

MONROE COUNTY, FLORIDA

PROBLEM

Monroe County, Florida, is home to the Florida Keys and a complex and dynamic marine ecosystem—including the world's third-largest coral reef. The county is also home to 30,000 individual wastewater systems that may contribute to excessive nutrients in near shore and offshore waters, leading to the deterioration of the reef and marine resources. Additionally, more stringent wastewater treatment standards adopted by the state also created challenges for conventional onsite systems.

SOLUTION

A state wastewater treatment standards law targeting Monroe County now requires the countywide use of advanced nutrient reduction systems, renewable operating permits, maintenance contracts, and annual inspections.

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OVERVIEW

Protecting the health of coastal waters and marine habitats is paramount to the region's economy, health, and quality of life. In 1999, Florida

adopted more stringent treatment standards for wastewater systems in Monroe County including:

- **Renewable operating permit requirements**
- **Routine treatment system inspection requirements**
- **Homeowner requirement to enter into a contract with an O&M entity**
- **System inventory, maintenance contract requirements, and delivery of service reminders**

RENEWABLE OPERATING PERMITS

Regulations enacted by the Florida Department of Health's Bureau of Onsite Sewage Programs and implemented by the county health department set effluent standards, dispersal requirements, and associated compliance schedules for existing and new individual/clustered systems in Monroe County. All systems are

now required to use advanced treatment technologies to meet stricter wastewater treatment standards for nutrients. New systems in the Florida Keys must be designed to achieve an effluent limit of 10 milligrams per liter (mg/L) or less for nitrogen. Systems are regulated by the county through the use of renewable operating permits, required maintenance contracts, and annual inspections.

System owners must renew a one-year operating permit annually at a cost of \$100. The health department also issues construction permits for new systems and repair permits for existing systems.

MAINTENANCE CONTRACTS AND INSPECTIONS

Individual treatment system owners must enter into contracts with a maintenance entity to oversee the system's operation. System owners must renew the maintenance contract each year for the life of the system. Maintenance entities are registered contractors certified by the product manufacturer to conduct maintenance services. The maintenance entity submits inspection reports and sampling results to the state as specified in the operating permit.

Maintenance contractors inspect permitted systems at least semiannually, and the county health department inspects the

systems annually. The county health department maintains system data in a statewide, web-based database that tracks all permits and inspections.

FUNDING SOURCES

The Monroe County program has eight full-time employees and an annual budget of \$330,000. The program is funded through a statewide trust fund supported by fees collected from permits and contractor licensing. Since 1999, the local governments in Monroe County have received nearly \$50 million in federal and state funds to improve wastewater treatment at the nearly 50,000 residences in the Florida Keys region.

RESULTS

Currently, 3,065 individual wastewater treatment systems have been permitted, including 327 advanced treatment units. Florida Department of Health effluent limits for new systems discharging less than 100,000 gallons per day to the soil—including individual and clustered systems—include 10 mg/L for biochemical oxygen demand, total suspended solids, and total nitrogen, and 1 mg/L for total phosphorus, representing greater than 75% reductions over conventional septic systems. Effluent is sampled prior to soil discharge.

References and Resources

- Sherman, K.M., Chase, P.K., and Ebelherr, D. 2003. Implementation of Model Programs 3 and 4 of the USEPA Voluntary Management Guidelines in the state of Florida. National Onsite Wastewater Recycling Association Annual Conference, Franklin, TN.
- Population data—Census Bureau, State and County QuickFacts, Monroe County, 2011. <http://quickfacts.census.gov/qfd/states/12/12087.html>