



GOVERNMENT OF PUERTO RICO  
DEPARTMENT OF NATURAL AND ENVIRONMENTAL RESOURCES

***Puerto Rico 2022 - 305(b) and 303(d) Integrated Report***

**Plans and Special Projects Division  
Water Quality Area**

**September 2023**

San José Industrial Park, 1375 Ave Ponce de León, San Juan, PR 00926

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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 April 11, 2019) 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. 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.

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 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.

- **Clean Water Act 303(d) Long – Term Vision Program** - In December 2013, the United States Environmental Protection Agency (USEPA) announced a new framework 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 new vision, encourage states and territories to develop tailored strategies to implementation CWA 303(d) responsibilities of their overall water quality goals and individual’s states priorities.

- The time frame for the implementation of Long- *Term Vision Program* was from 2016 to 2022. Beginning in 2016 Cycle PRDNER identify a total of one hundred twenty – five (125) AU/parameter combination for priority restoration and protection activities under this program (See Appendix II). This prioritization provides a framework to focus the location and timing for the development of alternative restoration, protection plans and TMDLs.

Taking into consideration the development of strategies and alternative approaches, the PRDNER achieved the improvement of seventy-eight (78) AU/parameter combination which corresponds to sixty-two point four (62.4) percent of the total AU/parameters combination of the Long- *Term Vision Program 2016 to 2022* (Table 50). The alternatives approaches included are Identification of specific impairment addressed, planning, development and implement effectiveness monitoring programs and revisions, and amendments to the existing regulations.

This report constitutes the PR 305(b)/303(d) Integrated Report (IR) for fiscal year 2022. For 2022 cycle there are total of three hundred fifty-eight (358) Assessment Units (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 (SJBES) and sixty-four (64) are coastal shoreline.

### **Rivers & Streams**

The water quality assessment for the 2022 cycle indicates that five thousand four hundred three point five (5,403.5) miles of rivers and stream 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 Enterococcus exceeded 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-five (45) AU/parameter combination were removed from the 2022 303(d) List.

### **Lakes (reservoirs)**

The water quality assessment for the 2022 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. A total of two (2) AU/parameter combination were removed from the 2022 303(d) List.

### **Coastal Waters**

The water quality assessment for the 2022 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 Enterococcus exceeded the applicable standard. For aquatic life designated use Turbidity, Copper and Temperature were the most common causes of impairment. A total of six (6) AU/parameter combination were removed from the 2022 303(d) List for meet the water quality standards.

### **Estuaries**

The assessment of estuaries corresponds to lower reaches of the rivers near the coastal shoreline as defined in the PRWQSR. Islandwide, 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 2022 cycle indicates that the three point eight three four zero (3.8340) sq. mi. and eighteen point eight (18.8) miles were assessed. 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 Enterococcus exceeded the standard. Among the most important causes of impairment for aquatic life designated uses were Chromium VI, Dissolved Oxygen, Surfactants, Temperature, Total Nitrogen, Total Phosphorus and Turbidity. A total of nine (9) AU/parameter combination were removed from the 2022 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, between other responsibilities.

This report constitutes the PR 305(b)/303(d) Integrated Report (IR) for fiscal year 2022. For 2022 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 (Figure 1).

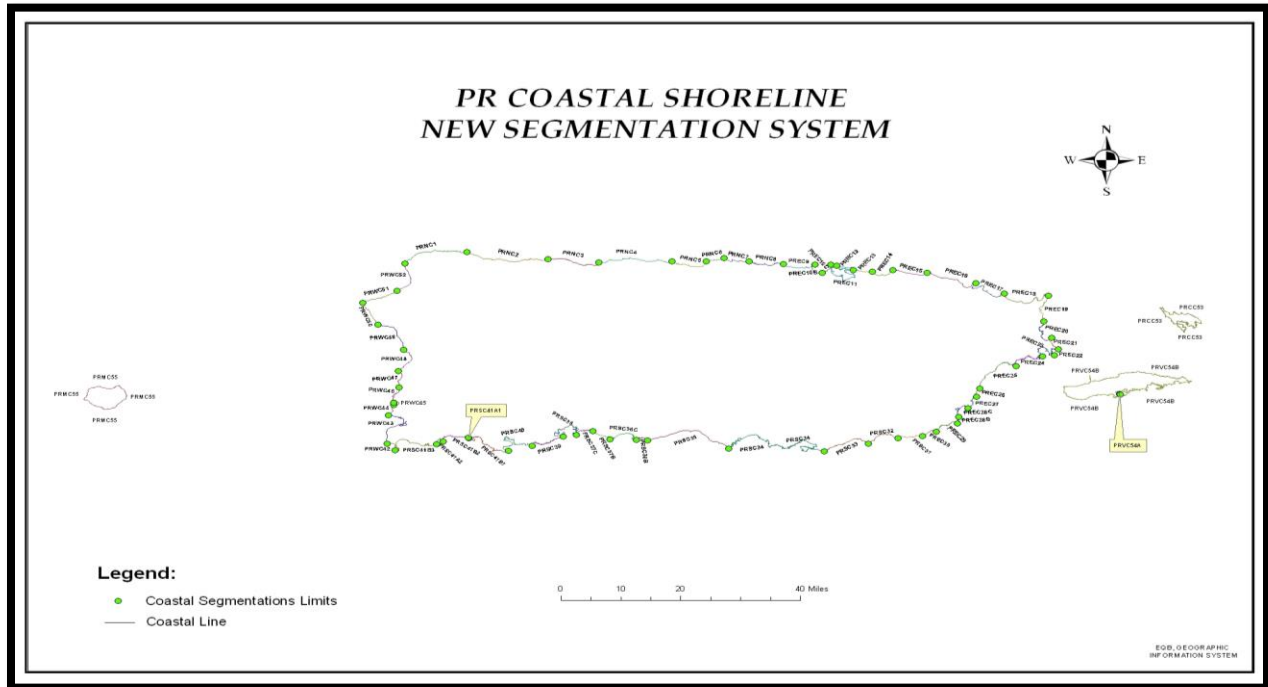


***Figure 1: Watersheds in Puerto Rico***

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 boat).

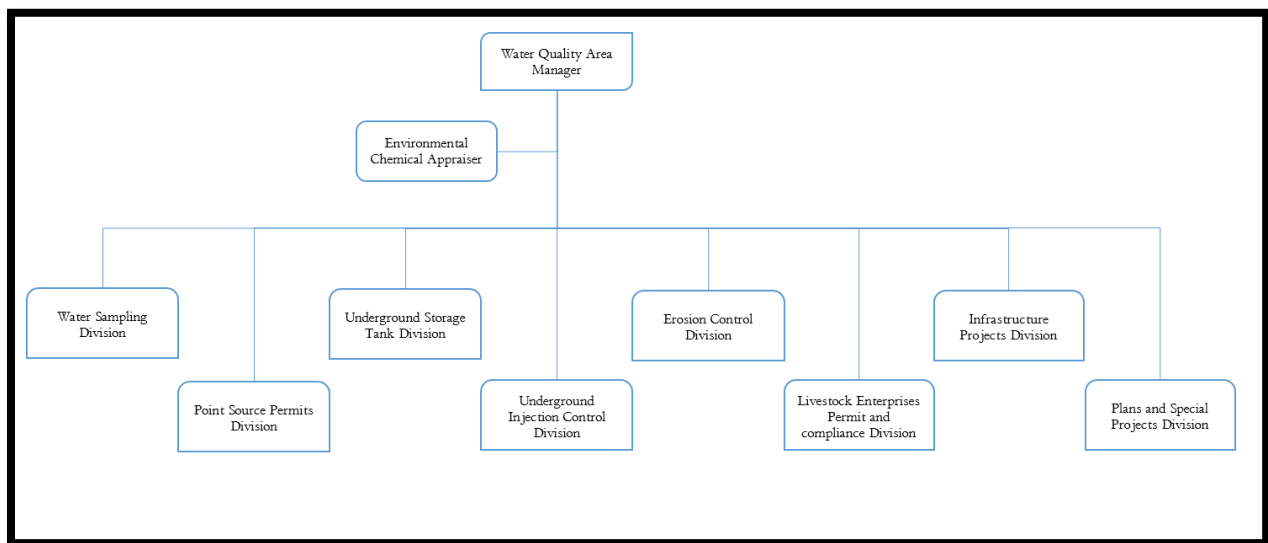




**Figure 3: Puerto Rico Coastal Shoreline Segmentation System**

## 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 river, stream, 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 improvements 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 responsible 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 new vision, encourage states and territories to develop tailored strategies to implementation CWA 303(d) responsibilities of their overall water quality goals and each states priority. 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 also is managing under this Division.

The **Underground Injection Control Division** was created to regulate/control the facilities with underground injection system (UIS) and responds 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 to those where the bad operation of the systems has caused spills to the water or to the subsoil. The USEPA thru 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 are 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 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 responds to of leaking tank that could be affecting the underground water resources. To control this type of systems, permits and authorization are issued, sampling monitoring report are evaluated, and remedial plans are required to those where the bad operations of the systems have cause spills to the water or to the subsoil. USEPA thru 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 to all the permitted projects and presented 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 manage 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 **Livestock Permit and Compliance Division** perform inspections, evaluate 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 (**Error! Reference source not found.** and **Error! Reference source not found.**).

**Table 1: Actions Initiated Point Sources Control Units**

<b>Actions</b>	<b>NPDES Facilities</b>	<b>UST</b>	<b>UIC</b>	<b>Non-Filer (Illegal Discharges)</b>
Certificates or permits Issued	83	949	376	-
Permits of operation	-	261		-
Total number of inspections	41	820	190	183
Referrals to Legal Affairs	-	1	1	1
Notification of violation	-	248	250	210
Administrative Orders	-	-	4	-
Consent Orders	-	158	-	-

**Table 2: Actions Initiated Non-Point Sources Control Units**

<b>Actions</b>	<b>SEC Activities</b>	<b>Livestock Enterprises</b>
Certificates or permits Issued	249	116
Total number of inspections	586	678
Referrals to Legal Affairs	-	1
Notification of violation	328	145
Administrative Orders	-	-

### 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 **Error! Reference source not found.** thru Table 7.



**Table 3: Federal and State Funds**

Categories	Performance Partnership Grant (PPG)				Beach Monitoring and Public Notification Program	
	2020		2021		2020	2021
	Federal	State	Federal	State	Federal	Federal
Salaries	\$1,407,859	\$287,283	\$1,837,675	\$394,838	\$154,506	\$170,594
Fringe Benefits	\$221,398	\$45,177	\$298,581	\$64,154	\$25,845	\$28,042
Travel	\$2,719	\$555	\$31,000	\$6,660	\$7,500	\$9,000
Equipment	\$33,221	\$6,779	\$130,468	\$28,032	\$10,800	\$2,000
Supplies	\$156,537	\$31,943	\$155,000	\$33,304	\$31,000	\$29,000
Contractual	\$993,871	\$202,806	\$284,488	\$41,121	\$10,000	\$8,000
Construction	\$0	\$0	\$0	\$0	\$0	\$0
Others	\$60,612	\$12,368	\$58,206	\$12,506	\$21,063	\$14,196

**Table 4: Federal and State Funds (Cont.)**

Categories	Water Quality Management 604(B)		State Revolving Fund (SRF)			
	2020	2021	2020		2021	
	Federal	Federal	Federal	State	Federal	State
Salaries	\$28,668	\$33,423	\$285,193	\$57,038	\$349,947	\$69,989
Fringe Benefits	\$4,564	\$5,249	\$50,797	10,159	\$64,165	\$12,833
Travel	\$0	\$0	\$3,590	\$718	\$4,167	\$833
Equipment	\$0	\$0	\$129,667	\$25,933	\$4,000	\$800
Supplies	\$4,500	\$4,500	\$625	\$125	\$2,500	\$500
Contractual	\$160,914	\$154,770	\$256,995	\$51,399	\$262,043	\$52,408
Construction	\$0	\$0	\$0	\$0	\$0	\$0
Others	\$1,441	\$589	\$19,909,920	\$3,981,984	19,926,122	\$3,985,226

**Table 5: Federal and State Funds (Cont.)**

Categories	LUST - Corrective				UST - Preventive			
	2020		2021		2020		2021	
	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
Fringe Benefits	\$40,160	\$4,462	\$40,160	\$4,462	\$31,765	\$10,589	\$31,765	\$10,589
Travel	\$5,600	\$622	\$5,600	\$622	\$5,600	\$1,867	\$5,600	\$1,867
Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplies	\$10,000	\$1,112	10,000	1,112	\$7,500	\$2,500	\$7,500	\$2,500
Contractual	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Others	\$5,500	\$611	\$5,500	\$611	\$13,000	\$4,334	\$13,000	\$4,334

**Table 6: Federal and State Funds (Cont.)**

Categories	UST- Hurricane Relief			
	2020		2021	
	Federal	State	Federal	State
Salaries	\$53,035	\$5,893	\$53,035	\$5,893
Fringe Benefits	\$8,543	\$949	\$8,543	\$949
Travel	\$500	\$56	\$500	\$56
Equipment	\$12,600	\$1,400	\$12,600	\$1,400
Supplies	\$2,000	\$222	\$2,000	\$222
Contractual	\$602,347	\$66,927	\$602,347	\$66,927
Construction	\$0	\$0	\$0	\$0
Others	\$2,440	\$271	\$2440	\$271

**Table 7: Total Federal and State Funds**

Summary of Federal and State Funds	
Federal	\$50,325,380
State	\$9,805,001
Total	\$60,130,381

#### 4.0 Special State Concerns and Recommendations

[RESERVED]

### PART B. Assessment Methodology Used for 305(b)/303(d) Integrated Report for 2022 Cycle and Assessment Results

#### 1.0 Assessment Units (AU)

This report constitutes the PR 305(b)/303(d) Integrated Report (IR) for fiscal year 2022. For 2022 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 AU 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 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
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

Basin name	Basin ID	Basin size (miles)	Region	Sub-basin
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
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

Basin name	Basin ID	Basin size (miles)	Region	Sub-basin
RÍO YAGÜEZ*	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) AU of river, forty-nine (49) AU are monitored routinely. Also, two (2) stations that are routinely monitored are in two (2) AU of the SJBES for a total of fifty-one (51) monitoring stations (Table 9).

**Table 9: AU 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
Río de La Plata	PRER10A4
Río de La Plata	PRER10A5
Río Guadiana	PRER10E
Río Arroyata	PRER10G
Río Matón	PRER10J

<b>AU Name</b>	<b>AU ID</b>
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 Espiritu 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 shows the AUs that does not have monitoring stations.

**Table 10: AU without monitoring stations**

<b>AU Name</b>	<b>AU ID</b>
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
Río Manatí	PRNR8A3
Río Toro Negro	PRNR8C1
Río Bauta	PRNR8C2
Río Sana Muertos	PRNR8D

<b>AU Name</b>	<b>AU ID</b>
Río Botijas	PRNR8E2
Río Indios	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	PREQ14D
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

<b>AU Name</b>	<b>AU ID</b>
Quebrada Manglillo	PRSQ38A
Quebrada Florida*	PRSQ39A
Río Jacaboá	PRSR40A
Quebrada Palenque	PRSQ41A
Río Chico	PRSR42A
Río Grande de Patillas	PRSR43A1
Río Marín	PRSR43B
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	PRSR69A1
Río Loco	PRSR69A2
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 Hoconuco	PRWR77E
Río Caín	PRWR77F
Río Cupeyes	PRWR77G
Río Cruces	PRWR77H
Río Grande	PRWR77I

<b>AU Name</b>	<b>AU ID</b>
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
Río Humata	PRWR83D
Río Arenas	PRWR83E
Río Mayagüecillo	PRWR83F
Río Guabá	PRWR83G
Río Blanco	PRWR83H
Río Prieto	PRWR83I
Quebrada Justo	PRWQ84A
Quebrada Icacos	PRWQ85A
Quebrada Caguabo	PRWQ86A
Caño García	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 Caños (Río Cañas)	PRWR95B
Quebrada Grande	PRWQ95C
Quebrada Las Marías	PRWQ95D
Quebrada Yagruma	PRWQ95E
Quebrada La Salle	PRWQ95F
Quebrada El Salto	PRWQ95G
Quebrada Grande de La Majagua	PRWQ95H
Quebrada Salada	PRWQ95I
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 basins into four (4) geographic regions. The Table 11 presents geographic regions with its corresponding basins as part of the monitoring network and AU with existing or secondary data.

**Table 11: Geographic Regions**

Region	Basin	Basins in permanent stream water quality network	Assessment units by water quality 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.

Supplementary information, such as: 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 (BMPs) by non-point sources, fish-kills or spill events, make possible identified potential pollution sources.

## 1.2 Assessment Unit for Coastal Shoreline

The Coastal Shoreline consists of 64 AU (Figure 4), from which fifty-five (55) have monitoring stations and nine (9) AU without monitoring stations (The AU that do not have monitoring stations were classified on Category 3: Waters for which insufficient available data and/or information to determine if any designated uses are being attained). PRDNER completed the relocation process of the coastal stations with the purpose that the greater amount of AU is monitored.

With the purpose that the greater amount of AU is monitored, PRDNER performed a relocation of the monitoring network. The following description provides the rationale for setting the number of stations according to the length of the AU:

- AU with a length of eleven (11) miles or greater, generally have three (3) stations.
- AU whose length is less than eleven (11) miles but not greater than or equal to four (4) miles, usually have two (2) stations.
- AU whose length is less than four (4) miles usually has one station.

Due to accessibility, the monitoring network excluded AU of Roosevelt Roads Naval Station in Ceiba (PREC21 and PREC22), Vieques (PRVC54B), Culebra (PRCC53), and Mona Island (PRMC55). Also, AU Isla de Cabra to Punta El Morro (PREC11) was not included.

Nevertheless, the AU that have waters classified as SA are not monitored by the Coastal Monitoring Network. The 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. The Class SA waters included in the PRWQSR are the following: *Bahía Biolumicente La Parguera, Lajas*, two (2) miles (AU PRSC41A1), *Bahía Monsio José, Lajas*, three point seven two (3.72) miles (AU PRSC41A2) and *Bahía Mosquito, Vieques*, three (3) miles (AU PRVC54A).

The Table 12 summarize the coastal shoreline segmentation; the *AU Description* column indicates where the AU begins and where it ends.

**Table 12: Assessment Units for the coastal shoreline**

<b>Assesment Unit (AU) ID</b>	<b>AU Description</b>	<b>AU Size (miles)</b>	<b>Region</b>
<b>PRNC01*</b>	Punta Borinquen to Punta Sardina	11.72	North
<b>PRNC02*</b>	Punta Sardina to Punta Manglillo	14.10	North
<b>PRNC03*</b>	Punta Manglillo to Punta Morrillos	9.65	North
<b>PRNC04*</b>	Punta Morrillos to Punta Manatí	13.66	North
<b>PRNC05*</b>	Punta Manatí to Punta Chivato	7.46	North
<b>PRNC06*</b>	Punta Chivato to Punta Puerto Nuevo	3.23	North
<b>PRNC07*</b>	Punta Puerto Nuevo to Punta Cerro Gordo	5.05	North
<b>PRNC08*</b>	Punta Cerro Gordo to Punta Boca Juana	7.32	North
<b>PREC09*</b>	Punta Boca Juana to Punta Salinas	5.78	East
<b>PREC10B*</b>	Punta Salinas to Río Bayamón mouth	2.91	East
<b>PREC10C*</b>	Río Bayamón mouth to Isla de Cabras	6.63	East
<b>PREC11</b>	Isla de Cabras to Punta del Morro	7.79	East
<b>PREC12*</b>	Punta del Morro to west side of Condado Bridge	3.50	East
<b>PREC13*</b>	East side of Condado Bridge to Punta Las Marías	4.31	East
<b>PREC14*</b>	Punta Las Marías to Punta Cangrejos	4.19	East
<b>PREC15*</b>	Punta Cangrejos to Punta Vacía Talega	6.23	East
<b>PREC16*</b>	Punta Vacía Talega to Punta Miquillo	9.46	East
<b>PREC17*</b>	Punta Miquillo to Punta La Bandera	8.41	East
<b>PREC18*</b>	Punta La Bandera to Cabezas de San Juan	10.46	East
<b>PREC19*</b>	Cabezas de San Juan to Punta Barrancas	7.08	East
<b>PREC20*</b>	Punta Barrancas to Punta Medio Mundo	5.33	East
<b>PREC21</b>	Punta Medio Mundo to Punta Puerca	3.00	East
<b>PREC22</b>	Punta Puerca to Isla Cabras	3.30	East
<b>PREC23*</b>	Isla Cabras to Punta Cascajo	8.83	East
<b>PREC24*</b>	Punta Cascajo to Punta Lima	9.07	East
<b>PREC25*</b>	Punta Lima to Morro de Humacao	9.83	East
<b>PREC26*</b>	Morro de Humacao to Punta Candelero	1.84	East
<b>PREC27*</b>	Punta Candelero to Punta Guayanés	3.74	East
<b>PREC28C*</b>	Punta Guayanés to Punta Quebrada Honda	4.68	East
<b>PREC28B*</b>	Punta Quebrada Honda to Punta Yeguas	0.74	East
<b>PREC29*</b>	Punta Yeguas to Punta Tuna	4.35	East
<b>PREC30*</b>	Punta Tuna to Cabo Mala Pascua	2.65	East
<b>PRSC31*</b>	Cabo Mala Pascua to Punta Viento	4.06	South
<b>PRSC32*</b>	Punta Viento to Punta Figuras	6.16	South
<b>PRSC33*</b>	Punta Figuras to Punta Ola Grande	8.10	South
<b>PRSC34*</b>	Punta Ola Grande to Punta Petrona	40.96	South

Assesment Unit (AU) ID	AU Description	AU Size (miles)	Region
<b>PRSC35*</b>	Punta Petrona to Punta de Cabullones	2.53	South
<b>PRSC36B*</b>	Punta de Cabullones to Punta Carenero	6.70	South
<b>PRSC36C*</b>	Punta Carenero to Punta Cucharas	9.23	South
<b>PRSC37B*</b>	Punta Cuchara to Cayo Parguera	3.30	South
<b>PRSC37C*</b>	Cayo Parguera to Punta Guayanilla	4.20	South
<b>PRSC38*</b>	Punta Guayanilla to Punta Verraco	13.20	South
<b>PRSC39*</b>	Punta Verraco to Punta Ballenas	6.41	South
<b>PRSC40*</b>	Punta Ballenas to Punta Brea	13.26	South
<b>PRSC41B1*</b>	Punta Brea to Bahía Fosforescente La Parguera	10.93	South
<b>PRSC41A1</b>	Bahía Fosforescente La Parguera	2.00	South
<b>PRSC41B2*</b>	Bahía Fosforescente La Parguera to Punta Cueva de Ayala	7.00	South
<b>PRSC41A2</b>	Bahía Monsio José	3.72	South
<b>PRSC41B3*</b>	Bahía Monsio José to Faro de Cabo Rojo	13.45	South
<b>PRWC42*</b>	Faro de Cabo Rojo to Punta Águila	2.89	West
<b>PRWC43*</b>	Punta Águila to Punta Guaniquilla	9.54	West
<b>PRWC44*</b>	Punta Guaniquilla to Punta La Mela	2.50	West
<b>PRWC45</b>	Punta La Mela to Punta Carenero	2.95	West
<b>PRWC46*</b>	Punta Carenero to front of Cayo Ratones	4.00	West
<b>PRWC47*</b>	In front of Cayo Ratones to Punta Guanajibo	3.85	West
<b>PRWC48*</b>	Punta Guanajibo to Punta Algarrobo	5.60	West
<b>PRWC49*</b>	Punta Algarrobo to Punta Cadena	6.98	West
<b>PRWC50*</b>	Punta Cadena to Punta Higüero	4.98	West
<b>PRWC51*</b>	Punta Higüero to Punta del Boquerón	6.14	West
<b>PRWC52*</b>	Punta del Boquerón to Punta Borinquen	6.80	West
<b>PRCC53</b>	Culebra Island	32.70	Offshore Islands
<b>PRVC54A</b>	Bahía Mosquito	3.00	Offshore Islands
<b>PRVC54B**</b>	Vieques Island	67.60	Offshore Islands
<b>PRMC55</b>	Mona Island	18.60	Offshore Islands

\* AU with monitoring stations

\*\* AU with monitoring station only from the Beach Monitoring and Public Notification Program Network.

## 2.0 Monitoring Program

### 2.1 Permanent Water Quality Monitoring Network

The PRDNER monitoring activities for this reporting cycle (October 1, 2019, to September 30, 2021), 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 generated 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	Specific Conductance *
Enterococcus	Temperature
Flow *	NH <sub>3</sub> + NH <sub>4</sub> as N
Hardness*	Total Nitrogen
Nitrate + Nitrite as Nitrogen	Total Phosphorus
pH	Turbidity

\* Parameter that does not have numeric standard as establish in 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, 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 aforementioned remarks were used as a valid result for this assessment cycle.

- Clean Lakes Monitoring Network:** Operated by PRDNER, this network monitors water quality in 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. (See Table 13)

**Table 13: Lakes Monitoring Network**

<b>Basin</b>	<b>Water body (WB) name</b>	<b>WB size (acres)</b>	<b>2022 permanent monitoring station ID</b>
<b>RÍO GUAJATACA</b>	LAGO GUAJATACA PRNL3A1	1000 acres	10720 10790 10790C
<b>RÍO GRANDE DE ARECIBO</b>	LAGO DOS BOCAS PRNL <sub>1</sub> 7A1	634 acres	25110 27090 27090E
<b>RÍO GRANDE DE ARECIBO</b>	LAGO CAONILLAS PRNL <sub>2</sub> 7C1	700 acres	89001 89002 89003
<b>RÍO GRANDE DE ARECIBO</b>	LAGO GARZAS PRNL <sub>3</sub> 7A3	108 acres	20050
<b>RÍO GRANDE DE MANATÍ</b>	LAGO MATRULLAS PRNL <sub>2</sub> 8C1	77 acres	89009 89010
<b>RÍO DE LA PLATA</b>	LAGO LA PLATA PREL <sub>1</sub> 10A1	560 acres	44400 44950 44950C
<b>RÍO DE LA PLATA</b>	LAGO CARITE PREL <sub>2</sub> 10A5	333 acres	39900 39950 39950C
<b>RÍO BAYAMÓN</b>	LAGO CIDRA PREL12A2	268 acres	89029 89030 89031
<b>SAN JUAN BAY ESTUARY</b>	LAGO LAS CURIAS PREE13A2	55 acres	89027
<b>RÍO GRANDE DE LOIZA</b>	LAGO LOIZA PREL14A1	713 acres	57500 58800 58800D
<b>RÍO GRANDE DE PATILLAS</b>	LAGO PATILLAS PRSL43A1	312 acres	89022 89023 89024
<b>QUEBRADA MELANÍA</b>	LAGO MELANIA PRSL50A	35 acres	89026
<b>RÍO JACAGUAS</b>	LAGO GUAYABAL PRSL <sub>1</sub> 60A1	373 acres	89011 89012 89013
<b>RÍO JACAGUAS</b>	LAGO TOA VACA PRSL <sub>2</sub> 60A1	836 acres	89014 89015 89016
<b>RÍO BUCANÁ-CERRILLOS</b>	LAGO CERRILLOS PRSL62A1	700 acres	89032 89033 89034
<b>RÍO YAUCO</b>	LAGO LUCHETTI PRSL68A1	266 acres	89017 89018 89019
<b>RÍO LOCO</b>	LAGO LOCO PRSL69A	69 acres	89021C

Basin	Water body (WB) name	WB size (acres)	2022 permanent monitoring station ID
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
Enterococcus	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 (See Table 14). The network covers a total of four hundred nineteen-point one (419.01) coastal miles of PR's main island, out of a total 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
Enterococcus	Temperature
Turbidity	Total Nitrogen
***Oil and Grease	

\*\*\* 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	18° 29' 12.30"	66° 40' 33.92"	Every two months
SBZ-008	PRNC04	SB	18° 29' 03.84"	66° 34' 39.01"	Every two months
MAC-055	PRNC04	SB	18° 28' 54.93"	66° 32' 11.61"	Every two months
SEG5-01	PRNC05	SB	18° 28' 36.50"	66° 30' 24.80"	Every two months
SBZ-010	PRNC05	SB	18° 28' 22.50"	66° 29' 08.36"	Every two months
MAC-087	PRNC06	SB	18° 29' 30.80"	66° 23' 55.28"	Every two months
SEG7-01	PRNC07	SB	18° 29' 24.70"	66° 23' 40.49"	Every two months
MAC-088	PRNC07	SB	18° 28' 52.56"	66° 20' 26.81"	Every two months
SBZ-013	PRNC08	SB	18° 28' 32.86"	66° 19' 11.95"	Every two months
SBZ-014	PRNC08	SB	18° 28' 28.22"	66° 16' 51.88"	Every two months
SEG9-01	PREC09	SB	18° 28' 15.66"	66° 14' 47.38"	Every two months
MAC-077	PREC09	SB	18° 28' 21.27"	66° 11' 09.68"	Every two months
MAC-063	PREC10B	SB	18° 27' 17.64"	66° 10' 43.31"	Every two months
SEG10C-01	PREC10C	SB	18° 27' 09.58"	66° 09' 27.38"	Every two months
SEG10C-02	PREC10C	SB	18° 27' 55.18"	66° 08' 19.21"	Every two months
SBZ-019	PREC12	SB	18° 28' 01.72"	66° 05' 25.19"	Every two months
SBZ-018	PREC12	SB	18° 28' 00.23"	66° 05' 12.00"	Every two months
B-1	PREC13	SB	18° 27' 40.07"	66° 04' 56.67"	Every two months
B-2	PREC13	SB	18° 27' 10.84"	66° 02' 55.97"	Every two months
EB-40	PREC14	SB	18° 26' 38.73"	66° 01' 19.74"	Every two months
SEG14-01	PREC14	SB	18° 26' 45.50"	66° 00' 13.10"	Every two months
B-3	PREC14	SB	18° 27' 01.86"	65° 59' 48.63"	Every two months
SEG14-02	PREC14	SB	18° 27' 32.84"	66° 59' 34.27"	Every two months
SBZ-024	PREC15	SB	18° 27' 22.62"	65° 58' 25.74"	Every two months
SBZ-026	PREC15	SB	18° 26' 52.29"	65° 54' 22.43"	Every two months
SBZ-027	PREC16	SB	18° 26' 04.49"	65° 51' 08.34"	Every two months
SBZ-028	PREC16	SB	18° 25' 24.30"	65° 49' 44.73"	Every two months
SEG17-01	PREC17	SB	18° 24' 08.80"	65° 46' 19.90"	Every two months
MAC-009	PREC17	SB	18° 23' 05.67"	65° 43' 47.98"	Every two months
SBZ-030	PREC18	SB	18° 22' 54.72"	65° 43' 06.45"	Every two months
SEG23-01	PREC23	SB	18° 13' 29.20"	65° 37' 00.40"	Every two months
SEG20-02	PREC20	SB	18° 15' 46.10"	65° 37' 48.13"	Every two months
SEG20-01	PREC20	SB	18° 17' 06.10"	65° 37' 52.60"	Every two months
MAC-078	PREC19	SB	18° 20' 02.39"	65° 37' 48.76"	Every two months
MAC-010	PREC18	SB	18° 22' 10.45"	65° 38' 10.79"	Every two months
SEG24-02	PREC24	SB	18° 12' 10.90"	65° 40' 08.10"	Every two months
SEG25-01	PREC25	SB	18° 11' 22.80"	65° 43' 10.60"	Every two months
MAC-080	PREC25	SB	18° 11' 12.94"	65° 43' 33.48"	Every two months
MAC-081	PREC25	SB	18° 09' 27.90"	65° 45' 21.44"	Every two months
SEG26-01	PREC26	SB	18° 06' 32.70"	65° 47' 00.60"	Every two months
SEG27-01	PREC27	SB	18° 04' 52.64"	65° 47' 47.60"	Every two months
MAC-012	PREC28C	SB	18° 03' 45.70"	65° 49' 09.10"	Every two months
SBZ-040	PRSC32	SB	17° 58' 26.00"	65° 59' 19.00"	Every two months
SEG31-01	PRSC31	SB	17° 58' 23.50"	65° 56' 39.10"	Every two months
MAC-082	PREC30	SB	17° 59' 31.69"	65° 53' 28.32"	Every two months



Station number	AU ID	Classification (PRWQSR)	Coordinates		Frequency of sampling
			Latitude	Longitude	
SEG29-02	PREC29	SB	18° 00' 20.70"	65° 52' 16.60"	Every two months
SEG29-01	PREC29	SB	18° 00' 53.90"	65° 50' 44.50"	Every two months
SBZ-038	PREC28B	SB	18° 01' 44.54"	65° 49' 52.27"	Every two months
SBZ-037	PREC28C	SB	18° 02' 34.97"	65° 50' 00.06"	Every two months
MAC-020	PRSC35	SB	17° 57' 13.67"	66° 24' 22.76"	Every two months
SEG34-02	PRSC34	SB	17° 57' 35.60"	66° 22' 13.50"	Every two months
SEG34-01	PRSC34	SB	17° 58' 39.30"	66° 19' 56.90"	Every two months
MAC-019	PRSC34	SB	17° 57' 04.76"	66° 13' 34.38"	Every two months
MAC-017	PRSC33	SB	17° 55' 55.97"	66° 09' 03.62"	Every two months
SEG33-01	PRSC33	SB	17° 57' 46.18"	66° 03' 55.95"	Every two months
MAC-083	PRSC32	SB	17° 57' 43.14"	66° 02' 23.94"	Every two months
MAC-084	PRSC37B	SB	17° 58' 15.88"	66° 40' 38.16"	Every two months
MAC-023	PRSC36C	SB	17° 58' 54.05"	66° 37' 33.87"	Every two months
MAC-022	PRSC36C	SB	17° 58' 13.93"	66° 37' 04.75"	Every two months
SEG36B-01	PRSC36B	SB	17° 58' 09.40"	66° 36' 09.80"	Every two months
SEG35-02	PRSC35	SB	17° 58' 30.80"	66° 32' 09.40"	Every two months
PSEG35-01	PRSC35	SB	17° 59' 26.10"	66° 29' 11.20"	Every two months
MAC-030	PRSC39	SB	17° 57' 54.22"	66° 48' 33.45"	Every two months
MAC-028	PRSC38	SB	17° 59' 43.51"	66° 47' 06.50"	Every two months
MAC-089	PRSC38	SB	18° 00' 22.54"	66° 46' 06.00"	Every two months
MAC-027	PRSC38	SB	17° 59' 39.62"	66° 45' 43.21"	Every two months
MAC-025	PRSC37C	SB	17° 59' 00.12"	66° 45' 12.90"	Every two months
MAC-024	PRSC37C	SB	17° 59' 29.54"	66° 43' 53.30"	Every two months
SEG41B2-01	PRSC41B2	SB	17° 58' 24.30"	67° 02' 57.50"	Every two months
SBZ-046	PRSC41B2	SB	17° 58' 19.17"	66° 01' 55.12"	Every two months
SEG41B1-01	PRSC41B1	SB	17° 57' 40.30"	66° 58' 55.30"	Every two months
SBZ-045	PRSC41B1	SB	17° 56' 19.57"	66° 54' 21.05"	Every two months
MAC-034	PRSC40	SB	17° 57' 53.14"	66° 54' 30.46"	Every two months
MAC-085	PRSC40	SB	17° 57' 09.11"	66° 53' 04.42"	Every two months
SEG39-01	PRSC39	SB	17° 57' 22.80"	66° 51' 18.09"	Every two months
SEG41B3-01	PRSC41B3	SB	17° 57' 54.60"	67° 10' 44.40"	Every two months
SEG41B3-02	PRSC41B3	SB	17° 56' 07.60"	67° 11' 25.00"	Every two months
SEG42-01	PRWC42	SB	17° 57' 05.00"	67° 11' 47.80"	Every two months
SBZ-047	PRWC43	SB	17° 58' 29.26"	67° 12' 46.46"	Every two months
SBZ-048	PRWC43	SB	17° 58' 57.49"	67° 12' 55.51"	Every two months
MAC-037	PRWC43	SB	18° 01' 09.99"	67° 10' 20.08"	Every two months
SBZ-050	PRWC44	SB	18° 02' 56.20"	67° 11' 51.10"	Every two months
SBZ-051	PRWC44	SB	18° 03' 52.32"	67° 11' 51.10"	Every two months
SEG45-01	PRWC45	SB	18° 04' 24.40"	67° 11' 17.40"	Every two months
SBZ-052	PRWC46	SB	18° 05' 42.37"	67° 11' 42.36"	Every two months
SEG47-01	PRWC47	SB	18° 08' 26.60"	67° 10' 48.30"	Every two months
MAC-038	PRWC48	SB	18° 11' 41.18"	67° 09' 21.07"	Every two months
MAC-040	PRWC48	SB	18° 13' 19.02"	67° 10' 08.05"	Every two months
MAC-041	PRWC49	SB	18° 17' 16.31"	67° 11' 38.23"	Every two months
SEG49-01	PRWC49	SB	18° 17' 41.80"	67° 12' 36.00"	Every two months
SBZ-054	PRWC50	SB	18° 18' 47.81"	67° 14' 34.21"	Every two months

Station number	AU ID	Classification (PRWQSR)	Coordinates		Frequency of sampling
			Latitude	Longitude	
SBZ-055	PRWC50	SB	18° 20' 26.52"	67° 15' 22.16"	Every two months
SEG51-01	PRWC51	SB	18° 22' 14.20"	67° 15' 25.00"	Every two months
SEG51-02	PRWC51	SB	18° 23' 4.42"	67° 12' 45.81"	Every two months
MAC-043	PRWC52	SB	18° 24' 51.78"	67° 09' 42.05"	Every two months
SBZ-002	PRWC52	SB	18° 27' 28.01"	67° 09' 49.21"	Every two months
SBZ-003	PRNC01	SB	18° 29' 26.21"	67° 09' 25.09"	Every two months
SBZ-004	PRNC01	SB	18° 30' 51.24"	67° 04' 32.41"	Every two months
MAC-044	PRNC01	SB	18° 30' 30.49"	67° 01' 22.85"	Every two months
MAC-086	PRNC02	SB	18° 29' 23.21"	66° 57' 31.76"	Every two months
SBZ-006	PRNC02	SB	18° 29' 26.16"	66° 51' 21.16"	Every two months
MAC-047	PRNC02	SB	18° 29' 15.53"	66° 49' 42.50"	Every two months
SBZ-007	PRNC03	SB	18° 29' 34.51"	66° 47' 53.70"	Every two months
SEG3-01	PRNC03	SB	18° 28' 45.33"	66° 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 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 Clean Water Act (CWA) as amended by Beaches Environmental Assessment and Coastal Health Act (Beach Act) that requires compliance 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 EPA, 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 the 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 the national STORET database; however the data is available on the Internet through the water quality portal ([www.waterqualitydata.us/](http://www.waterqualitydata.us/)) or hardcopy files from its Caribbean Field Office.

## 2.2 Special Monitoring Projects

### Surface Water Assessment of Pesticides Sampling Plan 2020-2021

Pesticides are used in agriculture, in homes and businesses, on lawns and gardens, along roads, in recreational areas, and on pets and livestock. Pesticides released into the environment for agricultural and nonagricultural purposes can contaminate surface and groundwater, which are critical sources of drinking water.

As part of the assessment of pesticides under the Endangered Species Act (ESA), the United States Environmental Protection Agency (EPA) has the responsibility of registering a pesticide or reassessing the potential ecological risks from use of a currently registered pesticide. EPA evaluates extensive environmental fate and toxicity data to determine how a pesticide will move through and break down in the environment and whether potential exposure to the pesticide will result in adverse effects to wildlife and vegetation. They routinely assess risks to birds, fish, invertebrates, mammals, and plants to determine whether a pesticide may be licensed for use in the United States and Puerto Rico.

The EPA and the United States Fish and Wildlife Service (USFWS) have 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. At the present time, the presence of these Pesticides was not detected in any of the monitoring stations.

## 2.3 Water Quality Existing Data

The development of the Integrated Report (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 Quality Assurance and Quality Control (QA/QC) requirements established in the

Quality Assurance Project Plan (QAPP) for the use of Water Quality Existing Data for the Development of the 305(b)/303(d) IR, Rev. 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 AUs to be delisted.
- Objective 3: Develop and publish the 305(b)/303(d) IR.

The data requested and downloaded must be from the previous two federal fiscal years from the even-numbered year that comprises the assessment cycle (October 1, 2019, to September 30, 2021). 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 includes government agencies and non-governmental entities can be found in Table 15.

**Table 15: Government Agencies and Non-governmental Entities**

<b>Name</b>	<b>Position</b>	<b>Agency</b>
Eng. Umberto Donato	Chairman	Associated General Contractors of America PR Chapter
Ms. Irma López, Esq.	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. Juan F. Alicea Flores	Chairman	College of Engineers and Land Surveyors of PR
Mr. Alex R. Muñoz Lasalle	Director Auxiliary Secretariat of Agrocomercial Integrity	PR Department of Agriculture
Mr. Juan C. Muñoz Ruiz	Supervisor Pesticides Inspection Program PR Agrological Laboratory	PR Department of Agriculture
Mr. Raúl Santini	Environmental Coordinator II Coastal Zone Division	Department of Natural and Environmental Resources
Ms. Damaris Delgado	Acting Assistant Secretary, Auxiliary Secretary for Conservation and Research Coastal Zone Division Program	Department of Natural and Environmental Resources
Dr. Jorge Bauzá	Science Director	San Juan Bay Estuary Program

<b>Name</b>	<b>Position</b>	<b>Agency</b>
Mr. Sixto A. Machado Ríos	Director of 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 of Academic Affairs	Pontifical Catholic University of PR – Arecibo Campus
Ms. Jackeline Rosas Negrón	Director College of Science	Pontifical Catholic University of PR – Mayagüez Campus
Dr. Carlos Lugo Ortiz	Director Biology Department	Pontifical Catholic University of PR – Ponce Campus
Prof. Carmen Reyes Colón	Coordinator Environmental Sciences Program	Pontifical Catholic University of PR – Ponce Campus
Dr. Graciela I. Ramírez Toro	Director <i>Centro de Educación e Interpretación Ambiental (CECIA)</i>	Interamerican University of PR
Mr. Roberto Vargas	Director 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 PR Water Resources and Environmental Research Institute	University of PR – Mayagüez Campus
Dr. Ana Navarro Rodríguez	Associate Investigator Sea Grant College Program	University of PR– Mayagüez Campus
Dr. Francisco M. Monroig Salter	Director Agricultural Engineering Department	University of PR– Mayagüez Campus
Dr. Teresa Lipsett	Director Department of Natural Sciences and Technology	Turabo University
Eng. Héctor J. Cruzado	Director Department of Civil and Environmental Engineering	Polytechnic University of PR
Ms. María Calixta Ortiz Rivera	Dean School of Environmental Affairs	Metropolitan University of PR
Dr. Ángel A. Toledo López	Rector	Metropolitan University of PR
Dr. Fernando Crastz Peters	Associate Dean of School of Science and Technology	Metropolitan University of PR
Mr. Alex J. Ríos	Laboratory Administrator	Metropolitan University of PR
Mr. Karlos J. Malavé Llamas	Dean Academic 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

<b>Name</b>	<b>Position</b>	<b>Agency</b>
Ms. Marelisa Rivera	Deputy Field Supervisor	US Fish and Wildlife Service PR Field Office
Ms. 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. Ismael Pagán	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 of Community Relations	Vieques Conservation and Historical Trust
Dr. Roberto Viqueira	Executive Director	<i>Protectores de Cuencas, Inc.</i>
Ms. Deborah Rivera Velázquez	Director Environmental Affairs Department	Autonomous Municipality of Carolina
Ms. Marirosa Molina	Researcher Office of Research and Development (ORD)	Environmental Protection Agency
Ms. Autumn Oczkowski	Researcher Office of Research and Development (ORD)	Environmental Protection Agency
Mr. David Katz	Researcher Office of Research and Development (ORD)	Environmental Protection Agency

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

1. Mrs. Yazmin Laguer-EPA CEPD
  - a. DMR data (from the past two years 2019 to 2021) The DMR data is used to identify potential sources for water quality impairment.
  
2. San Juan Bay Estuary System Program
  - a. The monitoring network consists of 26 stations. (See Figure 5)
  - b. Parameters analyzed: Temperature, Dissolved Oxygen, Specific Conductance, Salinity, Turbidity, pH, Secchis Depth, Oil and Grease, Total Nitrate & Nitrite, Total Phosphorus, Enterococcus, Total Nitrogen Kjeldahl (TKN), TOC, Chlorophyll a, TSS, Ammonia and Fecal Coliform.
  - c. The SJBES Program has an approved QAPP by EPA.
  - d. This data will be used for the 2022 IR assessment.
  
3. USGS data:
  - a. The data was obtained from the following stations: 50048565 and 50048580, located in PREE13A1 assessment unit (San Juan Bay Estuary System Program).
  - b. Evaluated Parameters: Arsenic, Lead, Silver, Surfactants and Selenium.
  - c. This data was used for the 2022 IR assessment.

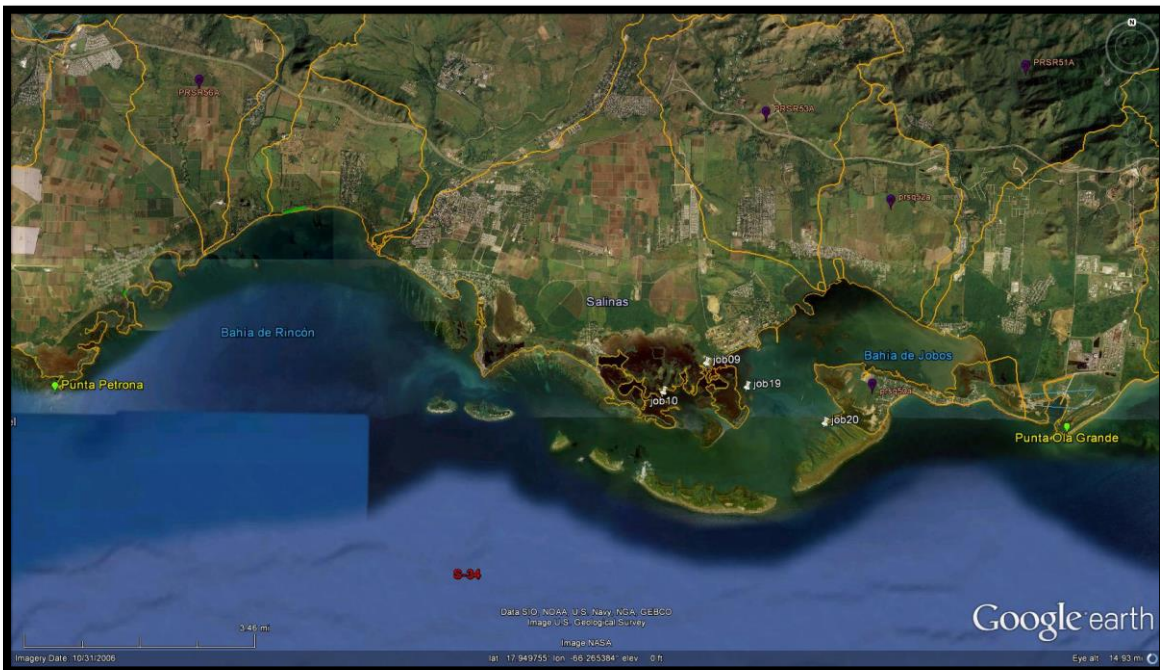
4. NOAA - Bahía de Jobos

- a. The data was obtained from 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 (See Figure 6).
- c. Parameters analyzed: Temperature, pH, Dissolved Oxygen and Turbidity.
- d. 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.*
- e. This data was used for the 2022 IR assessment.



***Figure 5: San Juan Bay Estuary System Monitoring Stations***





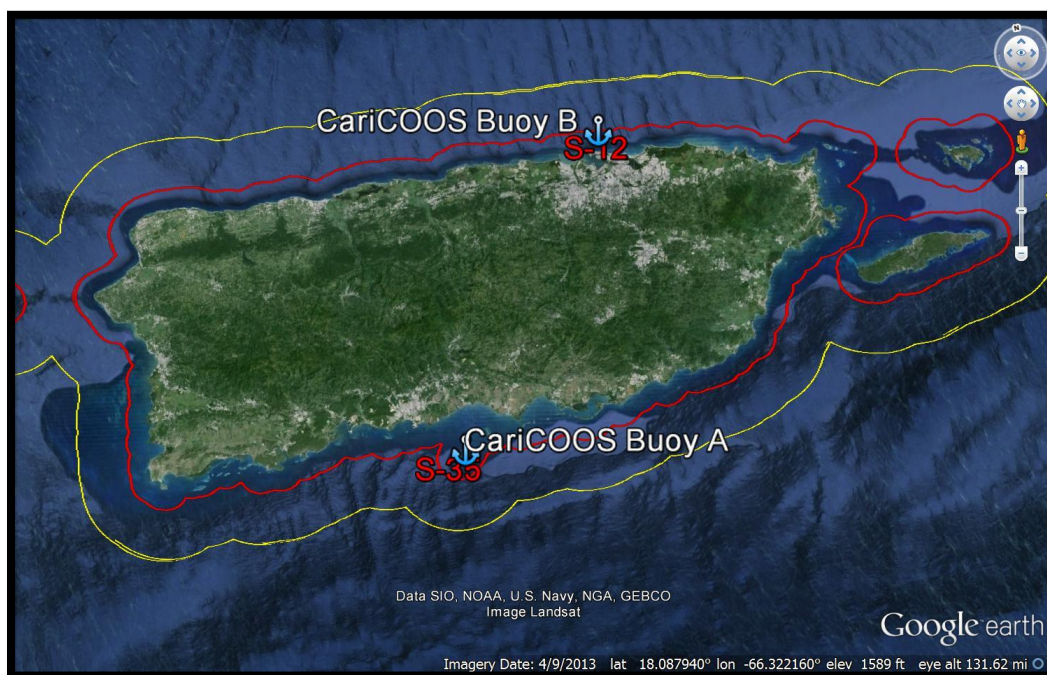
**Figure 6: NOAA - Bahía de Jobos Monitoring Stations**

#### 2.4 Water 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. (See 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 have accepted of 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. In an effort 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 April 11, 2019, 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 PRWQSR also includes the corresponding standards to protect each of the designated uses. All waters reported in the IR will be evaluated, based on availability of monitoring data and/or other available information to determine if they comply with the different

applicable water quality standards and whether the designated uses were attained. For assessment purposes, where the results of analysis are below the detection level, for the purposes of calculation, one half of the detection level will be used. In cases where the detection level is higher than the water quality standard, the PRDNER will not add the parameter to the 303(d) list unless the PRDNER has definitive data above the detection level. In the case of the Oil and Grease parameter, the applicable narrative water quality standard establishes that “The waters of Puerto Rico shall be substantially free from floating non-petroleum oils and greases as well as petroleum derived oils and greases.” This narrative standard is interpreted as zero concentration to reflect the absence of Oil and Grease. Since the lowest possible detection level for the analysis of Oil and Grease is 5 mg/L, the PRDNER will not add this parameter to the 303(d) list unless the PRDNER has definitive data above the detection level.

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

**CLASS SA** - Coastal or estuarine waters of exceptional quality 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. With the exception of 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 in order to preserve its natural characteristics.

The Table 16 and Table 17 summarize the existing applicable water quality standards that will be used to perform the assessment for the 2022 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) <sup>&amp;</sup>	-	87.0 (AL)
Antimony (Sb) <sup>+, &amp;</sup>	640.0 (HH)	5.6 (HH)
Arsenic (AS) <sup>*, +, &amp;</sup>	36.0 (AL)	10.0 (DW)
Cadmium (Cd) <sup>+, %, &amp;</sup>	7.95 (AL)	Note 1 (AL)
Chlorine	7.5 (AL)	11.0 (AL)
Cyanide (Free CN) <sup>+</sup>	1.0 (AL)	-
Cyanide <sup>+, &amp;</sup>	-	4.0 (HH)
Copper (Cu) <sup>+, &amp;</sup>	3.73 (AL)	Note 3 (AL)
Chromium III (Cr <sup>+3</sup> ) <sup>+, &amp;</sup>	-	Note 2 (AL)
Chromium VI (Cr <sup>+6</sup> ) <sup>+, &amp;</sup>	50.4 (AL)	11.4 (AL)
Fluoride (F)	-	4,000 (DW)
Lead (Pb) <sup>+, %, &amp;</sup>	8.52 (AL)	Note 6 (AL)
Mercury (Hg) <sup>+, &amp;</sup>	0.051 (HH)	0.050 (HH)
Nickel (Ni) <sup>+, &amp;</sup>	8.28 (AL)	Note 4 (AL)
Selenium (Se) <sup>+, &amp;</sup>	71.14 (AL)	5.0 (AL)
Silver (Ag) <sup>+, &amp;</sup>	2.24 (AL)	Note 5 (AL)
Sulfide (Undissociated H <sub>2</sub> S)	2.0 (AL)	2.0 (AL)
Thallium (Tl) <sup>+, &amp;</sup>	0.47 (HH)	0.24 (HH)
Zinc (Zn) <sup>+, &amp;</sup>	85.62 (AL)	Note 7 (AL)

**Note 1** - Concentration in ug/l must not exceed the numerical value given by  $e^{(0.7977 [\text{Ln Hardness}] - 3.909)}$

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

**Note 3** - Concentration in ug/l must not exceed the numerical value given by  $e^{(0.8545 [\text{Ln Hardness}] - 1.702)}$

**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 CaCO<sub>3</sub> 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 water body.

**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<sup>-5</sup>

+ 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.

& Numbers represent 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	15 Pt-Co.	Note 1

Parameter	SA	SB	SD	SE
		phenomena, as defined under this regulation		
Dissolved Oxygen	Note 1	Not less than 5 mg/L	Not less than 5 mg/L	Note 1
Enterococcus	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	86°F (30°C)	86°F (30°C)	86°F (30°C)	86°F (30°C)
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 of 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 1,700ug/L in any stream nor exceed 400ug/L in any reservoir or lake.

**Note 5** - Total Phosphorous shall not exceed 160 ug/L in any 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:

$$TAN = 0.8876 \times \left( \frac{0.0278}{1 + 10^{7.688-pH}} + \frac{1.1994}{1 + 10^{pH-7.688}} \right) \times (2.126 \times 10^{0.028 \times (20-T)})$$

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 Clean Water Act 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 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.

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 Epoxide
Beta-BHC	Heptachlor
Cyanide	Lindane (Gamma – BHC)
Chlorides	Mercury
Dieldrin	Thallium
4,4'-DDT	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 sources 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	Cyanide (Free CN)	Silver
Cadmium	Lead	Sulfide (Undissociated H <sup>2</sup> S)
Chromium III (Cr <sup>+3</sup> )	Mercury	Surfactants
Chromium VI (Cr <sup>+6</sup> )	Nickel	Thallium
Copper	Pesticides (Organochlorides)	Total, Ammonia Nitrogen
Cyanide	Selenium	Total, Nitrogen
Total, Phosphorus		Zinc

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

Dissolved Oxygen	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 perform taking into consideration the five (5) attainment categories currently required by EPA assessment guidelines. 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 standards with the

implementation of the adequate and corresponding control measures 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 (e.g., 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 is not included 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	3.50	67.60	33.62	0	0	0	441.91	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.,	3.8340 sq. mi.,	3.8340sq. mi.,

Waterbody type	Category							Total in state	Total assessed
	1	2	3	4a	4b	4c	5		
							18.8 mi	18.8 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	264.5	0	2,378.3	0	0	0	2,709.8	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 <sup>2</sup>

## 6.1 Rivers, Streams and Creeks

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

Causes of Impairments 2019-2021 Cycle		Causes of Impairments Summary
Causes of Impairments	Size of Waters Impaired* (miles)	Size of Waters Impaired (miles)
Ammonia	60.0	310.6
Arsenic	0	25.4
Chromium VI	2,555.1	2,555.1
Copper	187.1	594.8
Cyanide	90.0	90.0
Dissolved Oxygen	378	1,135.8
Enterococcus	2,555.1	2,555.1
Lead	54.7	301.5
Mercury	0	55.8
Pesticides	0	544.3
pH	261.2	931.5
Silver	0	14.6
Surfactants	0	241.3
Temperature	956.3	1,585.8
Total, Nitrogen	1,182.9	1,545.7
Total, Phosphorus	1,905.3	2,184.0
Turbidity	1,127.3	1,864.3

\* 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 2019-2021 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

<b>Potential Sources of Pollution 2019-2021 Cycle</b>		<b>Potential Sources of Pollution Summary</b>
<b>Potential Sources of Pollution</b>	<b>Size of Water Impaired (miles)</b>	<b>Size of Water Impaired (miles)</b>
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	2022 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	<i>Chromium VI</i> <i>Enterococcus Total, Nitrogen</i> <b>Cyanide</b> <b>Dissolved Oxygen</b>
	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	<i>Chromium VI</i> <i>Enterococcus Total, Nitrogen</i>
	QUEBRADA LAS SEQUÍAS PRNQ3B	3.5	SD		4a	4a	5	5	D F H, L	Confined Animal Feeding Operations Onsite Wastewater Systems	<i>Arsenic</i> <i>Dissolved Oxygen</i>
QUEBRADA BELLACA	QUEBRADA BELLACA PRNQ4A	1.7	SD		3	3	3	3	H	Confined Animal Feeding Operations Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
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	
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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Temperature</i> <i>Total, Phosphorus</i> <i>Turbidity</i>
	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Pesticides</i> <i>Temperature</i> <i>Total, Phosphorus</i> <i>Turbidity</i> <b>Total, Nitrogen</b>

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	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	<i>Chromium VI</i> <i>Enterococcus</i> <b>pH</b> <b>Total, Phosphorus</b>
	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <i>Turbidity</i>
	RÍO LIMÓN PRNR7C2	40.7	SD	NS 50026350	5	5	5	5	K	Agriculture Minor Industrial Point Sources Onsite Wastewater Systems	<i>Chromium VI</i> <i>Enterococcus</i> <i>Total, Nitrogen</i> <i>Turbidity</i>
	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Temperature</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <i>Turbidity</i>



Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	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 <i>Enterococcus</i> Total, Phosphorus Turbidity
<b>RÍO GRANDE DE MANATÍ</b>	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 <i>Enterococcus</i> Total, Phosphorus Turbidity <b>Temperature</b>
	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	<i>Chromium VI</i> <i>Copper</i> <i>Enterococcus</i> <i>Temperature</i> <i>Turbidity</i> <b>Total, Nitrogen</b> <b>Total, Phosphorus</b>
	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	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Turbidity</i>
	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	
	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <i>Turbidity</i>
	RÍO BOTIJAS PRNR8E2	19.1	SD		4a	4a	5	3	D H K	Confined Animal Feeding Operations Onsite Wastewater Systems	<i>pH</i>

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO CIBUCO</b>	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 <i>Enterococcus</i> Total, Nitrogen Total, Phosphorus Turbidity <b>Temperature</b>
	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	<i>Dissolved Oxygen</i>

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 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	
<b>RIO DE LA PLATA</b>	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	<i>Chromium VI</i> <i>Dissolved Oxygen</i> <i>Enterococcus</i> <i>Temperature</i>
	RÍO DE LA PLATA PRER10A2	14.3	SD		4a	4a	3	3	B H	Confined Animal Feeding Operations Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Total, Phosphorus</i> <i>pH</i>
	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>pH</i> <i>Temperature</i> <i>Total, Phosphorus</i> <i>Turbidity</i>
	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	<i>Chromium VI</i> <i>Copper</i> <i>Enterococcus</i> <i>Lead</i> <i>pH</i> <i>Total, Phosphorus</i>
	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	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i>
	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Total, Phosphorus</i>
	RÍO HONDO PRER10H	25.6	SD		4a	4a	3	3	B H	Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>pH</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i>
	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	<i>pH</i>
<b>RÍO HONDO</b>	RÍO HONDO PRER11A	22.0	SD		4a	4a	5	3	D F, H	Collection System Failure Urban Runoff/Storm Sewers	<i>Dissolved Oxygen</i> <i>Surfactants</i>



Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
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	<i>Ammonia</i> <i>Chromium VI</i> <i>Enterococcus</i> <i>pH</i> <i>Total, Nitrogen</i> <b>Temperature</b>
	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	<i>Chromium VI</i> <i>Enterococcus</i>
	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	<i>Chromium VI</i> <i>Dissolved Oxygen</i> <i>Enterococcus</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i>
	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	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO GRANDE DE LOIZA</b>	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	<i>Chromium VI</i> <i>Enterococcus Total, Phosphorus</i> <i>Turbidity</i> <b>Temperature</b>
	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Pesticides</i> <i>Total, Phosphorus</i> <i>Turbidity</i> <b>Temperature</b>
	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	<i>Dissolved Oxygen</i>
	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	<i>Dissolved Oxygen</i>

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	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	
	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Temperature</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <i>Turbidity</i>
	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	<i>Ammonia</i> <i>Chromium VI</i> <i>Enterococcus</i> <i>pH</i> <i>Surfactants</i> <i>Total, Phosphorus</i> <i>Turbidity</i> <b>Total, Nitrogen</b>

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i>
	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Surfactants</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <i>Turbidity</i> <b>Temperature</b>
	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	<i>Chromium VI</i> <i>Copper</i> <i>Enterococcus</i> <i>Lead</i> <i>Temperature</i> <i>Total, Phosphorus</i> <i>Turbidity</i>
	RÍO CAYAGUAS PRER14K	38.5	SD	NS 50051500	5	5	5	5	C	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	<i>Chromium VI</i> <i>Copper</i> <i>Enterococcus</i> <i>Total, Phosphorus</i> <i>Turbidity</i> <b>Temperature</b> <b>Total, Nitrogen</b>
	RÍO EMAJAGUA PRER14L	8.5	SD		4a	4a	3	3	C H	Minor Industrial Point Sources Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO HERRERA</b>	RÍO HERRERA PRER15A	17.0	SD		4a	4a	5	5	D F H	Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	<i>Dissolved Oxygen</i> <i>Turbidity</i>
<b>RÍO ESPÍRITU SANTO</b>	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	<i>Chromium VI</i> <i>Enterococcus</i>
	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	
<b>RÍO MAMEYES</b>	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	
<b>QUEBRADA MATA DE PLÁTANO</b>	QUEBRADA MATA DE PLÁTANO PREQ18A	4.0	SD		4a	4a	5	3	D F H	Onsite Wastewater Systems Urban Runoff/Storm Sewers	<i>Dissolved Oxygen</i> <i>Surfactants</i>
<b>RÍO SÁBANA</b>	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	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	RÍO SÁBANA PRER19A1	18.0	SD		4a	4a	3	3	D H J	Confined Animal Feeding Operations Onsite Wastewater Systems	
<b>RÍO JUAN MARTÍN</b>	RÍO JUAN MARTÍN PRER20A	7.8	SD		4a	4a	3	3	D H, J	Onsite Wastewater Systems	
<b>QUEBRADA FAJARDO</b>	QUEBRADA FAJARDO PREQ21A	10.0	SD		4a	4a	5	3	D H J	Collection System Failure Onsite Wastewater Systems	<i>Dissolved Oxygen pH Temperature</i>
<b>RÍO FAJARDO</b>	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	<i>Chromium VI Enterococcus Temperature Total, Nitrogen Total, Phosphorus</i>
<b>RÍO DEMAJAGUA</b>	RÍO DEMAJAGUA PRER23A	2.8	SD		4a	4a	5	3	D H, J	Onsite Wastewater Systems	<i>Dissolved Oxygen</i>
<b>QUEBRADA CEIBA</b>	QUEBRADA CEIBA PREQ24A	5.0	SD		4a	4a	5	3	D H, J	Onsite Wastewater Systems	<i>Dissolved Oxygen Surfactants</i>
<b>QUEBRADA AGUAS CLARAS</b>	QUEBRADA AGUAS CLARAS PREQ25A	4.8	SD		4a	4a	5	3	D H J	Onsite Wastewater Systems Urban Runoff/Storm Sewers	<i>Dissolved Oxygen</i>
<b>RÍO DAGUAO</b>	RÍO DAGUAO PRER26A	13.8	SD		4a	4a	5	3	D H J	Confined Animal Feeding Operations Onsite Wastewater Systems	<i>Dissolved Oxygen</i>
<b>QUEBRADA PALMA</b>	QUEBRADA PALMA PREQ27A	11.8	SD		4a	4a	3	3	H J	Confined Animal Feeding Operations Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>QUEBRADA BOTIJAS</b>	QUEBRADA BOTIJAS PREQ28A	7.4	SD		4a	4a	5	3	D H J	Confined Animal Feeding Operations Onsite Wastewater Systems	<i>Dissolved Oxygen</i>
<b>RÍO SANTIAGO</b>	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	
<b>RÍO BLANCO</b>	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	<i>Turbidity</i>
	QUEBRADA PEÑA POBRE PREQ30B	13.4	SD		4a	4a	5	3	D H J	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	<i>Dissolved Oxygen</i>
<b>RÍO ANTÓN RUIZ</b>	RÍO ANTÓN RUIZ PRER31A	16.9	SD		4a	4a	5	3	D H J	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	<i>Dissolved Oxygen Temperature</i>
	QUEBRADA MULAS PREQ31A1	3.5	SD		4a	4a	3	3	H J	Confined Animal Feeding Operations Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>QUEBRADA FRONTERA</b>	QUEBRADA FRONTERA PREQ32A	8.5	SD		4a	4a	5	3	D H J	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems	<i>Dissolved Oxygen</i>
<b>RÍO HUMACAO</b>	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	<i>Ammonia Chromium VI Copper Enterococcus Mercury pH Temperature Total, Nitrogen Total, Phosphorus Turbidity</i>
<b>RÍO CANDELERO</b>	RÍO CANDELERO PRER34A	10.4	SD		4a	4a	5	3	D F H	Confined Animal Feeding Operations Onsite Wastewater Systems	<i>Dissolved Oxygen</i>
<b>RÍO GUAYANÉS</b>	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	<i>Chromium VI Copper Enterococcus Lead pH Total, Phosphorus Turbidity <b>Temperature Total, Nitrogen</b></i>
	RÍO INGENIO PRER35A1	32.6	SD		4a	4a	3	3	F H	Confined Animal Feeding Operations Onsite Wastewater Systems	



Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>QUEBRADA EMAJAGUA</b>	QUEBRADA EMAJAGUA PREQ36A	2.5	SD		4a	4a	3	3	H J	Onsite Wastewater Systems	
<b>RÍO MAUNABO</b>	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Temperature</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <i>Turbidity</i>
<b>QUEBRADA MANGLILLO</b>	QUEBRADA MANGLILLO PRSQ38A	1.0	SD		4a	4a	3	3	H J	Onsite Wastewater Systems	
<b>QUEBRADA FLORIDA</b>	QUEBRADA FLORIDA PRSQ39A	3.0	SD		N/A	N/A	N/A	N/A	H L		
<b>RÍO JACABOA</b>	RÍO JACABOA PRSR40A	13.0	SD		4a	4a	3	3	H J L	Confined Animal Feeding Operations Onsite Wastewater Systems	
<b>QUEBRADA PALENQUE</b>	QUEBRADA PALENQUE PRSQ41A	1.0	SD		4a	4a	5	3	D, H J, L	Onsite Wastewater Systems	<i>Dissolved Oxygen</i>
<b>RÍO CHICO</b>	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	<i>Ammonia</i> <i>Copper</i> <i>Dissolved Oxygen</i> <i>Silver</i> <i>Surfactants</i> <i>Total, Phosphorus</i>

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO GRANDE DE PATILLAS</b>	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>pH</i>
	RÍO MARÍN PRSR43B	8.7	SD		4a	4a	3	3	H J	Onsite Wastewater Systems	
<b>QUEBRADA YAUREL</b>	QUEBRADA YAUREL PRSQ44A	6.0	SD		4a	4a	3	3	H J, L	Onsite Wastewater Systems	
<b>RÍO NIGUAS DE ARROYO</b>	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	
<b>QUEBRADA SALADA</b>	QUEBRADA SALADA PRSQ46A	1.7	SD		4a	4a	3	3	H J, L	Onsite Wastewater Systems Surface Mining	
<b>QUEBRADA CORAZÓN</b>	QUEBRADA CORAZÓN PRSQ47A	9.7	SD		4a	4a	3	3	H J L	Confined Animal Feeding Operations Onsite Wastewater Systems	
<b>QUEBRADA BRANDERI</b>	QUEBRADA BRANDERI PRSQ48A	4.5	SD		4a	4a	3	3	H J, L	Collection System Failure Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO GUAMANÍ</b>	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	<i>Temperature</i>
<b>QUEBRADA MELANÍA</b>	QUEBRADA MELANÍA PRSQ50A	7.0	SD		4a	4a	5	3	D H J, L	Landfill Onsite Wastewater Systems Urban Runoff/Storm Sewers	<i>Dissolved Oxygen</i>
<b>RÍO SECO</b>	RÍO SECO PRSR51A	24.7	SD		4a	4a	5	3	D, H J, L	Agriculture Onsite Wastewater Systems	<i>Dissolved Oxygen</i>
<b>QUEBRADA AMORÓS</b>	QUEBRADA AMORÓS PRSQ52A	0.7	SD		4a	4a	5	3	D H J, L	Agriculture Collection System Failure Onsite Wastewater Systems	<i>Dissolved Oxygen</i> pH
<b>QUEBRADA AGUAS VERDES</b>	QUEBRADA AGUAS VERDES PRSQ53A	15.0	SD		4a	4a	5	3	D F H, L	Confined Animal Feeding Operations Onsite Wastewater Systems	<i>Dissolved Oxygen</i>
<b>RÍO NIGUAS DE SALINAS</b>	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	<i>Dissolved Oxygen</i>
<b>RÍO JUEYES</b>	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	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO CAYURES</b>	RÍO CAYURES PRSR56A	5.0	SD		4a	4a	5	3	D, H J, L	Agriculture Onsite Wastewater Systems	<i>Dissolved Oxygen</i> <i>Surfactants</i>
<b>RÍO COAMO</b>	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>pH</i> <i>Total, Nitrogen</i> <b>Cyanide</b> <b>Temperature</b>
	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	<i>Temperature</i>
<b>RÍO DESCALABRADO</b>	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	
<b>RÍO CAÑAS</b>	RÍO CAÑAS PRSR59A	8.0	SD		4a	4a	3	3	H J, L	Agriculture Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO JACAGUAS</b>	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	
<b>RÍO INABÓN</b>	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	
<b>RÍO BUCANÁ-CERRILLOS</b>	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	<i>Chromium VI</i> <i>Dissolved Oxygen</i> <i>Enterococcus</i> <i>Temperature</i>
	RIO BUCANÁ-CERRILLOS PRSR62A2	32.6	SD	NS 50113800	5	5	5	5	J	Agriculture Minor Industrial Point Sources Onsite Wastewater Systems	<i>Chromium VI</i> <i>Enterococcus</i> <i>pH</i> <i>Total, Phosphorus</i> <i>Turbidity</i>

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO PORTUGUÉS</b>	RÍO 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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Temperature</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <i>Turbidity</i>
<b>RÍO MATILDE – PASTILLO</b>	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	<i>Temperature</i>
	QUEBRADA DEL AGUA PRSQ64A1	8.0	SD		4a	4a	3	3	H J, L	Onsite Wastewater Systems	
<b>RÍO TALLABOA</b>	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	<i>pH</i> <i>Temperature</i>
<b>RÍO MACANÁ</b>	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	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO GUAYANILLA</b>	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	<i>Ammonia</i> <i>Chromium VI</i> <i>Dissolved Oxygen</i> <i>Enterococcus</i> <i>Temperature</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <i>Turbidity</i>
<b>RÍO YAUCO</b>	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	<i>Dissolved Oxygen</i> <i>Total, Phosphorus</i>
	RÍO YAUCO PRSR68A2	18.3	SD		4a	4a	3	3	F H, L	Agriculture Onsite Wastewater Systems	
<b>RÍO LOCO</b>	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	<i>Dissolved Oxygen</i> <i>Temperature</i> <i>Turbidity</i>
	RÍO LOCO PRSR69A2	19.5	SD		4a	4a	3	3	F H	Agriculture Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO ARROYO CAJUL</b>	RÍO ARROYO CAJUL PRSR70A	7.4	SD		4a	4a	3	3	H J, L	Onsite Wastewater Systems	
<b>QUEBRADA BOQUERÓN</b>	QUEBRADA BOQUERÓN PRWQ71A	11.7	SD		4a	4a	3	3	H J	Minor Industrial Point Sources Onsite Wastewater Systems	
<b>QUEBRADA ZUMBÓN</b>	QUEBRADA ZUMBÓN PRWQ72A	1.7	SD		4a	4a	5	3	D, H J, L	Collection System Failure Onsite Wastewater Systems	<i>Dissolved Oxygen Surfactants</i>
<b>QUEBRADA GONZÁLEZ</b>	QUEBRADA GONZÁLEZ PRWQ73A	1.8	SD		4a	4a	5	3	D, H J, L	Onsite Wastewater Systems	<i>Dissolved Oxygen</i>
<b>QUEBRADA LOS PAJARITOS</b>	QUEBRADA LOS PAJARITOS PRWQ74A	2.7	SD		4a	4a	5	3	D H J, L	Onsite Wastewater Systems	<i>Dissolved Oxygen</i>
<b>CAÑO CONDE ÁVILA</b>	CAÑO CONDE ÁVILA PRWK75A	4.0	SD		4a	4a	3	3	H J	Onsite Wastewater Systems	
<b>QUEBRADA IRIZARRY</b>	QUEBRADA IRIZARRY PRWQ76A	2.0	SD		4a	4a	3	3	H J	Onsite Wastewater Systems	
<b>RIO GUANAJIBO</b>	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	<i>Chromium VI Dissolved Oxygen Enterococcus Total, Phosphorus</i>
	RIO HONDO PRWR77B	17.2	SD		4a	4a	3	3	F H	Onsite Wastewater Systems Urban Runoff/Storm Sewers	



Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Pesticides</i> <b>Total, Phosphorus</b> <b>Turbidity</b>
	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	<i>Chromium VI</i> <i>Dissolved Oxygen</i> <i>Enterococcus</i> <i>Total, Phosphorus</i> <i>Turbidity</i> <b>Cyanide</b>
	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	
	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	<i>Pesticides</i>
	RÍO CRUCES PRWR77H	13.8	SD		4a	4a	3	3	F H	Collection System Failure Onsite Wastewater Systems Urban Runoff/Storm Sewers	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	RÍO GRANDE PRWR77I	22.5	SD		4a	4a	3	3	F H	Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	
<b>CAÑO MERLE</b>	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	<i>Dissolved Oxygen</i> <i>Surfactants</i>
	QUEBRADA SÁBALO PRWQ78A1	9.5	SD		4a	4a	3	3	H J, L	Onsite Wastewater Systems	
<b>RÍO YAGÜEZ</b>	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	<i>Chromium VI</i> <i>Enterococcus</i>
<b>QUEBRADA DEL ORO</b>	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	
<b>CAÑO MANÍ</b>	CAÑO MANÍ PRWK81A	3.0	SD		3	3	3	3	H	Onsite Wastewater Systems	
<b>CAÑO BOQUILLA</b>	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	2022 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	
<b>RÍO GRANDE DE AÑASCO</b>	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	<i>Chromium VI</i> <i>Enterococcus</i> <i>Turbidity</i> <b>pH</b>
	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	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	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	
	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	<i>Pesticides</i>
<b>QUEBRADA JUSTO</b>	QUEBRADA JUSTO PRWQ84A	1.0	SD		3	3	3	3	H L	Onsite Wastewater Systems	
<b>QUEBRADA ICACOS</b>	QUEBRADA ICACOS PRWQ85A	1.4	SD		3	3	3	3	H L	Onsite Wastewater Systems	
<b>QUEBRADA CAGUABO</b>	QUEBRADA CAGUABO PRWQ86A	1.0	SD		3	3	3	3	H L	Onsite Wastewater Systems	
<b>CAÑO GARCÍA</b>	CAÑO GARCÍA PRWK87A	2.0	SD		3	3	3	3	H L	Onsite Wastewater Systems	
<b>QUEBRADA GRANDE DE CALVACHE</b>	QUEBRADA GRANDE DE CALVACHE PRWQ88A	14.8	SD		3	3	3	3	D H L	Onsite Wastewater Systems	
<b>QUEBRADA LOS RAMOS</b>	QUEBRADA LOS RAMOS PRWQ89A	6.9	SD		3	3	5	3	D H L	Confined Animal Feeding Operations Landfill Onsite Wastewater Systems	<i>Dissolved Oxygen</i>

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>QUEBRADA PUNTA ENSENADA</b>	QUEBRADA PUNTA ENSENADA PRWQ90A	5.0	SD		3	3	3	3	H L	Collection System Failure Onsite Wastewater Systems	
<b>QUEBRADA PILETAS</b>	QUEBRADA PILETAS PRWQ91A	2.0	SD		3	3	5	3	D H, L	Onsite Wastewater Systems	<i>Dissolved Oxygen</i>
<b>RÍO GRANDE</b>	RÍO GRANDE PRWR92A	21.8	SD		3	3	3	3	H L	Onsite Wastewater Systems	
<b>CAÑO DE SANTI PONCE</b>	CAÑO DE SANTI PONCE PRWK93A	4.8	SD		4a	4a	3	3	H J, L	Collection System Failure Onsite Wastewater Systems	
<b>RÍO GUAYABO</b>	RÍO GUAYABO PRWR94A	43.1	SD		4a	4a	3	3	H J	Collection System Failure Onsite Wastewater Systems Urban Runoff/Storm Sewers	
<b>RIO CULEBRINAS</b>	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	<i>Chromium VI Copper Enterococcus Pesticides Total, Nitrogen Total, Phosphorus Turbidity</i>
	RIO CAÑO (RÍO CAÑAS) PRWR95B	33.3	SD		4a	4a	3	3	H K	Onsite Wastewater Systems Urban Runoff/Storm Sewers	

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					R1	R2	AL	DW			
	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	<i>Dissolved Oxygen Pesticides</i>
	QUEBRADA EL SALTO PRWQ95G	7.8	SD		4a	4a	5	3	D H. K	Agriculture Onsite Wastewater Systems	<i>Dissolved Oxygen</i>
	QUEBRADA GRANDE DE LA MAJAGUA PRWQ95H	5.6	SD		4a	4a	5	5	D H K	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	<i>Pesticides</i>
	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	

Basin	Waterbody Name (AU ID)	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
	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	
<b>CAÑO CORAZONES</b>	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 2022 Cycle (New added causes).**

*Italicized and black causes were listed into and/or prior to 2022 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 2022 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

6.2 Estuaries

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

Causes of Impairments 2019-2021 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 2019-2021 Cycle		Potential Sources of Pollution Summary
Potential Sources of Pollution	Size of Waters Impaired (sq. mi.)	Size of Waters Impaired (sq. mi.)
Agriculture	0.2635	0.2635
Collection System Failure	3.2261	3.2261
Confined Animal Feeding Operations	2.2829	2.2829
Landfill	0.9300	0.9300
Major Industrial Point Sources	0.2964	0.2964
Major Municipal Point Sources	1.5296	1.5296
Minor Industrial Point Sources	0.2232	0.2232
Onsite Wastewater Systems	4.3083	4.3083
Surface Mining	0.2298	0.2298
Upstream Impoundment	0.4596	0.4596
Urban Runoff/Storm Sewers	3.067	3.0678



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

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi.)	Class	2022 Monitoring Stations	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO GUAJATACA PRNR3A</b>	RÍO GUAJATACA PRNE3A	0.048	SB		3	3	3	N/A	H	Onsite Wastewater Systems Surface Mining Urban Runoff/Storm Sewers	
<b>QUEBRADA BELLACA PRNQ4A</b>	QUEBRADA BELLACA PRNE4A	0.0042	SB		3	3	3	N/A	H	Onsite Wastewater Systems	
<b>RÍO CAMUY PRNR5A</b>	RÍO CAMUY PRNE5A	0.042	SB		4a	4a	3	N/A	F H	Onsite Wastewater Systems	
<b>RÍO GRANDE DE ARECIBO PRNR7A</b>	RÍO GRANDE DE ARECIBO PRNE7A	0.0847	SB		4a	4a	3	N/A	H K	Agriculture Urban Runoff/Storm Sewers	
<b>CAÑO TIBURONES PRNE7.1</b>	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	
<b>RÍO GRANDE DE MANATÍ PRNR8A</b>	RÍO GRANDE DE MANATÍ PRNE8A	0.2576	SB		4a	4a	3	N/A	H K	Urban Runoff/Storm Sewers	
<b>RÍO CIBUCO PRNR9A</b>	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 Source Onsite Wastewater Systems Urban Runoff/Storm Sewers	

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi.)	Class	2022 Monitoring Stations	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO DE LA PLATA PRER10A</b>	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	
<b>RÍO GRANDE DE LOIZA PRER14A</b>	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	
<b>RÍO HERRERA PRER15A</b>	RÍO HERRERA PREE15A	0.102	SB		4a	4a	5	N/A	D F, H	Landfill Onsite Wastewater Systems	<i>Surfactants</i>
<b>RÍO ESPÍRITU SANTO PRER16A</b>	RÍO ESPÍRITU SANTO PREE16A	0.5758	SB		4a	4a	5	N/A	D F H	Collection System Failure Onsite Wastewater Systems	<i>Dissolved Oxygen Surfactants</i>
<b>CAÑO RODRÍGUEZ PREK16.1</b>	CAÑO RODRÍGUEZ PREE16.1	0.108	SB		3	3	3	N/A	H	Minor Industrial Point Sources Onsite Wastewater Systems	
<b>RÍO MAMEYES PRER17A</b>	RÍO MAMEYES PREE17A	0.1674	SB		4a	4a	3	N/A	F H	Onsite Wastewater Systems Surface Mining	
<b>RÍO SABANA PRER19A</b>	RÍO SABANA PREE19A	0.0288 mi <sup>2</sup>	SB		4a	4a	3	N/A	H J	Urban Runoff/Storm Sewers	
<b>RÍO JUAN MARTÍN PRER20A</b>	RÍO JUAN MARTÍN PREE20A	0.0028	SB		4a	4a	3	N/A	H J	Urban Runoff/Storm Sewers	
<b>RÍO FAJARDO PRER22A</b>	RÍO FAJARDO PREE22A	0.068	SB		4a	4a	3	N/A	H J	Collection System Failure Urban Runoff/Storm Sewers	
<b>RÍO DEMAJAGUA PRER23A</b>	RÍO DEMAJAGUA PREE23A	0.0028	SB		4a	4a	5	N/A	D H, J	Collection System Failure Urban Runoff/Storm Sewers	<i>Turbidity</i>

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi.)	Class	2022 Monitoring Stations	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>QUEBRADA AGUAS CLARAS PREQ25A</b>	QUEBRADA AGUAS CLARAS PREE25A	0.0024	SB		4a	4a	3	N/A	H J	Upstream Impoundment	
<b>RÍO DAGUAO PRER26A</b>	RÍO DAGUAO PREE26A	0.0672	SB		4a	4a	3	N/A	H J	Upstream Impoundment	
<b>QUEBRADA PALMA PREQ27A</b>	QUEBRADA PALMA PREE27A	0.005	SB		4a	4a	3	N/A	H J	Upstream Impoundment	
<b>QUEBRADA BOTIJAS PREQ28A</b>	QUEBRADA BOTIJAS PREE28A	0.0192	SB		4a	4a	3	N/A	H J	Upstream Impoundment	
<b>RÍO SANTIAGO PRER29A</b>	RÍO SANTIAGO PREE29A	0.0252	SB		4a	4a	3	N/A	H J	Onsite Wastewater Systems	
<b>RÍO BLANCO PRER30A</b>	RÍO BLANCO PREE30A	0.0512	SB		4a	4a	3	N/A	H J	Upstream Impoundment	
<b>RÍO ANTON RUIZ PRER31A</b>	RÍO ANTÓN RUIZ PREE31A	0.1296	SB		4a	4a	3	N/A	H J	Upstream Impoundment	
<b>RÍO HUMACAO PRER33A</b>	RÍO HUMACAO PREE33A	0.124	SB		4a	4a	3	N/A	F H	Collection System Failure Landfill Onsite Wastewater Systems	
<b>RÍO CANDELERO PRER34A</b>	RÍO CANDELERO PREE34A	0.078	SB		4a	4a	5	N/A	D F, H	Collection System Failure	<i>Dissolved Oxygen Temperature</i>
<b>RÍO GUAYANÉS PRER35A</b>	RÍO GUAYANÉS PREE35A	0.0364	SB		4a	4a	5	N/A	F H	Agriculture Collection System Failure Onsite Wastewater Systems	<i>Arsenic Turbidity</i>
<b>CAÑO SANTIAGO PREK35.1</b>	CAÑO SANTIAGO PREE35.1	0.1152	SB		4a	4a	5	N/A	D F H	Agriculture Collection System Failure Landfill Major Municipal Point Sources	<i>Dissolved Oxygen Surfactants Turbidity</i>

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi.)	Class	2022 Monitoring Stations	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
										Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	
<b>RÍO CHICO PRSR42A</b>	RÍO CHICO PRSE42A	0.008	SB		4a	4a	3	N/A	H J, L	Onsite Wastewater Systems	
<b>RÍO GRANDE DE PATILLAS PRSR43A</b>	RÍO GRANDE DE PATILLAS PRSE43A	0.0136	SB		4a	4a	3	N/A	H J	Upstream Impoundment Urban Runoff/Storm Sewers	
<b>QUEBRADA SALADA PRSQ46A</b>	QUEBRADA SALADA PRSE46A	0.006	SB		4a	4a	3	N/A	H J L	Onsite Wastewater Systems Surface Mining	
<b>QUEBRADA CORAZÓN PRSQ47A</b>	QUEBRADA CORAZÓN PRSE47A	0.0054	SB		4a	4a	3	N/A	H J L	Onsite Wastewater Systems	
<b>QUEBRADA BRANDERI PRSQ48A</b>	QUEBRADA BRANDERI PRSE48A	0.012	SB		4a	4a	3	N/A	H J L	Onsite Wastewater Systems	
<b>QUEBRADA MELANÍA PRSQ50A</b>	QUEBRADA MELANÍA PRSE50A	0.012	SB		4a	4a	3	N/A	H J L	Onsite Wastewater Systems	
<b>RÍO SECO PRSR51A</b>	RÍO SECO PRSE51A	0.0036	SB		4a	4a	3	N/A	H J, L	Urban Runoff/Storm Sewers	
<b>QUEBRADA AMORÓS PRSQ52A</b>	QUEBRADA AMORÓS PRSE52A	0.0042	SB		4a	4a	3	N/A	H J L	Urban Runoff/Storm Sewers	
<b>QUEBRADA AGUAS VERDES PRSQ53A</b>	QUEBRADA AGUAS VERDES PRSE53A	0.0036	SB		4a	4a	3	N/A	F H L	Upstream Impoundment Urban Runoff/Storm Sewers	

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi.)	Class	2022 Monitoring Stations	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO NIGUAS DE SALINAS PRSR54A</b>	RÍO NIGUAS DE SALINAS PRSE54A	0.011	SB		4a	4a	3	N/A	F H L	Onsite Wastewater Systems Upstream Impoundment	
<b>RÍO COAMO PRSR57A</b>	RÍO COAMO PRSE57A	0.0114	SB		4a	4a	3	N/A	H J, L	Agriculture Upstream Impoundment	
<b>RÍO DESCALABRADO PRSR58A</b>	RÍO DESCALABRADO PRSE58A	0.0048	SB		4a	4a	3	N/A	H J	Agriculture	
<b>RÍO JACAGUAS PRSR60A</b>	RÍO JACAGUAS PRSE60A	0.011	SB		4a	4a	3	N/A	F H, L	Agriculture Onsite Wastewater Systems	
<b>RÍO INABÓN PRSR61A</b>	RÍO INABÓN PRSE61A	0.0036	SB		4a	4a	3	N/A	F H	Urban Runoff/Storm Sewers	
<b>RÍO MATILDE- PASTILLO PRSR64A</b>	RÍO MATILDE- PASTILLO PRSE64A	0.0432	SB		4a	4a	5	N/A	D H J, L	Onsite Wastewater Systems Urban Runoff/Storm Sewers	<i>Turbidity</i>
<b>RÍO TALLABOA PRSR65A</b>	RÍO TALLABOA PRSE65A	0.0336	SB		4a	4a	5	N/A	D, H J, L	Onsite Wastewater Systems Urban Runoff/Storm Sewers	<i>Turbidity</i>
<b>RÍO MACANÁ PRSR66A</b>	RÍO MACANÁ PRSE66A	0.0036	SB		4a	4a	3	N/A	H J, L	Urban Runoff/Storm Sewers	
<b>RÍO YAUCO PRSR68A</b>	RÍO YAUCO PRSE68A	0.003	SB		4a	4a	3	N/A	F H, L	Upstream Impoundment	
<b>RÍO LOCO PRSR69A</b>	RÍO LOCO PRSE69A	0.0084	SB		4a	4a	3	N/A	F H	Onsite Wastewater Systems Surface Mining Urban Runoff/Storm Sewers	
<b>QUEBRADA BOQUERÓN PRWQ71A</b>	QUEBRADA BOQUERÓN PRWE71A	0.0096	SB		4a	4a	3	N/A	H J	Urban Runoff/Storm Sewers	
<b>QUEBRADA ZUMBÓN PRWQ72A</b>	QUEBRADA ZUMBÓN PRWE72A	0.003	SB		4a	4a	3	N/A	H J L	Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi.)	Class	2022 Monitoring Stations	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>QUEBRADA GONZÁLEZ PRWQ73A</b>	QUEBRADA GONZÁLEZ PRWE73A	0.008	SB		4a	4a	3	N/A	H J L	Upstream Impoundment	
<b>QUEBRADA LOS PAJARITOS PRWQ74A</b>	QUEBRADA LOS PAJARITOS PRWE74A	0.003	SB		4a	4a	3	N/A	H J L		
<b>RIO GUANAJIBO PRWR77A</b>	RIO GUANAJIBO PRWE77A	0.0576	SB		4a	4a	3	N/A	H J	Collection System Failure Onsite Wastewater Systems	
<b>CAÑO MERLE PRWK78A</b>	CAÑO MERLE PRWE78A	0.158	SB		4a	4a	5	N/A	D, H J, L	Collection System Failure	<i>Surfactants</i>
<b>RIO YAGÜEZ PRWR79A</b>	RIO YAGÜEZ PRWE79A	0.0192	SB		4a	4a	3	N/A	H J	Collection System Failure Urban Runoff/Storm Sewers	
<b>CAÑO BOQUILLA PRWK82A</b>	CAÑO BOQUILLA PRWE82A	0.062	SB		3	3	5	N/A	D H L	Onsite Wastewater Systems	<i>Dissolved Oxygen Surfactants Turbidity</i>
<b>RÍO GRANDE DE AÑASCO PRWR83A</b>	RÍO GRANDE DE AÑASCO PRWE83A	0.2376	SB		4a	4a	3	N/A	H K	Onsite Wastewater Systems	
<b>QUEBRADA GRANDE CALVACHE PRWQ88A</b>	QUEBRADA GRANDE CALVACHE PRWE88A	0.002	SB		4a	4a	5	N/A	D H L	Urban Runoff/Storm Sewers	<i>Dissolved Oxygen</i>
<b>QUEBRADA LOS RAMOS PRWQ89A</b>	QUEBRADA LOS RAMOS PRWE89A	0.0006	SB		3	3	3	N/A	H L	Collection System Failure	
<b>RÍO GRANDE PRWR92A</b>	RÍO GRANDE PRWE92A	0.0028	SB		4a	4a	3	N/A	H J, L		
<b>CAÑO DE SANTI PONCE PRWK93A</b>	CAÑO DE SANTI PONCE PRWE93A	0.0032	SB		4a	4a	3	N/A	H J L	Onsite Wastewater Systems	

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi.)	Class	2022 Monitoring Stations	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO GUAYABO PRWR94A</b>	RÍO GUAYABO PRWE94A	0.0288	SB		4a	4a	5	N/A	D H, J	Onsite Wastewater Systems Urban Runoff/Storm Sewers	<i>Dissolved Oxygen</i>
<b>RÍO CULEBRINAS PRWR95A</b>	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 2022 Cycle (New added causes).**

*Italicized and black causes were listed into and/or prior to 2022 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 2022 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.

**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

### 6.3 San Juan Bay Estuary System

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

Causes of Impairments 2019-2021 Cycle		Causes of Impairments Summary
Causes of Impairments	Size of Waters Impaired (sq. mi., miles)	Size of Waters Impaired (sq. mi., miles)
Ammonia	0	3.8340 sq. mi.
Chromium VI	3.8340 sq. mi.	3.8340 sq. mi.
Copper	0	0.1009 sq. mi., 18.8 mi
Dissolved Oxygen	3.8340 sq. mi., 18.8 mi	3.8340 sq. mi., 18.8 mi
Enterococcus	3.8340 sq. mi., 18.8 mi	3.8340 sq. mi., 18.8 mi
Lead	0	0.1009 sq. mi.
Oil and Grease	18.8 mi	18.8 mi
pH	3.7331 sq. mi., 18.8 mi	3.7331 sq. mi., 18.8 mi
Surfactants	0	3.8340 sq. mi.
Temperature	3.8340 sq. mi., 18.8 mi	3.8340 sq. mi., 18.8 mi
Total, Nitrogen	0.1009 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 2019-2021 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 Source	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)	2022 Monitoring Stations NS = Network ED = External Data	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	A L	DW			
<b>ESTUARY SYSTEM</b>	<b>PREE13A1</b> 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	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Enterococcus</i> <i>Oil &amp; Grease</i> <i>pH</i> <i>Temperature</i> <i>Turbidity</i>
<b>ESTUARY SYSTEM</b>	<b>PREE13A2</b> 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	<i>Ammonia</i> <i>Chromium VI</i> <i>Copper</i> <i>Dissolved Oxygen</i> <i>Enterococcus</i> <i>Lead</i> <i>Surfactants</i> <i>Temperature</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <i>Turbidity</i>
<b>ESTUARY SYSTEM</b>	<b>PREE13A3</b> Caño Martín Peña Quebrada Juan Méndez	3.7331 sq. mi.	NS 50050300 ED – CS 1, 2 CMP	5	5	5	N/A	M	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater System	<i>Ammonia</i> <i>Chromium VI</i> <i>Dissolved Oxygen</i> <i>Enterococcus</i>

Basin	Waterbody Name (AU ID)	Waterbody Size (sq. mi., miles)	2022 Monitoring Stations NS = Network ED = External Data	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	A L	DW			
	Quebrada San Antón Quebrada Blasina Canal Machicote Canal Suárez Laguna San José Laguna Torrecillas Laguna de Piñones Laguna Los Corozos		LSJ 1, 2 Blasina San Antón Laguna Los Corozos Laguna Torrecilla 1, 2, 3					Urban Runoff/Storm Sewers	<i>pH</i> <i>Surfactants</i> <i>Temperature</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <i>Turbidity</i>	

**Notes:**

**Bold and Red causes were listed into 2022 Cycle (New added causes).**

*Italicized and black causes were listed into and/or prior to 2022 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

#### 6.4 Lagoons

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

Causes of Impairments 2019-2021 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
Enterococcus	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 2019-2021 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	0	2.3657
Urban Runoff/Storm Sewers	2.6328	2.6328

**Table 34: Lagoons Assessment (Monitored and Unmonitored)**

Municipality	Waterbody Name (AU ID)	Class	2022 Monitoring Stations	WB Size (sq. mi.)	Overall Designated Uses and Categories			Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL			
<b>MAYAGÜEZ</b>	Laguna Joyudas PRWN0005	SB		0.5297	4a	4a	5	H J	Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	<i>Copper</i> <i>Dissolved Oxygen</i>
<b>VEGA BAJA- MANATÍ</b>	Laguna Tortuguero PRNN0006	SE		0.8656	3	3	5	H	Onsite Wastewater Systems Urban Runoff/Storm Sewers	<i>Dissolved Oxygen</i>
<b>DORADO</b>	Laguna Mata Redonda PRNN0007	SB		0.0234	3	3	5	H	Urban Runoff/Storm Sewers	<i>Dissolved Oxygen</i> <i>pH</i>
<b>FAJARDO</b>	Laguna Aguas Prietas PREN0011	SB		0.2	3	3	5	H	Unknown Sources	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Turbidity</i>
<b>FAJARDO</b>	Laguna Grande PREN0012	SB		0.3375	5	5	5	H	Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	<i>Dissolved Oxygen</i> <i>Enterococcus</i> <i>pH</i>
<b>CEIBA</b>	Laguna Ceiba PREN0013	SB		0.1875	5	5	5	H	Unknown Source	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Enterococcus</i> <i>pH</i>
<b>GUAYAMA</b>	Laguna Pozuelo PRSN0014	SB		0.0547	3	3	5	H	Unknown Source Urban Runoff/Storm Sewers	<i>Copper</i> <i>Dissolved Oxygen</i> <i>pH</i> <i>Temperature</i>
<b>SALINAS</b>	Laguna Mar Negro PRSN0015	SB		0.325	3	3	5	H	Urban Runoff/Storm Sewers Unknown Source	<i>Copper</i> <i>Dissolved Oxygen</i> <i>pH</i>

Municipality	Waterbody Name (AU ID)	Class	2022 Monitoring Stations	WB Size (sq. mi.)	Overall Designated Uses and Categories			Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL			
<b>SALINAS</b>	Laguna Punta Arenas PRSN0016	SB		0.0281	3	3	5	H	Unknown Source Urban Runoff/Storm Sewers	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Temperature</i> <i>Turbidity</i>
<b>SALINAS</b>	Laguna Tiburones PRSN0017	SB		0.0219	3	3	5	H	Landfill Unknown Source	<i>Copper</i> <i>Dissolved Oxygen</i> <i>pH</i> <i>Temperature</i> <i>Turbidity</i>
<b>PONCE</b>	Laguna Salinas PRSN0018	SB		0.1203	3	3	5	H	Onsite Wastewater Systems Unknown Source	<i>Copper</i> <i>Dissolved Oxygen</i>
<b>CABO ROJO</b>	Laguna Salinas I (Fraternidad) PRSN0019	SB		0.4594	3	3	5	H	Onsite Wastewater Systems Unknown Source	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Turbidity</i>
<b>CABO ROJO</b>	Laguna Cabo Rojo 2 (Candelaria) PRSN0020	SB		0.2969	3	3	5	H	Unknown Source	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Temperature</i> <i>Turbidity</i>
<b>CABO ROJO</b>	Laguna Cabo Rojo 3 (El Faro) PRSN0021	SB		0.1078	3	3	5	H	Unknown Source	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Turbidity</i>
<b>CABO ROJO</b>	Caño Boquerón PRSN0022	SB		0.2859	3	3	5	H	Marinas and Recreational Boating Minor Industrial Point Sources Unknown Sources	<i>Copper</i> <i>Dissolved Oxygen</i> <i>pH</i> <i>Turbidity</i>
<b>CABO ROJO</b>	Laguna Guaniquilla PRSN0023	SB		0.0344	3	3	5	H	Unknown Source	<i>Dissolved Oxygen</i> <i>pH</i> <i>Turbidity</i>
<b>LAJAS</b>	Laguna Cartagena PRSN0024	SE		0.4688	3	3	3	H	Urban Runoff/Storm Sewers	

**Notes:**

**Bold and Red causes were listed into 2022 Cycle (New added causes).**

*Italicized and black causes were listed into and/or prior to 2022 Cycle. (Old causes)*

**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

6.5 Lakes

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

Causes of Impairments 2019-2021 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	7,234	7,288
Enterococcus	0	35
Lead	0	1,726
Mercury	0	35
Pesticides	0	2,133
pH	4,158	6,858
Surfactants	0	634
Temperature	0 4,042	4,790
Total, Nitrogen	0 6,476	6849
Total, Phosphorus	0 6,915	7,269
Turbidity	1,632	1,898

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

Potential Sources of Pollution 2019-2021 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
Minor Municipal Point Sources	0	0
Onsite Wastewater Systems	6,623	6,623
Package Plant (Small Flows)	0	0
Unknown Sources	108	1,232
Urban Runoff/Storm Sewers	1,413	1,413

**Table 37: Lakes Assessment (Monitored and Unmonitored waters)**

Basin	Waterbody Name (AU ID)	Waterbody Size (acres)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO GUAJATACA</b>	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	<i>Dissolved Oxygen</i> <i>pH</i> <i>Temperature</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i>
<b>RÍO GRANDE DE ARECIBO</b>	LAGO DOS BOCAS PRNL17A1	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 Sources (9000)	<i>Arsenic</i> <i>Copper</i> <i>Dissolved Oxygen</i> <i>pH</i> <i>Surfactants</i> <i>Temperature</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <i>Turbidity</i>
<b>RÍO GRANDE DE ARECIBO</b>	LAGO CAONILLAS PRNL27C1	700	SD	NS 89001 89002 89003	4a	4a	5	5	K	Agriculture Onsite Wastewater Systems	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Pesticides</i> <i>pH</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i>
<b>RÍO GRANDE DE ARECIBO</b>	LAGO GARZAS PRNL37A3	108	SD	NS 20050	4a	4a	5	5	K	Agriculture Onsite Wastewater Systems	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Lead</i> <i>Pesticides</i> <i>Total, Phosphorus</i>
<b>RÍO GRANDE DE MANATÍ</b>	LAGO GUINEO PRNL18C1	54	SD		4a	4a	5	5	H K	Agriculture Onsite Wastewater Systems	<i>Dissolved Oxygen</i> <i>Pesticides</i>



Basin	Waterbody Name (AU ID)	Waterbody Size (acres)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO GRANDE DE MANATÍ</b>	LAGO MATRULLAS PRNL <sub>2</sub> 8C1	77	SD	NS 89009 89010	4a	4a	5	5	K	Agriculture Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Lead</i> <i>pH</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i>
<b>RÍO DE LA PLATA</b>	LAGO DE LA PLATA PREL <sub>1</sub> 10A1	560	SD	NS 44400 44950 44950C	4a	4a	5	5	B N	Collection System Failure Confined Animal Feeding Operations Landfill Onsite Wastewater Systems	<i>Arsenic</i> <i>Dissolved Oxygen</i> <i>Lead</i> <i>pH</i> <i>Temperature</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i>
<b>RÍO DE LA PLATA</b>	LAGO CARITE PREL <sub>2</sub> 10A5	333	SD	NS 39900 39950 39950C	4a	4a	5	5	B	Confined Animal Feeding Operations Onsite Wastewater Systems	<i>Dissolved Oxygen</i> <i>pH</i> <i>Total, Phosphorus</i> <b><i>Total, Nitrogen</i></b>
<b>RÍO BAYAMON</b>	LAGO CIDRA PREL <sub>12</sub> A2	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	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Lead</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i>
<b>RÍO GRANDE DE LOIZA</b>	LAGO LOIZA PREL <sub>14</sub> A1	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	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Lead</i> <i>pH</i> <i>Temperature</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <i>Turbidity</i>

Basin	Waterbody Name (AU ID)	Waterbody Size (acres)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO GRANDE DE PATILLAS</b>	LAGO PATILLAS PRSL43A1	312	SD	NS 89022 89023 89024	4a	4a	5	5	J	Agriculture Onsite Wastewater Systems	<i>Dissolved Oxygen</i> <i>Pesticides</i> <i>pH</i> <i>Temperature</i> <i>Total, Phosphorus</i>
<b>QUEBRADA MELANÍA</b>	LAGO MELANIA PRSL50A	35	SD	NS 89026	4a	4a	5	5	J	Agriculture Onsite Wastewater Systems	<i>Enterococcus</i> <i>Mercury</i> <i>Pesticides</i> <i>Temperature</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i>
<b>RÍO JACAGUAS</b>	LAGO GUAYABAL PRSL160A1	373	SD	NS 89011 89012 89013	4a	4a	5	5	F	Agriculture Collection System Failure Minor Industrial Point Sources Onsite Wastewater Systems	<i>Dissolved Oxygen</i> <i>Pesticides</i> <i>pH</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i>
<b>RÍO JACAGUAS</b>	LAGO TOA VACA PRSL260A1	836	SD	NS 89014 89015 89016	4a	4a	5	5	F	Agriculture Onsite Wastewater Systems	<i>Dissolved Oxygen</i> <i>pH</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <b><i>Temperature</i></b>
<b>RÍO BUCANA-CERRILLOS</b>	LAGO CERRILLOS PRSL62A1	700	SD	NS 89032 89033 89034	4a	4a	5	5	J	Urban Runoff/Storm Sewers	<i>Dissolved Oxygen</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <b><i>pH</i></b> <b><i>Temperature</i></b>

Basin	Waterbody Name (AU ID)	Waterbody Size (acres)	Class	2022 Monitoring Stations NS = Network	Overall Designated Use Attainment				Notes	Potential Sources of Pollution	Causes of Impairment
					R1	R2	AL	DW			
<b>RÍO YAUCO</b>	LAGO LUCHETTI PRSL68A1	266	SD	NS 89017 89018 89019	4a	4a	5	5	F	Agriculture Onsite Wastewater Systems	<i>Dissolved Oxygen</i> <i>Pesticides</i> <i>pH</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <i>Turbidity</i>
<b>RÍO LOCO</b>	LAGO LOCO PRSL69A	69	SD	NS 89021C	4a	4a	5	5	F	Onsite Wastewater Systems	<i>Dissolved Oxygen</i> <i>pH</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i>
<b>RÍO GRANDE DE AÑASCO</b>	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	<i>Dissolved Oxygen</i> <i>Pesticides</i> <i>pH</i> <i>Total, Nitrogen</i> <i>Total, Phosphorus</i> <i>Turbidity</i>

**Notes:**

**Bold and Red causes were listed into 2022 Cycle (New added causes).**

*Italicized and black causes were listed into and/or prior to 2022 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 2022 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

## 6.6 Coastal Shoreline

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

Causes of Impairments 2019-2021 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	56.18	92.65
Enterococcus	264.32	390.97
Fecal Coliforms	0	7.79
Lead	0	152.17
Mercury	0	213.37
Nickel	0	170.90
Oil and Grease	0	82.42
pH	100.42	190.52
Temperature	206.96	251.01
Thallium	0	203.74
Turbidity	351.48	434.94
Zinc	0	43.80

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

Potential Sources of Pollution 2019-2021 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	2022 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 Enterococcus 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 Enterococcus 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 Enterococcus 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 Enterococcus Mercury pH Thallium Turbidity

Waterbody Name (AU ID)	Size of AU (miles)	Class	2022 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
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	<i>Copper</i> <i>Enterococcus</i> <i>Mercury</i> <i>Temperature</i> <i>Turbidity</i>
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	<i>Copper</i> <i>Mercury</i> <i>pH</i> <i>Temperature</i> <i>Turbidity</i>
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	<i>Arsenic</i> <i>Copper</i> <i>Enterococcus</i> <i>Lead</i> <i>Nickel</i> <i>Turbidity</i> <i>Zinc</i>
PREC09 (Punta Boca Juana to Punta Salinas)	5.78	SB	NS MAC-077 SEG9-01 RW-19	1	1	5		Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	<i>Arsenic</i> <i>Copper</i> <i>Enterococcus</i> <i>Lead</i> <i>Nickel</i> <i>Turbidity</i> <b>pH</b>
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	<i>Copper</i> <i>Enterococcus</i> <i>Lead</i> <i>Mercury</i> <i>Nickel</i> <i>Turbidity</i>

Waterbody Name (AU ID)	Size of AU (miles)	Class	2022 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
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	<i>Copper</i> <i>Enterococcus</i> <i>Lead</i> <i>Mercury</i> <i>Nickel</i> <i>pH</i> <i>Temperature</i> <i>Thallium</i> <i>Turbidity</i> <i>Zinc</i>
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	<i>Arsenic</i> <i>Copper</i> <i>Dissolved Oxygen</i> <i>Fecal Coliforms</i>
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	1	1	1	M		<b><i>Enterococcus</i></b> <b><i>pH</i></b> <b><i>Turbidity</i></b>
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	<i>Copper</i> <i>Enterococcus</i> <i>Lead</i> <i>Mercury</i> <i>Temperature</i> <i>Thallium</i> <b><i>Turbidity</i></b>

Waterbody Name (AU ID)	Size of AU (miles)	Class	2022 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
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	<i>Arsenic Copper Lead Temperature Thallium Turbidity</i>
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	<i>Arsenic Copper Enterococcus Mercury Nickel Thallium Temperaure Turbidity</i>
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	<i>Arsenic Copper Enterococcus Lead Mercury Nickel Temperature Thallium Turbidity Zinc</i>
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	<i>Copper Mercury Temperature Turbidity</i>



Waterbody Name (AU ID)	Size of AU (miles)	Class	2022 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PREC18 (Punta La Bandera to Cabezas de San Juan)	10.46	SB	NS MAC-010 SBZ-030 RW-2	1	1	5		Unknown Source	<i>Copper</i> <i>pH</i> <i>Temperature</i> <i>Thallium</i> <i>Turbidity</i>
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	<i>Copper</i> <i>Enterococcus</i> <i>Oil &amp; Grease</i> <i>Temperature</i> <i>Turbidity</i>
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	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Enterococcus</i> <i>Temperature</i> <i>Thallium</i> <i>Turbidity</i>
PREC21 (Punta Medio Mundo to Punta Puerca)	3.0	SB		3	3	3	H		
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	<i>Copper</i> <i>Turbidity</i>

Waterbody Name (AU ID)	Size of AU (miles)	Class	2022 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PREC24 (Punta Cascajo to Punta Lima)	9.07	SB	SEG24-02	5	5	5		Major Industrial Point Sources Upstream Impoundment	<i>Copper Dissolved Oxygen Enterococcus Temperature Turbidity</i>
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	<i>Copper Enterococcus Mercury Temperature Turbidity</i>
PREC26 (Morro de Humacao to Punta Candelerero)	1.84	SB	NS SEG26-01	5	5	5		Onsite Wastewater Systems Urban Runoff/Storm Sewers	<i>Copper Enterococcus Temperature Turbidity</i>
PREC27 (Punta Candelerero to Punta Guayanés)	3.74	SB	NS SEG27-01	5	5	5		Onsite Wastewater Systems Urban Runoff/Storm Sewers	<i>Arsenic Copper Enterococcus Thallium Turbidity</i>
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	<i>Arsenic Copper Enterococcus Mercury Oil &amp; Grease Temperature Thallium Turbidity</i>

Waterbody Name (AU ID)	Size of AU (miles)	Class	2022 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PREC28B (Punta Quebrada Honda to Punta Yeguas)	0.74	SB	NS SBZ-038	5	5	5		Onsite Wastewater Systems Unknown Source	<i>Copper</i> <i>Enterococcus</i> <i>Thallium</i> <i>Turbidity</i>
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	<i>Copper</i> <i>Enterococcus</i> <i>Lead</i> <i>pH</i> <i>Thallium</i> <i>Turbidity</i>
PREC30 (Punta Tuna to Cabo Mala Pascua)	2.65	SB	NS MAC-082	5	5	5		Unknown Source	<i>Copper</i> <i>Enterococcus</i> <i>Turbidity</i>
PRSC31 (Cabo Mala Pascua to Punta Viento)	4.06	SB	SEG31-01	5	5	5		Onsite Wastewater Systems Upstream Impoundment Urban Runoff/Storm Sewers	<i>Copper</i> <i>Temperature</i> <i>Thallium</i> <i>Turbidity</i> <b><i>Enterococcus</i></b>
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	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Enterococcus</i> <i>Mercury</i> <i>Temperature</i> <i>Thallium</i> <i>Turbidity</i>

Waterbody Name (AU ID)	Size of AU (miles)	Class	2022 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	<i>Copper</i> <i>Enterococcus</i> <i>Lead</i> <i>Mercury</i> <i>Temperature</i> <i>Turbidity</i>
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	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Enterococcus</i> <i>Lead</i> <i>Mercury</i> <i>Nickel</i> <i>Oil &amp; Grease</i> <i>pH</i> <i>Temperature</i> <i>Turbidity</i>
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	<i>Copper</i> <i>Enterococcus</i> <i>Lead</i> <i>Mercury</i> <i>Nickel</i> <i>Thallium</i> <i>Turbidity</i> <i>Zinc</i>
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	<i>Copper</i> <i>Mercury</i> <i>pH</i> <i>Temperature</i> <i>Turbidity</i> <b>Enterococcus</b>

Waterbody Name (AU ID)	Size of AU (miles)	Class	2022 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
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	<i>Copper</i> <i>Enterococcus</i> <i>Mercury</i> <i>Oil &amp; Grease</i> <i>Turbidity</i>
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	<i>Copper</i> <i>Enterococcus</i> <i>Mercury</i> <i>Nickel</i> <i>pH</i> <i>Turbidity</i>
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	<i>Copper</i> <i>Enterococcus</i> <i>Lead</i> <i>Mercury</i> <i>Nickel</i> <i>Oil &amp; Grease</i> <i>Thallium</i> <i>Turbidity</i> <i>Zinc</i>
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	<i>Copper</i> <i>Mercury</i> <i>Enterococcus</i> <i>Oil &amp; Grease</i> <i>Temperature</i> <i>Thallium</i> <i>Turbidity</i>

Waterbody Name (AU ID)	Size of AU (miles)	Class	2022 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PRSC39 (Punta Verraco to Punta Ballena)	6.41	SB	NS MAC-030 SEG39-01 G1	1	1	5		Unknown Source	<i>Copper</i> <i>Thallium</i> <i>Turbidity</i>
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	<i>Copper</i> <i>Enterococcus</i> <i>Nickel</i> <i>pH</i> <i>Temperature</i> <i>Turbidity</i>
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	<i>Copper</i> <i>pH</i> <i>Temperature</i> <i>Thallium</i> <i>Turbidity</i> <b>Enterococcus</b>
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	<i>Copper</i> <i>Dissolved Oxygen</i> <i>Enterococcus</i> <i>pH</i> <i>Temperature</i> <i>Thallium</i> <i>Turbidity</i>
PRSC41A2 (Bahía Monsio José)	3.72	SA		3	3	3	H		

Waterbody Name (AU ID)	Size of AU (miles)	Class	2022 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
PRSC41B3 (Bahía Monsio José to Faro de Cabo Rojo)	13.45	SB	NS SEG41B3-01 SEG41B3-02	5	5	5		Unknown Source	<i>Dissolved Oxygen</i> <i>Enterococcus</i> <i>Mercury</i> <i>Nickel</i> <i>Temperature</i> <i>Thallium</i> <i>Turbidity</i>
PRWC42 (Faro de Cabo Rojo to Punta Águila)	2.89	SB	NS SEG42-01	1	1	5		Unknown Source	<i>Dissolved Oxygen</i> <i>pH</i> <i>Temperature</i> <i>Turbidity</i> <b>Enterococcus</b>
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	<i>Enterococcus</i> <i>Temperature</i> <i>Turbidity</i>
PRWC44 (Punta Guaniquilla to Punta La Mela)	2.5	SB	NS SBZ-050 SBZ-051, RW-8	1	1	5		Onsite Wastewater Systems	<i>Enterococcus</i> <i>pH</i> <i>Thallium</i> <i>Turbidity</i> <b>Temperature</b>
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	<i>Copper</i> <i>Enterococcus</i> <i>Lead</i> <i>Thallium</i> <i>Turbidity</i>

Waterbody Name (AU ID)	Size of AU (miles)	Class	2022 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
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	<i>Copper Lead Temperature Thallium Turbidity</i>
PRWC47 (In front of Cayo Ratones to Punta Guanajibo)	3.85	SB	NS SEG47-01	1	1	5		Onsite Wastewater Systems	<i>Copper Nickel Turbidity</i>
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	<i>Copper Enterococcus Lead Mercury Nickel Oil &amp; Grease pH Thallium Turbidity</i>
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	<i>Copper Enterococcus Nickel pH Temperature Turbidity</i>



Waterbody Name (AU ID)	Size of AU (miles)	Class	2022 Monitoring Station NS - Network ED - External Data	Overall Designated Use Attainment			Notes	Potential Sources of Pollution	Causes of Impairment
				R1	R2	AL			
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	<i>Copper</i> <i>Enterococcus</i> <i>Lead</i> <i>Mercury</i> <i>Nickel</i> <i>Turbidity</i> <i>pH</i>
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	<i>Copper</i> <i>Enterococcus</i> <i>Lead</i> <i>Mercury</i> <i>Nickel</i> <i>Turbidity</i>
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	<i>Copper</i> <i>Turbidity</i>
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	<i>pH</i> <i>Turbidity</i>
PRVC54A (Bahía Mosquito)	3.0	SA		3	3	3	H		

Waterbody Name (AU ID)	Size of AU (miles)	Class	2022 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 2022 Cycle (New added causes).**

*Italicized and black causes were listed into and/or prior to 2022 Cycle. (Old causes)*

**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

## 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 boat). 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 42 shows 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	1	69
Mesotrophic	5	2,118
Eutrophic	11	4,852***

\* 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 <sup>1</sup> [P mg/L] <sup>2</sup>	
			2020 Cycle (Oct.2017-Sept. 2019)	2022 Cycle (Oct.2019-Sept.2021)
Guajataca	1000	PRNL3A1	(0.02) O	(0.08) E
Dos Bocas	634	PRNL <sub>1</sub> 7A1	(0.07) E	(0.13) E
Caonillas	700	PRNL <sub>2</sub> 7C1	(0.06) E	(0.06) E
Garzas	108	PRNL <sub>3</sub> 7A3	(0.02) O	(0.38) E
Matrullas	77	PRNL <sub>2</sub> 8C1	(0.02) O	(0.04) M
La Plata	560	PREL <sub>1</sub> 10A1	(0.06) E	(0.04) M
Carite	333	PREL <sub>2</sub> 10A5	(0.02) O	(0.03) M
Cidra	268	PREL12A2	(0.07) E	(0.10) E
Las Curias	55	PREE13A2	(0.05) E	(0.10) E
Loíza	713	PREL14A1	(0.18) E	(0.18) E
Patillas	312	PRSL43A1	(0.02) O	(0.04) M
Melanía	35	PRSL50A	(0.03) M	(0.10) E
Guayabal	373	PRSL <sub>1</sub> 60A	(0.04) M	(0.08) E
Toa Vaca	836	PRSL <sub>2</sub> 60A	(0.06) E	(0.04) M
Cerrillos	700	PRSL62A	(0.05) M	(0.06) E
Luchetti	266	PRSL68A1	(0.03) M	(0.09) E
Loco	69	PRSL69A	(0.04) M	(0.02) O
Guayo	285	PRWL83H	(0.03) M	no assessed

(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 at 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
		2018 Cycle	2020 Cycle	2022 Cycle	
Caonillas	700	4.2	4.4	4.2	Stable
Guayo	285	4.3	3.8	4.1	Improved
Matrullas	77	5.2	4.4	5.2	Improved
Guayabal	373	4.7	5.4	5.9	Improved
Toa Vaca	836	4.8	3.5	5.1	Improved
Luchetti	266	4.7	4.9	7.6	Improved
Loco	69	5.3	5.4	3.7	Degraded

Lakes	Lake Size (acres)	DO*mg/L			Trend
		2018 Cycle	2020 Cycle	2022 Cycle	
Patillas	312	4.4	4.6	4.4	Stable
Las Curias	55	2.7	1.8	2.4	Stable
Cidra	268	3.7	4.9	3.9	Degraded
Cerrillos	700	5.1	5.2	4.7	Degraded
Loíza	713	5.0	4.0	4.9	Improved
Guajataca	1000	4.9	5.7	4.8	Degraded
Dos Bocas	634	5.0	5.3	5.2	Stable
Carite	333	4.2	4.3	5.2	Improved
La Plata	560	4.5	4.3	4.4	Stable
Garzas	108	3.7	3.6	3.5	Stable
Melanía	35	7.1	7.1	7.7	Stable

\* Dissolved oxygen value corresponds at 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 April 11, 2019, 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 or not considered in the 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. The freshwater wetlands, comprises about of 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 of 65% of the total area of wetlands. Examples of estuarine wetlands are those close to coastal rivers, salt flats and mangroves.

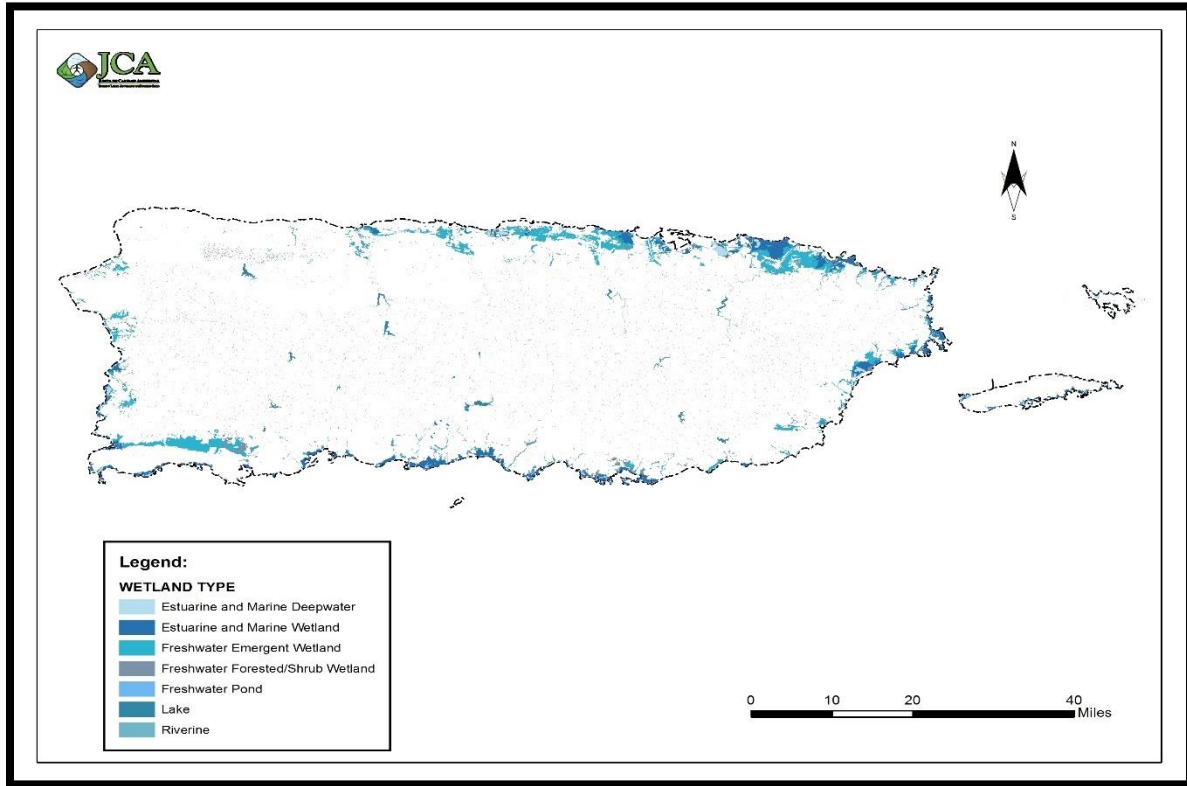
Wetlands provide habitat for thousands of species of fish, wildlife and plants, and act as nurseries for many saltwater and freshwater fishes and shellfish of commercial significance. They also provide important ecological services such as flood control, water filtration and the supply of groundwater, 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 the 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.

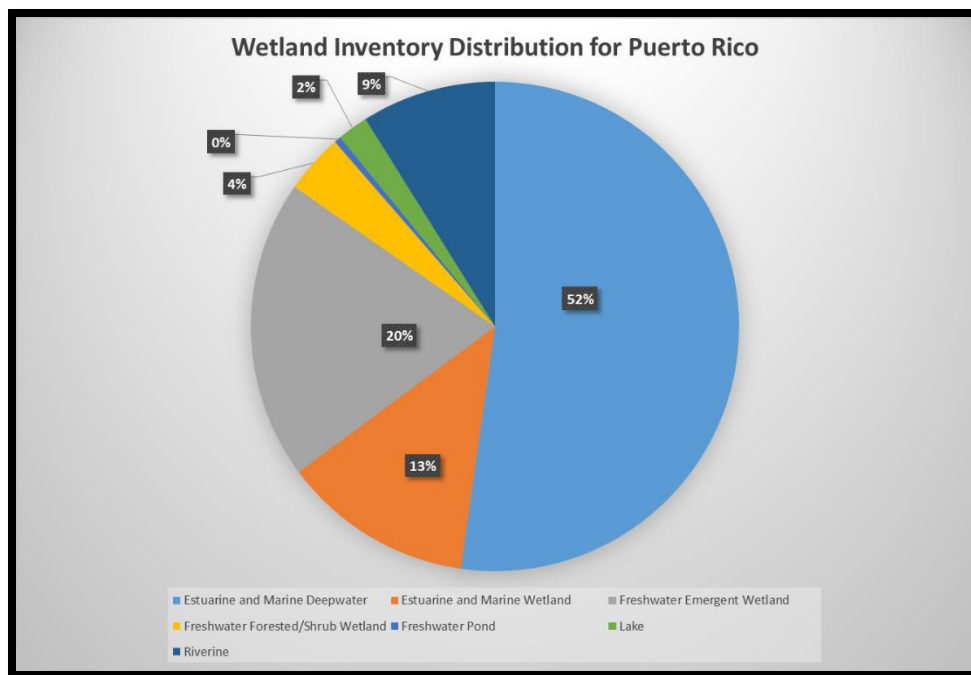
The wetlands of the highlands of central area are the last refuge of the Puerto Rican parrot, an endangered species. Even wetlands of metropolitan San Juan (Laguna La Torrecilla, Torrecilla Baja, Laguna de Piñones to Vacía Talega) provide excellent habitats for wildlife, fish hatcheries maintain high 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 publically 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 the 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 the food production and in the biomedical investigation (Goenaga and Boulon, 1992).

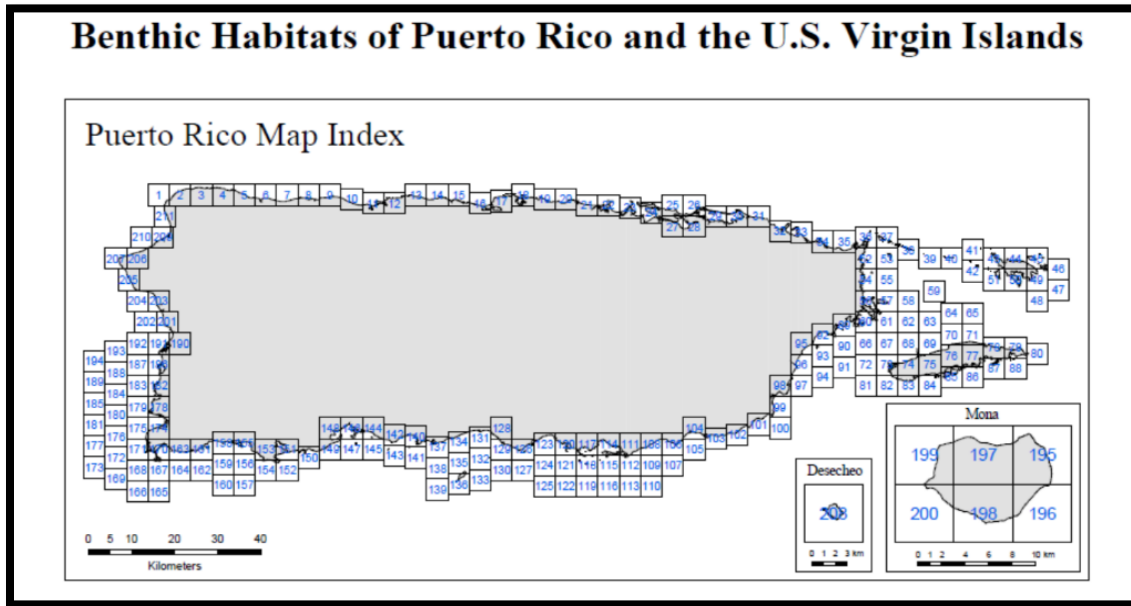
However, the coral reefs in PR are significantly degraded due to a variety of anthropogenic factors that exacerbate the impacts of natural factors (e.g., hurricanes, diseases, syndromes in corals) (Hernandez-Delgado, 2005). The anthropogenic factor that could affect the coral reef ecosystem are the following: deforestation, erosion and sedimentation. The deterioration of the water quality 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 basin through 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 the facilities that represent potential sources of pollution. These actions improve the water quality of the water body and will protect the marine ecosystems included the coral reef ecosystem.

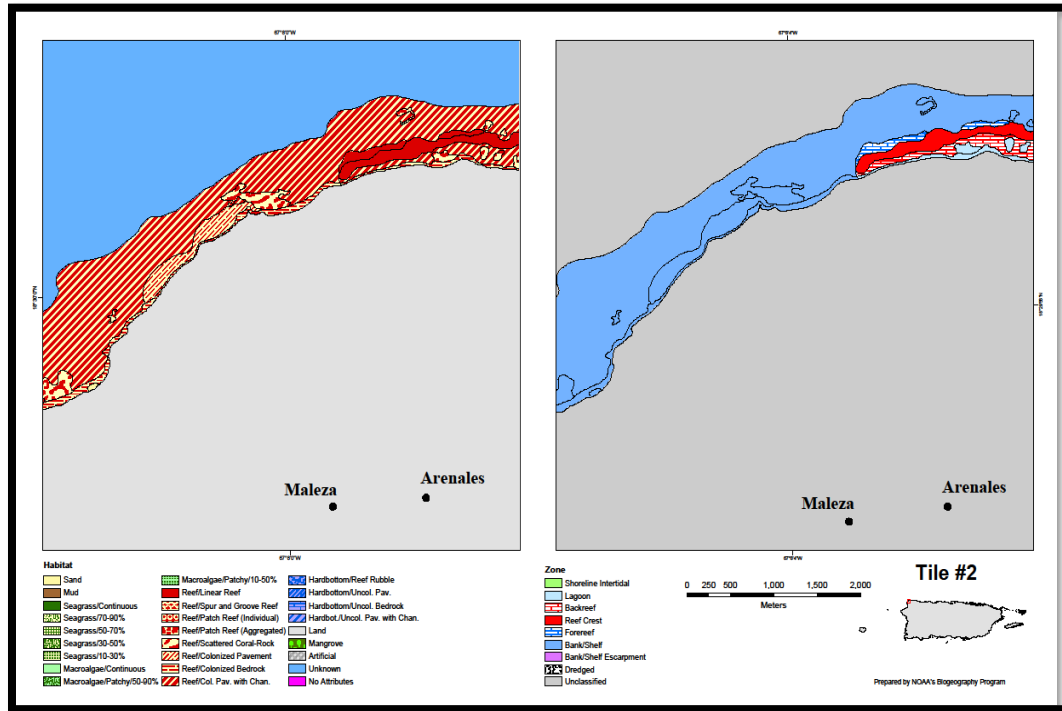


Figure 11: Example of one tile of the Benthic Map and the habitat classification

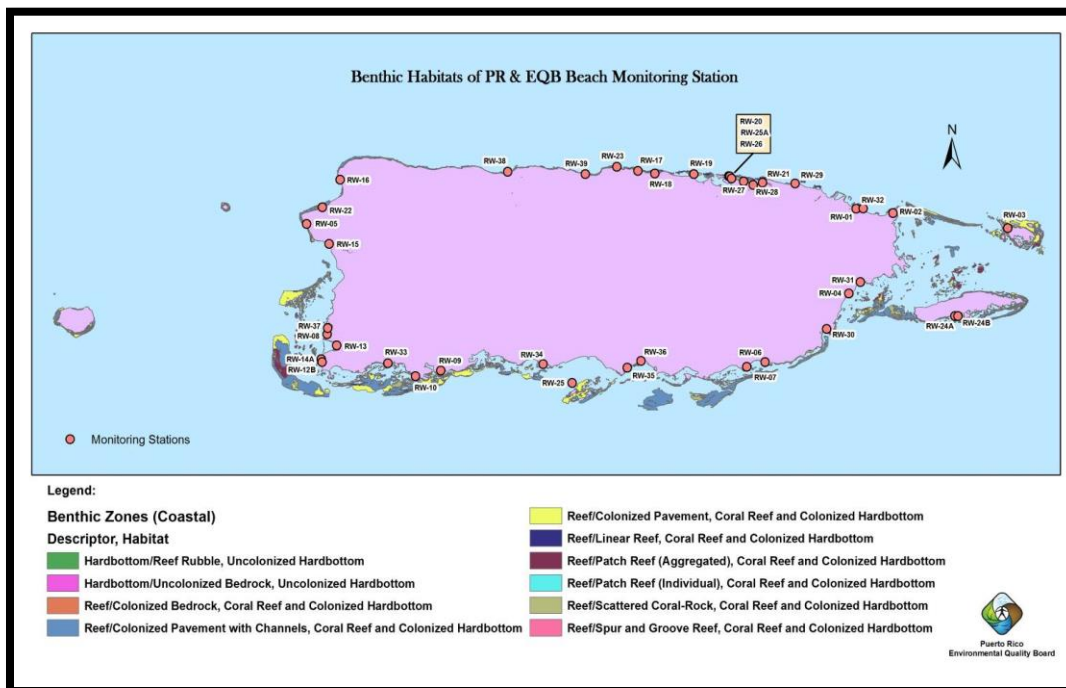
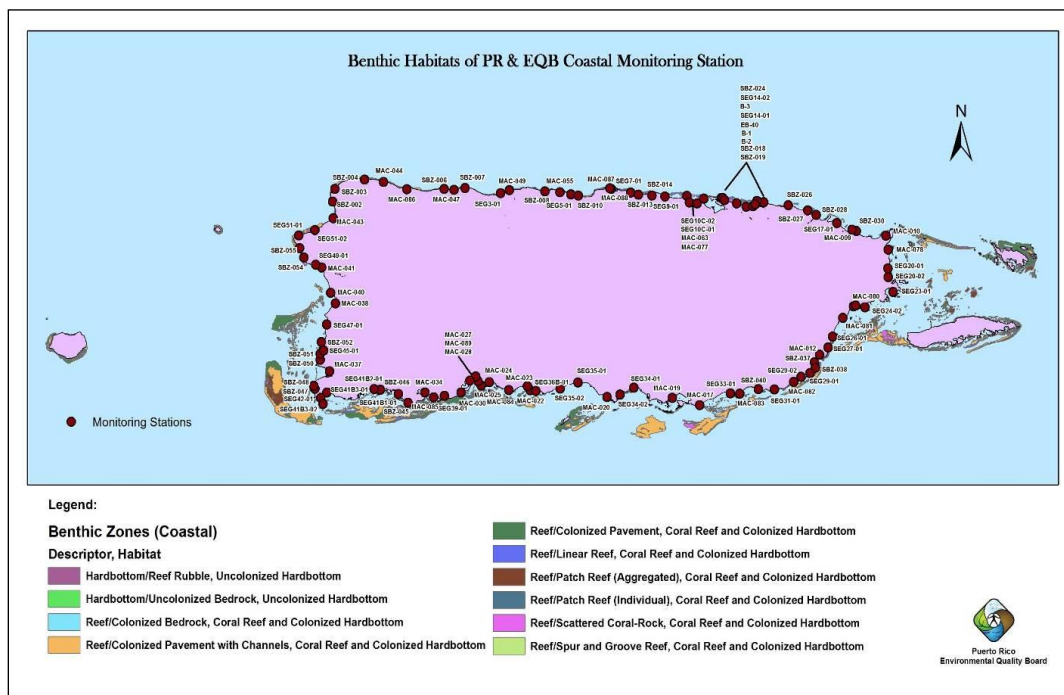


Figure 12: Benthic Habitats of PR and the Location of the PREQB Beach Monitoring Station



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

## PART E. 303(d) List

### 1.0 303(d) List Criteria

The PR 2022 List of Impaired Waters (303(d) List) is based on the water quality data generated through the water quality monitoring networks, as explain in Section 2.0 Monitoring Program. In the case of the 2022 303(d) List, we considered the most recent available water quality data for each parameter in each AU (October 1, 2019, to September 30, 2021). 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).

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 2020 cycle exceed the applicable water quality standard at least once in 2022 Cycle, the parameter continues to appear as an impairment cause and the AU continues to be listed in Category 5. The 303(d) List 2022 is included in the Appendix I of this Integrated Report.

## 2.0 303(d) Delisting Criteria

If a previously listed parameter complied fully with the applicable water quality standard during the 2020 (October 1, 2017, to September 30, 2019) and 2022 (October 1, 2019 to September 30, 2021) 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).

According to Section 3.0 Designated Uses and applicable water quality standards, DNER will delist an assessment unit if the quantitative data for oil and grease is the detection level of 5 mg/L.

During this cycle it is proposed to remove sixty-one (61) parameter/assessment unit's combination from the 303(d) List (See Table 45).

**Table 45: Parameter/AU Combinations to be delisted**

<b>AU ID</b>	<b>Type of water</b>	<b>Parameter</b>	<b>Reason for delisting</b>
1. PRNR3A1	River	Fecal Coliform	Change in water quality standard
2. PRNR7A2	River	Copper	Water Quality Standard met
3. PRNR7A3	River	Turbidity	Water Quality Standard met
4. PRNR7C3	River	Copper	Water Quality Standard met
5. PRNR7B2	River	Copper	Water Quality Standard met
6. PRNR7B2	River	Lead	Water Quality Standard met
7. PRNR7B2	River	Total, Nitrogen	Water Quality Standard met
8. PRNR8A1	River	Copper	Water Quality Standard met
9. PRNR8A1	River	Total, Nitrogen	Water Quality Standard met
10. PRNR8B	River	pH	Water Quality Standard met
11. PRNR9A	River	Copper	Water Quality Standard met
12. PRER10A1	River	Total, Nitrogen	Water Quality Standard met
13. PRER10A1	River	Total, Phosphorus	Water Quality Standard met
14. PRER10A1	River	Turbidity	Water Quality Standard met
15. PRER10A3	River	Total, Nitrogen	Water Quality Standard met
16. PRER10A3	River	Turbidity	Water Quality Standard met
17. PRER10A4	River	Total, Nitrogen	Water Quality Standard met
18. PRER10A5	River	Total, Nitrogen	Water Quality Standard met
19. PRER10A5	River	Turbidity	Water Quality Standard met
20. PRER10E	River	Turbidity	Water Quality Standard met
21. PRER10G	River	Dissolved Oxygen	Water Quality Standard met
22. PRER10G	River	Turbidity	Water Quality Standard met

<b>AU ID</b>	<b>Type of water</b>	<b>Parameter</b>	<b>Reason for delisting</b>
23. PRER12A1	River	Total, Phosphorus	Water Quality Standard met
24. PRER12A1	River	Turbidity	Water Quality Standard met
25. PRER12A2	River	Total, Nitrogen	Water Quality Standard met
26. PRER12A2	River	Total, Phosphorus	Water Quality Standard met
27. PRER12B	River	Turbidity	Water Quality Standard met
28. PRER14A2	River	Lead	Water Quality Standard met
29. PRER14G1	River	Copper	Water Quality Standard met
30. PRER14H	River	Surfactants	Water Quality Standard met
31. PRER14J	River	Cadmium	Water Quality Standard met
32. PRER14K	River	Lead	Water Quality Standard met
33. PRER16A	River	Total, Nitrogen	Water Quality Standard met
34. PRER22A	River	Dissolved Oxygen	Water Quality Standard met
35. PRER22A	River	Turbidity	Water Quality Standard met
36. PRER33A	River	Lead	Water Quality Standard met
37. PRER33A	River	Surfactants	Water Quality Standard met
38. PRSR57A2	River	Total, Phosphorus	Water Quality Standard met
39. PRSR62A1	River	Total, Phosphorus	Water Quality Standard met
40. PRSR62A1	River	Turbidity	Water Quality Standard met
41. PRSR63A	River	Ammonia	Water Quality Standard met
42. PRWR77A	River	Turbidity	Water Quality Standard met
43. PRWR83A	River	Copper	Water Quality Standard met
44. PRWR83A	River	Total, Phosphorus	Water Quality Standard met
45. PREL110A1	Lake	Turbidity	Water Quality Standard met
46. PRNL37A3	Lake	pH	Water Quality Standard met
47. PREE13A1	SJBES	Arsenic	Water Quality Standard met
48. PREE13A1	SJBES	Lead	Water Quality Standard met
49. PREE13A1	SJBES	Mercury	Water Quality Standard met
50. PREE13A1	SJBES	Selenium	Water Quality Standard met
51. PREE13A1	SJBES	Surfactants	Water Quality Standard met
52. PREE13A1	SJBES	Total, Phosphorus	Water Quality Standard met
53. PREE13A2	SJBES	Oil and Grease	Change in water quality standard
54. PREE13A3	SJBES	Fecal Coliform	Change in water quality standard
55. PREE13A3	SJBES	Oil and Grease	Change in water quality standard
56. PRNC04	Coast	Dissolved Oxygen	Water Quality Standard met
57. PRNC05	Coast	Temperature	Water Quality Standard met
58. PRSC36C	Coast	Dissolved Oxygen	Water Quality Standard met
59. PRSC37C	Coast	Enterococcus	Water Quality Standard met
60. PRWC46	Coast	Enterococcus	Water Quality Standard met
61. PRWC48	Coast	Dissolved Oxygen	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. 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**

<b>Basin</b>	<b>Region</b>	<b>AU per basin</b>
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 including 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 and changes in regulations applicable to water quality standards are taken into consideration. For the 2022 cycle, three hundred sixteen (316) AU / parameter are evaluated as a high priority for the development of the TMDLs (Table



47) and five hundred twenty-two (522) with intermediate (moderate) and low priority (Table 48).

**Table 47: Parameter/AU combinations with high priority to development of TMDL**

Basin	Waterbody name	AU 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	Enterococcus	H
5. Río Guajataca	Río Guajataca	PRNR3A1	Total, Nitrogen	H
6. Río Guajataca	Río Guajataca	PRNR3A2	Chromium VI	H
7. Río Guajataca	Río Guajataca	PRNR3A2	Enterococcus	H
8. Río Guajataca	Río Guajataca	PRNR3A2	Total, Nitrogen	H
9. Río Guajataca	Quebrada Las Sequías	PRNQ3B	Arsenic	H
10. Río Guajataca	Quebrada Las Sequías	PRNQ3B	Dissolved Oxygen	H
11. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A1	Chromium VI	H
12. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A1	Enterococcus	H
13. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A1	Temperature	H
14. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A1	Total, Phosphorus	H
15. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A1	Turbidity	H
16. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A2	Chromium VI	H
17. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A2	Enterococcus	H
18. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A2	Pesticides	H
19. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A2	Temperature	H
20. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A2	Total, Nitrogen	H
21. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A2	Total, Phosphorus	H
22. Río Grande de Arecibo	Río Grande de Arecibo	PRNR7A2	Turbidity	H
23. Río Grande de Arecibo	Túnel	PRNR7A3	Chromium VI	H
24. Río Grande de Arecibo	Túnel	PRNR7A3	Enterococcus	H
25. Río Grande de Arecibo	Túnel	PRNR7A3	pH	H
26. Río Grande de Arecibo	Túnel	PRNR7A3	Total, Phosphorus	H
27. Río Grande de Arecibo	Río Caonillas	PRNR7C1	Chromium VI	H
28. Río Grande de Arecibo	Río Caonillas	PRNR7C1	Enterococcus	H
29. Río Grande de Arecibo	Río Caonillas	PRNR7C1	Total, Nitrogen	H
30. Río Grande de Arecibo	Río Caonillas	PRNR7C1	Total, Phosphorus	H
31. Río Grande de Arecibo	Río Caonillas	PRNR7C1	Turbidity	H
32. Río Grande de Arecibo	Río Limón	PRNR7C2	Chromium VI	H
33. Río Grande de Arecibo	Río Limón	PRNR7C2	Enterococcus	H
34. Río Grande de Arecibo	Río Limón	PRNR7C2	Total, Nitrogen	H
35. Río Grande de Arecibo	Río Limón	PRNR7C2	Turbidity	H
36. Río Grande de Arecibo	Río Yunes	PRNR7C3	Chromium VI	H
37. Río Grande de Arecibo	Río Yunes	PRNR7C3	Enterococcus	H
38. Río Grande de Arecibo	Río Yunes	PRNR7C3	Temperature	H
39. Río Grande de Arecibo	Río Yunes	PRNR7C3	Total, Nitrogen	H
40. Río Grande de Arecibo	Río Yunes	PRNR7C3	Total, Phosphorus	H
41. Río Grande de Arecibo	Río Yunes	PRNR7C3	Turbidity	H
42. Río Grande de Arecibo	Río Tanamá	PRNR7B2	Chromium VI	H
43. Río Grande de Arecibo	Río Tanamá	PRNR7B2	Enterococcus	H

Basin	Waterbody name	AU ID	Parameter	Priority
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	Enterococcus	H
48. Río Grande de Manatí	Río Grande de Manatí	PRNR8A1	Temperature	H
49. Río Grande de Manatí	Río Grande de Manatí	PRNR8A1	Total, Phosphorus	H
50. Río Grande de Manatí	Río Grande de Manatí	PRNR8A1	Turbidity	H
51. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Chromium VI	H
52. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Copper	H
53. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Enterococcus	H
54. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Temperature	H
55. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Total, Nitrogen	H
56. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Total, Phosphorus	H
57. Río Grande de Manatí	Río Grande de Manatí	PRNR8A2	Turbidity	H
58. Río Grande de Manatí	Río Cialito	PRNR8B	Chromium VI	H
59. Río Grande de Manatí	Río Cialito	PRNR8B	Enterococcus	H
60. Río Grande de Manatí	Río Cialito	PRNR8B	Turbidity	H
61. Río Grande de Manatí	Río Orocovis	PRNR8E1	Chromium VI	H
62. Río Grande de Manatí	Río Orocovis	PRNR8E1	Enterococcus	H
63. Río Grande de Manatí	Río Orocovis	PRNR8E1	Total, Nitrogen	H
64. Río Grande de Manatí	Río Orocovis	PRNR8E1	Total, Phosphorus	H
65. Río Grande de Manatí	Río Orocovis	PRNR8E1	Turbidity	H
66. Río Grande de Manatí	Río Botijas	PRNR8E2	pH	H
67. Río Cibuco	Río Cibuco	PRNR9A	Chromium VI	H
68. Río Cibuco	Río Cibuco	PRNR9A	Enterococcus	H
69. Río Cibuco	Río Cibuco	PRNR9A	Temperature	H
70. Río Cibuco	Río Cibuco	PRNR9A	Total, Nitrogen	H
71. Río Cibuco	Río Cibuco	PRNR9A	Total, Phosphorus	H
72. Río Cibuco	Río Cibuco	PRNR9A	Turbidity	H
73. Río Cibuco	Río Morovis	PRNR9B2	Dissolved Oxygen	H
74. Río De La Plata	Río De La Plata	PRER10A1	Chromium VI	H
75. Río De La Plata	Río De La Plata	PRER10A1	Dissolved Oxygen	H
76. Río De La Plata	Río De La Plata	PRER10A1	Enterococcus	H
77. Río De La Plata	Río De La Plata	PRER10A1	Temperature	H
78. Río De La Plata	Río De La Plata	PRER10A3	Chromium VI	H
79. Río De La Plata	Río De La Plata	PRER10A3	Enterococcus	H
80. Río De La Plata	Río De La Plata	PRER10A3	pH	H
81. Río De La Plata	Río De La Plata	PRER10A3	Total, Phosphorus	H
82. Río De La Plata	Río De La Plata	PRER10A4	Chromium VI	H
83. Río De La Plata	Río De La Plata	PRER10A4	Enterococcus	H
84. Río De La Plata	Río De La Plata	PRER10A4	pH	H
85. Río De La Plata	Río De La Plata	PRER10A4	Temperature	H
86. Río De La Plata	Río De La Plata	PRER10A4	Total, Phosphorus	H
87. Río De La Plata	Río De La Plata	PRER10A4	Turbidity	H
88. Río De La Plata	Río De La Plata	PRER10A5	Chromium VI	H
89. Río De La Plata	Río De La Plata	PRER10A5	Copper	H
90. Río De La Plata	Río De La Plata	PRER10A5	Enterococcus	H



Basin	Waterbody name	AU ID	Parameter	Priority
91. Río De La Plata	Río De La Plata	PRER10A5	Lead	H
92. Río De La Plata	Río De La Plata	PRER10A5	pH	H
93. Río De La Plata	Río De La Plata	PRER10A5	Total, Phosphorus	H
94. Río De La Plata	Río Guadiana	PRER10E	Chromium VI	H
95. Río De La Plata	Río Guadiana	PRER10E	Enterococcus	H
96. Río De La Plata	Río Guadiana	PRER10E	Total, Nitrogen	H
97. Río De La Plata	Río Guadiana	PRER10E	Total, Phosphorus	H
98. Río De La Plata	Río Arroyata	PRER10G	Chromium VI	H
99. Río De La Plata	Río Arroyata	PRER10G	Enterococcus	H
100. Río De La Plata	Río Arroyata	PRER10G	Total, Phosphorus	H
101. Río De La Plata	Río Matón	PRER10J	Chromium VI	H
102. Río De La Plata	Río Matón	PRER10J	Enterococcus	H
103. Río De La Plata	Río Matón	PRER10J	pH	H
104. Río De La Plata	Río Matón	PRER10J	Total, Nitrogen	H
105. Río De La Plata	Río Matón	PRER10J	Total, Phosphorus	H
106. Río De La Plata	Río Guavate	PRER10K	pH	H
107. Río Hondo	Río Hondo	PRER11A	Dissolved Oxygen	H
108. Río Hondo	Río Hondo	PRER11A	Surfactants	H
109. Río Bayamón	Río Bayamón	PRER12A1	Ammonia	H
110. Río Bayamón	Río Bayamón	PRER12A1	Chromium VI	H
111. Río Bayamón	Río Bayamón	PRER12A1	Enterococcus	H
112. Río Bayamón	Río Bayamón	PRER12A1	pH	H
113. Río Bayamón	Río Bayamón	PRER12A1	Temperature	H
114. Río Bayamón	Río Bayamón	PRER12A1	Total, Nitrogen	H
115. Río Bayamón	Río Bayamón	PRER12A2	Chromium VI	H
116. Río Bayamón	Río Bayamón	PRER12A2	Enterococcus	H
117. Río Bayamón	Río Guaynabo	PRER12B	Chromium VI	H
118. Río Bayamón	Río Guaynabo	PRER12B	Dissolved Oxygen	H
119. Río Bayamón	Río Guaynabo	PRER12B	Enterococcus	H
120. Río Bayamón	Río Guaynabo	PRER12B	Total, Nitrogen	H
121. Río Bayamón	Río Guaynabo	PRER12B	Total, Phosphorus	H
122. Río Grande de Loíza	Río Grande de Loíza	PRER14A1	Chromium VI	H
123. Río Grande de Loíza	Río Grande de Loíza	PRER14A1	Enterococcus	H
124. Río Grande de Loíza	Río Grande de Loíza	PRER14A1	Temperature	H
125. Río Grande de Loíza	Río Grande de Loíza	PRER14A1	Total, Phosphorus	H
126. Río Grande de Loíza	Río Grande de Loíza	PRER14A1	Turbidity	H
127. Río Grande de Loíza	Río Grande de Loíza	PRER14A2	Chromium VI	H
128. Río Grande de Loíza	Río Grande de Loíza	PRER14A2	Enterococcus	H
129. Río Grande de Loíza	Río Grande de Loíza	PRER14A2	Pesticides	H
130. Río Grande de Loíza	Río Grande de Loíza	PRER14A2	Temperature	H
131. Río Grande de Loíza	Río Grande de Loíza	PRER14A2	Total, Phosphorus	H
132. Río Grande de Loíza	Río Grande de Loíza	PRER14A2	Turbidity	H
133. Río Grande de Loíza	Río Canóvanas	PRER14B	Dissolved Oxygen	H
134. Río Grande de Loíza	Río Canovanillas	PRER14C	Dissolved Oxygen	H
135. Río Grande de Loíza	Río Gurabo	PRER14G1	Chromium VI	H
136. Río Grande de Loíza	Río Gurabo	PRER14G1	Enterococcus	H
137. Río Grande de Loíza	Río Gurabo	PRER14G1	Temperature	H

Basin	Waterbody name	AU ID	Parameter	Priority
138. Río Grande de Loíza	Río Gurabo	PRER14G1	Total, Nitrogen	H
139. Río Grande de Loíza	Río Gurabo	PRER14G1	Total, Phosphorus	H
140. Río Grande de Loíza	Río Gurabo	PRER14G1	Turbidity	H
141. Río Grande de Loíza	Río Valenciano	PRER14G2	Ammonia	H
142. Río Grande de Loíza	Río Valenciano	PRER14G2	Chromium VI	H
143. Río Grande de Loíza	Río Valenciano	PRER14G2	Enterococcus	H
144. Río Grande de Loíza	Río Valenciano	PRER14G2	pH	H
145. Río Grande de Loíza	Río Valenciano	PRER14G2	Surfactants	H
146. Río Grande de Loíza	Río Valenciano	PRER14G2	Total, Nitrogen	H
147. Río Grande de Loíza	Río Valenciano	PRER14G2	Total, Phosphorus	H
148. Río Grande de Loíza	Río Valenciano	PRER14G2	Turbidity	H
149. Río Grande de Loíza	Río Bairoa	PRER14H	Chromium VI	H
150. Río Grande de Loíza	Río Bairoa	PRER14H	Enterococcus	H
151. Río Grande de Loíza	Río Bairoa	PRER14H	Total, Nitrogen	H
152. Río Grande de Loíza	Río Bairoa	PRER14H	Total, Phosphorus	H
153. Río Grande de Loíza	Río Cagüitas	PRER14I	Chromium VI	H
154. Río Grande de Loíza	Río Cagüitas	PRER14I	Enterococcus	H
155. Río Grande de Loíza	Río Cagüitas	PRER14I	Surfactants	H
156. Río Grande de Loíza	Río Cagüitas	PRER14I	Temperature	H
157. Río Grande de Loíza	Río Cagüitas	PRER14I	Total, Nitrogen	H
158. Río Grande de Loíza	Río Cagüitas	PRER14I	Total, Phosphorus	H
159. Río Grande de Loíza	Río Cagüitas	PRER14I	Turbidity	H
160. Río Grande de Loíza	Río Turabo	PRER14J	Chromium VI	H
161. Río Grande de Loíza	Río Turabo	PRER14J	Copper	H
162. Río Grande de Loíza	Río Turabo	PRER14J	Enterococcus	H
163. Río Grande de Loíza	Río Turabo	PRER14J	Lead	H
164. Río Grande de Loíza	Río Turabo	PRER14J	Temperature	H
165. Río Grande de Loíza	Río Turabo	PRER14J	Total, Phosphorus	H
166. Río Grande de Loíza	Río Turabo	PRER14J	Turbidity	H
167. Río Grande de Loíza	Río Cayaguas	PRER14K	Chromium VI	H
168. Río Grande de Loíza	Río Cayaguas	PRER14K	Copper	H
169. Río Grande de Loíza	Río Cayaguas	PRER14K	Enterococcus	H
170. Río Grande de Loíza	Río Cayaguas	PRER14K	Temperature	H
171. Río Grande de Loíza	Río Cayaguas	PRER14K	Total, Nitrogen	H
172. Río Grande de Loíza	Río Cayaguas	PRER14K	Total, Phosphorus	H
173. Río Grande de Loíza	Río Cayaguas	PRER14K	Turbidity	H
174. Río Blanco	Río Blanco	PRER30A	Turbidity	H
175. Río Blanco	Quebrada Peña Pobre	PREQ30B	Dissolved Oxygen	H
176. Río Grande de Patillas	Río Grande de Patillas	PRSR43A2	Chromium VI	H
177. Río Grande de Patillas	Río Grande de Patillas	PRSR43A2	Enterococcus	H
178. Río Grande de Patillas	Río Grande de Patillas	PRSR43A2	pH	H
179. Río Coamo	Río Coamo	PRSR57A2	Chromium VI	H
180. Río Coamo	Río Coamo	PRSR57A2	Cyanide	H
181. Río Coamo	Río Coamo	PRSR57A2	Enterococcus	H
182. Río Coamo	Río Coamo	PRSR57A2	pH	H
183. Río Coamo	Río Coamo	PRSR57A2	Temperature	H
184. Río Coamo	Río Coamo	PRSR57A2	Total, Nitrogen	H

Basin	Waterbody name	AU ID	Parameter	Priority
185. Río Coamo	Río Cuyón	PRSR57B	Temperature	H
186. Río Guayanilla	Río Guayanilla	PRSR67A	Ammonia	H
187. Río Guayanilla	Río Guayanilla	PRSR67A	Chromium VI	H
188. Río Guayanilla	Río Guayanilla	PRSR67A	Dissolved Oxygen	H
189. Río Guayanilla	Río Guayanilla	PRSR67A	Enterococcus	H
190. Río Guayanilla	Río Guayanilla	PRSR67A	Temperature	H
191. Río Guayanilla	Río Guayanilla	PRSR67A	Total, Nitrogen	H
192. Río Guayanilla	Río Guayanilla	PRSR67A	Total, Phosphorus	H
193. Río Guayanilla	Río Guayanilla	PRSR67A	Turbidity	H
194. Río Guanajibo	Río Guanajibo	PRWR77A	Chromium VI	H
195. Río Guanajibo	Río Guanajibo	PRWR77A	Dissolved Oxygen	H
196. Río Guanajibo	Río Guanajibo	PRWR77A	Enterococcus	H
197. Río Guanajibo	Río Guanajibo	PRWR77A	Total, Phosphorus	H
198. Río Guanajibo	Río Rosario	PRWR77C	Chromium VI	H
199. Río Guanajibo	Río Rosario	PRWR77C	Enterococcus	H
200. Río Guanajibo	Río Rosario	PRWR77C	Pesticides	H
201. Río Guanajibo	Río Rosario	PRWR77C	Total, Phosphorus	H
202. Río Guanajibo	Río Rosario	PRWR77C	Turbidity	H
203. Río Guanajibo	Río Viejo	PRWR77D	Chromium VI	H
204. Río Guanajibo	Río Viejo	PRWR77D	Cyanide	H
205. Río Guanajibo	Río Viejo	PRWR77D	Dissolved Oxygen	H
206. Río Guanajibo	Río Viejo	PRWR77D	Enterococcus	H
207. Río Guanajibo	Río Viejo	PRWR77D	Total, Phosphorus	H
208. Río Guanajibo	Río Viejo	PRWR77D	Turbidity	H
209. Río Guanajibo	Río Cupeyes	PRWR77G	Pesticides	H
210. Río Yagüez	Río Yagüez	PRWR79A	Chromium VI	H
211. Río Yagüez	Río Yagüez	PRWR79A	Enterococcus	H
212. Río Grande de Añasco	Río Grande de Añasco	PRWR83A	Chromium VI	H
213. Río Grande de Añasco	Río Grande de Añasco	PRWR83A	Enterococcus	H
214. Río Grande de Añasco	Río Grande de Añasco	PRWR83A	pH	H
215. Río Grande de Añasco	Río Grande de Añasco	PRWR83A	Turbidity	H
216. Río Grande de Añasco	Río Prieto	PRWR83I	Pesticides	H
217. Río Culebrinas	Río Culebrinas	PRWR95A	Chromium VI	H
218. Río Culebrinas	Río Culebrinas	PRWR95A	Copper	H
219. Río Culebrinas	Río Culebrinas	PRWR95A	Enterococcus	H
220. Río Culebrinas	Río Culebrinas	PRWR95A	Pesticides	H
221. Río Culebrinas	Río Culebrinas	PRWR95A	Total, Nitrogen	H
222. Río Culebrinas	Río Culebrinas	PRWR95A	Total, Phosphorus	H
223. Río Culebrinas	Río Culebrinas	PRWR95A	Turbidity	H
224. Río Culebrinas	Quebrada La Salle	PRWQ95F	Dissolved Oxygen	H
225. Río Culebrinas	Quebrada La Salle	PRWQ95F	Pesticides	H
226. Río Culebrinas	Quebrada El Salto	PRWQ95G	Dissolved Oxygen	H
227. Río Culebrinas	Quebrada Grande De La Majagua	PRWQ95H	Pesticides	H
228. Río Guajataca	Lago Guajataca	PRNL3A1	Dissolved Oxygen	H
229. Río Guajataca	Lago Guajataca	PRNL3A1	pH	H
230. Río Guajataca	Lago Guajataca	PRNL3A1	Temperature	H
231. Río Guajataca	Lago Guajataca	PRNL3A1	Total, Nitrogen	H

Basin	Waterbody name	AU ID	Parameter	Priority
232. Río Guajataca	Lago Guajataca	PRNL3A1	Total, Phosphorus	H
233. Río Grande de Arecibo	Lago Dos Bocas	PRNL <sub>1</sub> 7A1	Arsenic	H
234. Río Grande de Arecibo	Lago Dos Bocas	PRNL <sub>1</sub> 7A1	Copper	H
235. Río Grande de Arecibo	Lago Dos Bocas	PRNL <sub>1</sub> 7A1	Dissolved Oxygen	H
236. Río Grande de Arecibo	Lago Dos Bocas	PRNL <sub>1</sub> 7A1	pH	H
237. Río Grande de Arecibo	Lago Dos Bocas	PRNL <sub>1</sub> 7A1	Surfactants	H
238. Río Grande de Arecibo	Lago Dos Bocas	PRNL <sub>1</sub> 7A1	Temperature	H
239. Río Grande de Arecibo	Lago Dos Bocas	PRNL <sub>1</sub> 7A1	Total, Nitrogen	H
240. Río Grande de Arecibo	Lago Dos Bocas	PRNL <sub>1</sub> 7A1	Total, Phosphorus	H
241. Río Grande de Arecibo	Lago Dos Bocas	PRNL <sub>1</sub> 7A1	Turbidity	H
242. Río Grande de Arecibo	Lago Caonillas	PRNL <sub>2</sub> 7C1	Copper	H
243. Río Grande de Arecibo	Lago Caonillas	PRNL <sub>2</sub> 7C1	Dissolved Oxygen	H
244. Río Grande de Arecibo	Lago Caonillas	PRNL <sub>2</sub> 7C1	Pesticides	H
245. Río Grande de Arecibo	Lago Caonillas	PRNL <sub>2</sub> 7C1	pH	H
246. Río Grande de Arecibo	Lago Caonillas	PRNL <sub>2</sub> 7C1	Total, Nitrogen	H
247. Río Grande de Arecibo	Lago Caonillas	PRNL <sub>2</sub> 7C1	Total, Phosphorus	H
248. Río Grande de Arecibo	Lago Garzas	PRNL <sub>3</sub> 7A3	Copper	H
249. Río Grande de Arecibo	Lago Garzas	PRNL <sub>3</sub> 7A3	Dissolved Oxygen	H
250. Río Grande de Arecibo	Lago Garzas	PRNL <sub>3</sub> 7A3	Lead	H
251. Río Grande de Arecibo	Lago Garzas	PRNL <sub>3</sub> 7A3	Pesticides	H
252. Río Grande de Arecibo	Lago Garzas	PRNL <sub>3</sub> 7A3	Total, Phosphorus	H
253. Río Grande de Manatí	Lago Guineo	PRNL <sub>1</sub> 8C1	Dissolved Oxygen	H
254. Río Grande de Manatí	Lago Guineo	PRNL <sub>1</sub> 8C1	Pesticides	H
255. Río Grande de Manatí	Lago Matrullas	PRNL <sub>2</sub> 8C1	Copper	H
256. Río Grande de Manatí	Lago Matrullas	PRNL <sub>2</sub> 8C1	Dissolved Oxygen	H
257. Río Grande de Manatí	Lago Matrullas	PRNL <sub>2</sub> 8C1	Lead	H
258. Río Grande de Manatí	Lago Matrullas	PRNL <sub>2</sub> 8C1	pH	H
259. Río Grande de Manatí	Lago Matrullas	PRNL <sub>2</sub> 8C1	Total, Nitrogen	H
260. Río Grande de Manatí	Lago Matrullas	PRNL <sub>2</sub> 8C1	Total, Phosphorus	H
261. Río De La Plata	Lago La Plata	PREL <sub>1</sub> 10A1	Arsenic	H
262. Río De La Plata	Lago La Plata	PREL <sub>1</sub> 10A1	Dissolved Oxygen	H
263. Río De La Plata	Lago La Plata	PREL <sub>1</sub> 10A1	Lead	H
264. Río De La Plata	Lago La Plata	PREL <sub>1</sub> 10A1	pH	H
265. Río De La Plata	Lago La Plata	PREL <sub>1</sub> 10A1	Temperature	H
266. Río De La Plata	Lago La Plata	PREL <sub>1</sub> 10A1	Total, Nitrogen	H
267. Río De La Plata	Lago La Plata	PREL <sub>1</sub> 10A1	Total, Phosphorus	H
268. Río De La Plata	Lago Carite	PREL <sub>2</sub> 10A5	Dissolved Oxygen	H
269. Río De La Plata	Lago Carite	PREL <sub>2</sub> 10A5	pH	H
270. Río De La Plata	Lago Carite	PREL <sub>2</sub> 10A5	Total, Nitrogen	H
271. Río De La Plata	Lago Carite	PREL <sub>2</sub> 10A5	Total, Phosphorus	H
272. Río Bayamón	Lago Cidra	PREL12A2	Copper	H
273. Río Bayamón	Lago Cidra	PREL12A2	Dissolved Oxygen	H
274. Río Bayamón	Lago Cidra	PREL12A2	Lead	H
275. Río Bayamón	Lago Cidra	PREL12A2	Total, Nitrogen	H
276. Río Bayamón	Lago Cidra	PREL12A2	Total, Phosphorus	H
277. Río Grande de Loíza	Lago Loíza	PREL14A1	Copper	H
278. Río Grande de Loíza	Lago Loíza	PREL14A1	Dissolved Oxygen	H

Basin	Waterbody name	AU ID	Parameter	Priority
279. Río Grande de Loíza	Lago Loíza	PREL14A1	Lead	H
280. Río Grande de Loíza	Lago Loíza	PREL14A1	pH	H
281. Río Grande de Loíza	Lago Loíza	PREL14A1	Temperature	H
282. Río Grande de Loíza	Lago Loíza	PREL14A1	Total, Nitrogen	H
283. Río Grande de Loíza	Lago Loíza	PREL14A1	Total, Phosphorus	H
284. Río Grande de Loíza	Lago Loíza	PREL14A1	Turbidity	H
285. Río Grande de Patillas	Lago Patillas	PRSL43A1	Dissolved Oxygen	H
286. Río Grande de Patillas	Lago Patillas	PRSL43A1	Pesticides	H
287. Río Grande de Patillas	Lago Patillas	PRSL43A1	pH	H
288. Río Grande de Patillas	Lago Patillas	PRSL43A1	Temperature	H
289. Río Grande de Patillas	Lago Patillas	PRSL43A1	Total, Phosphorus	H
290. Río Grande de Añasco	Lago Guayo	PRWL83H	Dissolved Oxygen	H
291. Río Grande de Añasco	Lago Guayo	PRWL83H	Pesticides	H
292. Río Grande de Añasco	Lago Guayo	PRWL83H	pH	H
293. Río Grande de Añasco	Lago Guayo	PRWL83H	Total, Nitrogen	H
294. Río Grande de Añasco	Lago Guayo	PRWL83H	Total, Phosphorus	H
295. Río Grande de Añasco	Lago Guayo	PRWL83H	Turbidity	H
296. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Ammonia	H
297. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Chromium VI	H
298. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Copper	H
299. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Dissolved Oxygen	H
300. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Enterococcus	H
301. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Lead	H
302. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Surfactants	H
303. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Temperature	H
304. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Total, Nitrogen	H
305. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Total, Phosphorus	H
306. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A2	Turbidity	H
307. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Ammonia	H
308. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Chromium VI	H
309. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Dissolved Oxygen	H
310. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Enterococcus	H
311. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	pH	H
312. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Surfactants	H
313. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Temperature	H
314. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Total, Nitrogen	H
315. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Total, Phosphorus	H
316. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A3	Turbidity	H

**Table 48: Assessment Units/ 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	Chromium VI	M



Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
4. Río Espíritu Santo	Río Espíritu Santo	PRER16A	Enterococcus	M
5. Quebrada Mata de Plátano	Quebrada Mata de Plátano	PREQ18A	Dissolved Oxygen	M
6. Quebrada Mata de Plátano	Quebrada Mata de Plátano	PREQ18A	Surfactants	M
7. Quebrada Fajardo	Quebrada Fajardo	PREQ21A	Dissolved Oxygen	M
8. Quebrada Fajardo	Quebrada Fajardo	PREQ21A	pH	M
9. Quebrada Fajardo	Quebrada Fajardo	PREQ21A	Temperature	M
10. Río Fajardo	Río Fajardo	PRER22A	Chromium VI	M
11. Río Fajardo	Río Fajardo	PRER22A	Enterococcus	M
12. Río Fajardo	Río Fajardo	PRER22A	Temperature	M
13. Río Fajardo	Río Fajardo	PRER22A	Total, Nitrogen	M
14. Río Fajardo	Río Fajardo	PRER22A	Total, Phosphorus	M
15. Río Demajagua	Río Demajagua	PRER23A	Dissolved Oxygen	M
16. Quebrada Ceiba	Quebrada Ceiba	PREQ24A	Dissolved Oxygen	M
17. Quebrada Ceiba	Quebrada Ceiba	PREQ24A	Surfactants	M
18. Quebrada Aguas Claras	Quebrada Aguas Claras	PREQ25A	Dissolved Oxygen	M
19. Río Daguao	Río Daguao	PRER26A	Dissolved Oxygen	M
20. Quebrada Botijas	Quebrada Botijas	PREQ28A	Dissolved Oxygen	M
21. Río Antón Ruiz	Río Antón Ruiz	PRER31A	Dissolved Oxygen	M
22. Río Antón Ruiz	Río Antón Ruiz	PRER31A	Temperature	M
23. Quebrada Frontera	Quebrada Frontera	PREQ32A	Dissolved Oxygen	M
24. Río Humacao	Río Humacao	PRER33A	Ammonia	M
25. Río Humacao	Río Humacao	PRER33A	Chromium VI	M
26. Río Humacao	Río Humacao	PRER33A	Copper	M
27. Río Humacao	Río Humacao	PRER33A	Enterococcus	M
28. Río Humacao	Río Humacao	PRER33A	Mercury	M
29. Río Humacao	Río Humacao	PRER33A	pH	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	Enterococcus	M

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
38. Río Guayanés	Río Guayanés	PRER35A	Lead	M
39. Río Guayanés	Río Guayanés	PRER35A	pH	M
40. Río Guayanés	Río Guayanés	PRER35A	Temperature	M
41. Río Guayanés	Río Guayanés	PRER35A	Total, Nitrogen	M
42. Río Guayanés	Río Guayanés	PRER35A	Total, Phosphorus	M
43. Río Guayanés	Río Guayanés	PRER35A	Turbidity	M
44. Río Maunabo	Río Maunabo	PRER37A	Chromium VI	M
45. Río Maunabo	Río Maunabo	PRER37A	Enterococcus	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
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	Dissolved Oxygen	M
68. Río Bucaná-Cerrillos	Río Bucaná Cerrillos	PRSR62A1	Enterococcus	M
69. Río Bucaná-Cerrillos	Río Bucaná Cerrillos	PRSR62A1	Temperature	M
70. Río Bucaná-Cerrillos	Río Bucaná Cerrillos	PRSR62A2	Chromium VI	M
71. Río Bucaná-Cerrillos	Río Bucaná Cerrillos	PRSR62A2	Enterococcus	M
72. Río Bucaná-Cerrillos	Río Bucaná Cerrillos	PRSR62A2	pH	M

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



Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
108. Caño Merle	Caño Merle	PRWE78A	Surfactants	M
109. Quebrada Grande de Calvache	Quebrada Grande de Calvache	PRWE88A	Dissolved Oxygen	M
110. Río Guayabo	Río Guayabo	PRWE94A	Dissolved Oxygen	M
111. Quebrada Melanía	Lago Melanía	PRSL50A	Enterococcus	M
112. Quebrada Melanía	Lago Melanía	PRSL50A	Mercury	M
113. Quebrada Melanía	Lago Melanía	PRSL50A	Pesticides	M
114. Quebrada Melanía	Lago Melanía	PRSL50A	Temperature	M
115. Quebrada Melanía	Lago Melanía	PRSL50A	Total, Nitrogen	M
116. Quebrada Melanía	Lago Melanía	PRSL50A	Total, Phosphorus	M
117. Río Jacaguas	Lago Guayabal	PRSL <sub>1</sub> 60A1	Dissolved Oxygen	M
118. Río Jacaguas	Lago Guayabal	PRSL <sub>1</sub> 60A1	Pesticides	M
119. Río Jacaguas	Lago Guayabal	PRSL <sub>1</sub> 60A1	pH	M
120. Río Jacaguas	Lago Guayabal	PRSL <sub>1</sub> 60A1	Total, Nitrogen	M
121. Río Jacaguas	Lago Guayabal	PRSL <sub>1</sub> 60A1	Total, Phosphorus	M
122. Río Jacaguas	Lago Toa vaca	PRSL <sub>2</sub> 60A1	Dissolved Oxygen	M
123. Río Jacaguas	Lago Toa vaca	PRSL <sub>2</sub> 60A1	pH	M
124. Río Jacaguas	Lago Toa vaca	PRSL <sub>2</sub> 60A1	Temperature	M
125. Río Jacaguas	Lago Toa vaca	PRSL <sub>2</sub> 60A1	Total, Nitrogen	M
126. Río Jacaguas	Lago Toa vaca	PRSL <sub>2</sub> 60A1	Total, Phosphorus	M
127. Río Bucaná-Cerrillos	Lago Cerrillos	PRSL62A1	Dissolved Oxygen	M
128. Río Bucaná-Cerrillos	Lago Cerrillos	PRSL62A1	pH	M
129. Río Bucaná-Cerrillos	Lago Cerrillos	PRSL62A1	Temperature	M
130. Río Bucaná-Cerrillos	Lago Cerrillos	PRSL62A1	Total, Nitrogen	M
131. Río Bucaná-Cerrillos	Lago Cerrillos	PRSL62A1	Total, Phosphorus	M
132. Río Yauco	Lago Luchetti	PRSL68A1	Dissolved Oxygen	M
133. Río Yauco	Lago Luchetti	PRSL68A1	Pesticides	M
134. Río Yauco	Lago Luchetti	PRSL68A1	pH	M
135. Río Yauco	Lago Luchetti	PRSL68A1	Total, Nitrogen	M
136. Río Yauco	Lago Luchetti	PRSL68A1	Total, Phosphorus	M
137. Río Yauco	Lago Luchetti	PRSL68A1	Turbidity	M
138. Río Loco	Lago Loco	PRSL69A	Dissolved Oxygen	M
139. Río Loco	Lago Loco	PRSL69A	pH	M
140. Río Loco	Lago Loco	PRSL69A	Total, Nitrogen	M
141. Río Loco	Lago Loco	PRSL69A	Total, Phosphorus	M

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
142. Quebrada Los Ramos	Quebrada Los Ramos	PRWQ89A	Dissolved Oxygen	L
143. Quebrada Piletas	Quebrada Piletas	PRWQ91A	Dissolved Oxygen	L
144. Caño Boquilla	Caño Boquilla	PRWE82A	Dissolved Oxygen	L
145. Caño Boquilla	Caño Boquilla	PRWE82A	Surfactants	L
146. Caño Boquilla	Caño Boquilla	PRWE82A	Turbidity	L
147. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A1	Copper	L
148. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A1	Dissolved Oxygen	L
149. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A1	Enterococcus	L
150. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A1	Oil and Grease	L
151. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A1	pH	L
152. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A1	Temperature	L
153. San Juan Bay Estuary	San Juan Bay Estuary	PREE13A1	Turbidity	L
154. Laguna Joyudas	Laguna Joyudas	PRWN0005	Copper	L
155. Laguna Joyudas	Laguna Joyudas	PRWN0005	Dissolved Oxygen	L
156. Laguna Tortuguero	Laguna Tortuguero	PRNN0006	Dissolved Oxygen	L
157. Laguna Mata Redonda	Laguna Mata Redonda	PRNN0007	Dissolved Oxygen	L
158. Laguna Mata Redonda	Laguna Mata Redonda	PRNN0007	pH	L
159. Laguna Aguas Prieta	Laguna Aguas Prieta	PREN0011	Copper	L
160. Laguna Aguas Prieta	Laguna Aguas Prieta	PREN0011	Dissolved Oxygen	L
161. Laguna Aguas Prieta	Laguna Aguas Prieta	PREN0011	Turbidity	L
162. Laguna Grande	Laguna Grande	PREN0012	Dissolved Oxygen	L
163. Laguna Grande	Laguna Grande	PREN0012	Enterococcus	L
164. Laguna Grande	Laguna Grande	PREN0012	pH	L
165. Laguna Ceiba	Laguna Ceiba	PREN0013	Copper	L
166. Laguna Ceiba	Laguna Ceiba	PREN0013	Dissolved Oxygen	L
167. Laguna Ceiba	Laguna Ceiba	PREN0013	Enterococcus	L
168. Laguna Ceiba	Laguna Ceiba	PREN0013	pH	L
169. Laguna Pozuelo	Laguna Pozuelo	PRSN0014	Copper	L
170. Laguna Pozuelo	Laguna Pozuelo	PRSN0014	Dissolved Oxygen	L
171. Laguna Pozuelo	Laguna Pozuelo	PRSN0014	pH	L
172. Laguna Pozuelo	Laguna Pozuelo	PRSN0014	Temperature	L
173. Laguna Mar Negro	Laguna Mar Negro	PRSN0015	Copper	L
174. Laguna Mar Negro	Laguna Mar Negro	PRSN0015	Dissolved Oxygen	L
175. Laguna Mar Negro	Laguna Mar Negro	PRSN0015	pH	L
176. Laguna Punta Arenas	Laguna Punta Arenas	PRSN0016	Copper	L

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
177. Laguna Punta Arenas	Laguna Punta Arenas	PRSN0016	Dissolved Oxygen	L
178. Laguna Punta Arenas	Laguna Punta Arenas	PRSN0016	Temperature	L
179. Laguna Punta Arenas	Laguna Punta Arenas	PRSN0016	Turbidity	L
180. Laguna Tiburones	Laguna Tiburones	PRSN0017	Copper	L
181. Laguna Tiburones	Laguna Tiburones	PRSN0017	Dissolved Oxygen	L
182. Laguna Tiburones	Laguna Tiburones	PRSN0017	pH	L
183. Laguna Tiburones	Laguna Tiburones	PRSN0017	Temperature	L
184. Laguna Tiburones	Laguna Tiburones	PRSN0017	Turbidity	L
185. Laguna Salinas	Laguna Salinas	PRSN0018	Copper	L
186. Laguna Salinas	Laguna Salinas	PRSN0018	Dissolved Oxygen	L
187. Laguna Salinas 1	Fraternidad	PRSN0019	Copper	L
188. Laguna Salinas 1	Fraternidad	PRSN0019	Dissolved Oxygen	L
189. Laguna Salinas 1	Fraternidad	PRSN0019	Turbidity	L
190. Laguna Cabo Rojo 2	Candelaria	PRSN0020	Copper	L
191. Laguna Cabo Rojo 2	Candelaria	PRSN0020	Dissolved Oxygen	L
192. Laguna Cabo Rojo 2	Candelaria	PRSN0020	Temperature	L
193. Laguna Cabo Rojo 2	Candelaria	PRSN0020	Turbidity	L
194. Laguna Cabo Rojo 3	El Faro	PRSN0021	Copper	L
195. Laguna Cabo Rojo 3	El Faro	PRSN0021	Dissolved Oxygen	L
196. Laguna Cabo Rojo 3	El Faro	PRSN0021	Turbidity	L
197. Caño Boquerón	Caño Boquerón	PRSN0022	Copper	L
198. Caño Boquerón	Caño Boquerón	PRSN0022	Dissolved Oxygen	L
199. Caño Boquerón	Caño Boquerón	PRSN0022	pH	L
200. Caño Boquerón	Caño Boquerón	PRSN0022	Turbidity	L
201. Laguna Guaniquilla	Laguna Guaniquilla	PRSN0023	Dissolved Oxygen	L
202. Laguna Guaniquilla	Laguna Guaniquilla	PRSN0023	pH	L
203. Laguna Guaniquilla	Laguna Guaniquilla	PRSN0023	Turbidity	L
204. Punta Borinquén to Punta Sardina	Punta Borinquén to Punta Sardina	PRNC01	Copper	L
205. Punta Borinquén to Punta Sardina	Punta Borinquén to Punta Sardina	PRNC01	Thallium	L
206. Punta Sardina to Punta Manglillo	Punta Sardina to Punta Manglillo	PRNC02	Copper	L
207. Punta Sardina to Punta Manglillo	Punta Sardina to Punta Manglillo	PRNC02	Enterococcus	L
208. Punta Sardina to Punta Manglillo	Punta Sardina to Punta Manglillo	PRNC02	Lead	L
209. Punta Sardina to Punta Manglillo	Punta Sardina to Punta Manglillo	PRNC02	Thallium	L

<b>Basin</b>	<b>Waterbody Name</b>	<b>Assessment Unit ID</b>	<b>Parameter</b>	<b>Priority</b>
210. Punta Sardina to Punta Manglillo	Punta Sardina to Punta Manglillo	PRNC02	Turbidity	L
211. Punta Manglillo to Punta Morillos	Punta Manglillo to Punta Morillos	PRNC03	Copper	L
212. Punta Manglillo to Punta Morillos	Punta Manglillo to Punta Morillos	PRNC03	Enterococcus	L
213. Punta Manglillo to Punta Morillos	Punta Manglillo to Punta Morillos	PRNC03	Temperature	L
214. Punta Manglillo to Punta Morillos	Punta Manglillo to Punta Morillos	PRNC03	Turbidity	L
215. Punta Morrillos to Punta Manatí	Punta Morrillos to Punta Manatí	PRNC04	Copper	L
216. Punta Morrillos to Punta Manatí	Punta Morrillos to Punta Manatí	PRNC04	Enterococcus	L
217. Punta Morrillos to Punta Manatí	Punta Morrillos to Punta Manatí	PRNC04	Mercury	L
218. Punta Morrillos to Punta Manatí	Punta Morrillos to Punta Manatí	PRNC04	Nickel	L
219. Punta Morrillos to Punta Manatí	Punta Morrillos to Punta Manatí	PRNC04	pH	L
220. Punta Morrillos to Punta Manatí	Punta Morrillos to Punta Manatí	PRNC04	Thallium	L
221. Punta Morrillos to Punta Manatí	Punta Morrillos to Punta Manatí	PRNC04	Turbidity	L
222. Punta Manatí to Punta Chivato	Punta Manatí to Punta Chivato	PRNC05	Copper	L
223. Punta Manatí to Punta Chivato	Punta Manatí to Punta Chivato	PRNC05	Enterococcus	L
224. Punta Manatí to Punta Chivato	Punta Manatí to Punta Chivato	PRNC05	Mercury	L
225. Punta Manatí to Punta Chivato	Punta Manatí to Punta Chivato	PRNC05	pH	L
226. Punta Manatí to Punta Chivato	Punta Manatí to Punta Chivato	PRNC05	Thallium	L
227. Punta Manatí to Punta Chivato	Punta Manatí to Punta Chivato	PRNC05	Turbidity	L
228. Punta Chivato to Punta Cerro Gordo	Punta Chivato to Punta Cerro Gordo	PRNC06	Copper	L
229. Punta Chivato to Punta Cerro Gordo	Punta Chivato to Punta Cerro Gordo	PRNC06	Enterococcus	L
230. Punta Chivato to Punta Cerro Gordo	Punta Chivato to Punta Cerro Gordo	PRNC06	Mercury	L
231. Punta Chivato to Punta Cerro Gordo	Punta Chivato to Punta Cerro Gordo	PRNC06	Temperature	L
232. Punta Chivato to Punta Cerro Gordo	Punta Chivato to Punta Cerro Gordo	PRNC06	Turbidity	L
233. Punta Puerto Nuevo to Punta Cerro Gordo	Punta Puerto Nuevo to Punta Cerro Gordo	PRNC07	Copper	L

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
234. Punta Puerto Nuevo to Punta Cerro Gordo	Punta Puerto Nuevo to Punta Cerro Gordo	PRNC07	Mercury	L
235. Punta Puerto Nuevo to Punta Cerro Gordo	Punta Puerto Nuevo to Punta Cerro Gordo	PRNC07	pH	L
236. Punta Puerto Nuevo to Punta Cerro Gordo	Punta Puerto Nuevo to Punta Cerro Gordo	PRNC07	Temperature	L
237. Punta Puerto Nuevo to Punta Cerro Gordo	Punta Puerto Nuevo to Punta Cerro Gordo	PRNC07	Turbidity	L
238. Punta Cerro Gordo to Punta Boca Juana	Punta Cerro Gordo to Punta Boca Juana	PRNC08	Arsenic	L
239. Punta Cerro Gordo to Punta Boca Juana	Punta Cerro Gordo to Punta Boca Juana	PRNC08	Copper	L
240. Punta Cerro Gordo to Punta Boca Juana	Punta Cerro Gordo to Punta Boca Juana	PRNC08	Enterococcus	L
241. Punta Cerro Gordo to Punta Boca Juana	Punta Cerro Gordo to Punta Boca Juana	PRNC08	Lead	L
242. Punta Cerro Gordo to Punta Boca Juana	Punta Cerro Gordo to Punta Boca Juana	PRNC08	Nickel	L
243. Punta Cerro Gordo to Punta Boca Juana	Punta Cerro Gordo to Punta Boca Juana	PRNC08	Turbidity	L
244. Punta Cerro Gordo to Punta Boca Juana	Punta Cerro Gordo to Punta Boca Juana	PRNC08	Zinc	L
245. Punta Boca Juana to Punta Salinas	Punta Boca Juana to Punta Salinas	PREC09	Arsenic	L
246. Punta Boca Juana to Punta Salinas	Punta Boca Juana to Punta Salinas	PREC09	Copper	L
247. Punta Boca Juana to Punta Salinas	Punta Boca Juana to Punta Salinas	PREC09	Enterococcus	L
248. Punta Boca Juana to Punta Salinas	Punta Boca Juana to Punta Salinas	PREC09	Lead	L
249. Punta Boca Juana to Punta Salinas	Punta Boca Juana to Punta Salinas	PREC09	Nickel	L
250. Punta Boca Juana to Punta Salinas	Punta Boca Juana to Punta Salinas	PREC09	pH	L
251. Punta Boca Juana to Punta Salinas	Punta Boca Juana to Punta Salinas	PREC09	Turbidity	L
252. Punta Salinas to Río Bayamón Mouth	Punta Salinas to Río Bayamón Mouth	PREC10B	Copper	L
253. Punta Salinas to Río Bayamón Mouth	Punta Salinas to Río Bayamón Mouth	PREC10B	Enterococcus	L
254. Punta Salinas to Río Bayamón Mouth	Punta Salinas to Río Bayamón Mouth	PREC10B	Lead	L
255. Punta Salinas to Río Bayamón Mouth	Punta Salinas to Río Bayamón Mouth	PREC10B	Mercury	L
256. Punta Salinas to Río Bayamón Mouth	Punta Salinas to Río Bayamón Mouth	PREC10B	Nickel	L
257. Punta Salinas to Río Bayamón Mouth	Punta Salinas to Río Bayamón Mouth	PREC10B	Turbidity	L

<b>Basin</b>	<b>Waterbody Name</b>	<b>Assessment Unit ID</b>	<b>Parameter</b>	<b>Priority</b>
258. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Copper	L
259. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Enterococcus	L
260. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Lead	L
261. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Mercury	L
262. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Nickel	L
263. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	pH	L
264. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Temperature	L
265. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Thallium	L
266. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Turbidity	L
267. Rio Bayamón Mouth to Isla de Cabras	Rio Bayamón Mouth to Isla de Cabras	PREC10C	Zinc	L
268. Isla de Cabras to Punta Del Morro	Isla de Cabras to Punta Del Morro	PREC11	Arsenic	L
269. Isla de Cabras to Punta Del Morro	Isla de Cabras to Punta Del Morro	PREC11	Copper	L
270. Isla de Cabras to Punta Del Morro	Isla de Cabras to Punta Del Morro	PREC11	Dissolved Oxygen	L
271. Isla de Cabras to Punta Del Morro	Isla de Cabras to Punta Del Morro	PREC11	Fecal Coliform	L
272. Punta Del Morro to West Side of Condado Bridge	Punta Del Morro to West Side of Condado Bridge	PREC12	Enterococcus	L
273. Punta Del Morro to West Side of Condado Bridge	Punta Del Morro to West Side of Condado Bridge	PREC12	pH	L
274. Punta Del Morro to West Side of Condado Bridge	Punta Del Morro to West Side of Condado Bridge	PREC12	Turbidity	L
275. East side of Condado Bridge to Punta Las Marías	East side of Condado Bridge to Punta Las Marías	PREC13	Copper	L
276. East side of Condado Bridge to Punta Las Marías	East side of Condado Bridge to Punta Las Marías	PREC13	Enterococcus	L
277. East side of Condado Bridge to Punta Las Marías	East side of Condado Bridge to Punta Las Marías	PREC13	Lead	L

<b>Basin</b>	<b>Waterbody Name</b>	<b>Assessment Unit ID</b>	<b>Parameter</b>	<b>Priority</b>
278. East side of Condado Bridge to Punta Las Marías	East side of Condado Bridge to Punta Las Marías	PREC13	Mercury	L
279. East side of Condado Bridge to Punta Las Marías	East side of Condado Bridge to Punta Las Marías	PREC13	Temperature	L
280. East side of Condado Bridge to Punta Las Marías	East side of Condado Bridge to Punta Las Marías	PREC13	Thallium	L
281. East side of Condado Bridge to Punta Las Marías	East side of Condado Bridge to Punta Las Marías	PREC13	Turbidity	L
282. Punta Las Marías to Punta Cangrejos	Punta Las Marías to Punta Cangrejos	PREC14	Arsenic	L
283. Punta Las Marías to Punta Cangrejos	Punta Las Marías to Punta Cangrejos	PREC14	Copper	L
284. Punta Las Marías to Punta Cangrejos	Punta Las Marías to Punta Cangrejos	PREC14	Lead	L
285. Punta Las Marías to Punta Cangrejos	Punta Las Marías to Punta Cangrejos	PREC14	Temperature	L
286. Punta Las Marías to Punta Cangrejos	Punta Las Marías to Punta Cangrejos	PREC14	Thallium	L
287. Punta Las Marías to Punta Cangrejos	Punta Las Marías to Punta Cangrejos	PREC14	Turbidity	L
288. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Arsenic	L
289. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Copper	L
290. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Enterococcus	L
291. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Mercury	L
292. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Nickel	L
293. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Temperature	L
294. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Thallium	L
295. Punta Cangrejos to Punta Vacía Talega	Punta Cangrejos to Punta Vacía Talega	PREC15	Turbidity	L
296. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Arsenic	L
297. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Copper	L
298. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Enterococcus	L
299. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Lead	L



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300. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Mercury	L
301. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Nickel	L
302. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Temperature	L
303. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Thallium	L
304. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Turbidity	L
305. Punta Vacía Talega to Punta Miquillo	Punta Vacía Talega to Punta Miquillo	PREC16	Zinc	L
306. Punta Miquillo to Punta La Bandera	Punta Miquillo to Punta La Bandera	PREC17	Copper	L
307. Punta Miquillo to Punta La Bandera	Punta Miquillo to Punta La Bandera	PREC17	Mercury	L
308. Punta Miquillo to Punta La Bandera	Punta Miquillo to Punta La Bandera	PREC17	Temperature	L
309. Punta Miquillo to Punta La Bandera	Punta Miquillo to Punta La Bandera	PREC17	Turbidity	L
310. Punta La Bandera to Cabezas de San Juan	Punta La Bandera to Cabezas de San Juan	PREC18	Copper	L
311. Punta La Bandera to Cabezas de San Juan	Punta La Bandera to Cabezas de San Juan	PREC18	pH	L
312. Punta La Bandera to Cabezas de San Juan	Punta La Bandera to Cabezas de San Juan	PREC18	Temperature	L
313. Punta La Bandera to Cabezas de San Juan	Punta La Bandera to Cabezas de San Juan	PREC18	Thallium	L
314. Punta La Bandera to Cabezas de San Juan	Punta La Bandera to Cabezas de San Juan	PREC18	Turbidity	L
315. Cabezas de San Juan to Punta Barrancas	Cabezas de San Juan to Punta Barrancas	PREC19	Copper	L
316. Cabezas de San Juan to Punta Barrancas	Cabezas de San Juan to Punta Barrancas	PREC19	Enterococcus	L
317. Cabezas de San Juan to Punta Barrancas	Cabezas de San Juan to Punta Barrancas	PREC19	Oil and Grease	L
318. Cabezas de San Juan to Punta Barrancas	Cabezas de San Juan to Punta Barrancas	PREC19	Temperature	L
319. Cabezas de San Juan to Punta Barrancas	Cabezas de San Juan to Punta Barrancas	PREC19	Turbidity	L
320. Punta Barrancas to Punta Medio Mundo	Punta Barrancas to Punta Medio Mundo	PREC20	Copper	L
321. Punta Barrancas to Punta Medio Mundo	Punta Barrancas to Punta Medio Mundo	PREC20	Dissolved Oxygen	L
322. Punta Barrancas to Punta Medio Mundo	Punta Barrancas to Punta Medio Mundo	PREC20	Enterococcus	L
323. Punta Barrancas to Punta Medio Mundo	Punta Barrancas to Punta Medio Mundo	PREC20	Temperature	L



<b>Basin</b>	<b>Waterbody Name</b>	<b>Assessment Unit ID</b>	<b>Parameter</b>	<b>Priority</b>
324. Punta Barrancas to Punta Medio Mundo	Punta Barrancas to Punta Medio Mundo	PREC20	Thallium	L
325. Punta Barrancas to Punta Medio Mundo	Punta Barrancas to Punta Medio Mundo	PREC20	Turbidity	L
326. Isla Cabras to Punta Cascajo	Isla Cabras to Punta Cascajo	PREC23	Copper	L
327. Isla Cabras to Punta Cascajo	Isla Cabras to Punta Cascajo	PREC23	Turbidity	L
328. Punta Cascajo to Punta Lima	Punta Cascajo to Punta Lima	PREC24	Copper	L
329. Punta Cascajo to Punta Lima	Punta Cascajo to Punta Lima	PREC24	Dissolved Oxygen	L
330. Punta Cascajo to Punta Lima	Punta Cascajo to Punta Lima	PREC24	Enterococcus	L
331. Punta Cascajo to Punta Lima	Punta Cascajo to Punta Lima	PREC24	Temperature	L
332. Punta Cascajo to Punta Lima	Punta Cascajo to Punta Lima	PREC24	Turbidity	L
333. Punta Lima to Morro de Humacao	Punta Lima to Morro de Humacao	PREC25	Copper	L
334. Punta Lima to Morro de Humacao	Punta Lima to Morro de Humacao	PREC25	Enterococcus	L
335. Punta Lima to Morro de Humacao	Punta Lima to Morro de Humacao	PREC25	Mercury	L
336. Punta Lima to Morro de Humacao	Punta Lima to Morro de Humacao	PREC25	Temperature	L
337. Punta Lima to Morro de Humacao	Punta Lima to Morro de Humacao	PREC25	Turbidity	L
338. Morro de Humacao to Punta Candelero	Morro de Humacao to Punta Candelero	PREC26	Copper	L
339. Morro de Humacao to Punta Candelero	Morro de Humacao to Punta Candelero	PREC26	Enterococcus	L
340. Morro de Humacao to Punta Candelero	Morro de Humacao to Punta Candelero	PREC26	Temperature	L
341. Morro de Humacao to Punta Candelero	Morro de Humacao to Punta Candelero	PREC26	Turbidity	L
342. Punta Candelero to Punta Guayanés	Punta Candelero to Punta Guayanés	PREC27	Arsenic	L
343. Punta Candelero to Punta Guayanés	Punta Candelero to Punta Guayanés	PREC27	Copper	L
344. Punta Candelero to Punta Guayanés	Punta Candelero to Punta Guayanés	PREC27	Enterococcus	L
345. Punta Candelero to Punta Guayanés	Punta Candelero to Punta Guayanés	PREC27	Thallium	L
346. Punta Candelero to Punta Guayanés	Punta Candelero to Punta Guayanés	PREC27	Turbidity	L
347. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Arsenic	L

<b>Basin</b>	<b>Waterbody Name</b>	<b>Assessment Unit ID</b>	<b>Parameter</b>	<b>Priority</b>
348. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Copper	L
349. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Enterococcus	L
350. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Mercury	L
351. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Oil and Grease	L
352. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Temperature	L
353. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Thallium	L
354. Punta Guayanés to Punta Quebrada Honda	Punta Guayanés to Punta Quebrada Honda	PREC28C	Turbidity	L
355. Punta Quebrada Honda to Punta Yeguas	Punta Quebrada Honda to Punta Yeguas	PREC28B	Copper	L
356. Punta Quebrada Honda to Punta Yeguas	Punta Quebrada Honda to Punta Yeguas	PREC28B	Enterococcus	L
357. Punta Quebrada Honda to Punta Yeguas	Punta Quebrada Honda to Punta Yeguas	PREC28B	Thallium	L
358. Punta Quebrada Honda to Punta Yeguas	Punta Quebrada Honda to Punta Yeguas	PREC28B	Turbidity	L
359. Punta Yeguas to Punta Tuna	Punta Yeguas to Punta Tuna	PREC29	Copper	L
360. Punta Yeguas to Punta Tuna	Punta Yeguas to Punta Tuna	PREC29	Enterococcus	L
361. Punta Yeguas to Punta Tuna	Punta Yeguas to Punta Tuna	PREC29	Lead	L
362. Punta Yeguas to Punta Tuna	Punta Yeguas to Punta Tuna	PREC29	pH	L
363. Punta Yeguas to Punta Tuna	Punta Yeguas to Punta Tuna	PREC29	Thallium	L
364. Punta Yeguas to Punta Tuna	Punta Yeguas to Punta Tuna	PREC29	Turbidity	L
365. Punta Tuna to Cabo Mala Pascua	Punta Tuna to Cabo Mala Pascua	PREC30	Copper	L
366. Punta Tuna to Cabo Mala Pascua	Punta Tuna to Cabo Mala Pascua	PREC30	Enterococcus	L
367. Punta Tuna to Cabo Mala Pascua	Punta Tuna to Cabo Mala Pascua	PREC30	Turbidity	L
368. Cabo Mala Pascua to Punta Viento	Cabo Mala Pascua to Punta Viento	PRSC31	Copper	L
369. Cabo Mala Pascua to Punta Viento	Cabo Mala Pascua to Punta Viento	PRSC31	Enterococcus	L
370. Cabo Mala Pascua to Punta Viento	Cabo Mala Pascua to Punta Viento	PRSC31	Temperature	L
371. Cabo Mala Pascua to Punta Viento	Cabo Mala Pascua to Punta Viento	PRSC31	Thallium	L

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
372. Cabo Mala Pascua to Punta Viento	Cabo Mala Pascua to Punta Viento	PRSC31	Turbidity	L
373. Punta Viento to Punta Figuras	Punta Viento to Punta Figuras	PRSC32	Copper	L
374. Punta Viento to Punta Figuras	Punta Viento to Punta Figuras	PRSC32	Dissolved Oxygen	L
375. Punta Viento to Punta Figuras	Punta Viento to Punta Figuras	PRSC32	Enterococcus	L
376. Punta Viento to Punta Figuras	Punta Viento to Punta Figuras	PRSC32	Mercury	L
377. Punta Viento to Punta Figuras	Punta Viento to Punta Figuras	PRSC32	Temperature	L
378. Punta Viento to Punta Figuras	Punta Viento to Punta Figuras	PRSC32	Thallium	L
379. Punta Viento to Punta Figuras	Punta Viento to Punta Figuras	PRSC32	Turbidity	L
380. Punta Figuras to Punta Ola Grande	Punta Figuras to Punta Ola Grande	PRSC33	Copper	L
381. Punta Figuras to Punta Ola Grande	Punta Figuras to Punta Ola Grande	PRSC33	Enterococcus	L
382. Punta Figuras to Punta Ola Grande	Punta Figuras to Punta Ola Grande	PRSC33	Lead	L
383. Punta Figuras to Punta Ola Grande	Punta Figuras to Punta Ola Grande	PRSC33	Mercury	L
384. Punta Figuras to Punta Ola Grande	Punta Figuras to Punta Ola Grande	PRSC33	Temperature	L
385. Punta Figuras to Punta Ola Grande	Punta Figuras to Punta Ola Grande	PRSC33	Turbidity	L
386. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Copper	L
387. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Dissolved Oxygen	L
388. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Enterococcus	L
389. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Lead	L
390. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Mercury	L
391. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Nickel	L
392. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Oil and Grease	L
393. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	pH	L
394. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Temperature	L
395. Punta Ola Grande to Punta Petrona	Punta Ola Grande to Punta Petrona	PRSC34	Turbidity	L

<b>Basin</b>	<b>Waterbody Name</b>	<b>Assessment Unit ID</b>	<b>Parameter</b>	<b>Priority</b>
396. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Copper	L
397. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Enterococcus	L
398. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Lead	L
399. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Mercury	L
400. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Nickel	L
401. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Thallium	L
402. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Turbidity	L
403. Punta Petrona to Punta Cabullones	Punta Petrona to Punta Cabullones	PRSC35	Zinc	L
404. Punta Cabullones to Punta Carenero	Punta Cabullones to Punta Carenero	PRSC36B	Copper	L
405. Punta Cabullones to Punta Carenero	Punta Cabullones to Punta Carenero	PRSC36B	Enterococcus	L
406. Punta Cabullones to Punta Carenero	Punta Cabullones to Punta Carenero	PRSC36B	Mercury	L
407. Punta Cabullones to Punta Carenero	Punta Cabullones to Punta Carenero	PRSC36B	pH	L
408. Punta Cabullones to Punta Carenero	Punta Cabullones to Punta Carenero	PRSC36B	Temperature	L
409. Punta Cabullones to Punta Carenero	Punta Cabullones to Punta Carenero	PRSC36B	Turbidity	L
410. Punta Carenero to Punta Cuchara	Punta Carenero to Punta Cuchara	PRSC36C	Copper	L
411. Punta Carenero to Punta Cuchara	Punta Carenero to Punta Cuchara	PRSC36C	Enterococcus	L
412. Punta Carenero to Punta Cuchara	Punta Carenero to Punta Cuchara	PRSC36C	Mercury	L
413. Punta Carenero to Punta Cuchara	Punta Carenero to Punta Cuchara	PRSC36C	Oil and Grease	L
414. Punta Carenero to Punta Cuchara	Punta Carenero to Punta Cuchara	PRSC36C	Turbidity	L
415. Punta Cuchara to Cayo Parguera	Punta Cuchara to Cayo Parguera	PRSC37B	Copper	L
416. Punta Cuchara to Cayo Parguera	Punta Cuchara to Cayo Parguera	PRSC37B	Enterococcus	L
417. Punta Cuchara to Cayo Parguera	Punta Cuchara to Cayo Parguera	PRSC37B	Mercury	L
418. Punta Cuchara to Cayo Parguera	Punta Cuchara to Cayo Parguera	PRSC37B	Nickel	L
419. Punta Cuchara to Cayo Parguera	Punta Cuchara to Cayo Parguera	PRSC37B	pH	L

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

Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
444. Punta Ballena to Punta Brea	Punta Ballena to Punta Brea	PRSC40	Turbidity	L
445. Punta Brea to Bahía Fosforescente La Parguera	Punta Brea to Bahía Fosforescente La Parguera	PRSC41B1	Copper	L
446. Punta Brea to Bahía Fosforescente La Parguera	Punta Brea to Bahía Fosforescente La Parguera	PRSC41B1	Enterococcus	L
447. Punta Brea to Bahía Fosforescente La Parguera	Punta Brea to Bahía Fosforescente La Parguera	PRSC41B1	pH	L
448. Punta Brea to Bahía Fosforescente La Parguera	Punta Brea to Bahía Fosforescente La Parguera	PRSC41B1	Temperature	L
449. Punta Brea to Bahía Fosforescente La Parguera	Punta Brea to Bahía Fosforescente La Parguera	PRSC41B1	Thallium	L
450. Punta Brea to Bahía Fosforescente La Parguera	Punta Brea to Bahía Fosforescente La Parguera	PRSC41B1	Turbidity	L
451. Bahía Fosforescente La Parguera to Punta Cueva de Ayala	Bahía Fosforescente La Parguera to Punta Cueva de Ayala	PRSC41B2	Copper	L
452. Bahía Fosforescente La Parguera to Punta Cueva de Ayala	Bahía Fosforescente La Parguera to Punta Cueva de Ayala	PRSC41B2	Dissolved Oxygen	L
453. Bahía Fosforescente La Parguera to Punta Cueva de Ayala	Bahía Fosforescente La Parguera to Punta Cueva de Ayala	PRSC41B2	Enterococcus	L
454. Bahía Fosforescente La Parguera to Punta Cueva de Ayala	Bahía Fosforescente La Parguera to Punta Cueva de Ayala	PRSC41B2	pH	L
455. Bahía Fosforescente La Parguera to Punta Cueva de Ayala	Bahía Fosforescente La Parguera to Punta Cueva de Ayala	PRSC41B2	Temperature	L
456. Bahía Fosforescente La Parguera to Punta Cueva de Ayala	Bahía Fosforescente La Parguera to Punta Cueva de Ayala	PRSC41B2	Thallium	L
457. Bahía Fosforescente La Parguera to Punta Cueva de Ayala	Bahía Fosforescente La Parguera to Punta Cueva de Ayala	PRSC41B2	Turbidity	L
458. Bahía Monsio José to Faro de Cabo Rojo	Bahía Monsio José to Faro de Cabo Rojo	PRSC41B3	Dissolved Oxygen	L
459. Bahía Monsio José to Faro de Cabo Rojo	Bahía Monsio José to Faro de Cabo Rojo	PRSC41B3	Enterococcus	L
460. 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
461. Bahía Monsio José to Faro de Cabo Rojo	Bahía Monsio José to Faro de Cabo Rojo	PRSC41B3	Nickel	L
462. Bahía Monsio José to Faro de Cabo Rojo	Bahía Monsio José to Faro de Cabo Rojo	PRSC41B3	Temperature	L
463. Bahía Monsio José to Faro de Cabo Rojo	Bahía Monsio José to Faro de Cabo Rojo	PRSC41B3	Thallium	L
464. Bahía Monsio José to Faro de Cabo Rojo	Bahía Monsio José to Faro de Cabo Rojo	PRSC41B3	Turbidity	L
465. Faro de Cabo Rojo to Punta Águila	Faro de Cabo Rojo to Punta Águila	PRWC42	Dissolved Oxygen	L
466. Faro de Cabo Rojo to Punta Águila	Faro de Cabo Rojo to Punta Águila	PRWC42	Enterococcus	L
467. Faro de Cabo Rojo to Punta Águila	Faro de Cabo Rojo to Punta Águila	PRWC42	pH	L
468. Faro de Cabo Rojo to Punta Águila	Faro de Cabo Rojo to Punta Águila	PRWC42	Temperature	L
469. Faro de Cabo Rojo to Punta Águila	Faro de Cabo Rojo to Punta Águila	PRWC42	Turbidity	L
470. Punta Águila to Punta Guaniquilla	Punta Águila to Punta Guaniquilla	PRWC43	Enterococcus	L
471. Punta Águila to Punta Guaniquilla	Punta Águila to Punta Guaniquilla	PRWC43	Temperature	L
472. Punta Águila to Punta Guaniquilla	Punta Águila to Punta Guaniquilla	PRWC43	Turbidity	L
473. Punta Guaniquilla to Punta La Mela	Punta Guaniquilla to Punta La Mela	PRWC44	Enterococcus	L
474. Punta Guaniquilla to Punta La Mela	Punta Guaniquilla to Punta La Mela	PRWC44	pH	L
475. Punta Guaniquilla to Punta La Mela	Punta Guaniquilla to Punta La Mela	PRWC44	Temperature	L
476. Punta Guaniquilla to Punta La Mela	Punta Guaniquilla to Punta La Mela	PRWC44	Thallium	L
477. Punta Guaniquilla to Punta La Mela	Punta Guaniquilla to Punta La Mela	PRWC44	Turbidity	L
478. Punta La Mela to Punta Carenero	Punta La Mela to Punta Carenero	PRWC45	Copper	L
479. Punta La Mela to Punta Carenero	Punta La Mela to Punta Carenero	PRWC45	Enterococcus	L
480. Punta La Mela to Punta Carenero	Punta La Mela to Punta Carenero	PRWC45	Lead	L
481. Punta La Mela to Punta Carenero	Punta La Mela to Punta Carenero	PRWC45	Thallium	L
482. Punta La Mela to Punta Carenero	Punta La Mela to Punta Carenero	PRWC45	Turbidity	L
483. Punta Carenero to front of Cayo Ratones	Punta Carenero to front of Cayo Ratones	PRWC46	Copper	L
484. Punta Carenero to front of Cayo Ratones	Punta Carenero to front of Cayo Ratones	PRWC46	Enterococcus	L



Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
485. Punta Carenero to front of Cayo Ratones	Punta Carenero to front of Cayo Ratones	PRWC46	Lead	L
486. Punta Carenero to front of Cayo Ratones	Punta Carenero to front of Cayo Ratones	PRWC46	Temperature	L
487. Punta Carenero to front of Cayo Ratones	Punta Carenero to front of Cayo Ratones	PRWC46	Thallium	L
488. Punta Carenero to front of Cayo Ratones	Punta Carenero to front of Cayo Ratones	PRWC46	Turbidity	L
489. In front of Cayo Ratones to Punta Guanajibo	In front of Cayo Ratones to Punta Guanajibo	PRWC47	Copper	L
490. In front of Cayo Ratones to Punta Guanajibo	In front of Cayo Ratones to Punta Guanajibo	PRWC47	Nickel	L
491. In front of Cayo Ratones to Punta Guanajibo	In front of Cayo Ratones to Punta Guanajibo	PRWC47	Turbidity	L
492. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Copper	L
493. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Enterococcus	L
494. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Lead	L
495. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Mercury	L
496. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Nickel	L
497. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Oil and Grease	L
498. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	pH	L
499. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Thallium	L
500. Punta Guanajibo to Punta Algarrobo	Punta Guanajibo to Punta Algarrobo	PRWC48	Turbidity	L
501. Punta Algarrobo to Punta Cadena	Punta Algarrobo to Punta Cadena	PRWC49	Copper	L
502. Punta Algarrobo to Punta Cadena	Punta Algarrobo to Punta Cadena	PRWC49	Enterococcus	L
503. Punta Algarrobo to Punta Cadena	Punta Algarrobo to Punta Cadena	PRWC49	Nickel	L
504. Punta Algarrobo to Punta Cadena	Punta Algarrobo to Punta Cadena	PRWC49	pH	L
505. Punta Algarrobo to Punta Cadena	Punta Algarrobo to Punta Cadena	PRWC49	Temperature	L
506. Punta Algarrobo to Punta Cadena	Punta Algarrobo to Punta Cadena	PRWC49	Turbidity	L
507. Punta Cadena to Punta Higüero	Punta Cadena to Punta Higüero	PRWC50	Copper	L
508. Punta Cadena to Punta Higüero	Punta Cadena to Punta Higüero	PRWC50	Enterococcus	L



Basin	Waterbody Name	Assessment Unit ID	Parameter	Priority
509. Punta Cadena to Punta Higüero	Punta Cadena to Punta Higüero	PRWC50	Lead	L
510. Punta Cadena to Punta Higüero	Punta Cadena to Punta Higüero	PRWC50	Mercury	L
511. Punta Cadena to Punta Higüero	Punta Cadena to Punta Higüero	PRWC50	Nickel	L
512. Punta Cadena to Punta Higüero	Punta Cadena to Punta Higüero	PRWC50	pH	L
513. Punta Cadena to Punta Higüero	Punta Cadena to Punta Higüero	PRWC50	Turbidity	L
514. Punta Higüero to Punta del Boquerón	Punta Higüero to Punta del Boquerón	PRWC51	Copper	L
515. Punta Higüero to Punta del Boquerón	Punta Higüero to Punta del Boquerón	PRWC51	Enterococcus	L
516. Punta Higüero to Punta del Boquerón	Punta Higüero to Punta del Boquerón	PRWC51	Lead	L
517. Punta Higüero to Punta del Boquerón	Punta Higüero to Punta del Boquerón	PRWC51	Mercury	L
518. Punta Higüero to Punta del Boquerón	Punta Higüero to Punta del Boquerón	PRWC51	Nickel	L
519. Punta Higüero to Punta del Boquerón	Punta Higüero to Punta del Boquerón	PRWC51	Turbidity	L
520. Punta del Boquerón to Punta Borinquén	Punta del Boquerón to Punta Borinquén	PRWC52	Copper	L
521. Punta del Boquerón to Punta Borinquén	Punta del Boquerón to Punta Borinquén	PRWC52	Turbidity	L
522. Culebra Island	Culebra Island	PRCC53	pH	L
523. Culebra Island	Culebra Island	PRCC53	Turbidity	L

Following are TMDL development status for specific segment/pollutant combination.  
(See Table 49).

**Table 49: TMDL Development Status**

AU/Pollutant	AU ID	Project status
1. RIO 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 <sub>1</sub> 10A1	Final draft
9. LAGO LA PLATA/TOTAL, NITROGEN	PREL <sub>1</sub> 10A1	Final draft

<b>AU/Pollutant</b>	<b>AU ID</b>	<b>Project status</b>
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. RIO GRANDE DE ARECIBO/COPPER	PRNR7A2	Final draft
14. RIO BAUTA/COPPER	PRNR8C2	Final draft
15. RIO GUAYNABO/COPPER	PRER12B	Final draft
16. RIO 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. RIO VALENCIANO/COPPER	PRER14G2	Final draft
22. RIO VALENCIANO/LEAD	PRER14G2	Final draft
23. RIO CULEBRINAS/COPPER	PRWR95A	Final draft
24. RIO DE LA PLATA/COPPER	PRER10A5	Final draft

#### 4.0 Implementation of the Clean Water Act 303(d) Program Vision Long – Term Vision

In December 2013, USEPA announced a new framework for implementing the Clean Water Act (CWA) Section 303(d) Program – A long-term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program. This new vision, encourage states and territories to develop tailored strategies to implementation CWA 303(d) responsibilities of their overall water quality goals and individual’s states priorities.

Recognizing each State is unique, USEPA expects that States will vary in the extent to which and how they implement the goals of the Vision, depending on particular circumstances and water quality goals of the State. To support State and EPA discussions on re-orienting CWA 303(d) Program responsibilities consistent with the Vision, EPA is providing additional information for States to consider when implementing the Prioritization, Engagement and Alternative Goals. EPA and States jointly identified these topics as warranting further clarification to promote timely implementation of the Vision and submittal and review of States' 2020 Integrated Reports. EPA anticipates working closely with the States on these issues as States move forward with developing their Integrated Reports.

#### **Long-term Prioritization from 2016 to 2022**

Consistent with the new USEPA’s vision, PRDNER identifies those AU for priority restoration and protection activities (See Table 50).

**Table 50: Long-Term Priorities 2016 – 2022**

<b>Water body name</b>	<b>AU ID</b>	<b>Causes of impairments</b>	<b>Area</b>	<b>Sq miles</b>	<b>Approach</b>
RIO GURABO	PRER14G1	Copper (0530), Cyanide (0720), Total Coliforms (1700), Turbidity (2500)	32512.22173	50.800346	1, 5a
RIO CAONILLAS	PRNR7C1	Arsenic (0510), Cyanide (0720)	23524.998676	36.75781	1, 5a
RIO GRANDE DE LOIZA	PRER14A2	Cyanide (0720), Pesticides (0200), Total Coliforms (1700), Turbidity (2500)	26498.345459	41.403665	1, 5a
RIO CAGUITAS	PRER14I	Cyanide (0720), Surfactants (0400), Thermal Modifications (1400), Total Coliforms (1700), Turbidity (2500)	12019.471726	18.780425	1, 5a
RIO LA PLATA	PRER10A1	Cyanide (0720), Turbidity (2500)	6762.208267	10.56595	1, 5a
RIO CIBUCO	PRNR9A	Cyanide (0720), Total Coliforms (1700), Turbidity (2500)	14250.254207	22.266022	1, 5a
RIO GRANDE DE LOIZA	PRER14A1	Copper (0530), Cyanide (0720), Low Dissolved Oxygen (1200), Turbidity (2500)	10851.784356	16.955913	1, 5a
RIO ESPIRITU SANTO	PRER16A	Copper (0530), Cyanide (0720), Lead (0550), Low Dissolved Oxygen (1200), pH (1000), Surfactants (0400), Turbidity (2500)	15760.761314	24.62619	1, 5a
RIO LA PLATA	PRER10A3	Cyanide (0720), Low Dissolved Oxygen (1200), Turbidity (2500)	12896.790193	20.151235	1, 5a
TÚNEL	PRNR7A3	Cyanide (0720)	19822.753445	30.973052	1, 5a
RIO LA PLATA	PRER10A5	Arsenic (0510), Copper (0530), Cyanide (0720), Lead (0550), Mercury (0560), Surfactants (0400), Turbidity (2500)	23893.320027	37.333313	1, 5a
RIO GUAYNABO	PRER12B	Cyanide (0720), Total Coliforms (1700), Turbidity (2500)	12590.494231	19.672647	1, 5a
RIO CULEBRINAS	PRWR95A	Arsenic (0510), Copper (0530), Cyanide (0720), Lead (0550), Pesticides (0200), Surfactants	30592.920494	47.801438	1, 5a

Water body name	AU ID	Causes of impairments	Area	Sq miles	Approach
		(0400), Total Coliforms (1700), Turbidity (2500)			
LAKE LA PLATA	PREL110A1	Arsenic (0510), Cyanide (0720), Low Dissolved Oxygen (1200), Phosphorus (0910)	7938.7658	12.404322	3, 4, 5a
LAKE GUAJATACA	PRNL3A1	Low Dissolved Oxygen (1200)	5824.294966	9.100461	3, 4, 5a
RIO TURABO	PRER14J	Arsenic (0510), Copper (0530), Cyanide (0720), pH (1000), Surfactants (0400), Turbidity (2500)	19006.0409	29.696939	1, 5a
RIO VALENCIANO	PRER14G2	Arsenic (0510), Copper (0530), Cyanide (0720), Surfactants (0400), Turbidity (2500)	12200.5404	19.063344	1, 5a
RIO GRANDE DE ARECIBO	PRNR7A2	Copper (0530), Cyanide (0720), Lead (0550), Pesticides (0200), Total Coliforms (1700), Turbidity (2500)	22446.225457	35.072227	1, 5a
RIO GRANDE DE ARECIBO	PRNR7A1	Copper (0530), Cyanide (0720), Low Dissolved Oxygen (1200), Turbidity (2500)	7207.74912	11.262108	1, 5a
RIO CIALITO	PRNR8B	Cyanide (0720), Total Coliforms (1700), Turbidity (2500)	10776.451776	16.838206	1, 5a
RIO GRANDE DE MANATI	PRNR8A1	Copper (0530), Cyanide (0720), Turbidity (2500)	14214.337007	22.209902	1, 5a
RIO ROSARIO	PRWR77C	Cyanide (0720), Pesticides (0200), Turbidity (2500)	15356.703909	23.99485	1, 5a
RIO LA PLATA	PRER10A4	Cyanide (0720), Turbidity (2500)	4187.745159	6.543352	1, 5a
RIO HUMACAO	PRER33A	Copper (0530), Cyanide (0720), Lead (0550), Surfactants (0400), Total Coliforms (1700), Turbidity (2500)	14678.023253	22.934411	1, 5a
LAKE LOIZA	PREL14A1	Copper (0530), Lead (0550), Low Dissolved Oxygen (1200), Turbidity (2500)	7928.060628	12.387595	3, 4, 5a
RIO GRANDE DE AÑASCO	PRWR83A	Cyanide (0720), Low Dissolved Oxygen (1200), Turbidity (2500)	32194.001763	50.303128	1, 5a

Water body name	AU ID	Causes of impairments	Area	Sq miles	Approach
LAKE DOS BOCAS	PRNL17A1	Arsenic (0510), Copper (0530), Cyanide (0720), Low Dissolved Oxygen (1200), pH (1000), Surfactants (0400)	10734.480607	16.772626	3, 4, 5a
RIO BAIROA	PRER14H	Phosphorus	5005.816097	7.821588	3
RIO GUAYANILLA	PRSR67A	Phosphorus	16090.163506	25.14088	3
RIO YAUCO	PRSR68A1	Phosphorus	20519.523795	32.061756	3
RIO GUAYABO	PRWR94A	Phosphorus	8200.426277	12.813166	3
SAN JUAN BAY ESTUARY SYSTEM	PREE13A2	Dissolve Oxygen, Ammonia, Oil and Grease, pH, Thermal Modification, Total Coliforms, Turbidity, NO2+NO3, Surfactants, Lead, Copper, Cyanide	16626.02176	25.978159	5b

This prioritization provides a framework to focus the location and timing for the development of, alternative restoration, protection plans and TMDLs. Those alternatives should include:

- Identification of specific impairment addressed by an alternate approach.
- Planning, development and implement effectiveness monitoring programs.
- Revisions, and amendments to the existing regulations.

Recently, PRDNER update its Non-Point Source Management Program (NPSMP). One of the most important parts of this NPSMP is the development and implementation of a Priority System. This Priority System will be used as a priority based system in the long-term vision of the assessment restoration and protection under the CWA section 303(d). The main purpose will be standardizing the priority systems and the basic criteria used for a more effective assessment of island’s water quality. In Appendix II is the Implementation of the Clean Water Act 303(d) Program Vision Long – Term Vision document. It is important to establish that this document originally was prepare using the 2014 303(d) List.

The time frame for the implementation of Long- *Term Vision Program* was from 2016 to 2022. Beginning in 2016 Cycle PRDNER identify a total of one hundred twenty – five (125) AU/parameter combination for priority restoration and protection activities under this program (Table 49). This prioritization provides a framework to focus the

location and timing for the development of alternative restoration, protection plans and TMDLs.

Taking into consideration the development of strategies and alternative approaches, the PRDNER achieved the improvement of seventy-eight (78) AU/parameter combination which corresponds to sixty-two point four (62.4) percent of the total AU/parameters combination of the *Long - Term Vision Program 2016 to 2022* (Table 51). The alternatives approaches included are identification of specific impairment addressed, planning, development and implement effectiveness monitoring programs and revisions, and amendments to the existing regulations.

**Table 51: Long-Term Priorities Assessment Units/Parameter Combinations Improvement**

Water body name	AU ID	2014 Causes of impairment	Parameter delisted	Cycle delisted	2022 Cycle parameter in improvement
RIO GURABO	PRER14G1	Copper, Cyanide, Total Coliforms, <i>Turbidity*</i>	Cyanide	2016	
			Total Coliform	2018	
			Copper	2022	
RIO CAONILLAS**	PRNR7C1	Arsenic, Cyanide	Arsenic	2016	
			Cyanide	2016	
RIO GRANDE DE LOIZA	PRER14A2	Cyanide, <i>Pesticides*</i> , Total Coliforms, <i>Turbidity*</i>	Cyanide	2016	
			Total Coliforms	2018	
RIO CAGÜTAS	PRER14I	Cyanide, <i>Surfactants*</i> , <i>Thermal Modifications*</i> , Total Coliforms, <i>Turbidity*</i>	Cyanide	2018	
			Total Coliform	2018	
					Surfactants
RIO DE LA PLATA **	PRER10A1	Cyanide, <i>Turbidity</i>	Cyanide	2016	
			<i>Turbidity</i>	2022	
RIO CIBUCO	PRNR9A	Cyanide, Total Coliforms, <i>Turbidity*</i>	Cyanide	2016	
			Total Coliforms	2018	
					<i>Turbidity</i>
RIO GRANDE DE LOIZA	PRER14A1	Copper, Cyanide, Low Dissolved Oxygen, <i>Turbidity*</i>	Cyanide	2016	
			Low Dissolved Oxygen	2020	
			Copper	2020	
					<i>Turbidity</i>
RIO ESPIRITU SANTO**	PRER16A	Copper, Cyanide, Lead, Low Dissolved Oxygen, pH, Surfactants, <i>Turbidity</i>	Copper	2016	
			Lead	2016	
			Low Dissolved Oxygen	2016	
			pH	2016	
			Surfactants	2016	
			Cyanide	2016	
RIO DE LA PLATA **	PRER10A3		Low Dissolved Oxygen	2016	

Water body name	AU ID	2014 Causes of impairment	Parameter delisted	Cycle delisted	2022 Cycle parameter in improvement
		Cyanide, Low Dissolved Oxygen, Turbidity	Cyanide	2018	
			Turbidity	2022	
TÚNEL**	PRNR7A3	Cyanide	Cyanide	2016	
RIO DE LA PLATA	PRER10A5	Arsenic, <i>Copper*</i> , Cyanide, <i>Lead*</i> , Mercury, Surfactants, Turbidity	Cyanide	2016	
			Arsenic	2016	
			Surfactants	2016	
			Mercury	2018	
			Turbidity	2022	
					Copper
		Lead			
RIO GUAYNABO **	PRER12B	Cyanide, Total Coliforms, Turbidity	Cyanide	2016	
			Total Coliforms	2018	
			Turbidity	2022	
RIO CULEBRINAS	PRWR95A	Arsenic, <i>Copper*</i> , Cyanide, Lead, <i>Pesticides*</i> , Surfactants, Total Coliforms, <i>Turbidity*</i>	Lead	2016	
			Surfactants	2016	
			Total Coliforms	2016	
			Cyanide	2016	
			Arsenic	2018	
					Copper
LAKE LA PLATA	PREL <sub>1</sub> 10A1	Arsenic*, Cyanide, Low Dissolved Oxygen*, Phosphorus*	Cyanide	2018	
LAKE GUAJATACA	PRNL3A1	Low Dissolved Oxygen*			
RIO TURABO	PRER14J	Arsenic, <i>Copper*</i> , Cyanide, pH, Surfactants, <i>Turbidity*</i>	Arsenic	2016	
			Surfactants	2016	
			Cyanide	2018	
			pH	2020	
RIO VALENCIANO	PRER14G2	Arsenic, Copper, Cyanide, <i>Surfactants*</i> , <i>Turbidity*</i>	Copper	2020	
			Arsenic	2016	
			Cyanide	2016	
					Surfactants
RIO GRANDE DE ARECIBO	PRNR7A2	Copper, Cyanide, Lead, <i>Pesticides*</i> , Total Coliforms, <i>Turbidity*</i>	Cyanide	2016	
			Lead	2018	
			Total Coliforms	2018	
			Copper	2022	
RIO GRANDE DE ARECIBO	PRNR7A1	Copper, Cyanide, Low Dissolved Oxygen, <i>Turbidity*</i>	Copper	2016	
			Cyanide	2018	
			Low Dissolved Oxygen	2018	
					Turbidity



Water body name	AU ID	2014 Causes of impairment	Parameter delisted	Cycle delisted	2022 Cycle parameter in improvement
RIO CIALITO	PRNR8B	Cyanide, Total Coliforms, <i>Turbidity*</i>	Cyanide	2016	
			Total Coliforms	2018	
RIO GRANDE DE MANATI	PRNR8A1	Copper, Cyanide, <i>Turbidity*</i>	Cyanide	2016	
			Copper	2022	
RIO ROSARIO	PRWR77C	Cyanide, <i>Pesticides*</i> , <i>Turbidity*</i>	Cyanide	2016	
RIO DE LA PLATA	PRER10A4	Cyanide, <i>Turbidity*</i>	Cyanide	2016	<i>Turbidity</i>
RIO HUMACAO	PRER33A	<i>Copper*</i> , Cyanide, Lead, Surfactants, Total Coliforms, <i>Turbidity*</i>	Cyanide	2016	
			Total Coliforms	2018	
			Lead	2022	
			Surfactants	2022	
LAKE LOIZA	PREL14A1	<i>Copper*</i> , <i>Lead*</i> , <i>Low Dissolved Oxygen*</i> , <i>Turbidity*</i>			Lead
					Copper
RIO GRANDE DE AÑASCO	PRWR83A	Cyanide, Low Dissolved Oxygen, <i>Turbidity*</i>	Cyanide	2016	
			Low Dissolved Oxygen	2016	
					<i>Turbidity</i>
LAKE DOS BOCAS	PRNL <sub>1</sub> 7A1	<i>Arsenic*</i> , <i>Copper*</i> , Cyanide, <i>Low Dissolved Oxygen*</i> , <i>pH*</i> , <i>Surfactants*</i>	Cyanide	2018	
					Copper
					Surfactants
RIO BAIROA	PRER14H	<i>Phosphorus*</i>			
RIO GUAYANILLA	PRSR67A	<i>Phosphorus*</i>			
RIO YAUCO	PRSR68A1	<i>Phosphorus*</i>			
RIO GUAYABO **	PRWR94A	Phosphorus	Phosphorus	2016	
SAN JUAN BAY ESTUARY SYSTEM	PREE13A2	<i>Low Dissolved Oxygen*</i> , <i>Ammonia*</i> , Oil and Grease, pH, <i>Thermal Modification*</i> , Total Coliforms, <i>Turbidity*</i> , NO <sub>2</sub> +NO <sub>3</sub> , <i>Surfactants*</i> , <i>Lead*</i> , <i>Copper*</i> , Cyanide	pH	2020	
			Cyanide	2016	
			NO <sub>2</sub> +NO <sub>3</sub>	2016	
			Total Coliforms	2018	
			Oil and Grease	2022	
					Ammonia
					Copper
					Lead
		Surfactants			

\* AU/parameter combination that did not achieve improvement

\*\* AU/Parameter combinations with full improvement and were completely removed from 303(d) List

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 DRNA is working in the development of a series of workshop to trained 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.

#### PART F. Public Participation

The List of Impacted Water Bodies draft for the 2022 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](mailto: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: [ayudaalciudadano@drna.pr.gov](mailto: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.

The public notice was appropriated published in two local newspaper of island wide circulation, PRIMERA HORA and EL VOCERO on August 2, 2023, (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 th Governing Board of PRDNER.

## APENDIX I – 2022 CYCLE 303 (d) List

## RIVERS, STREAMS AND CREEKS

<i>Table 52: Size of waters Impaired by Causes all cycles (Monitored Miles for Rivers and Streams)</i>	
<b>Causes of Impairments</b>	<b>Size of Waters Impaired (miles)</b>
Pesticides	544.3
Surfactants	241.3
Arsenic	25.4
Copper	594.8
Chromium VI	2,555.1
Lead	301.5
Mercury	55.8
Ammonia	310.6
Total, Phosphorus	2,184
Total, Nitrogen	1,545.7
pH	931.5
Dissolved Oxygen	1,135.8
Temperature	1,585.8
Enterococcus	2,555.1
Turbidity	1,864.3
Cyanide	90.0
Silver	14.6

**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 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	2022
												Dissolved Oxygen	2022
												Enterococcus	2022, 2020, 2018
											Total, Nitrogen	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
												Enterococcus	2022, 2020, 2018
												Total, Nitrogen	2022, 2020, 2018, 2016
	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	Chromium VI	2022, 2020
												Enterococcus	2022, 2020, 2018

**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 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 Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Temperature	2020
	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	Chromium VI	2022, 2020
Total, Phosphorus												2020, 2018	
Turbidity												2020, 2018, 2014, 2012, 2010, 2006	
	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
Enterococcus												2022, 2020, 2018	
pH												2022	
Total, Phosphorus												2022	

**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 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	2022, 2020
												Enterococcus	2022, 2020, 2018
												Total, Nitrogen	2020
												Total, Phosphorus	2022, 2020
												Turbidity	2020
	RÍO LIMÓN PRNR7C2	40.7	SD	NS 50026350	5	5	5	5	K	H	Agriculture Minor Industrial Point Sources Onsite Wastewater Systems	Chromium VI	2022, 2020
												Enterococcus	2022, 2020, 2018
												Total, Nitrogen	2020
												Turbidity	2020, 2016
	RÍO YUNES PRNR7C3	32.7	SD	NS 50026950	5	5	5	5	K	H	Agriculture Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI	2022, 2020
												Enterococcus	2022, 2020, 2018
												Temperature	2020
												Total, Nitrogen	2020
												Total, Phosphorus	2020, 2018
											Turbidity	2020, 2018	

**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
	RÍO TANAMÁ PRNR7B2	43.5	SD	NS 50028000	5	5	5	5	K	H	Agriculture Collection System Failure Minor Industrial Point Sources Onsite Wastewater Systems	Chromium VI Enterococcus Total, Phosphorus Turbidity	2022, 2020 2022, 2020, 2018 2022, 2018 2022, 2018, 2014, 2012, 2008
<b>RÍO GRANDE DE MANATÍ</b>	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 Enterococcus Temperature Total, Phosphorus Turbidity	2022, 2020 2022, 2018 2022 2022, 2018, 2016 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	Copper Chromium VI Enterococcus Temperature Total, Nitrogen Total, Phosphorus Turbidity	2022, 2018 2022, 2020 2022, 2020, 2018 2020 2022 2022 2022, 2018, 2014, 2012,

**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
												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 Enterococcus Turbidity	2022, 2020 2022, 2020, 2018 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 Enterococcus Total, Nitrogen Total, Phosphorus Turbidity	2022, 2020 2022, 2020, 2018 2020 2022, 2020, 2018, 2016 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
	RÍO BOTIJAS PRNR8E2	19.1	SD		4a	4a	5	3	D H K	H	Confined Animal Feeding Operations Onsite Wastewater Systems	pH	2020
		31.1	SD		5	5	5	5	A	H	Agriculture	Chromium VI	2022, 2020



**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
<b>RÍO CIBUCO</b>	RÍO CIBUCO PRNR9A			NS 50039500							Collection System Failure	Enterococcus	2022, 2020, 2018
											Confined Animal Feeding Operations	Temperature	2022
											Landfill	Total, Nitrogen	2022, 2020, 2018, 2016
											Major Industrial Point Sources	Total, Phosphorus	2022, 2020, 2018
										Major Municipal Point Sources	Turbidity	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
<b>RÍO DE LA PLATA</b>	RÍO DE LA PLATA PRER10A1	21	SD	NS 50046000	5	5	5	1	B	H	Collection System Failure	Chromium VI	2022, 2020
											Confined Animal Feeding Operations	Dissolved Oxygen	2022, 2020, 2018, 2016
											Major Industrial Point Sources	Enterococcus	2022, 2020, 2018

**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
											Minor Municipal Point Sources Onsite Wastewater Systems Surfaces Mining	Temperature	2020
	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
Enterococcus												2022, 2020, 2018	
pH												2020	
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
Enterococcus												2022, 2020, 2018	
pH												2020	
Temperature												2020	
Total, Phosphorus												2022, 2020, 2018, 2016	
Turbidity												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
Copper												2020	
Enterococcus												2022, 2020, 2018	
Lead												2020	

**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 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	pH Total, Phosphorus	2020 2022, 2020, 2018, 2016
	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 Enterococcus Total, Nitrogen Total, Phosphorus	2022, 2020 2022, 2020, 2018 2022, 2018, 2016 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 Enterococcus Total, Phosphorus	2022, 2020 2022, 2020, 2018 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 Enterococcus pH Total, Nitrogen Total, Phosphorus	2022, 2020 2022, 2020, 2018 2020 2020 2020
	RÍO GUAVATE PRER10K	19.8	SD		4a	4a	5	3	B D	H	Collection System Failure	pH	2020, 2012

**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
									H		Confined Animal Feeding Operations 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	2016, 2014, 2008, 2006
												Surfactants	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	Ammonia	2020
												Chromium VI	2022, 2020
												Enterococcus	2022, 2020, 2018
												pH	2020
												Temperature	2022
Total, Nitrogen	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	2022, 2020
												Enterococcus	2022, 2020, 2018
		50.7	SD		5	5	5	5	F	H	Collection System Failure	Chromium VI	2022, 2020

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
	RÍO GUAYNABO PRER12B			NS 50047990							Confined Animal Feeding Operations Landfill Major Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen Enterococcus Total, Nitrogen Total, Phosphorus	2020 2022, 2020, 2018 2022, 2018, 2016 2022, 2020, 2018, 2016
<b>RÍO GRANDE DE LOIZA</b>	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
												Enterococcus	2022, 2018
												Temperature	2022
												Total, Phosphorus	2020, 2016
												Turbidity	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	Chromium VI	2022, 2020
												Enterococcus	2022, 2020, 2018
												Pesticides	2008
												Temperature	2022
												Total, Phosphorus	2022, 2018, 2016
												Turbidity	2022, 2018

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
											Urban Runoff/Storm Sewers		
	RÍO CANÓVANAS PRER14B	32.6	SD		4a	4a	5	3	D F H	H	Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen	2016
	RÍO CANOVANILLA 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 Enterococcus Temperature Total, Nitrogen Total, Phosphorus Turbidity	2022, 2020 2022, 2020, 2018 2022, 2020 2022, 2020, 2018 2022, 2020, 2018, 2016 2022, 2020, 2018, 2014, 2012, 2010, 2008, 2006
		42.8	SD	NS	5	5	5	5	C	H	Agriculture	Ammonia	2020

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Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
	RÍO VALENCIANO PRER14G2			50056500							Collection System Failure Confined Animal Feeding Operations Landfills Minor Industrial Point Sources Onsite Waster Systems Urban Runoff/Storm Sewers	Chromium VI Enterococcus pH Surfactants Total, Nitrogen Total, Phosphorus Turbidity	2022, 2020 2022, 2020, 2018 2020 2020 2022 2022, 2020, 2018, 2016 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 Enterococcus Total, Phosphorus Total, Nitrogen	2022, 2020 2022, 2020, 2018 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 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	Chromium VI Enterococcus Surfactants Temperature Total, Nitrogen	2022, 2020 2022, 2020, 2018 2020 2022 2022, 2020, 2018, 2016

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
											Urban Runoff/Storm Sewers Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Surfaces Mining Urban Runoff/Storm Sewers	Total, Phosphorus Turbidity	2022, 2020, 2018, 2016 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 Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI Copper Enterococcus Lead Temperature Total, Phosphorus Turbidity	2022, 2020 2022, 2018, 2014 2022, 2020, 2018 2022, 2018 2022, 2020 2022, 2018 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 Copper Enterococcus Temperature Total, Nitrogen	2022, 2020 2022, 2018 2022, 2020, 2018 2022 2022



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Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
											Total, Phosphorus	2022, 2018, 2016	
											Turbidity	2022, 2018	
<b>RÍO HERRERA</b>	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
<b>RÍO ESPIRITU SANTO</b>	RÍO ESPIRITU 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 Onsite Wastewater Systems	Chromium VI	2022, 2020
												Enterococcus	2022, 2020, 2018
<b>QUEBRADA MATA DE PLÁTANO</b>	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
<b>QUEBRADA FAJARDO</b>	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
												pH	2020, 2018
<b>RÍO FAJARDO</b>	RÍO FAJARDO PRER22A	59.0	SD	NS 50072500	5	5	5	5	J	M	Confined Animal Feeding Operations Landfill	Chromium VI	2022, 2020
												Enterococcus	2022, 2020, 2018

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Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
											Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Temperature Total, Nitrogen Total, Phosphorus	2022, 2020 2022, 2020, 2018, 2016 2022, 2020, 2018, 2016
<b>RÍO DEMAJAGUA</b>	RÍO DEMAJAGUA PRER23A	2.8	SD		4a	4a	5	3	D H J	M	Onsite Wastewater Systems	Dissolved Oxygen	2020, 2016, 2012
<b>QUEBRADA CEIBA</b>	QUEBRADA CEIBA PREQ24A	5.0	SD		4a	4a	5	3	D H J	M	Onsite Wastewater Systems	Dissolved Oxygen Surfactants	2016, 2014, 2012, 2006 2016, 2014, 2012
<b>QUEBRADA AGUAS CLARAS</b>	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
<b>RÍO DAGUAO</b>	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
<b>QUEBRADA BOTIJAS</b>	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
<b>RÍO BLANCO</b>	RÍO BLANCO PRER30A	45.0	SD		4a	4a	5	5	D H J	H	Agriculture Confined Animal Feeding Operations	Turbidity	2020, 2012

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Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 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		
	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
RÍO HUMACAO	RÍO HUMACAO PRER33A	55.8	SD	NS 50082000	5	5	5	5	F	M	Collection System Failure Confined Animal Feeding Operations Landfill Minor Industrial Point Sources Onsite Wastewater Systems	Ammonia	2020
												Chromium VI	2022, 2020
												Copper	2022, 2018, 2014
												Enterococcus	2022, 2020, 2018
												Mercury	2020, 2018
												pH	2020
Temperature	2022, 2020												

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
											Urban Runoff/Storm Sewers	Total, Nitrogen	2022, 2020, 2018
												Total, Phosphorus	2022, 2020, 2018, 2016
												Turbidity	2022, 2020, 2018, 2016, 2014, 2012, 2008, 2006
<b>RÍO CANDELERO</b>	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
<b>RÍO GUAYANÉS</b>	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	2020, 2016, 2014, 2012, 2006
												Enterococcus	2022, 2020, 2018
												Lead	2020, 2016, 2014, 2006
												pH	2020, 2016, 2014
												Temperature	2022
												Total, Nitrogen	2022
												Total, Phosphorus	2022, 2020

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Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
												Turbidity	2022, 2020, 2016, 2014, 2012, 2006
<b>RÍO MAUNABO</b>	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
												Enterococcus	2022, 2020, 2018
												Temperature	2022, 2020
												Total, Nitrogen	2022, 2020, 2016
												Total, Phosphorus	2022, 2020, 2016
<b>QUEBRADA PALENQUE</b>	QUEBRADA PALENQUE PRSQ41A	1.0	SD		4a	4a	5	3	D H J, L	M	Onsite Wastewater Systems	Dissolved Oxygen	2012
<b>RÍO CHICO</b>	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
		35.9	SD	NS	5	5	5	1	J	H		Chromium VI	2022, 2020

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Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
<b>RÍO GRANDE DE PATILLAS</b>	RÍO GRANDE DE PATILLAS PRSR43A2			50092000							Onsite Wastewater Systems	Enterococcus	2022, 2020, 2018
												pH	2020
<b>RÍO GUAMANÍ</b>	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
<b>QUEBRADA MELANÍA</b>	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
<b>RÍO SECO</b>	RÍO SECO PRSR51A	24.7	SD		4a	4a	5	3	D H J L	M	Agriculture Onsite Wastewater Systems	Dissolved Oxygen	2012
<b>QUEBRADA AMORÓS</b>	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
<b>QUEBRADA AGUAS VERDES</b>	QUEBRADA AGUAS VERDES	15.0	SD		4a	4a	5	3	D F	M	Confined Animal Feeding Operations	Dissolved Oxygen	2020, 2016, 2014, 2012

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Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
	PRSQ53A								H, L		Onsite Wastewater Systems		
<b>RÍO NIGUAS DE SALINAS</b>	RÍO NIGUAS DE SALINAS PRSR54A	102.5	SD		4a	4a	5	3	D F H L	M	Confined Animal Feeding Operations Onsite Wastewater Systems Surfaces Mining Urban Runoff/Storm Sewers	Dissolved Oxygen	2010
<b>RÍO CAYURES</b>	RÍO CAYURES PRSR56A	5.0	SD		4a	4a	5	3	D H J L	M	Agriculture Onsite Wastewater Systems	Dissolved Oxygen Surfactants	2016, 2014, 2012 2016, 2014, 2012
<b>RÍO COAMO</b>	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 Cyanide Enterococcus pH Temperature Total, Nitrogen	2022, 2020 2022 2022, 2020, 2018 2020 2022 2020, 2016
	RÍO CUYÓN PRSR57B	49.2	SD		4a	4a	5	3	D H J	H	Agriculture Collection System Failure Confined Animal Feeding Operations	Temperature	2020

**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 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		
<b>RÍO BUCANÁ-CERRILLOS</b>	RÍO BUCANÁ-CERRILLOS PRSR62A1	27.8	SD	NS 50114400	5	5	5	1	J	M	Collection System Failure	Chromium VI	2022, 2020
											Onsite Wastewater Systems	Dissolved Oxygen	2022, 2020, 2018
											Surfaces Mining	Enterococcus	2022, 2020, 2018
											Urban Runoff/Storm Sewers	Temperature	2020
	RÍO BUCANÁ-CERRILLOS PRSR62A2	32.6	SD	NS 50113800	5	5	5	5	J	M	Agriculture	Chromium VI	2022, 2020
											Minor Industrial Point Sources	Enterococcus	2022, 2020, 2018
											Onsite Wastewater Systems	pH	2020
												Total, Phosphorus	2020
											Turbidity	2020	
<b>RÍO PORTUGUÉS</b>	RÍO PORTUGUÉS PRSR63A	54.0	SD	NS 50116200	5	5	5	5	J	M	Collection System Failure	Chromium VI	2022, 2020
											Minor Industrial Point Sources	Enterococcus	2022, 2020, 2018
											Onsite Wastewater Systems	Temperature	2020
											Urban Runoff/Storm Sewers	Total, Nitrogen	2020
												Total, Phosphorus	2020, 2018
											Turbidity	2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006	



**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
<b>RÍO MATILDE – PASTILLO</b>	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
<b>RÍO TALLABOA</b>	RÍO TALLABOA PRSR65A	59.6	SD		4a	4a	5	1	D H J L	M	Agriculture Collection System Failure Minor Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	pH Temperature	2020 2020
<b>RÍO GUAYANILLA</b>	RÍO GUAYANILLA PRSR67A	60.0	SD	NS 50124700	5	5	5	5	F	H	Agriculture Collection System Failure Landfill Minor Industrial Point Sources	Ammonia Chromium VI Dissolved Oxygen	2022, 2020, 2018, 2014 2022, 2020 2022, 2020, 2016, 2014, 2012, 2008

**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
											Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Enterococcus Temperature Total, Nitrogen Total, Phosphorus Turbidity	2022, 2020, 2018 2022, 2020 2022, 2020, 2018, 2016 2022, 2020, 2018, 2016, 2012, 2010, 2008 2020
<b>RÍO YAUCO</b>	RÍO YAUCO PRSR68A1	61.4	SD		4a	4a	5	5	D F H L	M	Agriculture Collection System Failure Landfill Major Municipal Point Sources Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Dissolved Oxygen Total, Phosphorus	2014 2016, 2012
<b>RÍO LOCO</b>	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	Dissolved Oxygen Temperature	2020, 2016, 2014, 2012, 2006 2020

**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 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		
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
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
												Dissolved Oxygen	2020
												Enterococcus	2022, 2020, 2018
												Total, Phosphorus	2022, 2020, 2018, 2016
		58.3	SD		5	5	5	5	F	H	Agriculture	Chromium VI	2022, 2020

**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
	RÍO ROSARIO PRWR77C			NS 50136700							Collection System Failure Confined Animal Feeding Operations Landfills Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Enterococcus Pesticides Total, Phosphorus	2022, 2020, 2018 2012 2022
	RÍO VIEJO PRWR77D	21.1	SD	NS 50135625	5	5	5	5	F	H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater Systems Urban Runoff/Storm Sewers	Chromium VI Cyanide Dissolved Oxygen Enterococcus Total, Phosphorus	2022, 2020 2022 2022, 2020, 2018, 2016, 2014, 2012 2022, 2020, 2018 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

**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
	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  Surfactants	2012  2012
<b>RÍO YAGÜEZ</b>	RÍO YAGÜEZ PRWR79A	42.2	SD	NS 50139000	5	5	5	1	J	H	Agriculture Collection System Failure Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems Package Plant (Small Flow) Urban Runoff/Storm Sewers	Chromium VI Enterococcus	2022, 2020 2022, 2020, 2018
<b>RÍO GRANDE DE AÑASCO</b>	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	Chromium VI Enterococcus pH Turbidity	2022, 2020 2022, 2020, 2018 2022 2020, 2018, 2016, 2014, 2012, 2010

**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
											Urban Runoff/Storm Sewers		
	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
<b>QUEBRADA LOS RAMOS</b>	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
<b>QUEBRADA PILETAS</b>	QUEBRADA PILETAS PRWQ91A	2.0	SD		3	3	5	3	D H L	L	Onsite Wastewater Systems	Dissolved Oxygen	2012
<b>RÍO CULEBRINAS</b>	RÍO CULEBRINAS PRWR95A	142.6	SD	NS 50149100	5	5	5	5	K	H	Agriculture Collection System Failure Confined Animal Feeding Operations Landfill Major Industrial Point Sources	Chromium VI	2022, 2020
												Copper	2020
												Enterococcus	2022, 2020, 2018
												Pesticides	2012
											Total, Nitrogen	2022, 2018	

**Table 53: 2022 Cycle 303(d) List – List of Rivers and Streams**

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

Basin	Waterbody Name	Waterbody Size (miles)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
											Major Municipal Point Sources Minor Industrial Point Sources Minor Municipal Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers	Total, Phosphorus	2022, 2020, 2018
	QUEBRADA LA SALLE PRWQ95F	11.8	SD		4a	4a	5	5	D H K	H	Agriculture Confined Animal Feeding Operations Onsite Wastewater Systems	Pesticides Dissolved Oxygen	2012 2016
	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 2022 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

<b><i>Table 54: Size of waters Impaired by Causes (Monitored sq. mi. for Estuaries)</i></b>	
<b>Causes of Impairments</b>	<b>Size of Waters Impaired (sq. mi.)</b>
Surfactants	1.0130
Arsenic	0.0364
Dissolved Oxygen	0.8618
Temperature	0.0780
Turbidity	0.2932

**Table 55: 2022 Cycle 303(d) List – List of Estuaries**

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

Basin	Waterbody Name	Waterbody Size (sq. miles)	Class	2022 Monitoring Stations	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL					
<b>RÍO HERRERA PRER15A</b>	RÍO HERRERA PREE15A	0.102	SB		4a	4a	5	D F, H	M	Landfill Onsite Wastewater Systems	Surfactants	2012
<b>RÍO ESPÍRITU SANTO PRER16A</b>	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
<b>RÍO DEMAJAGUA PRER23A</b>	RÍO DEMAJAGUA PREE23A	0.0028	SB		4a	4a	5	D H, J	M	Collection System Failure Urban Runoff/Storm Sewers	Turbidity	2012
<b>RÍO CANDELERO PRER34A</b>	RÍO CANDELERO PREE34A	0.078	SB		4a	4a	5	D F, H	M	Collection System Failure	Dissolved Oxygen	2006
											Temperature	2012
<b>RÍO GUAYANÉS PRER35A</b>	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
<b>CAÑO SANTIAGO PREK35.1</b>	CAÑO SANTIAGO PREE35.1	0.1152	SB		4a	4a	5	D F H	M	Agriculture Collection System Failure Landfill Major Municipal Point Sources	Dissolved Oxygen	2012, 2006
											Surfactants	2012
											Turbidity	2012

**Table 55: 2022 Cycle 303(d) List – List of Estuaries**

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

Basin	Waterbody Name	Waterbody Size (sq. miles)	Class	2022 Monitoring Stations	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL					
										Minor Industrial Point Sources Onsite Wastewater Systems Urban Runoff/Storm Sewers		
<b>RÍO MATILDE-PASTILLO PRSR64A</b>	RÍO MATILDE-PASTILLO PRSE64A	0.0432	SB		4a	4a	5	D H J, L	M	Onsite Wastewater Systems Urban Runoff/Storm Sewers	Turbidity	2012
<b>RÍO TALLABOA PRSR65A</b>	RÍO TALLABOA PRSE65A	0.0336	SB		4a	4a	5	D, H J, L	M	Onsite Wastewater Systems Urban Runoff/Storm Sewers	Turbidity	2012
<b>CAÑO MERLE PRWK78A</b>	CAÑO MERLE PRWE78A	0.158	SB		4a	4a	5	D, H J, L	M	Collection System Failure	Surfactants	2014
<b>CAÑO BOQUILLA PRWK82A</b>	CAÑO BOQUILLA PRWE82A	0.062	SB		3	3	5	D H L	L	Onsite Wastewater Systems	Dissolved Oxygen	2012
											Surfactants	2012
											Turbidity	2012

**Table 55: 2022 Cycle 303(d) List – List of Estuaries**

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

Basin	Waterbody Name	Waterbody Size (sq. miles)	Class	2022 Monitoring Stations	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL					
<b>QUEBRADA GRANDE DE CALVACHE PRWQ88A</b>	QUEBRADA GRANDE DE CALVACHE PRWE88A	0.002	SB		4a	4a	5	D H L	M	Urban Runoff/Storm Sewers	Dissolved Oxygen	2016, 2012, 2008
<b>RÍO GUAYABO PRWR94A</b>	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 included 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

<b>Table 56: Size of waters Impaired by Causes San Juan Bay Estuary System</b>	
<b>Causes of Impairments</b>	<b>Size of Waters Impaired (sq. mi., miles)</b>
Ammonia	3.8340 sq. mi.
Chromium VI	3.8340 sq. mi.
Copper	0.1009 sq. mi., 18.8 mi
Dissolved Oxygen	3.8340 sq. mi., 18.8 mi
Enterococcus	3.8340 sq. mi., 18.8 mi
Lead	0.1009 sq. mi.
Oil and Grease	18.8 mi.
pH	3.7331 sq. mi., 18.8 mi.
Surfactants	3.8340 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

**Table 57: 2022 Cycle 303(d) List – List of San Juan Bay Estuary System**

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

Basin	Waterbody Name	Waterbody Size (sq. mi., miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
<b>ESTUARY SYSTEM</b>	<b>PREE13A1</b> * Caño Control de La Malaria * Bahía de San Juan * Caño San Antonio * Laguna Del Condado * Península La Esperanza	18.8 miles	SB	<b>ED SJBEP</b> - Bahía de San Juan 1, 2, 3 Laguna Del Condado 1, 2 Canal San Antonio Canal La Malaria Península La Esperanza  <b>ED USGS</b> – Monitoring Station 50048565 and 50048580	5	5	5	N/A	F M	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	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2006
												Enterococcus	2022, 2020, 2018, 2016, 2014, 2012
												Oil & Grease	2022, 2020, 2018, 2016, 2014, 2012, 2010
												pH	2022, 2020, 2018, 2016, 2014, 2012, 2006
												Temperature	2022, 2020, 2018, 2016, 2014, 2006
												Turbidity	2022, 2020, 2018, 2016, 2014, 2012, 2010
	<b>PREE13A2</b> * Río Piedras	0.1009 sq. mi. 55 miles	SD	NS 50049100 89027	5	5	5	5	F M	H	Collection System Failure Confined Animal Feeding	Ammonia	2020, 2014, 2012, 2010, 2008, 2006
												Chromium VI	2022, 2020

**Table 57: 2022 Cycle 303(d) List – List of San Juan Bay Estuary System**

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

Basin	Waterbody Name	Waterbody Size (sq. mi., miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
	* Embalse Las Curías			ED SJBEP - Río Piedras 01, 02, 03 Río Puerto Nuevo Embalse Las Curias						Operations Landfill Urban Runoff/Storm Sewers	Copper Dissolved Oxygen Enterococcus Lead Surfactants Temperature Total, Nitrogen Total, Phosphorus Turbidity	2020 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006 2022, 2020, 2018 2020 2020 2022, 2018, 2016, 2014 2022, 2020, 2018, 2016 2022, 2020, 2018, 2016 2022, 2020, 2018, 2014, 2012, 2010, 2008, 2006	
	<b>PREE13A3</b> * Caño Martín Peña	3.7331 sq. mi. 47.9 miles	SB SD	NS 50050300  ED SJBEP – Canal Suárez 1, 2 Caño Martín Peña	5	5	5	N/A	M	H	Collection System Failure Confined Animal Feeding Operations Onsite Wastewater	Ammonia Chromium VI Dissolved Oxygen	2020, 2018, 2016 2022, 2020 2022, 2020, 2018, 2016, 2014, 2012,

**Table 57: 2022 Cycle 303(d) List – List of San Juan Bay Estuary System**

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

Basin	Waterbody Name	Waterbody Size (sq. mi., miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
	* Quebrada Juan Méndez * Quebrada San Antón * Quebrada Blasina * Canal Machicote * Canal Suárez * Laguna San José * Laguna Torrecillas * Laguna Piñones * Laguna Los Corozos			Laguna San José 1, 2 Quebrada Blasina Quebrada San Antón Laguna Los Corozos Laguna Torrecillas 1, 2, 3 Laguna Piñones						Systems Urban Runoff/Storm Sewers	Enterococcus  pH  Surfactants Temperature  Total, Nitrogen Total, Phosphorus Turbidity	2010, 2008, 2006  2022, 2020, 2018, 2014, 2012  2022, 2020, 2018, 2016, 2014, 2012, 2010, 2006  2020, 2016  2022, 2020, 2018, 2016, 2014, 2012  2020, 2018, 2016  2022, 2020, 2018, 2016  2022, 2020, 2018, 2016, 2014, 2012, 2010, 2006	

**Notes:**

- F - Watersheds that have approved TMDL on September 2012, the pollutant was Fecal Coliforms.
- M- External Data
- 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 including in the PRUWARA and have 50% or more of its waters as impaired for some designated use.

**L:** Low Priority: basins that were not including in the PRUWARA and have less than 50% of its waters as impaired for some designated use.

## LAGOONS

<b><i>Table 58: Size of waters Impaired by Causes (Monitored Acres for Lagoons)</i></b>	
<b>Causes of Impairments</b>	<b>Size of Waters Impaired (sq. mi.)</b>
Copper	2.6172
pH	1.2703
Dissolved Oxygen	3.8781
Temperature	0.4016
Enterococcus	0.5250
Turbidity	1.4344

**Table 59: 2022 Cycle 303(d) List – List of Lagoons**

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

Waterbody Name	AU - ID	Waterbody Size (sq. mi.)	Class	2022 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
											Enterococcus	2014
											pH	2008

**Table 59: 2022 Cycle 303(d) List – List of Lagoons**

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

Waterbody Name	AU - ID	Waterbody Size (sq. mi.)	Class	2022 Monitoring Stations	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL					
<b>LAGUNA CEIBA</b>	PREN0013	0.1875	SB		5	5	5	H	L	Unknown Source	Copper	2014
											Dissolved Oxygen	2014
											Enterococcus	2014
											pH	2014
<b>LAGUNA POZUELO</b>	PRSN0014	0.0547	SB		3	3	5	H	L	Unknown Source Urban Runoff/Storm Sewers	Copper	2014
											Dissolved Oxygen	2014
											pH	2014
											Temperature	2014
<b>LAGUNA MAR NEGRO</b>	PRSN0015	0.325	SB		3	3	5	H	L	Unknown Source Urban Runoff/Storm Sewers	Copper	2014
											Dissolved Oxygen	2014
											pH	2014
<b>LAGUNA PUNTA ARENAS</b>	PRSN0016	0.0281	SB		3	3	5	H	L	Unknown Source Urban Runoff/Storm Sewers	Copper	2014
											Dissolved Oxygen	2014
											Temperature	2014
											Turbidity	2014
<b>LAGUNA TIBURONES</b>	PRSN0017	0.0219	SB		3	3	5	H	L	Landfill Unknown Source	Copper	2014
											Dissolved Oxygen	2014
											pH	2014
											Temperature	2014
											Turbidity	2014
<b>LAGUNA SALINAS</b>	PRSN0018	0.1203	SB		3	3	5	H	L	Onsite Wastewater Systems Unknown Source	Copper	2014
											Dissolved Oxygen	2014

**Table 59: 2022 Cycle 303(d) List – List of Lagoons**

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

Waterbody Name	AU - ID	Waterbody Size (sq. mi.)	Class	2022 Monitoring Stations	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL					
<b>LAGUNA SALINAS I (FRATERNIDAD)</b>	PRSN0019	0.4594	SB		3	3	5	H	L	Onsite Wastewater Systems Unknown Source	Copper	2014
											Dissolved Oxygen	2014
											Turbidity	2014
<b>LAGUNA CABO ROJO 2 (CANDELARIA)</b>	PRSN0020	0.2969	SB		3	3	5	H	L	Unknown Source	Copper	2014
											Dissolved Oxygen	2014
											Temperature	2014
											Turbidity	2014
<b>LAGUNA CABO ROJO 3 (EL FARO)</b>	PRSN0021	0.1078	SB		3	3	5	H	L	Unknown Source	Copper	2014
											Dissolved Oxygen	2014
											Turbidity	2014
<b>CAÑO BOQUERÓN</b>	PRSN0022	0.2859	SB		3	3	5	H	L	Marinas and Recreational Boating Minor Industrial Point Sources	Copper	2014
											Dissolved Oxygen	2014
											pH	2014
											Turbidity	2014
<b>LAGUNA GUANIQUILLA</b>	PRSN0023	0.0344	SB		3	3	5	H	L	Unknown Source	Dissolved Oxygen	2014
											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 on 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 including 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

**Table 60: 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	7,288
Enterococcus	35
Lead	1,726
Mercury	35
Pesticides	2,133
pH	6,858
Surfactants	634
Temperature	4,790
Total, Nitrogen	6,849
Total, Phosphorus	7,269
Turbidity	1,898

**Table 61: 2022 Cycle 303(d) List – List of Lakes**

*Note: The 2022 303(d) List is comprised of the impairments included in assessments cycles 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.*

Basin	Waterbody Name	Waterbody Size (acres)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
<b>RÍO GUAJATACA</b>	LAGO GUAJATACA PRNL3A1	1000	SD	NS 10720 10790 10790C	4a	4a	5	5	F	H	Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems	Dissolved Oxygen	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												pH	2022, 2020, 2016
												Temperature	2022, 2020
												Total, Nitrogen	2022, 2020
												Total, Phosphorus	2022, 2020, 2018
<b>RÍO GRANDE DE ARECIBO</b>	LAGO DOS BOCAS PRNL <sub>1</sub> 7A1	634	SD	NS 25110 27090 27090E	4a	4a	5	5	K	H	Agriculture Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems	Arsenic	2006
												Copper	2006
												Dissolved Oxygen	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												pH	2022, 2020, 2018, 2016, 2012
												Surfactants	2006
												Temperature	2022, 2020
												Total, Nitrogen	2022, 2020, 2018
												Total, Phosphorus	2022, 2020, 2018
												Turbidity	2022, 2020

**Table 61: 2022 Cycle 303(d) List – List of Lakes**

*Note: The 2022 303(d) List is comprised of the impairments included in assessments cycles 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.*

Basin	Waterbody Name	Waterbody Size (acres)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
<b>RÍO GRANDE DE ARECIBO</b>	LAGO CAONILLAS PRNL <sub>2</sub> 7C1	700	SD	NS 89001 89002 89003	4a	4a	5	5	K	H	Agriculture Onsite Wastewater Systems	Copper	2020, 2012
												Dissolved Oxygen	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												Pesticides	2008
												pH	2020
												Total, Nitrogen	2022, 2020
												Total, Phosphorus	2022, 2020, 2018
<b>RÍO GRANDE DE ARECIBO</b>	LAGO GARZAS PRNL <sub>3</sub> 7A3	108	SD	NS 20050	4a	4a	5	5	K	H	Agriculture Onsite Wastewater Systems Unknown Source	Copper	2020
												Dissolved Oxygen	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2006
												Lead	2020
												Pesticides	2008
												Total, Phosphorus	2022, 2018
<b>RÍO GRANDE DE MANATÍ</b>	LAGO GUINEO PRNL <sub>1</sub> 8C1	54	SD		4a	4a	5	5	H K	H	Agriculture Onsite Wastewater Systems	Dissolved Oxygen	2012, 2010, 2006
												Pesticides	2008
<b>RÍO GRANDE DE MANATÍ</b>	LAGO MATRULLAS PRNL <sub>2</sub> 8C1	77	SD	NS 89009 89010	4a	4a	5	5	K	H	Agriculture Confined Animal Feeding Operations	Copper	2020
												Dissolved Oxygen	2022, 2020, 2018, 2016, 2014, 2012, 2010



**Table 61: 2022 Cycle 303(d) List – List of Lakes**

*Note: The 2022 303(d) List is comprised of the impairments included in assessments cycles 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.*

Basin	Waterbody Name	Waterbody Size (acres)	Class	2022 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 Unknown Source	Lead pH Total, Nitrogen Total, Phosphorus	2020 2020, 2018, 2014, 2012, 2010, 2006 2022, 2020 2022, 2020, 2018
<b>RÍO DE LA PLATA</b>	LAGO DE LA PLATA PREL <sub>1</sub> 10A1	560	SD	NS 44400 44950 44950C	4a	4a	5	5	B	H	Collection System Failure Confined Animal Feeding Operations Landfill Onsite Wastewater Systems	Arsenic	2006
												Dissolved Oxygen	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												Lead	2020
												pH	2022, 2020, 2018, 2016
												Temperature	2022, 2020
												Total, Nitrogen	2022, 2020
Total, Phosphorus	2022, 2020, 2018, 2016, 2006												
<b>RÍO DE LA PLATA</b>	LAGO CARITE PREL <sub>2</sub> 10A5	333	SD	NS 39900 39950 39950C	4a	4a	5	5	B	H	Confined Animal Feeding Operations Onsite Wastewater Systems	Dissolved Oxygen	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2006
												pH	2020

**Table 61: 2022 Cycle 303(d) List – List of Lakes**

*Note: The 2022 303(d) List is comprised of the impairments included in assessments cycles 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.*

Basin	Waterbody Name	Waterbody Size (acres)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
											Total, Nitrogen	2022	
											Total, Phosphorus	2022, 2020, 2018	
<b>RÍO BAYAMÓN</b>	LAGO CIDRA PREL12A2	268	SD	NS 89029 89030 89031	4a	4a	5	5	F	H	Collection System Failure Confined Animal Feeding Operations Minor Industrial Point Sources Onsite Wastewater Systems	Copper	2020
												Dissolved Oxygen	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												Lead	2020
												Total, Nitrogen	2022, 2020
												Total, Phosphorus	2022, 2020, 2018
<b>RÍO GRANDE DE LOIZA</b>	LAGO LOIZA PREL14A1	713	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	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008
												Lead	2012
												pH	2022, 2020
												Temperature	2020
												Total, Nitrogen	2022, 2020, 2018
												Total, Phosphorus	2022, 2020, 2018

**Table 61: 2022 Cycle 303(d) List – List of Lakes**

*Note: The 2022 303(d) List is comprised of the impairments included in assessments cycles 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.*

Basin	Waterbody Name	Waterbody Size (acres)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
												Turbidity	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008
<b>RÍO GRANDE DE PATILLAS</b>	LAGO PATILLAS PRSL43A1	312	SD	NS 89022 89023 89024	4a	4a	5	5	J	H	Agriculture Minor Industrial Point Sources Onsite Wastewater Systems Unknown Source	Dissolved Oxygen	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												Pesticides	2008
												pH	2020
												Temperature	2022, 2020
												Total, Phosphorus	2022, 2020, 2018
<b>QUEBRADA MELANÍA</b>	LAGO MELANÍA PRSL50A	35	SD	NS 89026	5	5	5	5	J	M	Agriculture Onsite Wastewater Systems Unknown Source	Enterococcus	2020
												Mercury	2020
												Pesticides	2008
												Temperature	2020
												Total, Nitrogen	2022, 2020
											Total, Phosphorus	2022, 2020, 2018	
<b>RÍO JACAGUAS</b>	LAGO GUAYABAL PRSL160A1	373	SD	NS 89011 89012 89013	4a	4a	5	5	F	M	Agriculture Collection System Failure Minor Industrial Point Sources Onsite Wastewater Systems	Dissolved Oxygen	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												Pesticides	2008
												pH	2020

**Table 61: 2022 Cycle 303(d) List – List of Lakes**

*Note: The 2022 303(d) List is comprised of the impairments included in assessments cycles 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.*

Basin	Waterbody Name	Waterbody Size (acres)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
											Total, Nitrogen	2020	
											Total, Phosphorus	2022, 2020, 2018	
<b>RÍO JACAGUAS</b>	LAGO TOA VACA PRSL <sub>2</sub> 60A1	836	SD	NS 89014 89015 89016	4a	4a	5	5	F	M	Agriculture Onsite Wastewater Systems	Dissolved Oxygen	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008
												pH	2020, 2016
												Temperature	2022
												Total, Nitrogen	2022, 2020
												Total, Phosphorus	2022, 2020, 2018
<b>RÍO BUCANÁ-CERRILLOS</b>	LAGO CERRILLOS PRSL62A1	700	SD	NS 89032 89033 89034	4a	4a	5	5	J	M	Unknown Source Urban Runoff/Storm Sewers	Dissolved Oxygen	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												pH	2022
												Temperature	2022
												Total, Nitrogen	2022, 2020
												Total, Phosphorus	2022, 2020, 2018
<b>RIO YAUCO</b>	LAGO LUCHETTI PRSL68A1	266	SD	NS 89017 89018 89019	4a	4a	5	5	F	M	Agriculture Onsite Wastewater Systems	Dissolved Oxygen	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008,

**Table 61: 2022 Cycle 303(d) List – List of Lakes**

*Note: The 2022 303(d) List is comprised of the impairments included in assessments cycles 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.*

Basin	Waterbody Name	Waterbody Size (acres)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
												2006	
											Pesticides	2008	
											pH	2022, 2020, 2018	
											Total, Nitrogen	2022, 2020	
											Total, Phosphorus	2022, 2020, 2018	
											Turbidity	2020	
<b>RÍO LOCO</b>	LAGO LOCO PRSL69A	69	SD	NS 89021C	4a	4a	5	5	F	M	Onsite Wastewater Systems	Dissolved Oxygen	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008
												pH	2020
												Total, Nitrogen	2022, 2020
												Total, Phosphorus	2020, 2018
<b>RÍO GRANDE DE AÑASCO</b>	LAGO GUAYO PRWL83H	285	SD	NS 89004 89005 89006	4a	4a	5	5	K	H	Agriculture Confined Animal Feeding Operations Major Industrial Point Sources Minor Industrial Point Sources Onsite Wastewater Systems	Dissolved Oxygen	2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008, 2006
												Pesticides	2008
												pH	2022, 2020, 2018
												Total, Nitrogen	2022, 2020, 2018

**Table 61: 2022 Cycle 303(d) List – List of Lakes**

*Note: The 2022 303(d) List is comprised of the impairments included in assessments cycles 2022, 2020, 2018, 2016, 2014, 2012, 2010, 2008 and 2006.*

Basin	Waterbody Name	Waterbody Size (acres)	Class	2022 Monitoring Stations NS = Network	Designated Uses and Categories Summary				Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
					R1	R2	AL	DW					
											Total, Phosphorus	2020, 2018	
											Turbidity	2022, 2020	

**Notes:**

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

**C** - Watershed that has an approved TMDL for Río Grande de Loíza, the TMDL was approved on September 2007, the pollutant was Fecal Coliforms.

**F** - Watersheds that have approved TMDL on 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 on September 2011, the pollutant was Fecal Coliform.

**K** - Watersheds that have an approved TMDL on 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.

**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 including in the PRUWARA and have 50% or more of its waters as impaired for some designated use.

## COASTAL SHORELINE

<b>Table 62: Size of Waters Impaired by Causes Coastal Shoreline</b>	
<b>Causes of Impairment</b>	<b>Size of Waters Impaired (miles)</b>
Arsenic	49.19
Copper	380.83
Dissolved Oxygen	92.65
Enterococcus	390.97
Fecal Coliforms	7.79
Lead	152.17
Mercury	213.37
Nickel	170.90
Oil and Grease	82.42
pH	190.52
Temperature	251.01
Thallium	203.74
Turbidity	434.94
Zinc	43.80

**Table 63: 2022 Cycle 303(d) List – List of Coastal Shoreline**

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

Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
<b>PRNC01</b> 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
<b>PRNC02</b> 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	2020, 2018
										Turbidity	2022, 2020, 2018, 2016, 2014, 2012
<b>PRNC03</b> 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	2022, 2020, 2018
										Temperature	2020
										Turbidity	2020, 2018, 2016
<b>PRNC04</b> Punta Morrillos to Punta Manatí	13.66	SB	NS MAC-049 MAC-055 SBZ-008	5	5	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	2022, 2020, 2018, 2016, 2014, 2012



**Table 63: 2022 Cycle 303(d) List – List of Coastal Shoreline**

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

Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
<b>PRNC05</b> Punta Manatí to Punta Chivato	7.46	SB	NS SBZ-010 SEG5-01	5	5	5		L	Unknown Source	Copper	2020, 2018
										Enterococci	2022, 2018
										Mercury	2020
										Thallium	2020
										pH	2022, 2020, 2018
Turbidity	2022, 2018										
<b>PRNC06</b> Punta Chivato to Punta Cerro Gordo	3.23	SB	NS MAC-087 RW23	5	5	5		L	Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	Copper	2018
										Enterococci	2022, 2018
										Mercury	2020
										Temperature	2022, 2020
Turbidity	2022, 2018										
<b>PRNC07</b> 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	2022, 2020
Turbidity	2020, 2018										
<b>PRNC08</b> 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	2022, 2020, 2018
										Lead	2020
										Copper	2020, 2018
										Nickel	2020
										Zinc	2020
Turbidity	2022, 2020, 2018, 2016										
<b>PREC09</b>	5.78	SB	NS	5	5	5		L		Arsenic	2020

**Table 63: 2022 Cycle 303(d) List – List of Coastal Shoreline**

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

Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
Punta Boca Juana to Punta Salinas			MAC-077 SEG9-01 RW-19					Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	Copper	2020, 2018	
									Enterococci	2022, 2020	
									Lead	2020	
									Nickel	2020, 2018	
									pH	2022	
Turbidity	2022, 2020, 2018, 2016										
<b>PREC10B</b> 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	2022, 2020, 2016, 2014	
									Lead	2020, 2018	
									Mercury	2020, 2018	
									Nickel	2020, 2018	
Turbidity	2022, 2020, 2018, 2016, 2014										
<b>PREC10C</b> 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	2020, 2018	
									Lead	2020, 2018	
									Mercury	2020, 2018	
									Nickel	2020, 2018	
									Zinc	2020	
									Thallium	2020	
									pH	2022, 2018	
Temperature	2020										
Turbidity	2022, 2020, 2018, 2016										

**Table 63: 2022 Cycle 303(d) List – List of Coastal Shoreline**

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

Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
<b>PREC11</b> 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
<b>PREC12</b> Punta del Morro to West side of Condado Bridge	3.5	SB	NS SBZ-018, SBZ-019, RW-20B, RW-20A, RW-25A, ED- CariCoos Buoy	5	5	1		L	Unknown Sources	Enterococci	2022
										Turbidity	2022
										pH	2022
<b>PREC13</b> 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	2022, 2020, 2018
										Lead	2020
										Mercury	2020
										Thallium	2020
										Temperature	2022, 2020
Turbidity	2022										
<b>PREC14</b>	4.19	SB	NS EB-40, B-3, SEG14-01	1	1	5		L	Marinas and Recreational Boating	Arsenic	2020
										Lead	2020
										Copper	2020

**Table 63: 2022 Cycle 303(d) List – List of Coastal Shoreline**

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

Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
Punta Las Marías to Punta Cangrejos			SEG14-02, RW-21C					Urban Runoff/Storm Sewers	Thallium	2020	
									Temperature	2022, 2020	
									Turbidity	2022, 2020, 2018, 2016, 2014	
<b>PREC15</b> 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	2022, 2020, 2018
										Mercury	2020
										Nickel	2020
										Temperature	2022, 2020
										Thallium	2020
Turbidity	2022,2020, 2018, 2016										
<b>PREC16</b> 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	2022, 2020, 2018
										Temperature	2020
Turbidity	2022, 2020, 2018, 2016										

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

Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
<b>PREC17</b> 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	2022, 2018, 2016
<b>PREC18</b> 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	2022, 2020
										Turbidity	2022, 2020, 2018, 2016, 2014, 2012
<b>PREC19</b> 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	2022, 2020, 2018, 2016
										Oil & Grease	2014
										Temperature	2022, 2020
										Turbidity	2022, 2020, 2018, 2016, 2014
<b>PREC20</b> Punta Barrancas to Punta Medio Mundo	5.33	SB	NS SEG20-01 SEG20-02	5	5	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	2022, 2020
										Turbidity	2022, 2020, 2018, 2016

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

Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
<b>PREC23</b> 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
<b>PREC24</b> 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	2022, 2020
										Turbidity	2022, 2020, 2018, 2016
<b>PREC25</b> 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	2022, 2020
										Enterococci	2022, 2020, 2018
										Turbidity	2022, 2020, 2018, 2016, 2014, 2012
<b>PREC26</b> Morro de Humacao to Punta Candelero	1.84	SB	NS SEG26-01	5	5	5		L	Onsite Wastewater Systems Urban Runoff/Storm Sewers	Copper	2020
										Enterococci	2020, 2018
										Temperature	2022, 2020
										Turbidity	2022, 2020, 2018, 2016
<b>PREC27</b>	3.74	SB	NS SEG27-01	5	5	5		L	Onsite Wastewater Systems	Arsenic	2020
										Copper	2020
										Thallium	2020

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Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
Punta Candeleró to Punta Guayanés								Urban Runoff/Storm Sewers	Enterococci	2022, 2020, 2018, 2008	
									Turbidity	2022, 2020, 2018, 2016	
<b>PREC28B</b> 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
<b>PREC28C</b> 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										
<b>PREC29</b> Punta Yeguas to Punta Tuna	4.35	SB	NS SEG29-02 SEG29-01	5	5	5		L	Onsite Wastewater Systems Unknown Source Urban Runoff/Storm Sewers	Copper	2020, 2018
										Lead	2018
										Thallium	2020
										Enterococci	2020
										pH	2020, 2018
Turbidity	2022, 2020, 2018, 2016										
<b>PREC30</b>	2.65	SB	NS	5	5	5		L	Unknown Source	Copper	2020, 2018

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Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
Punta Tuna to Cabo Mala Pascua			MAC-082						Enterococci	2022, 2020, 2018, 2016	
									Turbidity	2022, 2020, 2018, 2016, 2014, 2012	
<b>PRSC31</b> 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	2022
										Turbidity	2022, 2020
<b>PRSC32</b> Punta Viento to Punta Figuras	6.16	SB	NS MAC-083 SBZ-040 RW-6 RW-7	5	5	5		L	Onsite Wastewater Systems Urban Runoff/Storm Sewers Upstream Impoundment	Copper	2020, 2018
										Mercury	2020
										Thallium	2020
										Dissolved Oxygen	2018, 2016
										Enterococci	2022, 2020, 2018, 2014, 2010
										Temperature	2022, 2020
<b>PRSC33</b> 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	2022, 2020
									Temperature	2020	



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Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
										Turbidity	2022, 2020, 2018, 2016, 2014, 2012, 2008
<b>PRSC34</b> 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 Reserve of Jobos Bay	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	2022, 2018, 2016, 2014, 2012, 2010
										Enterococci	2022, 2018, 2012, 2010
										Oil & Grease	2014
										pH	2022, 2020, 2018, 2016, 2014, 2012, 2010
Temperature	2022, 2020, 2016, 2014										
									Turbidity	2022, 2020, 2018, 2016, 2014, 2012, 2010	
<b>PRSC35</b> Punta Petrona to Punta Cabullones	16.19	SB	NS MAC-020 SEG35-01 SEG35-02	5	5	5	M	L	Major Municipal Point Sources Onsite Wastewater Systems	Copper	2020, 2018
										Lead	2020
										Nickel	2020
										Thallium	2020

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

Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
			ED-CariCoos Buoy						Upstream Impoundment Urban Runoff/Storm Sewers	Zinc Enterococci Mercury Turbidity	2020 2022, 2020, 2018, 2016 2020, 2018 2022, 2020, 2018, 2016, 2014
<b>PRSC36B</b> 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	2022, 2020
										Temperature	2022, 2020
										Enterococci	2022
										Copper	2018
										Mercury	2018
Turbidity	2022, 2020, 2018, 2016										
<b>PRSC36C</b> Punta Carenero to Punta Cuchara	6.70	SB	NS MAC-022 MAC-023	5	5	5		L	Major Municipal Point Sources Marinas and Recreational Boating Onsite Wastewater Systems Urban Runoff/Storm Sewers	Turbidity	2022, 2020
										Copper	2020, 2018
										Enterococci	2022, 2020, 2018, 2014
										Mercury	2018
										Oil & Grease	2014
<b>PRSC37B</b> Punta Cuchara to Cayo Parguera	3.30	SB	NS MAC-084	5	5	5		L	Surface Mining Urban Runoff/Storm Sewers	Turbidity	2022, 2020, 2018, 2016, 2014
										Enterococci	2020, 2018

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Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
								Upstream Impoundment Unknown Source	pH Copper Nickel Mercury	2020 2020, 2018 2020 2020, 2018	
<b>PRSC37C</b> Cayo Parguera to Punta Guayanilla	4.20	SB	NS MAC-24 MAC-25	1	1	5		L	Major Municipal Point Sources	Turbidity	2020, 2018, 2016, 2014
									Major Industrial Point Sources	Copper	2020, 2018
									Surface Mining	Mercury	2020
									Onsite Wastewater Systems	Lead	2018
									Upstream Impoundment	Nickel	2018
									Marinas and Recreational Boating	Thallium	2020
									Urban Runoff/Storm Sewers	Oil & Grease	2014
										Zinc	2018
<b>PRSC38</b> Punta Guayanilla to Punta Verraco	13.20	SB	NS MAC-027 MAC-028 MAC-089	5	5	5		L	Major Municipal Point Sources	Copper	2020, 2018
									Marinas and Recreational Boating	Mercury	2020
									Onsite Wastewater Systems	Thallium	2020
									Upstream Impoundment	Oil & Grease	2014
									Urban Runoff/Storm Sewers	Enterococci	2022, 2020, 2018
										Turbidity	2022, 2020
	Temperature	2022, 2020, 2018, 2016, 2014									

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

Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
PRSC39 Punta Verraco to Punta Ballena	6.41	SB	NS MAC-030, Seg39-01, G1	1	1	5		L	Unknown Source	Turbidity	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	7.00	SB	NS SBZ-046 Seg41B2-01, RW-33	5	5	5		L	Landfill Marinas and Recreational Boating Onsite Wastewater Systems	Copper	2020, 2018
										Thallium	2020
										Dissolved Oxygen	2022, 2020, 2016
										Enterococci	2022, 2020

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Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
Punta Cueva de Ayala								Urban Runoff/Storm Sewers	pH	2020, 2018	
									Temperature	2022, 2020	
									Turbidity	2022, 2018, 2016	
<b>PRSC41B3</b> Bahía Monsio José to Faro de Cabo Rojo	13.45	SB	NS SEG41B3-01 SEG41B3-02	5	5	5		L	Unknown Source	Turbidity	2022, 2020, 2018, 2016
										Mercury	2020
										Thallium	2020
										Nickel	2020
										Dissolved Oxygen	2020, 2016
										Enterococci	2022, 2020, 2018
Temperature	2022, 2020										
<b>PRWC42</b> 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	2022, 2020, 2018, 2016
										pH	2022, 2020, 2018
										Temperature	2022, 2020, 2018
<b>PRWC43</b>	9.54	SB	NS MAC-037, SBZ-047	5	5	5		L	Collection System Failure	Enterococci	2022, 2020
										Turbidity	2022, 2020, 2018, 2016

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Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
Punta Águila to Punta Guaniquilla			SBZ-048 RW-12A, RW-12B, RW-13, RW-14A					Marinas and Recreational Boating Minor Municipal Point Sources Onsite Wastewater Systems	Temperature	2022, 2020	
<b>PRWC44</b> 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	2022
										pH	2020
								Thallium	2020		
<b>PRWC45</b> 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	2022, 2020, 2018, 2016
										Copper	2020, 2018
										Thallium	2020
										Lead	2020
								Enterococci	2020, 2018, 2016		
<b>PRWC46</b> 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	2020		

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Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
<b>PRWC47</b> In front of Cayo Ratones to Punta Guanajibo	3.85	SB	NS SEG47-01	1	1	5		L	Onsite Wastewater Systems	Turbidity	2020, 2018
										Copper	2020
										Nickel	2020
<b>PRWC48</b> 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
										Copper	2020, 2018
										Lead	2020
										Mercury	2020
										Thallium	2020
										Enterococci	2022, 2020, 2018, 2016, 2014, 2010
Nickel	2020, 2018										
<b>PRWC49</b> Punta Algarrobo to Punta Cadena	6.98	SB	NS MAC-041 SEG49-01 RW-15	5	5	5		L	Major Municipal Point Sources Upstream Impoundment Urban Runoff/Storm Sewers Onsite Wastewater Systems	Copper	2020, 2018
										Enterococci	2022, 2020, 2018
										Nickel	2020
										pH	2022, 2018, 2012
										Temperature	2022, 2020
										Turbidity	2022, 2020, 2018, 2016, 2014
<b>PRWC50</b>	4.98	SB	NS SBZ-054	5	5	5		L	Onsite Wastewater Systems	Copper	2020, 2018
										Nickel	2020, 2018

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Assessment Unit ID (AU)	Size of AU (miles)	Class	2022 Monitoring Stations NS = Network ED = External Data	Designated Uses and Categories Summary			Notes	Priority	Potential Pollution Sources	Causes of Impairment	Impaired Cycles
				R1	R2	AL					
Punta Cadena to Punta Higüero			SBZ-055 RW-5					Unknown Sources Upstream Impoundment	Enterococci	2022, 2018	
									pH	2022	
									Turbidity	2022, 2020, 2018, 2016	
									Lead	2018	
<b>PRWC51</b> 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	Mercury	2020	
									Copper	2020, 2018	
									Lead	2020	
									Nickel	2020, 2018	
									Enterococci	2022, 2020, 2018	
Turbidity	2020, 2018, 2016										
<b>PRWC52</b> 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	2022, 2020, 2016, 2018	
									Copper	2020	
<b>PRCC53</b>	32.70	SB	NS	1	1	5		L	Turbidity	2020, 2010	



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				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 including 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.

## APENDIX II - Implementation of the Clean Water Act 303(d) Program Vision Long – Term Vision

## **Implementation of the Clean Water Act 303(d) Program Vision Long – Term Vision**

### **Introduction**

In December 2013, Environmental Protection Agency (EPA) announced a new framework for implementing the Clean Water Act (CWA) Section 303(d) Program – A long-term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program. This new vision, encourage states and territories to develop tailored strategies to implementation CWA 303(d) responsibilities of their overall water quality goals and individuals states priorities.

Recognizing each State is unique, EPA expects that States will vary in the extent to which and how they implement the goals of the Vision, depending on particular circumstances and water quality goals of the State. To support State and EPA discussions on re-orienting CWA 303(d) Program responsibilities consistent with the Vision, EPA is providing additional information for States to consider when implementing the Prioritization, Engagement and Alternative Goals. EPA and States jointly identified these topics as warranting further clarification to promote timely implementation of the Vision and submittal and review of States' 2016 Integrated Reports. EPA anticipates working closely with the States on these issues as States move forward with developing their Integrated Reports.

### **Long-term Prioritization from 2016 to 2022**

Consistent with the new EPA's vision, Puerto Rico Environmental Quality Board (PREQB) identify those assessment units (AU) for priority restoration and protection activities. This prioritization provides a framework to focus the location and timing for the development of, alternative restoration, protection plans and TMDLs. Those alternatives should include:

- Identification of specific impairment addressed by an alternate approach.
- Planning, development and implement effectiveness monitoring programs.
- Revisions, and amendments to the existing regulations.

Recently, PREQB update its Non-Point Source Management Program (NPSMP). One of the most important parts of this NPSMP is the development and implementation of a Priority System. This Priority System will be used as a priority based system in the long-term vision of the assessment restoration and protection under the CWA section 303(d). The main purpose will be standardizing the priority systems and the basic criteria used for a more effective assessment of island's water quality.

### **Priority Ranking Criteria System**

The Priority Ranking Criteria System is based on the awarding of points, distributed in 10 criteria, which will identify the priority. To establish the degree of priority for the protection and restoration the evaluation will be by AU. The selected criteria are:

#### **1. Segment Classification (description)**

Under this criterion was established six (6) categories to which a score is assigned considering where it drains the segment into the basin or sub-basin. The highest score in this criteria is awarded to the lake itself and in descending order to its tributaries according to its draining on the basin or sub-basin. Each AU will be classified as follow:

- Stream or Channel not related to river or lakes
- Tributary of main river not flowing into a lake
- Main river not flowing into lake
- Tributary of the main river, which flows into a lake
- Main river which runs into a Lake
- Lake

## **2. Population Density**

The population density is an important criterion to determine which segments are in the greatest need for protection in relation to each other. The relationship of people with respect to the surface space they occupy an area allows us to anticipate where we can find more activity that involves activities with a potential impact on the basins or sub-basins.

The ranges of population density used are the following:

- 160-499
- 500-749
- 750-999
- 1,000-1,349
- 1,350-2,999
- 3,000-9,1000

## **3. Mean Annual Rainfall**

Precipitation generates run-off waters that run on the ground, which have the potential to drag and transport sediment and other pollutants into waterbodies. Those areas in which the precipitation is high, have a greater potential impact on surface water (AU). Therefore, as part of the prioritization system is included the mean annual rainfall as a criterion to assign the priority level of protection of AU. For this criteria were established five classification based on ranges that are shown below:

- 35-49 in
- 50-69 in
- 70-89 in
- 90-99 in
- 100 in or more

#### **4. Predominant Special Activities**

The surface water that are impacted, sometimes can be associated to certain contaminant activities. Those activities that are related to specific pollutants have been identified and included under predominant activities criteria. This criterion is intended to give priority to surface water with such activities present in the AU. The classification established are the following:

- Agriculture
- Industrial

#### **5. Monitory Station**

Monitoring stations are essential to gather data on water quality and keep it updated. The lack of water quality data limits the analysis and monitoring that can be performed on a waterbody. The existence of a sampling station is essential to carry out successfully the monitoring of the AU. Therefore, this approach is essential in determining whether it is potential candidate or not to be protected. The criteria of monitoring station will be:

- Exist
- Do not exist

#### **6. Known Potential Pollution Source**

The potential pollution sources, affect significantly the water quality. The recognition of knowns potential pollution sources on the watershed or sub- basin, imparts a greater certainty in the prioritization process. Therefore, the identification of that sources, will allow to establish the priority order to protect the AU as needed. The classification under this criterion are the following:

- Superfund Site
- Non active landfill
- Active landfill
- Underground storage tanks (UIC)
- Wastewater pump stations (Bypass)
- CES projects
- Livestock Enterprises
- Presence of communities without sanitary sewerage

#### **7. AU frequency on 303(d) List**

This criterion was based on the analysis of the 2014 303(d) list. The value of percentage ranges increases according to the frequency the AU was included in the 303(d) List in each evaluation cycles.

- 100-90%
- 89-80%
- 79-70%
- 69-60%
- 59-0%

## **8. Priority Watersheds**

It will be considered if the AU is part of one of the 18 priority watersheds identified in the *Puerto Rico Unified Watershed Assessment and Restoration Activities (PRUWA)* document.

## **9. Sensitive Natural Area**

The presence of sensitive areas in an AU is a criterion that is also important to consider as a matter of priority, since runoff can impact it with many potential pollutants. Therefore, we establish the following criteria:

- None
- Proposed area for conservation
- Designed Natural Reserve
- Natural Reserve designed with proposed area for conservation

## **10. Water intake from Puerto Rico Aqueduct and Sewer Authority (PRASA)**

Water Intakes in the AU will be taken in consideration as a priority criterion.

## **11. Valuable Coral Reef Areas (Coastal Sensitive Area)**

Assessments units that drain to an area identified as valuable coral threatened areas will be established as priority criteria to be managed with a higher priority. On this criterion are considered two categories: For coral reef areas, PREQB took in consideration the information of the National Oceanic and Atmospheric Administration and DNER.

- AU do not drain to a valuable coral reef area (No)
- AU drains to a valuable coral reef area (Yes)

### **Detail Point of the Priority Ranking System**

In order to establish the priority ranking each one of the AU for the inland waters was evaluated considering the following point system (Table 64).

**Table 64: Detailed Point System**

<b>Criteria Detailed and element</b>	<b>Points</b>
<b>1. Segment Clasification</b>	
• Stream or Caño not related to river or lakes	1
• Tributary of a main river not flowing into a Lake	2
• Main river not flowing into a Lake	3
• Tributary of the main river, which flows into a lake	4
• Main river which runs into a Lake	5
• Lake	6
Points to be considered in the percentage calculation	<b>6</b>
<b>2. Population Density</b>	
• 160-499	1
• 500-749	2
• 750-999	3
• 1,000-1,349	4
• 1,350-2,999	5
• 3,000-9,100	6
Points to be considered in the percentage calculation	<b>6</b>
<b>3. Mean Annual Rainfall</b>	
• 35-49 in.	1
• 50-69 in.	2
• 70-89 in.	3
• 90-99 in.	4
• 100 in or more	5
Points to be considered in the percentage calculation	<b>5</b>
<b>4. Predominant Special Activities</b>	
• Industrial	1
• Agriculture	2
Points to be considered in the percentage calculation	<b>3</b>
<b>5. Monitory station</b>	
• No	0
• Yes	2
Points to be considered in the percentage calculation	<b>2</b>
<b>6. Known Potential Pollution Sources</b>	
• Superfund Site	1
• Non active landfills	2
• Active landfill	3
• Underground storage tanks (UIC)	4
• Wastewater pump stations (Bypass)	5
• CES projects	6
• Livestock Enterprises	7
• Presence of communities without sanitary sewerage	8
Points to be considered in the percentage calculation	<b>36</b>
<b>7. AU frequency on 303 (d) List</b>	

<b>Criteria Detailed and element</b>	<b>Points</b>
• 0% (not listed)	0
• 1-59%	1
• 60-69%	2
• 70-79%	3
• 80-89%	4
• 90% or more	5
Points to be considered in the percentage calculation	<b>5</b>
<b>8. Priority Watersheds</b>	
• No	0
• Yes	2
Points to be considered in the percentage calculation	<b>2</b>
<b>9. Sensitive Natural Area (Ecological sensitive area)</b>	
• None	0
• Proposed area for conservation according to Planning Board	2
• Designed Natural Reserve	4
• Designed Natural Reserve with Proposed area for conservation	6
Points to be considered in the percentage calculation	<b>6</b>
<b>10. Water intake from AAA</b>	
• None	0
• 1	2
• 2	4
• 3	6
• 4 or more	8
Points to be considered in the percentage calculation	<b>8</b>
<b>11. Valuable Coral Reef Areas (Coastal Sensitive Area)</b>	
AU do not drains to a valuable coastal area (No)	<b>0</b>
AU drains to a valuable coastal area (Yes)	<b>5</b>
Points to be considered in the percentage calculation	<b>5</b>
<b>TOTAL POINT TO CALCULATE PRIORITY PERCENTAGE</b>	<b>84</b>

Once the evaluation is completed for each one of the assessment unit; to summarize the priority order in which the AU will be address the following categories were established:

**High Priority (H):** are assessment units that have a ranking between 100 to 70 percentages (adjusted).

**Moderate Priority (M):** are assessment units that have a ranking between 70 to 32 percentages (adjusted)

**Low Priority (L):** are assessment units that have a ranking between 32 to 0 percentages (adjusted).



**Others Consideration for Prioritization**

**Phosphorus impairments**

Due to the fact that the nutrient criteria are much needed for rivers and stream as endpoint for developing TMDL, PREQB had intended to adopt rivers and streams nutrient criteria first. It is likely that the criteria will be adopted for all water of appropriate classes, islandwide.

PREQB amended the Puerto Rico Water Quality Standard Regulation (PRWQSR) to incorporate the new standards for Total Phosphorus and Total Nitrogen applicable to the rivers and streams of PR. It was adopted on August 19, 2014. Actually, PREQB is in the process of complete the development and adoption of the numeric nutrient criteria (TP and TN) for lakes/reservoirs.

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.

However, in addition to those AU identified by the priority system the following AU will be included as part of the priority watersheds for the parameter of Phosphorus (Table 65):

***Table 65: Additional AU due to Phosphorus Impairments***

<b>AU ID</b>	<b>Causes name</b>
PRER14H	Phosphorus
PRSR67A	Phosphorus
PRSR68A1	Phosphorus
PRWR94A	Phosphorus

**San Juan Bay Estuary System**

The AU (PREE13A2) will be considered as priority, it's belongs to the San Juan Estuary System. This Estuary was designated in 1992 as part of National Estuary Program for which it's developed the Comprehensive Conservation and Management Plan (CCMP), to improved and maintain the integrity of the San Juan Bay Estuary and its designated uses (Table 66).

***Table 66: AU of the San Juan Bay Estuary System***

<b>AU ID</b>	<b>Causes of imparments</b>
PREE13A2	Dissolve Oxygen, Ammonia, Oil and Grease, pH, Thermal Modification, Total Coliforms, Turbidity, NO <sub>2</sub> +NO <sub>3</sub> , Surfactants, Lead, Copper, Cyanide

**Long-Term Priorities AU**

The PREQB uses the river basins system for planning activities and implementation of restoration efforts. In order to achieve these efforts in a more effective manner, we have replaced the old system based on the segmentation of small portions of rivers and individual creeks by basin segmentation system that has been implemented since the 2006 reporting cycle. The non-contributions basins are those areas, contribute to the coastal shoreline instead of the inland waters. Under this system, each main river basin it is divided in assessment units that consist of complete sub-basins. The smaller river basins have been maintained as a single assessment unit or, at the most, it may be segmented in two assessment units. A total of 194 AU for rivers and streams water bodies; 18 AU for the lakes or reservoirs; and 62 for estuaries (Please refers to Table 67) are delimited in the inland water off Puerto Rico.

***Table 67: AU and water bodies size per Type of Water body***

<b>Water body type</b>	<b>AU</b>	<b>Sizes of water type</b>
Rivers/Streams	194	5,052.8 miles
Lakes/Reservoirs	18	7,323 acres
Estuary	62	3,430.3 acres

After evaluated each one of the AU taking in consideration the criteria and the other considerations above mentioned the AU included in Table 5 are the long term priorities areas.

**Integrated alternatives approaches**

Following the alternatives approaches that will be considered to restore and protect impaired waterbodies.

**1. Improve Monitoring Strategy**

Parameters such as: Arsenic and Cyanide recently have changes in the water quality standard adopted in the PWQSR. Therefore, a specific monitoring plan needs to be develop and implement in each one of the AU that includes parameters such as: arsenic, cyanide in order to very if the impairment persists and a restoration plan or TMDL is needed or identified those AU that comply with the water quality standard and therefore and needs to be delisted from the 303 (d) List.

**2. Puerto Rico’s Nutrient Plan**

This document 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. This information will be used as the endpoint in the development of Nutrient TMDL.

**3. TMDL development for Nutrient parameter**

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 places in the priority list to develop TMDLs for TP.

The final outcome will be gather data to identified those AU that accomplished the parameters and therefore support the delist candidate assessment unit from the list 303 (d).

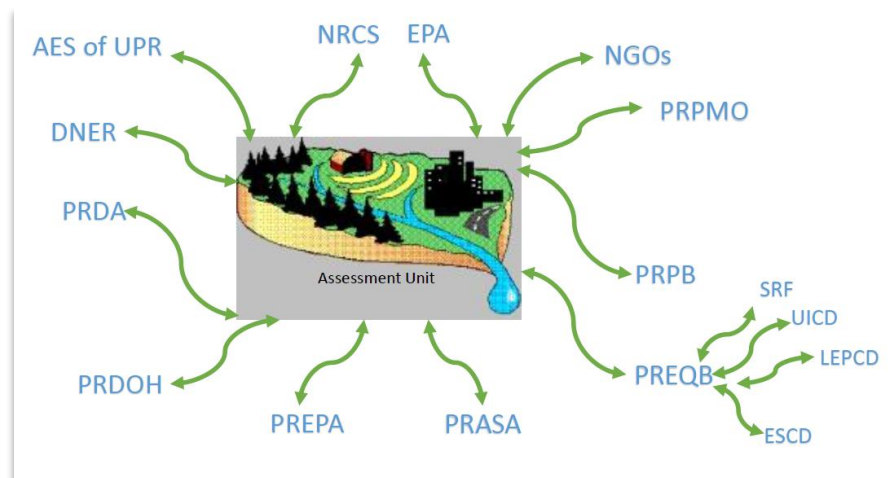
#### **4. Modifying the Assessment Protocol for the Implementation of the Aquatic Life Criteria in Reservoirs of Puerto Rico**

- a. Currently all the lakes in PR are included in the list 303 (d) for the parameter of Dissolved Oxygen (DO). The modification of the protocol implementation for aquatic life will promote the identification of those lakes that under the current protocol do not comply with the parameter of DO. The main objectives are:
  - i. Assess and identify with greater certainty the lakes that really are impacted by dissolved oxygen.
  - ii. Develop an appropriate strategy to restore the lakes/reservoirs identified that are impaired for DO.

#### **5. Integrating Other Programs**

##### **a. Puerto Rico Non- Point Source Management Program**

- i. This program has among its main objectives integrate the agencies that are partners in the protection, restoration and management of the environment and natural resources. In addition to integrating all areas of work of the EQB in the effort to work in a unified way, considering the priority areas identified, the intention is to integrate to other agencies in this effort.
- ii. Those waters having a high priority (highest priority ranking) will refer to the corresponding PREQB WQA Divisions: ESCD, LEPCD and UICD in order that they can implement their regulatory programs in a strategically effort. Also, the priority will be share with partnerships so they can include it as part of their work plans and thus can direct their efforts (programs, incentives, technical assistance, and outreach activities) to address the highest priority for these waters (please refers to Figure 1).



**Figure 14: Federal and State Programs, and partners working together**

iii. This strategy: (1) will enhance the strategically coordinated integration of the permit systems, (2) will enhance coordination and improve efficiency, (3) will improve communications among federal, state agencies and NGOs involved in non-point source management, (4) will identify cooperative activities, (5) will evaluate and promote guidance, and (6) will coordinate programs of federal and local agencies and NGOs to better utilize existing resources. The main goal will be:

1. Disseminate the priorities list of the PREQB so that it can be integrated into the decision-making of the related agencies and launch a concerted effort integrated in the priority areas.
2. Elaborate a most complete list with the protection and restoration projects or actions conducted in the priority areas.

## **b. Partnerships Project**

### **i. San Juan Bay Estuary System**

1. Assessment Protocol for Conducting Outfall Reconnaissance Inventory of San Juan Estuary Bay Watershed.
  - a. The scope of work basically is the identification of illicit discharge outfalls in a sizeable, highly dense populated watershed characterized in a significant portion by the lack of adequate sewage management infrastructure can be particularly challenging. The proposed screening protocol is based on guidelines established by USEPA for detection of illicit discharges. Field screening crews will inventory *all* recognizable outflows along the stream banks of the stream network of the SJBE. No distinction will be established *a*

*priory* regarding the nature of the existing outfalls (i.e., pluvial, industrial, sewage). Field screening will be conducted during the “dry” season (as recommended by EPA guidelines) to avoid “dilution” from runoff or groundwater sources. Each identified outfall will be catalogued into a relational database linked to a GIS system. A final color coded classification will be assigned to each outfall as follows: unlikely (green); confirmed suspect (red), and initially evident (black). The field screening efforts will be complemented with a stream water quality assessment component to support watershed restoration efforts once the project is completed. The goal of this subcomponent of the proposal is to identify *critical* contributing subbasins (i.e., “hot zones”) that should receive highest priority in future watershed restoration projects. A sampling strategy will be established based on a subbasin delineation assemblage. To further document the existence of sewer cross contamination the study will include a *rotational sampling scheme* of selected major sub-basins in the San Juan Bay Estuary watershed under high flow (storm events) conditions.

**Long-term Priorities 2016 - 2022 AUs**

Table 68 shows the long-term vision AU’s 2016-2022 with its corresponding alternative approaches.

**Table 68: Long-term Priorities 2016 - 2022 AUs**

Water body name	AU ID	Causes of impairments	Area	Sq miles	Approach
RIO GURABO	PRER14G1	Copper (0530), Cyanide (0720), Total Coliforms (1700), Turbidity (2500)	32512.22173	50.800346	1, 5a
RIO CAONILLAS	PRNR7C1	Arsenic (0510), Cyanide (0720)	23524.998676	36.75781	1, 5a
RIO GRANDE DE LOIZA	PRER14A2	Cyanide (0720), Pesticides (0200), Total Coliforms (1700), Turbidity (2500)	26498.345459	41.403665	1, 5a
RIO CAGUITAS	PRER14I	Cyanide (0720), Surfactants (0400), Thermal Modifications (1400), Total Coliforms (1700), Turbidity (2500)	12019.471726	18.780425	1, 5a

Water body name	AU ID	Causes of impairments	Area	Sq miles	Approach
RIO LA PLATA	PRER10A1	Cyanide (0720), Turbidity (2500)	6762.208267	10.56595	1, 5a
RIO CIBUCO	PRNR9A	Cyanide (0720), Total Coliforms (1700), Turbidity (2500)	14250.254207	22.266022	1, 5a
RIO GRANDE DE LOIZA	PRER14A1	Copper (0530), Cyanide (0720), Low Dissolved Oxygen (1200), Turbidity (2500)	10851.784356	16.955913	1, 5a
RIO ESPIRITU SANTO	PRER16A	Copper (0530), Cyanide (0720), Lead (0550), Low Dissolved Oxygen (1200), pH (1000), Surfactants (0400), Turbidity (2500)	15760.761314	24.62619	1, 5a
RIO LA PLATA	PRER10A3	Cyanide (0720), Low Dissolved Oxygen (1200), Turbidity (2500)	12896.790193	20.151235	1, 5a
TÚNEL	PRNR7A3	Cyanide (0720)	19822.753445	30.973052	1, 5a
RIO LA PLATA	PRER10A5	Arsenic (0510), Copper (0530), Cyanide (0720), Lead (0550), Mercury (0560), Surfactants (0400), Turbidity (2500)	23893.320027	37.333313	1, 5a
RIO GUAYNABO	PRER12B	Cyanide (0720), Total Coliforms (1700), Turbidity (2500)	12590.494231	19.672647	1, 5a
RIO CULEBRINAS	PRWR95A	Arsenic (0510), Copper (0530), Cyanide (0720), Lead (0550), Pesticides (0200), Surfactants (0400), Total Coliforms (1700), Turbidity (2500)	30592.920494	47.801438	1, 5a
LAKE LA PLATA	PREL110A1	Arsenic (0510), Cyanide (0720), Low Dissolved	7938.7658	12.404322	3, 4, 5a

Water body name	AU ID	Causes of impairments	Area	Sq miles	Approach
		Oxygen (1200), Phosphorus (0910)			
LAKE GUAJATACA	PRNL3A1	Low Dissolved Oxygen (1200)	5824.294966	9.100461	3, 4, 5a
RIO TURABO	PRER14J	Arsenic (0510), Copper (0530), Cyanide (0720), pH (1000), Surfactants (0400), Turbidity (2500)	19006.0409	29.696939	1, 5a
RIO VALENCIANO	PRER14G2	Arsenic (0510), Copper (0530), Cyanide (0720), Surfactants (0400), Turbidity (2500)	12200.5404	19.063344	1, 5a
RIO GRANDE DE ARECIBO	PRNR7A2	Copper (0530), Cyanide (0720), Lead (0550), Pesticides (0200), Total Coliforms (1700), Turbidity (2500)	22446.225457	35.072227	1, 5a
RIO GRANDE DE ARECIBO	PRNR7A1	Copper (0530), Cyanide (0720), Low Dissolved Oxygen (1200), Turbidity (2500)	7207.74912	11.262108	1, 5a
RIO CIALITO	PRNR8B	Cyanide (0720), Total Coliforms (1700), Turbidity (2500)	10776.451776	16.838206	1, 5a
RIO GRANDE DE MANATI	PRNR8A1	Copper (0530), Cyanide (0720), Turbidity (2500)	14214.337007	22.209902	1, 5a
RIO ROSARIO	PRWR77C	Cyanide (0720), Pesticides (0200), Turbidity (2500)	15356.703909	23.99485	1, 5a
RIO LA PLATA	PRER10A4	Cyanide (0720), Turbidity (2500)	4187.745159	6.543352	1, 5a
RIO HUMACAO	PRER33A	Copper (0530), Cyanide (0720), Lead (0550), Surfactants (0400), Total Coliforms (1700), Turbidity (2500)	14678.023253	22.934411	1, 5a

<b>Water body name</b>	<b>AU ID</b>	<b>Causes of impairments</b>	<b>Area</b>	<b>Sq miles</b>	<b>Approach</b>
LAKE LOIZA	PREL14A1	Copper (0530), Lead (0550), Low Dissolved Oxygen (1200), Turbidity (2500)	7928.060628	12.387595	3, 4, 5a
RIO GRANDE DE AÑASCO	PRWR83A	Cyanide (0720), Low Dissolved Oxygen (1200), Turbidity (2500)	32194.001763	50.303128	1, 5a
LAKE DOS BOCAS	PRNL17A1	Arsenic (0510), Copper (0530), Cyanide (0720), Low Dissolved Oxygen (1200), pH (1000), Surfactants (0400)	10734.480607	16.772626	3, 4, 5a
RIO BAIROA	PRER14H	Phosphorus	5005.816097	7.821588	3
RIO GUAYANILLA	PRSR67A	Phosphorus	16090.163506	25.14088	3
RIO YAUCO	PRSR68A1	Phosphorus	20519.523795	32.061756	3
RIO GUAYABO	PRWR94A	Phosphorus	8200.426277	12.813166	3
SAN JUAN BAY ESTUARY SYSTEM	PREE13A2	Dissolve Oxygen, Ammonia, Oil and Grease, pH, Thermal Modification, Total Coliforms, Turbidity, NO2+NO3, Surfactants, Lead, Copper, Cyanide	16626.02176	25.978159	5b



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pintura, A/G 787 908-2310

Martinez Agosto Nombre Sobriano  
(a) Ivonne Yacuzza Santillano  
Nordine Secretario(a) Auxiliar  
Firma Secretario(a) Auxiliar

MR-18448 IN THE UNITED  
STATES DISTRICT COURT  
FOR THE DISTRICT OF PUERTO  
RICO  
**SUNERGY, INC., LLC**  
Plaintiff,  
v.  
**BCPebody Construction Services, LLC**  
Defendant.

Civil No. 23-1307 (FAB) Action of Breach of Agreement. Collection of Money and Claim for Damages due to Breach of Agreement. COMPLAINT BY PUBLICATION UNITED STATES OF AMERICA - PRESIDENT OF U.S.A. - S.S. COMMONWEALTH OF PUERTO RICO vs. BCPEBODY CONSTRUCTION SERVICES, LLC Mr. Thomas Bluff, President Agent Carr. 107, Km. 3.2 Buzon 5071, Bo. Barranera Aguadilla, P.R. 00983 This is to Notify BCPebody Construction Services LLC that a lawsuit has been filed against you for Breach of Agreement, Collection of Money and Claim for Damages due to Breach of Contract. By this publication you are served with summons; you should notify your answer to the complaint to Attorney Jose Durand-Correa at PO Box 36390A, San Juan, Puerto Rico 00931. e-mail: durandj@metrojuris.com and file it in the U.S. District Court for the District of Puerto Rico using the CM/ECF system within thirty (30) days for the publication of this summons in a newspaper. Case 9:23-cv-01807-FAB Document 11 Filed 07/11/23 Page 1 of 2 Civil No. 23-1307 (FAB) of general circulation in Puerto Rico, pursuant to Rule 4.6 of the Rules of Civil Procedure of Puerto Rico. You fail to answer the complaint, judgment by default will be entered against you for the relief demanded in the Complaint. AD. GARCIA-PIÑA, ESC. CLERK OF THE COURT By: Deputy

**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 cumplen 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 implementen 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 TMDLs 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 2022 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 2022 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: [watersub@drna.gov](mailto:watersub@drna.gov). Los partes interesadas o afectadas pueden someter sus comentarios por escrito a la Sra. Wanda E. García Hernández, Sub-Gerente del Área de Calidad de Agua, a la dirección electrónica antes indicada no más tarde 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.

Todos 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: [audad@drna.gov](mailto:audad@drna.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.

  
**Anais Rodríguez Vega**  
Secretaría



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. 88-B Km. 2.5 Sector El Ciego, Hg. Pinar, P.R. 00926  
San José Industrial Park, 1376 Ave. Ponce de León, San Juan, P.R. 00926  
787-939-2200 / 787-939-2233 / [www.drna.gov](http://www.drna.gov)

**GOVERNMENT OF PUERTO RICO**  
Department of Natural and Environmental Resources

**PUBLIC NOTICE**

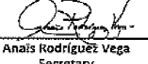
**303(d) List Water bodies that exceed Puerto Rico's Water Quality Standards**


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. TMDLs 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 (DRNER) has developed the 303(d) draft List, for the 2022 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 2022 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: [watersub@drna.gov](mailto:watersub@drna.gov). interested or affected parties may submit their comments in writing to Mrs. Wanda E. García Hernández, Water Quality Area Sub Manager, 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: [audad@drna.gov](mailto:audad@drna.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.

  
**Anais Rodríguez Vega**  
Secretary



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.

Carr. 88-B Km. 2.5 Sector El Ciego, Hg. Pinar, P.R. 00926  
San José Industrial Park, 1376 Ave. Ponce de León, San Juan, P.R. 00926  
787-939-2200 / 787-939-2233 / [www.drner.gov](http://www.drner.gov)

**Electricidad**

PERITO ELECTRICISTA METRO E ISLA L. #8768 SR COLON  
787-796-6003, 787-292-3954

**Mudanzas**

**MUDANZAS**  
El Resuelve. A toda la Isla.  
Info 787 615-7170

**>AVISOS**

**Comunicados**

Anuncio Anuncio  
Edición al muchacho al  
comienzo de su camino, que  
luego, de viejo, no se apartará  
de él Pr. 22-6

**Edictos**

MR-18586 ESTADO LIBRE  
REPUBLICANO DE PUERTO RICO  
TRIBUNAL DE PRIMER IN-  
STANCIA SALA SUPERIOR DE  
CAUSAS

**URBANA GENERAL  
CONTRACTOR LLC**  
Demandante

**MICHELLE G.  
MILLER**  
Demandado

**JACOB MALDONADO**  
Demandado

CIVIL NÚMERO  
CG2022P00525 SALA: 604  
SOBRE: DIVORCIO RUPTURA  
IRREPARABLE Notificación de  
Sentencia por Edicto (Número  
de las partes a las que se le  
notifica la sentencia por edicto):  
A. JACOB MALDONADO P/C  
L.O.D. MARIA ISABELLE  
MAYO S. ARTUNDUAGA EL  
SECRETARIO(A) que suscribe  
la notifica a usted que el 17 de  
mayo de 2023, este Tribunal no  
dictado Sentencia, Sentencia  
Parcial o Resolución en este  
caso, que ha sido debidamente  
registrada y anotada en autos  
donde podrá usted enterarse del  
desarrollo de los términos de  
la misma. Esta notificación se  
publicará una sola vez en un  
periódico de circulación general  
en la Isla de Puerto Rico, dentro  
de los 10 días siguientes a su  
notificación. Y, siendo o represen-  
tando usted una parte en el  
procedimiento sujeta a los  
términos de la Sentencia, Sen-  
tencia Parcial o Resolución, de  
la cual puede establecerse re-  
curso de revisión o apelación  
dentro del término de 30 días  
contados a partir de la  
siguiente publicación electrónica:  
<https://tribunales.prd.uscourts.gov>  
cavó que se represente por  
defectos propio, en cuyo caso  
deberá presentar su alegación  
responsoira en la secretaría del  
tribunal. Si usted desea de  
este caso, con fecha de 2 de  
junio de 2023. En Caspus, Puerto  
Rico.

## APENDIX IV – Department of Natural and Environmental Resources Determination



GOBIERNO DE PUERTO RICO  
DEPARTAMENTO DE RECURSOS NATURALES Y AMBIENTALES

IN RE:	RES. NÚM.: <u>N/A</u>
PROMULGACIÓN DE LA LISTA DE CUERPOS DE AGUA IMPACTADOS PARA PUERTO RICO PARA EL CICLO 2022	SOBRE LISTA 303(d) DE PUERTO RICO
ÁREA DE CALIDAD DE AGUA	REF: DIVISIÓN PLANES Y PROYECTOS

RESOLUCIÓN Y NOTIFICACIÓN

Se presentó ante la consideración de la secretaria de Recursos Naturales y Ambientales el 18 de septiembre de 2023, 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 2022, 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 2 de agosto de 2023. 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 periodo 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 2022, 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 ACOGE 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 2022, Lista 303(d).
- C: Se ordena a la División de Planes y Proyectos 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

LISTA DE CUERPOS DE AGUA IMPACTADOS PARA PUERTO RICO  
CICLO 2022  
Página 2

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 18 de septiembre de 2023.



Anaís Rodríguez Vega

Secretaria