

# Aging septic systems fouling Michigan waters

**Keith Matheny**, Detroit Free Press 11:03 p.m. ET Jan. 16, 2017



*(Photo: Picture taken May 2015 by John Gallagher/Detroit Free Press)*

Hundreds of thousands of septic systems in Michigan may be worn out, failed or failing, experts say. And research has shown they are polluting waters across the state.

Up to 1.4 million septic systems — individual waste disposal systems for homes or businesses that aren't connected to a municipal sewer line — still remain in Michigan. More than 21 million homes in the U.S. still use them.

In Michigan — the only state in the U.S. that doesn't regulate septic systems on a statewide basis — septic systems are putting 280 million gallons per day of wastewater into the ground.

A Michigan State University study, published in 2015, found *E. coli* traced to humans in all of the 64 rivers examined in the Lower Peninsula and in higher concentrations the areas with more septic systems. The study tested for *E. coli* — the health-harming bacteria often to blame for beach closings — as well as another bacteria used for confirming fecal contamination is from human, not animal, sources.

## More environmental news:

[Birds get a boost from Michigan findings on cell phone tower hazards](http://www.freep.com/story/news/local/michigan/2017/01/02/birds-get-boost-michigan-findings-cell-phone-tower-hazards/95713486/)  
(<http://www.freep.com/story/news/local/michigan/2017/01/02/birds-get-boost-michigan-findings-cell-phone-tower-hazards/95713486/>)

[Company stands by plan to bury nuke waste near Lake Huron](http://www.freep.com/story/news/local/michigan/2017/01/04/nuclear-waste-great-lakes/96146376/)  
(<http://www.freep.com/story/news/local/michigan/2017/01/04/nuclear-waste-great-lakes/96146376/>)

Complicating matters is the lack of statewide regulations. Oversight instead is left to a patchwork of county or regional health departments — all with differing staffing levels, budgets and interest in regulating septic systems.

At least 11 counties in Michigan have requirements that septic systems be inspected when a property is sold. But most counties and health districts don't have even this infrequent requirement, said Grenetta Thomassey, a program director for the nonprofit Tip of the Mitt Watershed Council based in Petoskey.

"The sanitary code talks about siting, design and installation practices," she said. "But once a septic system is in the ground, there's no legal requirement to ever look at it again."

## Signs of stress

A well-maintained system, with its tank pumped every three years or so, whose users are very disciplined about what flows into it, can have a drainage field that lasts and continues to work effectively for about 20 years.

Now, imagine all those rural, lakefront homes and cottages Up North, just off a lake or river, or above groundwater very closely tied to nearby surface water, with septic systems a half-century or more in age, rarely if ever maintained, Thommasey said.

"This isn't something that we think is going to foul Lake Charlevoix tomorrow, or the Chain of Lakes in Antrim County," she said. "But if we let this continue for another 10 or 15 years, the waters are going to start showing signs of stress."

And those waters drive Michigan's multi-billion-dollar fishing and summer tourism industries.

"It should be a topic that's near and dear to all Michiganders: The protection of the water we drink, and the waters where we fish and swim," said David Cotton, an environmental quality analyst with the Michigan Department of Environmental Quality's onsite wastewater program.

People with homes and businesses on septic systems at one time didn't think about their longevity, Cotton said. The thought was that the community sewer system was on its way, and they'd be connecting to it in a matter of years.

But the cost of connecting to a public sewer — \$60,000 per home or more — combined with budget struggles in local governments, mean "the sewer's not coming," Cotton said.

"Onsite septic systems are no longer considered temporary; they are long-term parts of our infrastructure needs," he said. "With that in mind, they need long-term maintenance."

#### Potential problems

Technology is improving to prolong a septic system's life, including diverter valves that can send septic wastewater to a new drain field, while the old field "rests" and rejuvenates, said Laura Pobanz, Macomb County environmental health supervisor.

"When a system is rested, it not only regains the ability to take water capacity, but some ability to regain phosphorus removal capacity," she said.

Tip of the Mitt is working with local residents and governments to examine the scope of potential problems with failing septic systems, find out what's working elsewhere, and examine alternatives such as time-of-transfer inspection ordinances, or mandatory septic tank pumping or system inspections.

"The thing we are advocating right now is getting this conversation going in our communities," she said.

There are many issues to consider, including that the cost of a new septic system to a home or business owner is between \$5,000 and \$20,000.

"And in Charlevoix County, if we passed a mandatory pumping ordinance tomorrow, our septic pumpers and haulers couldn't handle the increased business," Thomassey said.

The concept is to work toward something positive and beneficial, not punitive or burdensome, she said.

"We think it's just the cost of owning a home — it's the same as having a good roof," Thomassey said.

Contact Keith Matheny: 313-222-5021 or [kmatheny@freepress.com](mailto:kmatheny@freepress.com). Follow on Twitter @keithmatheny.

#### Read more:

[Madison Heights plating firm shut down amid chemical spill concerns  
\(<http://www.freep.com/story/news/local/michigan/oakland/2016/12/23/madison-heights-plating-firm-shut-down-amid-chemical-spill-concerns/95789022/>\)](http://www.freep.com/story/news/local/michigan/oakland/2016/12/23/madison-heights-plating-firm-shut-down-amid-chemical-spill-concerns/95789022/)

[Activists urge caution on Flint water despite improved tests  
\(<http://www.freep.com/story/news/local/michigan/flint-water-crisis/2017/01/09/activists-flint-water-tests/96342196/>\)](http://www.freep.com/story/news/local/michigan/flint-water-crisis/2017/01/09/activists-flint-water-tests/96342196/)

## Do's and don'ts of septic system maintenance

**Do:** Have your septic tank pumped out by a licensed operator every two to three years.

**Do:** Have the operator check that there is a tee or baffle on the outlet of the septic tank. That stops scum from floating into and clogging the disposal field.

**Do:** Check with your local health department if you think you are having septic system problems. The health department can assist with operation, maintenance and design questions.

**Do:** Learn the location of your septic tank, drain field and well. Your local health department may be able to help with this. Keep a sketch of their locations handy with your maintenance records for service visits.

**Do:** Divert other sorts of water, such as roof drains and sump pumps to lawn areas away from the septic system. A saturated drain field will be unable to adequately treat waste water.

**Do:** Take leftover hazardous household chemicals to approved hazardous waste collection centers for disposal.

**Do:** Cut the grass over the disposal field. Shorter grass kept at about 2-3 inches increases plant activity called evapotranspiration. This process removes nutrients from the disposal field through the root system, and increases evaporation.

**Don't:** Go down into a septic tank, or even spend too much time over its open lid. Toxic gases are produced by the natural treatment processes and they can kill a person in minutes.

**Don't:** Allow heavy vehicles to drive over or park on a drain field.

**Don't:** Plant trees or shrubs on a drain field. Their roots can damage septic system infrastructure.

**Don't:** Cover the drain field with a hard surface such as concrete, asphalt or a wooden deck. The area should only have a grass cover.

**Don't:** Attempt to repair your system without checking with your local health department to see if a permit is needed.

**Don't:** Overuse a kitchen garbage disposal unit. Heavy use adds large quantities of solids and shortens the time between septic tank pumpings.

**Don't:** Use commercial septic tank additives. These products don't help, and some may hurt your system in the long run.

**Don't:** Use your toilet like a trash can. Harmful chemicals and cleansers should not go down the drain. Nor should coffee grinds, disposable diapers, sanitary napkins, cigarette butts, paper towels, dental floss, or grease or oil.

Source: Rouge River National Wet Weather Demonstration Project

Read or Share this story: <http://on.freep.com/2jSCElc>

