



NONPOINT SOURCE SUCCESS STORY

Louisiana

Home Septic System Inspections and Education Help Reduce Bacteria in the Comite River

Waterbody Improved

Bacteria from improperly maintained septic systems led to a fecal coliform bacteria impairment in the Comite River (subsegment 040103). The Louisiana Department of Environmental Quality (LDEQ) added the waterbody to the state's 2012 Clean Water Act (CWA) Integrated Report as not supporting its secondary contact recreation (SCR) designated use because of high bacteria levels. Beginning in 2012, LDEQ contracted with Capital Resource Conservation and Development Council (CRC&D) to implement a series of initiatives such as home septic system inspections, education, and water quality monitoring in the Comite River subsegment. Recent data indicate that the river no longer exceeds the fecal coliform standard for SCR; as a result, LDEQ removed the waterbody's SCR bacteria impairment listing from the state's 2022 CWA section 305(b) water quality assessment (in Appendix A of the LDEQ Integrated Report of Water Quality in Louisiana).

Problem

The Comite River watershed (subsegment 040103 – From White Bayou to Amite River) drains approximately 48,920 acres. Primary land cover in the watershed is wetlands, open space, low-intensity developed land, and grass/pasture (Figure 1). Rural areas in Louisiana often depend on on-site sewage disposal systems (OSDS) in the absence of municipal or other public wastewater treatment systems. Improperly maintained OSDS caused high bacteria loadings to the Comite River. For SCR to be supported, no more than 25 percent of the fecal coliform samples collected on a monthly or near-monthly basis may exceed a fecal coliform density of 2,000 colonies (col)/100 milliliters (mL) year-round.

Between October 2017 and September 2018, five of 12 samples (42 percent) exceeded 2,000 col/100 mL. Based on these data, LDEQ indicated subsegment 040103 in the 2020 Integrated Report as not supporting the designated use SCR due to fecal coliform bacteria.

The 2020 Integrated Report showed the suspected source of the bacteria impairment in the river as on-site treatment systems (septic systems and similar decentralized systems) and sanitary sewer overflows (collection system failures). Problems from OSDS include poor installation and/or maintenance.

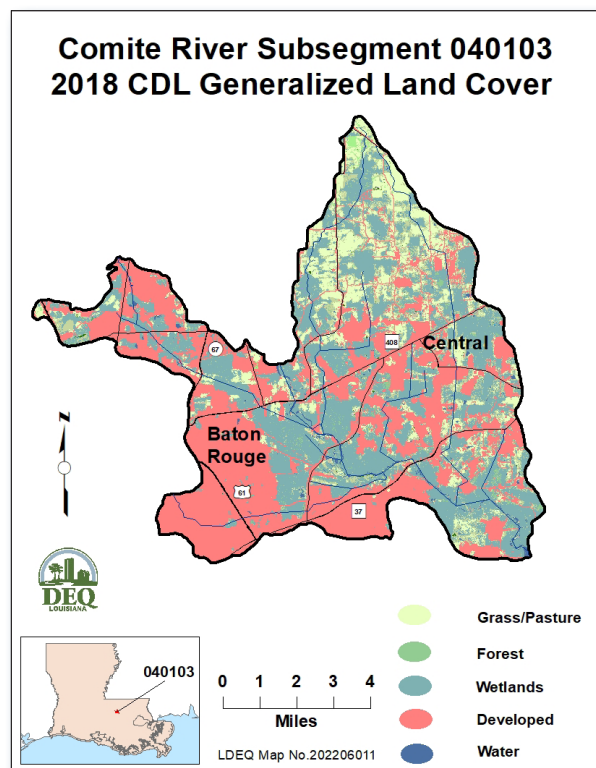


Figure 1. The Comite River subsegment 040103 watershed is in southeastern Louisiana.

Story Highlights

LDEQ has contracted with CRC&D to support a watershed coordinator (WSC) staff position since 2008. The WSC's job is to facilitate and conduct watershed use support restoration activities in southeast Louisiana, with a goal of reducing nonpoint source pollution to ultimately improve surface water quality, restore designated use support, and maintain healthy waters. CRC&D staff identified and helped repair some malfunctioning home systems, thus reducing bacteria and restoring the use support in the Comite River.

From 2012 through 2020, work occurred in the Comite River watershed to inspect home septic systems, educate homeowners, and monitor water quality. CRC&D inspected 1,542 systems and found that 567 were not functioning properly. CRC&D identified and assisted in the repair of 339 of these 567 systems.

Results

Water quality data show improvements as a result of OSDS repairs. From October 2019 to September 2020, only one fecal coliform sample out of 12 exceeded 2,000 col/100 mL (i.e., an 8 percent annual exceedance rate). These data indicated that the Comite River supports its SCR designated use (Figure 2). Based on these data, LDEQ removed SCR as a bacteria-impaired designated use for subsegment 040103 in 2022.

Partners and Funding

Partners responsible for making this project a success include the U.S. Environmental Protection Agency, LDEQ, and CRC&D. From October 2012 to September 2020, LDEQ used \$432,076 in CWA section 319 funds and \$288,470 in matching funds to contract with CRC&D to fund a WSC, septic system inspections, and water quality monitoring.

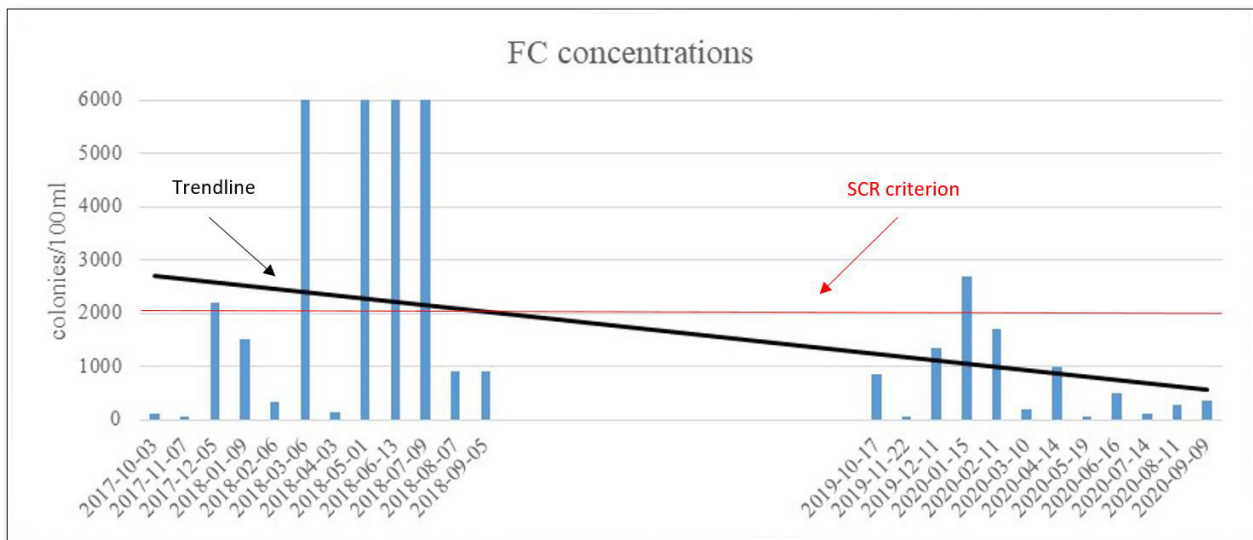


Figure 2. Fecal coliform (FC) bacteria concentrations have declined in the Comite River.



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