



NONPOINT SOURCE SUCCESS STORY

Louisiana

Inspecting, Repairing and Replacing Septic Systems Restores Primary Contact Recreation Use Support in Selsers Creek

Waterbody Improved

Since at least 1998, Selsers Creek, subsegment 040603, was not fully supporting its designated use of primary contact recreation (PCR) due to high levels of fecal coliform bacteria. It was determined that a possible source of fecal pollution in Selsers Creek was onsite sewage disposal systems, with an estimate of 3,000 systems located in Tangipahoa Parish. Onsite disposal system inspections, education and outreach, and the repair and/or replacement of systems occurred from October 2011 through December 2016. Water quality improved. As a result, the Louisiana Department of Environmental Quality (LDEQ) identified Selsers Creek as meeting its PCR use support in 2016.

Problem

The 12-square-mile Selsers Creek watershed supports primarily forestry, pasture and urban/developed land. Several areas within the watershed are undergoing population growth and rapid urban development, which consequently involves the conversion of agricultural land uses to urban land types (Figure 1).

As early as 1998, LDEQ listed the waterbody on its Integrated Report (IR) for failing to support PCR use due to high concentrations of fecal coliform bacteria. PCR standards for fecal coliform concentrations require that no more than 25 percent of the total samples collected on a monthly basis (between May and October) shall exceed a fecal coliform density of 400 colony-forming units per 100 milliliters (cfu/100 mL) of water. Data collected during the PCR period from May 2001 to September 2011 show that 11 of 27 samples exceeded the criteria for PCR (a 41 percent exceedance rate, which violated standards).

In October 2011 the Capital Resource Conservation and Development (RC&D) Council began developing a watershed implementation plan (WIP) specific to Selsers Creek. While drafting the WIP, the RC&D participated in the Lake Pontchartrain Basin Foundation (LPBF) watershed task force in Tangipahoa Parish, which helped to identify onsite disposal systems as a key fecal coliform pollutant source within the Selsers Creek watershed. Through grab samples and research, the RC&D confirmed that ailing individual home onsite disposal systems were a prevalent problem. With an estimated 889 onsite disposal systems located

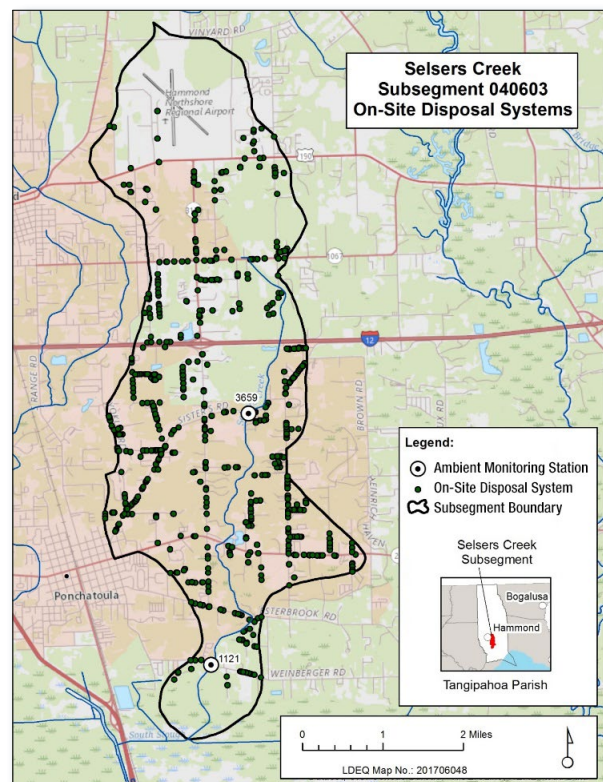


Figure 1. Selsers Creek is a rapidly developing watershed with numerous residential septic systems.

throughout the Selsers Creek watershed, there was an imminent need for homeowner education on the importance of proper home sewage system operation and maintenance, as well as a need to inspect and repair/replace failing systems.



Figure 2. An inspection team discovered sewage overflowing from an improperly maintained onsite disposal system in the Selsers Creek watershed.

Project Highlights

The RC&D staff began collecting water quality grab samples in February 2012 to identify critical areas within Selsers Creek. The RC&D then began targeting educational outreach efforts to work with homeowners to identify and repair potential failing onsite disposal systems to reduce fecal coliform concentrations in Selsers Creek (Figure 2).

Because onsite disposal systems are under the authority of the Louisiana Department of Health (LDH), LDEQ has no regulatory authority in this area; therefore, cooperation with the local government was critical in the project's success. In July 2014 an inspector with the Tangipahoa Parish Department of Health and Hospitals began going door to door to inspect the operation of the onsite disposal systems in the area. Inspections in Selsers Creek concluded in December 2016.

Tangipahoa Parish launched an educational outreach program at the same time as the initiation of the inspection program. The educational outreach program made the public aware that an inspection program was in effect and that their property could be inspected in the near future. The educational campaign consisted of advertisements in local newspapers and publications, mailing of courtesy letters, and communicating with homeowners face-to-face. The program emphasized public health and environmental protection with respect to nonpoint source pollution and sewage disposal. In addition, educational materials regarding maintenance, inspection, repair, and

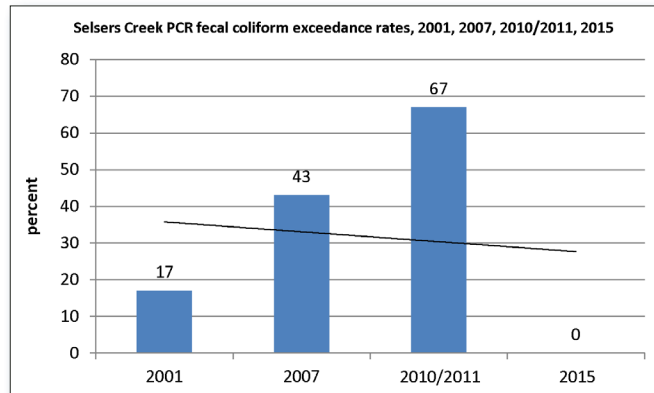


Figure 3. Selsers Creek PCR fecal coliform exceedance rates declined after the onsite sewage disposal system management program was initiated in 2014.

replacement of onsite disposal systems were integrated into information that all building and construction permit applicants received.

Between July 2014 and September 2016, 126 onsite disposal systems were inspected. Of those, 50 were found to be nonfunctional and were repaired and/or replaced. This reduced the fecal count by approximately 304,000 cfu/100 mL in Selsers Creek.

Results

Water quality data collected since the onset of education and inspection efforts indicates the waterbody is meeting the water quality PCR standard for total fecal coliform. From May 1 through October 31 of 2015, there were five sampling events, of which zero sampling events exceeded the fecal coliform standard of 400 cfu/100 mL, resulting in a zero percent exceedance (Figure 3). As a result, LDEQ listed Selsers Creek as supporting PCR in the state's 2016 IR.

Partners and Funding

Local, federal, state and nongovernmental entities that aided in the improvement of the Selsers Creek watershed include Capital RC&D, LDH, U.S. Environmental Protection Agency, LPBF, Tangipahoa Parish and LDEQ's Nonpoint Source section. Partners used approximately \$119,220 in CWA section 319(h) grant funds (federal fiscal years 2010 through 2015), and \$19,457 matching funds to support watershed restoration efforts in Selsers Creek.



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