Fact Sheet on Puerto Rico's 2018 Impaired Waters List
November 2018

Section 303(d) of the Clean Water Act requires states, territories and authorized tribes to develop lists of impaired waters. Impaired waters are waters that are too polluted or otherwise degraded to meet the state water quality standards. Federal law requires these jurisdictions establish priority rankings for waters on the lists and develop total maximum daily loads for impaired waters. A total maximum daily load, or TMDL, is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards. The EPA has approved Puerto Rico's 2018 list of impaired waters requiring a TMDL. Puerto Rico's 2018 impaired waters list presents information on impaired waters, pollutants causing the impairment and pollutant sources.

How States Report on the Quality of their Waters

The Clean Water Act requires states (Section 502 of the Act defines "state" to include Puerto Rico) to assess the quality of their waterbodies and to report their findings every two years to the EPA. States adopt specific water quality standards that serve as the foundation for water quality management. Water quality standards identify the designated uses for each body of water (such as swimming, drinking, shellfish harvesting, etc.) and set criteria to protect those uses. During the assessment process, states compare the collected data to the established water quality standards.

In addition to reporting on the overall quality of all waters, the Clean Water Act directs states to identify and list specific waterbodies where water quality is impaired by pollutants. A waterbody is considered impaired if it does not meet water quality standards. The requirement to prepare the impaired waters list is found in section 303(d) of the Clean Water Act, and the list is often called the 303(d) list.

Each impairment reflected on the 303(d) list requires a calculation of the maximum amount of the impairing pollutant that a waterbody can receive and still meet water quality standards. TMDLs include reductions for pollution sources impacting the waterbody that, when achieved, will result in the attainment of water quality standards in the waterbody.

In certain cases, impaired waters may not appear on a state's 303(d) list. If a TMDL has already been developed for the water, another required control measure is expected to result in the attainment of water quality standards within a reasonable amount of time, or the impairment is the result of pollution not caused by a pollutant (e.g., hydrologic or habitat alteration), then the water may not be included.

Water quality monitoring data and other information must be considered by states in assessment and reporting efforts. Monitoring may be carried out by national, state, local and tribal authorities, universities, dischargers, volunteers and others. It can include measurements of physical and chemical parameters (temperature, dissolved oxygen, suspended sediment, nutrients, metals, oils, and/or pesticides, for example), examinations of stream flow, water color, condition of stream banks and lake shores, observations of communities of aquatic wildlife, and sampling of fish tissue or sediment. Land use data, predictive models and land surveys may also be used.

Summary of 2018 Findings

Puerto Rico's 2018 303(d) list contains 666 instances where a pollutant is causing a designated use impairment. The indicators/causes of the impairments are:

- low dissolved oxygen (128)
- turbidity (116)
- metallic elements (including: copper, lead, mercury and nickel) (106)
- pathogens (fecal coliform and enterococcus) (94)
- nutrients (phosphorus, nitrogen and ammonia) (94)
- pH (48)
- surfactants (18)
- thermal modifications (17)
- pesticides (16)
- free cyanide (12)
- oil and grease (10)
- arsenic (6)
- selenium (1)

Pollutant sources include:

- sewage discharges in unsewered areas (274)
- urban runoff/storm sewers (153)
- point source confined animal feeding operations (121)
- sanitary sewer overflows/collection system failures (103)
- industrial point source discharges (80)
- agriculture (57)
- landfills (47)

Note: A pollutant may come from more than one source.

Puerto Rico added 215 new waterbody/pollutant combinations to the 2018 303(d) list. The new combinations are summarized below:

- 74 assessment units for impaired for enterococcus
- 37 assessment units for impaired for copper
- 29 assessment units for impaired for total phosphorus
- 13 assessment units for impaired for pH
- 13 assessment units for impaired for nitrogen
- 11 assessment units for impaired for turbidity
- 9 assessment units for impaired for lead
- 8 assessment units for impaired for mercury
- 8 assessment units for impaired for nickel
- 5 assessment units for impaired for cyanide (as free cyanide)
- 2 assessment units for impaired for dissolved oxygen
- 1 assessment units for impaired for ammonia
- 1 assessment units for impaired for cadmium
- 1 assessment units for impaired for surfactants
- 1 assessment units for impaired for thallium
- 1 assessment units for impaired for thermal modifications
- 1 assessment units for impaired for zinc

The 2018 303(d) list also reflects waterbody/pollutant combinations that no longer require listing. Removal of a waterbody/pollutant combination from the 303(d) list, called delisting, may indicate that the water is restored, a TMDL was developed, the water is receiving management attention that is expected to result in the attainment of water quality standards, or other factors (including errors). Puerto Rico delisted 83 waterbody/pollutant combinations for the 2018 cycle. A listing for other inorganics was removed because it had been included in error. Two waterbody/pollutant combinations have existing TMDLs for fecal coliform. The remaining waterbody/pollutant combinations that Puerto Rico delisted are:

- 43 waterbody/pollutant combinations where water quality standards are now met, based on new water quality data, including:
  - 1 waterbody/pollutant combination for arsenic;
  - 3 waterbody/pollutant combinations for copper;
  - 10 waterbody/pollutant combinations for dissolved oxygen;
  - 2 waterbody/pollutant combinations for fecal coliform;
  - 2 waterbody/pollutant combinations for lead;
  - 2 waterbody/pollutant combinations for mercury;
  - 11 waterbody/pollutant combinations for pH;
  - 3 waterbody/pollutant combinations for surfactants;
  - 6 waterbody/pollutant combinations for thermal modifications; and
  - 3 waterbody/pollutant combinations for turbidity.

- 37 waterbody/pollutant combinations where the water quality standard is no longer applicable
  - 14 waterbody/pollutant combination for total cyanide; and
  - 23 waterbody/pollutant combinations for total coliform.

How the Water Quality Sampling and Reporting Process Works

There are 358 assessment units in Puerto Rico. The PREQB monitoring activities for this reporting cycle (October 1, 2015 to September 30, 2017), included routine ambient water quality sampling at the various networks, special water quality studies performed in the waterbodies of concern, and existing or secondary data requested. Where available, effluent quality data from the discharge monitoring reports submitted by permitted point sources are used as contributing sources that may impact the use support potential of the waterbodies. The PREQB may perform special sampling when necessary to investigate fish kills, hydrocarbons leaks and spills, and illegal discharges to storm sewers and waterbodies.

The PREQB generates data from five routine monitoring networks that provide physical, chemical and biological water quality data from the different waterbodies:

- Surface Water Monitoring Network: Operated by the U.S. Geological Survey under a cooperative agreement with Puerto Rico, this network includes water quality sampling stations in 49 assessment units.
- Clean Lakes Monitoring Network: Operated by the PREQB, this network monitors water quality in 18 major lakes (reservoirs) that are mostly used as raw sources of public water supply, propagation and preservation of desirable species, and primary and secondary contact recreation.
- Groundwater Monitoring Network: The network is composed of 53 wells, that are drinking water supply wells operated by the Puerto Rico Aqueduct and Sewer Authority. The wells are sampled at least annually.

- Coastal Monitoring Network: Operated by the PREQB, this network includes 104 monitoring stations around the coastal perimeter of Puerto Rico. The network covers a total of 419.01 coastal miles of Puerto Rico's main island, out of a total 546.63 shore miles.
- Beach Monitoring and Public Notification Program: Operated by the PREQB and implemented in the 35 beaches included in the Beach Monitoring and Public Notification Program, all stations are sampled biweekly for enterococcus, pH and temperature.

Puerto Rico uses the data collected through its monitoring program to determine the health of its waters by comparing the data to its water quality standards. Impaired waters are those waters that do not meet water quality standards even after limits based on treatment technology are applied, such as technology requirements at publicly-owned wastewater treatment facilities. For the waters listed as impaired, Puerto Rico must develop loading limits to restore the waterbody. The list must include a priority ranking for each segment and Puerto Rico must document its decisions on which waterbodies to include and not include on the list. The documentation includes a description of the methodology used to develop the list. Puerto Rico printed a notice regarding the draft list and assessment methodology in the newspaper *Primera Hora* on May 28, 2018. The public comment period for the 2018 303(d) list ended with a public hearing on June 28, 2018. During the public notice period, the draft 2018 303(d) list was available on the PREQB website.

How to Get Involved

Recognizing that stakeholders throughout Puerto Rico collect valuable water quality data, the PREQB has established a process that allows groups and individuals to submit information for Puerto Rico to use in its assessment. Submissions must be sent to the PREQB by September 30 of odd-numbered years. Parties submitting information should send materials to:

PREQB – Plans and Special Projects Division, Water Quality Area
Cruz A. Matos Environmental Building,
Urbanización San José Industrial Park,
1375 Avenida Ponce de León, San Juan, PR 00926-2604
P.O. Box 11488, San Juan, PR 00910

If you have questions or would like to speak directly with a PREQB representative, call (787) 767-8181. The PREQB provides the opportunity for formal public comment on draft 303(d) lists during a public hearing and/or its 30-day comment period.

The EPA Contact for Puerto Rico's 303(d) List

If you have questions or concerns, contact Jacqueline Ríos by phone at (212) 637-3859 or by email at rios.jacqueline@epa.gov.