



Base map from Digital Line Graph data U.S. Geological Survey, San Juan, 1:20,000 1969 photorevised 1982, Carolina, 1:20,000 1969 photorevised 1982, Gurabo, 1:20,000 1969 photorevised 1982, Aguas Buenas, 1:20,000 1969, Rio Grande, 1:20,000 1963 photorevised 1982, El Yunque, 1:20,000 1967 photorevised 1982. The map scale is 1:30,000. Horizontal Datum NAD27, Lambert conformal conic projection

STREAMFLOW AND BACTERIOLOGICAL DATA SITES, IMPORTANT HYDROLOGIC FEATURES, AND SANITARY CLASSIFICATION OF STREAMS WITH DRAINAGE TO OR WITHIN THE MUNICIPIO OF CAROLINA, PUERTO RICO

Fernando Gómez-Gómez, Luis Santiago-Rivera, and Mario L. Oliveras-Feliciano 2002

0 0.5 1 1.5 2 Kilometers
0 0.5 1 1.5 2 Miles

EXPLANATION

Stream sanitary-quality classification (as used in this study for base-flow conditions)

Ranking	Fecal coliform concentration, colonies per 100 milliliters	
Poor	Greater than 2,000	Within delimited stream reach
Presumed Poor	Greater than 2,000	Probable within delimited stream reach
Fair	Less than 2,000 or greater than 2,000	Within delimited stream reach
Presumed Fair	Less than 2,000 or greater than 2,000	Probable within delimited stream reach
Acceptable	Less than or equal to 2,000	Within delimited stream reach
Presumed Acceptable	Less than or equal to 2,000	Probable within delimited stream reach
Good	Less than 200	Within delimited stream reach
Presumed Good	Less than 200	Probable within delimited stream reach
		Also fecal streptococcus less than 400 colonies 100 milliliters
		Riparian zone possibly contaminated by household waste-water discharges (unsewered dense housing units within 100 meters of stream)

Estuary sanitary-quality classification (as used in this study)

Ranking	Fecal coliform geometric mean concentration of five sequential samples, colonies per 100 milliliters	
Poor sanitary quality	Greater than 200	
Acceptable sanitary quality	Less than or equal to 200	

Flood-prone areas classification *

Zone VE	An area inundated by one percent annual chance flooding, with velocity hazard (wave action); Base Flood Elevations (BFEs) have been determined.
Zone A	An area inundated by one percent annual chance flooding (equivalent to the 100-year flood event) for which no BFEs have been determined.
Zone AE	An area inundated by one percent annual chance flooding (equivalent to the 100-year flood event), for which BFEs have been determined.
Zone X500	An area inundated by 0.2 percent annual chance flooding (equivalent to the 500-year flood event); an area inundated by one percent annual chance flooding with average depths of less than 1 foot or with drainage area less than 1 square mile; or an area protected by levees from one percent annual chance flooding.

* Source of information: Federal Emergency Management Agency (1996)

Other features

Potential reservoir site (CE-6), from Black & Veatch (1976)	
Sub-watershed boundary	
Municipio boundary	
Levee	
Bacteriological sampling station with more than 1 year of record (refer to chapter B of report)	
Municipal solid-waste landfill	

Public water-supply filtration facility

Active	
Closed	
Under construction	

Public water-supply raw water diversion point

Pump station	
Gravity intake	

Public waste-water treatment facility

Active	
Abandoned/closed	
Effluent-discharge point	

Data-collection site

50043000	USGS surface-water-data collection station identification number
	Continuous streamflow gaging station
	Index streamflow gaging station
	Stream-stage gaging station
	Bacteriological quality-of-water sampling station within streams
	Bacteriological quality-of-water sampling station within estuarine waters
	Stream low-flow partial-record station
	Stream low-flow partial-record station and bacteriological quality-of-water sampling station