Supporting Documentation for Review and Approval of Puerto Rico 2022 303(d) List

Pursuant to Sections 303(d) and 305(b) of the Clean Water Act, the Puerto Rico Department of Natural and Environmental Resources submitted its 2022 integrated water quality assessment report to the U.S. Environmental Protection Agency. The 2022 integrated water quality assessment report contains the Puerto Rico 2022 Clean Water Act Section 303(d) list of impaired waters that require total maximum daily load development. The Puerto Rico 2022 303(d) list and supporting documentation are referred to below collectively as the integrated water quality assessment.

The EPA reviewed the integrated water quality assessment to determine whether Puerto Rico developed its impaired waters list in compliance with Section 303(d) of the Clean Water Act and the EPA's implementing regulations. The EPA evaluated whether Puerto Rico reasonably considered existing and readily available water quality-related data and information and reasonably identified waters required to be listed. The EPA has concluded that Puerto Rico developed its 2022 303(d) list in compliance with Section 303(d) of the Clean Water Act and 40 Code of Federal Regulations Section 130.7. For the reasons set forth below, EPA Region 2 approves the Puerto Rico 2022 303(d) list.

Identification of Water Quality Limited Segments for Inclusion on the 303(d) List

Section 303(d)(1) of the Clean Water Act directs states (Section 502 of the Act defines "state" to include Puerto Rico) to identify those waters within their jurisdiction for which effluent limitations required by Section 301(b)(1)(A) and (B) are not stringent enough to achieve any applicable water quality standards, and establish a priority ranking of those waters for TMDL development. The ranking must consider the severity of the pollution and the uses of those waters. According to the EPA's long-standing interpretation of Section 303(d), the listing requirement applies to waters impaired by point and/or nonpoint sources.

The EPA regulations do not require states to list waters where the following controls are adequate to implement applicable standards: (1) technology-based effluent limitations required by the Clean Water Act; (2) more stringent effluent limitations required by state or local authority; and (3) other pollution control requirements required by state, local or federal authority. See 40 CFR 130.7(b)(1).

A state may also exclude a water from the impaired waters list where it demonstrates good cause based on: more recent or accurate data; more sophisticated water quality modeling; flaws in the original analysis that led to the water being listed as impaired; or changes in conditions (e.g., new control equipment or elimination of discharges). See 40 CFR 130.7(b)(6)(iv).

Consideration of Existing and Readily Available Water Quality-Related Data and Information

In developing 303(d) lists, states are required to assemble and evaluate all existing and readily available water quality-related data and information. At a minimum, states must consider existing and readily available data and information about the following categories of waters: (1) waters identified as partially meeting or not meeting designated uses, or as threatened, in the state's most recent Clean Water Act Section 305(b) report; (2) waters for which dilution calculations or predictive modeling indicate nonattainment of applicable standards; (3) waters for which water quality problems have been reported by governmental agencies, members of the public or academic institutions; and (4) waters identified as impaired or threatened in a nonpoint assessment submitted to the EPA under section 319 of the Clean Water Act. See 40 CFR 130.7(b)(5). The EPA regulations specify that states should actively solicit data from organizations and groups such as local governments, federal agencies, academic institutions and members of the public. See 40 CFR 130.7(b)(5)(iii).

In addition to assembling and evaluating all existing and readily available water quality-related data and information, the EPA regulations at 40 CFR 130.7(b)(6) require states to document the data and information used in making its decision to list or not to list waters on the impaired waters list. The documentation needs to include, at a minimum: (1) a description of the methodology used to develop the list; (2) a description of the data and information used to identify waters; (3) a rationale for not using any existing and readily available data and information; and (4) any other reasonable information requested by the EPA.

The Puerto Rico Department of Natural and Environmental Resources assessment methodology describes the process for evaluating monitoring data and information. Puerto Rico incorporates its methods document into its integrated report. The methods document describes the process for the consolidation and evaluation of monitoring data and information to determine whether a waterbody's designated use is supported or impaired. The methods include: an explanation of the identification of waterbody type, classification, and use; a description of the Puerto Rico water quality standards used in evaluation; and a detailed presentation of surface water monitoring and assessment.

Puerto Rico's integrated water quality assessment report includes: (1) the segmentation system and assessment unit description; (2) assessment methodology used for the 305(b)/303(d) integrated report and assessment results (including the segments classified as category 5, which make up the 303(d) list); (3) Puerto Rico's listing and delisting criteria; (4) the priority ranking and TMDL development status; and (5) a summary of the public participation process.

Puerto Rico has established four monitoring networks from which it collects water quality data and information. These are: surface water, clean lakes, coastal, and beach monitoring networks. The networks provide physical, chemical and biological water quality data for each type of water. Data generated from the rivers and stream stations sampled and analyzed by the U.S. Geological Survey are available on the internet through the water quality portal (www.waterqualitydata.us/) or hardcopy files from its Caribbean Field Office.

Puerto Rico actively solicits data from sources including other Puerto Rico departments, federal agencies, educational institutions and the San Juan Bay Estuary Program. Due to the large amount of published information on the internet and its accessibility, Puerto Rico conducted a search for information related to the quality of the coastal waters in Puerto Rico. The information search was limited to recognized and reliable sources. The main source of information from which Puerto Rico accesses data is the National Oceanographic and Atmospheric Administration (NOAA) and its partner in the Caribbean, the Caribbean Coastal Ocean Observing System (CariCOOS). Temperature data from the CariCOOS buoy located off the coast of Ponce in assessment unit PRSC35 and off the coast of San Juan in assessment unit PREC12 was used in Puerto Rico's assessment. Furthermore, temperature, pH, dissolved oxygen, and turbidity data from four NOAA National Estuarine Research Reserve System (http://cdmo.baruch.sc.edu/) monitoring stations were used to assess PRSC34.

After evaluating all existing and readily available data and information, Puerto Rico, in keeping with its assessment methodology and based on designated use support, placed its assessment units in one of the following five categories:

- 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 data and/or information is available to determine if any designated uses are being attained.
- Category 4: Waters in which designated uses are impaired or threatened and development of a TMDL is not necessary. A TMDL has been developed by a state and approved by the EPA or a TMDL has been established by the EPA (4a). Other required control measures are expected to result in the attainment of an applicable water quality standard in a reasonable period (4b). A water where a designated use is impaired or threatened by a cause that is not a pollutant (e.g., hydrologic and habitat alterations) (4c).
- Category 5: Waters where at least one water quality standard is not attained and development of a TMDL is needed. Category 5, therefore, is Puerto Rico's 303(d) list.

The EPA reviewed Puerto Rico's description of the data and information in the 2022 integrated water quality assessment and compared the assessment unit/pollutant combinations listed in 2022 with those listed in 2020. The EPA also confirmed all data used for delisting with data in the storage retrieval database and data from the water quality portal. The EPA concluded that Puerto Rico properly assembled and evaluated all existing and readily available data and information, including data and information relating to the categories of waters specified in 40 CFR 130.7(b)(5).

Each listing contains the assessment unit identification number, the assessment unit name, and the impairment cause. The 2022 303(d) list contains 838 assessment unit/pollutant combinations; 38 of these assessment unit/pollutant combinations are new additions to the 2022 303(d) list. The additions are:

PREC09 – Punta Boca Juana to Punta Salinas for pH
PREC12 – Punta del Morro to west side of Condado Bridge for enterococcus
PREC12 – Punta del Morro to west side of Condado Bridge for pH
PREC12 – Punta del Morro to west side of Condado Bridge for turbidity
PREL210A5 – Lago Carite for nitrogen
PRER12A1 – Río Bayamón for temperature
PRER14A1 – Río Grande de Loíza for temperature
PRER14A2 – Río Grande de Loíza for temperature
PRER14G2 – Río Valenciano for nitrogen
PRER14I – Río Cagüitas for temperature
PRER14K – Río Cayaguas for temperature
PRER14K – Río Cayaguas for nitrogen
PRER35A – Río Guayanés for temperature
PRER35A – Río Guayanés for nitrogen
PRNR3A1 – Río Guajataca for dissolved oxygen
PRNR3A1 – Río Guajataca for cyanide
PRNR7A2 – Río Grande de Arecibo for nitrogen
PRNR7A3 – Túnel for pH
PRNR7A3 – Túnel for phosphorus
PRNR8A1 – Río Grande de Manatí for temperature
PRNR8A2 – Río Grande de Manatí for phosphorus
PRNR8A2 – Río Grande de Manatí for nitrogen
PRNR9A – Río Cibuco for temperature

PRSC31 – Cabo Mala Pascua to Punta Viento for enterococcus
PRSC36B – Punta de Cabullones to Punta Carenero for enterococcus
PRSC41B1 – Punta Brea to Bahía Fosforescente La Parguera for enterococcus
PRSL260A1 – Lake Toa Vaca for temperature
PRSL62A1 – Lake Cerrillos for pH
PRSL62A1 – Lake Cerrillos for temperature
PRSR57A2 – Río Coamo for temperature
PRSR57A2 – Río Coama for cyanide
PRWC42 – Faro de Cabo Rojo to Punta Águila for enterococcus
PRWC44 – Punta Guaniquilla to Punta La Mela for temperature
PRWC50 – Punta Cadena to Punta Higüero for pH
PRWR77C – Río Rosario for turbidity
PRWR77C – Río Rosario for phosphorus
PRWR77D – Río Viejo for cyanide
PRWR83A – Río Grande de Añasco for pH

Delistings

Puerto Rico delisted 61 waterbody/pollutant combinations from the 2020 303(d) list. According to 40 CFR 130.7(b)(6)(iv), Puerto Rico has shown good cause to delist these waterbody/pollutant combinations based on one of the following reasons:

1. Water quality standard no longer applicable: 2 waterbody/pollutant combinations have been delisted because Puerto Rico adopted updated recreational water quality criteria. They are:

   PREE13A3 – San Juan Bay Estuary for fecal coliform[1]
   PRNR3A1 – Río Guajataca for fecal coliform[1]

2. Narrative water quality criterion met: 2 waterbody/pollutant combinations have been delisted due to Puerto Rico's assessment of data and information against its newly developed numeric translation of its narrative water quality criterion for oil and grease. They are:

   PREE13A3 – San Juan Bay Estuary for oil and grease
   PREE13A2 – San Juan Bay Estuary for oil and grease

3. Applicable water quality standard attained: 57 waterbody/pollutant combinations have been delisted because monitoring data from October 2019 through September 2021 shows attainment with the water quality criterion. They are:

   PREE13A1 – San Juan Bay Estuary for surfactants
   PREE13A1 – San Juan Bay Estuary for selenium
   PREE13A1 – San Juan Bay Estuary for arsenic
   PREE13A1 – San Juan Bay Estuary for mercury
   PREE13A1 – San Juan Bay Estuary for phosphorus
   PREE13A1 – San Juan Bay Estuary for lead

[1] PREE13A3 and PREE13A1 are impaired for enterococcus and listed on the 2022 303(d) List of impaired waters.

PREL110A1 – Lago La Plata for turbidity
PRER10A1 – Río La Plata for phosphorus
PRER10A1 – Río La Plata for nitrogen
PRER10A1 – Río La Plata for turbidity
PRER10A3 – Río La Plata for nitrogen
PRER10A3 – Río La Plata for turbidity
PRER10A4 – Río la Plata for nitrogen
PRER10A5 – Río La Plata for nitrogen
PRER10A5 – Río La Plata for turbidity
PRER10E – Río Guadiana for turbidity
PRER10G – Río Arroyata for turbidity
PRER10G – Río Arroyata for dissolved oxygen
PRER12A1 – Río Bayamón for phosphorus
PRER12A1 – Río Bayamón for turbidity
PRER12A2 – Río Bayamón for phosphorus
PRER12A2 – Río Bayamón for nitrogen
PRER12B – Río Guaynabo for turbidity
PRER14A2 – Río Grande de Loiza for lead
PRER14G1 – Río Gurabo for copper
PRER14H – Río Bairoa for surfactants
PRER14J – Río Turabo for cadmium
PRER14K – Río Cayaguas for lead
PRER16A – Río Espíritu Santo for nitrogen
PRER22A – Río Fajardo for turbidity
PRER22A – Río Fajardo for dissolved oxygen
PRER33A – Río Humacao for surfactants
PRER33A – Río Humacao for lead
PRNC04 – Punta Morrillos to Punta Manatí for dissolved oxygen
PRNC05 – Punta Manatí to Punta Chivato for temperature
PRNL37A3 – Lago Garzas for pH
PRNR7A2 – Río Grande de Arecibo for copper
PRNR7A3 – Túnel for turbidity
PRNR7B2 – Río Tanamá for nitrogen
PRNR7B2 – Río Tanamá for copper
PRNR7B2 – Río Tanamá for lead
PRNR7C3 – Río Yunes for copper
PRNR8A1 – Río Grande de Manatí for nitrogen
PRNR8A1 – Río Grande de Manatí for copper
PRNR8B – Río Cialito for pH
PRNR9A – Río Cibuco for copper
PRSC36C – Punta Carenero to Punta Cuchara for dissolved oxygen
PRSC37C – Cayo Parguera to Punta Guayanilla for enterococcus

PRSR57A2 – Río Coamo for phosphorus
PRSR62A1 – Río Bucaná Cerrillos for phosphorus
PRSR62A1 – Río Bucaná Cerrillos for turbidity
PRSR63A – Río Portugués for ammonia
PRWC46 – Punta Carenero to front of Cayo Ratones for enterococcus
PRWC48 – Punta Guanajibo to Punta Algarrobo for dissolved oxygen
PRWR77A – Río Guanajibo for turbidity
PRWR83A – Río Grande de Añasco for phosphorus
PRWR83A – Río Grande de Añasco for copper

Priority Ranking

Section 303(d)(1)(A) of the Clean Water Act and the EPA regulations at 40 CFR 130.7(b)(4) require states to prioritize waters on their impaired waters lists for TMDL development. The EPA regulations further require states to identify those waterbody segments targeted for TMDL development in the next two years. The EPA expects states to identify long-term impaired water program priorities in the context of the state's broader overall water quality goals. This long-term prioritization process is expected to be focused on identifying watersheds or individual waters for priority restoration and protection activities, taking into consideration how Clean Water Act 303(d)-related activities could collectively help achieve a state's broader overall water quality goals. The prioritization provides a framework to focus the location and timing of the development of TMDLs, and alternative restoration and protection plans, in relation to other planning and implementation activities that may already exist in the priority watersheds or waters.

In the 2022 303(d) list, Puerto Rico established a priority ranking for each waterbody/pollutant combination to determine the sequence of development for restoration activities, including the development and implementation of the TMDLs. This ranking prioritizes the watersheds of Puerto Rico based on factors including pollution sources, capacity for restoration and the magnitude and frequency of water quality exceedances. The ranking established three levels of priority:

- ✓ **High Priority**: waterbody/pollutant combinations in basins included in the Puerto Rico Unified Watershed Assessment and Restoration Activities Strategy with a high pollution level related to all the designated uses.

- ✓ **Intermediate (moderate) Priority**: waterbody/pollutant combinations in basins that were not included in the Puerto Rico Unified Watershed Assessment and Restoration Activities Strategy and 50% or more of its waters are listed as impaired for some designated use.

- ✓ **Low Priority**: waterbody/pollutant combinations in basins that were not included in the Puerto Rico Unified Watershed Assessment and Restoration Activities Strategy and less than 50% of its waters are listed as impaired for some designated use.

For the 2022 cycle, 316 waterbody/pollutant combinations have been identified as a high priority for the development of TMDLs, 141 waterbody/pollutant combinations have been identified as medium priority and 381 waterbody pollutant combinations have been identified as low priority.

Puerto Rico has 24 waterbody/pollutant combinations currently in development for TMDLs in the next two

years. These 24 waterbody/pollutant combinations are:

PRER14H – Río Bairoa for phosphorus
PRER14H – Río Bairoa for Nitrogen
PRSR67A – Río Guayanilla for phosphorus
PRSR67A – Río Guayanilla for nitrogen
RSR68A1 – Río Yauco for nitrogen
PRSR68A1 – Río Yauco for phosphorus
PRWR94A – Río Guayabo for nitrogen
PREL10A1 – Lago La Plata for phosphorus
PREL10A1 – Lago La Plata for nitrogen
PREL14A – Lago Loiza for phosphorus
PREL14A – Lago Loiza for nitrogen
PRNR8A3 – Río Grande de Manatí for copper
PRNR7A2 – Río Grande de Arecibo for copper
PRNR8C2 – Río Buata for copper
PRER12B – Río Guaynabo for copper
PRER12B – Río Guaynabo for lead
PRER14A1 – Río Grande de Loiza for copper
PRER14G1 – Río Gurabo for copper
PRER14J – Río Turabo for copper
PRWR83A – Río Grande de Añasco for copper
PRER14G2 – Río Valenciano for copper
PRER14G2 – Río Valenciano for lead
PRWR85A – Río Culebrinas for copper
PRWR95A – Río de La Plata for copper

The EPA has reviewed the Puerto Rico priority ranking of listed waters for TMDL development and concludes that Puerto Rico properly considered the severity of pollution and the uses to be made of such waters. The EPA believes that the 24 waterbody/pollutant combinations currently in development for TMDLs by Puerto Rico is an appropriate target for TMDL development in the next two years.

Public Participation

The availability of the Puerto Rico 2022 draft 303(d) list was publicized by posting notices in the newspapers *Primera Hora* and *El Nuevo Día* on August 2, 2023. The public comment period for the 2022 303(d) list concluded 30 days after the notices were published. During the public comment period, those requesting information were emailed copies of the draft list and methodology in English and Spanish. The DNER did not receive any comments during the public notice period; therefore, no changes were made to the draft 303(d) list for the final 303(d) list.