



# NONPOINT SOURCE SUCCESS STORY

## Louisiana

### Inspection and Repair of Septic Systems Improve Bayou Sara

#### Waterbody Improved

Sewage leaking from improperly managed septic systems led to a fecal coliform bacteria impairment in Bayou Sara. The

Louisiana Department of Environmental Quality (LDEQ) added the water body to the state's 2014 Clean Water Act (CWA) section 303(d) list for not supporting its primary contact recreation (PCR) designated use because of the high bacteria levels. Partners implemented a series of initiatives to restore this designated use, including home septic and facility inspections, and education and outreach. Recent data indicate that the river no longer exceeds the fecal coliform standard for PCR; as a result, LDEQ removed the waterbody's PCR impairment listing from the state's draft 2018 CWA section 303(d) list.

#### Problem

Bayou Sara (waterbody ID LA070501\_00) is approximately 31 miles long. The watershed is in West Feliciana Parish and includes the town of St. Francisville. The primary land cover in the watershed is deciduous forest and shrubland (Figure 1). Homes within this watershed contain improperly managed septic systems that caused high bacteria loadings to Bayou Sara.

Louisiana's water quality standard for PCR requires that no more than 25 percent of the fecal coliform samples collected on a monthly or near-monthly basis from May 1 to October 31 may exceed a fecal coliform density of 400 colonies per 100 milliliters of water (col/100 mL). During the 2012–2013 sampling year, two out of six events (33 percent) at Ambient Water Quality Monitoring Network (AWQMN) site 1108 exceeded the criterion of 400 col/100 mL. On the basis of these data, LDEQ added Bayou Sara to its 2014 CWA section 303(d) list for not fully supporting the water quality standard for PCR due to fecal coliform bacteria. The CWA section 305(b) list identified sanitary sewer overflows (collection system failures) as the suspected cause of bacteria pollution.

#### Story Highlights

From 2016 through 2018, LDEQ's Nonpoint Source Unit funded a watershed coordinator position at the Capital Resource Conservation & Development Council (CRC&D) to facilitate and conduct watershed restoration activities in southeast Louisiana. The goal was

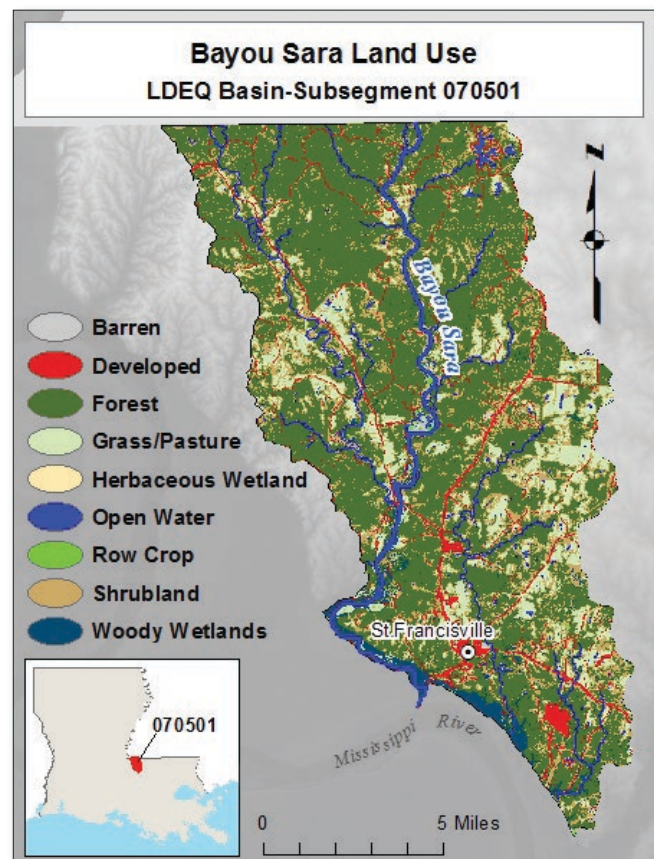


Figure 1. Bayou Sara (Subsegment 07051) land cover.

to reduce nonpoint pollution sources to ultimately improve surface water quality, restore designated use support and maintain healthy waters.

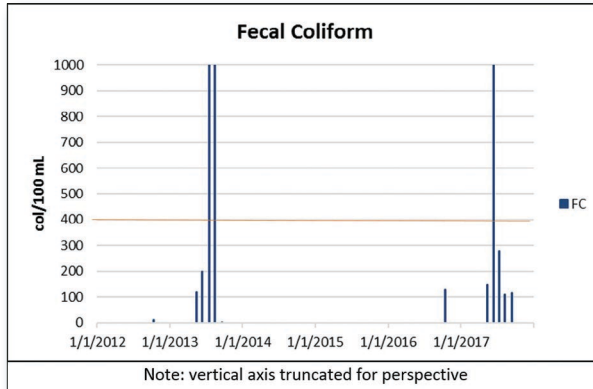


Figure 2. Fecal coliform data show improvement between 2012 and 2017.

CRC&D worked closely with the West Feliciana Parish Department of Health and Hospitals (WFPDHH) to conduct individual home sewage inspections. CRC&D personnel inspected 230 individual home wastewater systems in the Bayou Sara watershed; repairs were made as needed.

LDEQ surveillance personnel also performed a sweep of potential point sources of bacteria in Bayou Sara watershed in 2016 and 2017. They inspected 47 locations to ensure compliance with respect to pollutant discharge; corrective action was taken as needed.

## Results

Water quality data showed improvement as a result of inspections and repairs. Fecal coliform data from the 2016–2017 sampling year showed that only one out of six events exceeded the criterion (a 16.7 percent exceedance rate) at AWQMN site 1108 from May 1 to October 31, which is below the 25 percent exceedance rate limit noted in the water quality standard (Figure 2). On the basis of these data, in the 2018 CWA section 305(b) report LDEQ indicated that Bayou Sara is fully supporting its PCR designated use and is no longer listed as impaired for bacteria (Figure 3).



Figure 3. Bayou Sara now fully supports its PCR designated use.

## Partners and Funding

Partners in this work included the U.S. Environmental Protection Agency, LDEQ, CRC&D, and WFPDHH. LDEQ contracted with CRC&D from 2016 to 2018 to fund a watershed coordinator and to conduct septic system inspections; \$50,330.00 in CWA section 319(h) funds and \$21,010.00 in CRC&D match were expended for inspections in Bayou Sara.



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