Resilience/DDEC Energy Support Program (ESP)
	Improvements to Non-Historic Properties: Properties 45 Years or Greater, Not Individually Eligible or Listed in the National Register of Historic Places (NRHP), and Neither Adjacent to Nor Located Within an Eligible or Listed NRHP Historic District
	Proposed Undertakings Consist of the Installation of Photovoltaic Systems (PVS) and a Battery Storage Systems (BSS) on the Roof of the Subject Building
	SUBMISSION DATE: June 4, 2025 - 17 Cases

Property Information														National Register Eligibility		Determination of Effect			
Case ID	Street Address	Municipality	Parcel ID	Latitude	Longitude	Acreage	Estimated Funding	Photo (Current Aerial Imagery and up to 3 Photos: Front, Right, Left)	Link to Google Map	Key Dates Verified by Google Earth Pro, Aerial Photo and USGS Maps			PRDOH Eligibility Determination	SHPO Concurrence (SHPO Use Only)	PRDOH Effect Determination	SHPO Concurrence (SHPO Use Only)	Preparer and Date / Approver and Date	SHPO Comments
PR-ESP-00208	Bo. Caimital Abajo Carr 2 Km 121.6	Aguadilla	024-062-002-09-901	18.4463	-67.11348	0.23	$50,000		https://maps.app.goo.gl/EXBTtgq7LbIFUIo46	Circa 1970	Structure is present in 1975 aerial imagery but a different structure is present on 1958 imagery.		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/16/2025.	
PR-ESP-00132	Carretera 14 Km 46.7 Bo. Asomante	Aibonito	297-075-178-01-001	18.129686	-66.285385	0.3	$50,000		https://maps.app.goo.gl/VD7uPbVgAwK7V6P88	Circa 1962	Structure is present in 1968 aerial imagery but absent on 1958 aerial imagery.		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/19/2025.	
PR-ESP-00154	Ave. Santa Juanita AK6 Urb. Santa Juanita	Bayamón	113-014-522-06-001	18.367247	-66.163003	0.09	$19,534		https://maps.app.goo.gl/64ZDunSkzxZ44Zzt6	Circa 1962	Structure is present in 1962 aerial imagery. (Earliest available)		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/19/2025.	
PR-ESP-00217	MARGINAL A-3 URB FOREST HILLS BAY	Bayamón	085-054-239-25-000	18.385542	-66.165115	0.2	$48,287		https://maps.app.goo.gl/u7wK56QMaSykY3NB9	Circa 1955	Structure is present in 1962 aerial imagery but absent from 1930 municipality imagery.		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/16/2025.	
PR-ESP-00230	URB MIRAFLORES 3-9 CALLE 2	Bayamón	084-089-265-09-001	18.37671	-66.196617	0.06	$25,883		https://maps.app.goo.gl/OuSi7hu86SWEWciB7	Circa 1965	Structure is present in 1967 aerial imagery but absent from 1962 aerial imagery.		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/16/2025.	
PR-ESP-00362	REPARTO TERESITA AL-2 CALLE 23	Bayamón	061-061-201-04-001	18.414818	-66.183469	0.21	$50,000		https://maps.app.goo.gl/dxE4i6g4Xu7UzuQb7	Circa 1972	Structure is present in 1977 aerial imagery but no structure is present on 1967 aerial imagery.		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/16/2025.	
PR-ESP-00128	Ave Gautier Benitez B-13 Urb Villa Carmen	Caguas	251-003-345-13-001	18.215947	-66.043517	0.07	$18,478		https://maps.app.goo.gl/xABqliQVYhpuNcY36	Circa 1960	Structure is present in 1962 aerial imagery. (Earliest imagery available)		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/19/2025.	
PR-ESP-00119	Carr 303 Km 3.2 Bo. Olivares	Lajas	381-000-010-11-002	18.002324	-67.068464	4.15	$49,173		https://maps.app.goo.gl/njcZfAGqRzYVsYJR9	Circa 1970	Structure is present in 1975 aerial imagery. (Earliest imagery available)		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/16/2025.	
PR-ESP-00212	CARR 102 KM 17.2 INT SECTOR PALMER #8	Lajas	358-051-088-13-001	18.043257	-67.058622	0.11	$50,000		https://maps.app.goo.gl/zNHFsKamhYbBfdaj9	Circa 1970	Structure is present in 1975 aerial imagery not on 1941-43 aerials.		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/16/2025.	
PR-ESP-00139	1 D2 Villa Maria	Manatí	056-012-139-02-001	18.430947	-66.489996	0.1	$50,000		https://maps.app.goo.gl/rGA9JhwZsSi8A2TI9	Circa 1960	Structure is present in 1967 aerial imagery. (Earliest available imagery)		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/19/2025.	
PR-ESP-00229	CARR 125 KM 3.5	Moca	070-044-033-82-000	18.390318	-67.102544	0.33	$39,600		https://maps.app.goo.gl/PAU6ANFHx2TZwBuu7	Circa 1965	Structure is present in 1975 aerial imagery. Not present on 1958 aerial imagery.		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/16/2025.	
PR-ESP-00125	V3-22 AVE SAN ALFONSO	San Juan	086-055-450-23-802	18.389325	-66.09498	0.08	$40,605		https://maps.app.goo.gl/ZgEfHEPtjHTwhFcRA	Circa 1955	Structure is present in 1962 aerial imagery (Earliest Available)		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/19/2025.	
PR-ESP-00200	Urb Monte Carlos 1265 Ave Monte Carlos	San Juan	087-048-376-05-001	18.391794	-66.013808	0.09	$32,509		https://maps.app.goo.gl/LMkT6g8b3xuoPrd3A	Circa 1965	Structure is present in 1967 aerial imagery but absent from 1962 aerial Imagery.		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/19/2025.	
PR-ESP-00257	773 AVE SAN PATRICIO	San Juan	086-025-418-32-802	18.398043	-66.095977	0.07	$34,941		https://maps.app.goo.gl/a7bhqV6ysub6zs7q8	Circa 1960	Structure is present in 1962 aerial imagery.(Earliest imagery available)		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/16/2025.	

	Puerto Rico Department of Housing
	CDBG-DR ENERGY POWER RELIABILITY AND RESILIENCE/DDEC ENERGY SUPPORT PROGRAM (ESP)
	Improvements to Non-Historic Properties: Properties 45 Years or Greater, Not Individually Eligible or Listed in the National Register of Historic Places (NRHP), and Neither Adjacent to Nor Located Within an Eligible or Listed NRHP Historic District
	Proposed Undertakings Consist of the Installation of Photovoltaic Systems (PVS) and a Battery Storage Systems (BSS) on the Roof of the Subject Building
	SUBMISSION DATE: June 4, 2025 - 17 Cases

Property Information																National Register Eligibility		Determination of Effect			
Case ID	Street Address	Municpality	Parcel ID	Latitude	Longitude	Acreage	Estimated Funding	Photo (Current Aerial imagery and up to 3 photos: front, right, left)				Link to Google Map	Key Dates Verified by Google Earth Pro, Aerial Photo and USGS Maps			PRDOH Eligibility Determination	SHPO Concurrence (SHPO use only)	PRDOH Effect Determination	SHPO Concurrence (SHPO use only)	Preparer and Date / Approver and Date	SHPO Comments
PR-ESP-00264	CALLE 15 1265 EXT SAN AGUSTIN	San Juan	087-045-849-11-001 / 087-045-849-12-000	18.390973	-66.035318	0.24	$50,000					https://maps.app.goo.gl/1wwkHFUPcCAxjQWj8	Circa 1960	Structure is present in 1962 aerial imagery. (Earliest imagery available)		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 6/2/2025.	
PR-ESP-00356	1727 Avenida Jesus T. Pinero	San Juan	086-024-411-06-001	18.397422	-66.099655	0.09	$31,317					https://maps.app.goo.gl/Bly9BLOyDTvoVnmy5	Circa 1960	Structure is present in 1962 aerial imagery.(Earliest available imagery)		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/19/2025.	
PR-ESP-00149	CARR. 149 ESQUINA BORINQUEN #44	Villalba	294-081-038-05-001	18.127703	-66.494476	0.21	$33,654					https://maps.app.goo.gl/AMHr2K9kgNEn7Vnq8	Circa 1972	Structure is present in 1977 aerial imagery but absent on 1967 aerial imagery.		Ineligible	Select Eligibilty	No Historic Properties Affected	Select Effect	Prepared by Jorge L Lizardi Pollock, PhD on 5/1/2025 and approved by Elizabeth Atkins, M.A./Lauren Poche, M.A. on 5/19/2025.	

April 30, 2024

Arch. Carlos A. Rubio Cancela
Executive Director
Puerto Rico State Historic Preservation Office
Cuartel de Ballajá, Third Floor
San Juan, Puerto Rico 00901

Re: Authorization to Submit Documents for Consultation

Dear Arch. Rubio Cancela,

The U.S. Department of Housing (HUD) approved the allocations of Community Development Block Grant (CDBG-DR) funds on February 9, 2018. It also approved the allocation of Community Development Block Grant Mitigation (CDBG-MIT) funds on January 27, 2020. The purpose of these allocations is to address unsatisfied needs as a result of Hurricanes Irma and Maria in September 2017; and to carry out strategic and high-impact activities to mitigate disaster risks and reduce future losses.

To comply with the environmental requirements established by HUD, the Department of Housing of Puerto Rico (PRDOH) contracted Horne Federal LLC to provide environmental review services, among others, that will support the objectives of the agenda for both CDBG-DR and CDBG -MIT Programs.

To expedite the processes, Horne Federal LLC, is authorized to submit to the State Historic Preservation Officer, documentation of projects related to both the CDBG-DR and CDBG-MIT on behalf of PRDOH.

Cordially,

Aldo A. Rivera Vázquez, PE
Director
Division of Environmental Permitting and Compliance
Office of Disaster Recovery