

Fact Sheet on Puerto Rico's 2014 Impaired Waters List October 2, 2014

EPA has approved Puerto Rico's 2014 List of Impaired Waters Requiring a Total Maximum Daily Load (TMDL). Puerto Rico's 2014 list presents information on impaired waters, pollutants causing impairment and pollutant sources. The list is important because it focuses management attention on impaired waters. EPA will continue to build partnerships throughout Puerto Rico to ensure that impaired waters receive proper attention.

How States Report on the Quality of their Waters

The Clean Water Act requires states (Section 502 of the Act defines "state" to include the Commonwealth of Puerto Rico) to assess the quality of their water bodies and to report their findings every two years to EPA. States adopt specific water quality standards which 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 scientific 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 water bodies where water quality is impaired or threatened by pollutants. This requirement is found under section 303(d) of the Clean Water Act and the list of impaired waters is often referred to as the "303(d) list."

- Impaired – A body of water that does not meet water quality standards even after pollution controls have been put in place.
- Threatened – A body of water that is expected to be impaired within two years.

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). TMDLs include reductions for pollution sources impacting the water body which, when achieved, will result in the attainment of water quality standards in the impaired water body.

In certain cases, impaired or threatened waters may not appear on a state's 303(d) list. If a TMDL has already been devised for the water, another required control measure is expected to result in the attainment of water quality standards in a reasonable amount of time, or the impairment or threat is the result of *pollution*¹, 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 is 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

¹ Examples of pollution include segments impaired solely due to lack of adequate flow or to stream channelization.

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 2014 Findings

Puerto Rico's 303(d) list contains 581 instances where a pollutant is causing a designated use impairment.

- The most common indicators/causes of impairments include:
 - low dissolved oxygen (20.48% of impairments)
 - turbidity (16.01%)
 - cyanide (12.91%)
 - pathogens (8.61%)
 - copper (7.40%)

- Pollutant sources include:
 - onsite wastewater systems (169 sub-basins)
 - urban/stormwater runoff (92)
 - confined animal feeding operations (78)
 - collection system failure (57)
 - agriculture (56)

(Note: a pollutant may come from more than one source.)

The 303(d) list also reflects which water bodies no longer require listing. Removal of a water body from the 303(d) list, called delisting, may indicate that the water is restored or that the water is receiving management attention that is expected to result in the attainment of water quality standards.

- 151 waters were delisted, including:
 - 106 impairments where water quality standards are now met
 - 39 impairments because of fecal coliform TMDLs
 - 6 impairments previously listed in error

Evaluation of Management Efforts

EPA's National Water Program has prioritized protecting and restoring America's watersheds, and the 303(d) list is a useful tool for measuring progress in this effort. By comparing recent 303(d) lists to those developed in past years, managers can gain a sense of whether – and how quickly – impaired waters are being restored. EPA uses states' 2002 303(d) lists as a baseline against which managers track impairment removal and water quality improvement. Examination of Puerto Rico's recent 303(d) lists reveals that, over the last 12 years, 22 formerly impaired waters now meet applicable water quality standards. In addition, many other waters, while not fully restored, are improving in quality. Water quality improvement in restored waters can often be traced to watershed management efforts undertaken by EPA, states and local stakeholders.

How the Water Quality Sampling and Reporting Process Works

Puerto Rico has divided the island into 96 hydrologically defined basins, including the San Juan Bay Estuary System. Puerto Rico monitors 22 of the 96 basins routinely. These 22 basins form part of the permanent stream water quality network.

The Puerto Rico Environmental Quality Board (PREQB) monitoring activities for this reporting cycle included routine ambient water quality sampling at the various networks and special water quality studies performed in the water bodies of concern. Where available, effluent quality data from the discharge monitoring reports submitted by National Pollutant Discharge Elimination System (NPDES) permitted point sources were used as contributing sources that may impact the potential designated use support of the water bodies.

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

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 the 22 major river basins in the north, south, east and west hydrographic regions of Puerto Rico.

Clean Lakes Monitoring Network: Operated by PREQB, this network monitors water quality in the 19 major lakes (reservoirs) that are mostly used as raw sources of drinking water and for recreation activities, including fishing.

Nonpoint Sources Network: Operated by PREQB, this network is limited to Río Grande de Loíza, Río De La Plata and Río Grande de Arecibo basins. A total of five stations were established in Río Grande de Loíza, six in Río De La Plata and nine in Río Grande de Arecibo.

Groundwater Monitoring Network: This network is limited to approximately 70 drinking water wells located in different municipalities throughout Puerto Rico and are sampled at least one time per year, for each of the following: pathogens, nitrates, metals, volatile organic compounds, semi-volatile organic compounds and pesticides.

Coastal Monitoring Network: Operated by PREQB, this network includes monitoring stations all around the coastal perimeter of Puerto Rico.

Beach Monitoring and Notification Program Network: Operated by PREQB, this network includes 34 stations distributed over 23 beaches in Puerto Rico. The Beach Monitoring and Notification Program network stations are sampled biweekly for bacteria (fecal coliform and enterococcus).

PREQB may perform special sampling activities whenever necessary to investigate fish kills, hydrocarbon leaks and spills, and illegal discharges to storm sewers and water bodies to obtain water quality data to assess the impact and attempt to identify responsible parties.

In addition, for the 2014 303(d) listing cycle, PREQB sent letters soliciting chemical and biological data on water bodies, along with information pertaining to the quality control procedures that were used to generate the data, from a wide variety of organizations, including academic institutions, government agencies and nongovernmental organizations. Once received,

PREQB assembles all existing and readily available data and evaluates this data in accordance with Puerto Rico's water quality standards, using methods described in Puerto Rico's Consolidated Assessment and Listing Methodology, available at <http://www.jca.pr.gov>. These assessments inform Puerto Rico's 303(d)/305(b) Integrated Report.

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 the Commonwealth to use in its assessment. Submissions (data, photographs, etc.) must be sent to the PREQB by September 30 of odd-numbered years. When it is submitted as part of the 303(d) or 305(b) process, stakeholder information is considered as soon as it is received. Parties submitting information should send materials to

PREQB – Evaluation and Strategic Planning Area
Cruz A. Matos Environmental Agencies Building
1375 Ponce de León Avenue, San Juan, PR 00926-2604
P.O. Box 11488, Santurce, PR 00910
Fax 787-767-4861

Alternatively, information can be sent via email to waterquality@jca.gobierno.pr. 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. This is typically announced in early January of even-numbered years via newspaper (*El Vocero* and *Primera Hora*). Comments are accepted for a 30-day period.

EPA Contacts for Puerto Rico's 303(d) List

If you have questions or concerns, contact EPA's Puerto Rico water quality assessment and 303(d) list expert, Nesmarie Negrón (212-637-3883) or email WaterProgram.Region2@epa.gov.