

Testing the waters: Officials say no 'tidy' answer for who is monitoring swimming areas

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Photos: Sabine River Authority of Texas Field Office Coordinator Terry Wilson, right, and Biologist B. Conrad King take a water sample recently from the Sabine River on Texas 42. Kevin Green/News-Journal



A video on the state parks website shows people jumping from a platform into the water at Tyler State Park and maneuvering canoes across the water.

It is one of the spots the state parks department directs Texans to for lake, river or creek swimming.

It's also one of the many bodies of water in East Texas no one appears to be monitoring for E. coli, a bacteria that can make swimmers ill.

Water quality officials say most large bodies of water where people swim in Texas undergo some level of testing for the bacteria but acknowledge there's no way to test them all. That means smaller or private lakes often are not monitored.

"The problem is a matter of resources and trying to get enough resources into place where you're testing regularly all the areas people are utilizing regularly as swimming areas," said Miles Hall, environmental services division manager with the Sabine River Authority. "There's not a program set up like that."

Further, there is no program to provide a real-time guarantee elevated levels of bacteria aren't present before a swimmer hits the water. So many agencies have responsibilities and differing approaches to water quality that even finding information about which bodies of water are being tested and who reports the results is difficult.

That's not to suggest no testing or notification is done. The U.S. Army Corps of Engineers conducts regular testing of many of the reservoirs it oversees. It shut down beaches at Lake O' the Pines for a few weeks this summer after finding elevated levels of fecal coliforms, a group of bacteria that includes E. coli.

But East Texas is home to many other lakes and other bodies of water used for recreation. And at least a couple of state park swimming holes and some small private lakes that are open for public uses are not being monitored, including several lakes at summer camps. The rest don't appear to be tested at the frequency the Corps of Engineers tests swimming beaches during the summer recreation season.

Rick Lowerre, president of the Caddo Lake Institute, summed up the patchwork system of testing and public notification in one word: "Inadequate."

What we know

Texas monitors its rivers and lakes for long-term water quality, considering E. coli levels and other water quality indicators. Some coastal beaches undergo more frequent testing under the General Land Office. The effort is led by the Texas Commission on Environmental Quality with involvement from other agencies.

But there is not, as one state official said, a "tidy" answer to the question of who's conducting water quality testing on Texas' lakes, rivers and streams. In addition to what the environmental quality commission monitors, for instance, the Texas Department of State Health Services conducts fish and seafood testing when other agencies identify concerns.

Still, state officials maintain that there's no cause for concern if testing isn't occurring as frequently as the Corps conducts it during the swimming season, and say doing more would be a challenge given the number and size of the bodies of water the public uses in Texas.

"For one thing, it takes a 24-hour incubation period to test for bacteria samples," said Jim Davenport, aquatic scientist with the Texas Commission on Environmental Quality's surface water quality team. "There's a lag time built in anyway. They're not looking at real-time conditions either."

The state has about 1,800 fixed water-quality monitoring stations in surface water around the state where sampling of various kinds occurs. That includes river authorities and other participants of the Clean Rivers program.

That might sound like a lot of testing, he said, but Texas has more than 10,000 named streams, and there are thousands of reservoirs larger than 10 acres.

"Because of that, we have to pick our battles," he said. The commission tries to conduct regular monitoring of the most used, larger bodies of water that it hopes can act as indicators for water quality in an area.

He said several monitoring stations usually are based at larger reservoirs with sampling taking place quarterly or monthly. But the state is just too big to allow frequent testing at smaller reservoirs, he said.

Sabine River Authority

Hall, with the Sabine River Authority, cited similar issues as he explained his organization's water quality testing program on the river and its reservoirs. It is done in coordination with the Texas Commission on Environmental Quality as part of the Clean Rivers program.

The river authority had a water quality monitoring program earlier than much of the state, Hall said. Other organizations around the state also participate in the Clean Rivers program to monitor other basins.

"We would have a monitoring program even if the Clean Rivers program didn't exist because we are concerned about water quality in the Sabine basin," he said. "But the Clean Rivers program has been one of the most successful programs ever launched because it got all the river programs involved in water quality."

The river authority tests about 40 sites each month, and reviews its list of testing sites each year to ensure monitoring is done where it's most needed and in response to complaints. Target sites consist of water intake areas ? the Sabine River provides drinking water for many cities along its path ? and public access points.

As Davenport explained it, the Clean Rivers program is coordinated for each basin in the types of samples, testing frequency and sampling locations. The state agency tests some sites and its partners test others.

"We have very good water quality in the Sabine," Hall said. "There are some areas that are not as good as others, but that's the nature of water quality."

Still, the program has limitations when it comes to watching for E. coli.

"The test itself and the routine way you test is well and good," he said. "In our basin, we try to make sure that if an area is being utilized that we're at least testing the lake, but when you have these huge lakes, all you can do is spot check. And we can't go out there every time someone gets in the water and say it's safe. Through our spot checks that we're doing, we're relatively sure that our lakes are safe to swim in. Bacteria don't just appear one day and it's gone the next. If it's a problem, you're going to find it."

Lake O' the Pines concerns

The state and other entities involved in monitoring water quality have a good idea where problem areas are, according to Tony Martin, manager of Lake Cherokee. The private lake is one of the sources for Longview drinking water, although drinking water quality is a separate issue from recreational contact concerns. A number of homes are on the lake, where people swim and boat.

The Sabine River Authority works with the city of Longview for testing on Lake Cherokee and the Sabine River. Ben House, the city's industrial pretreatment inspector, said sampling, including for E. coli, occurs 10 times a year.

"We did the testing simply to ease the minds of our residents because of all the publicity in the paper about the E. coli in Lake O' the Pines," Martin said. "We did run the tests and got the results back, and it was about what I expected."

Two of six samples registered E. coli, but nowhere near levels considered a problem.

"In my opinion, the state or any local authorities would have a pretty good idea if there was a chance, a legitimate chance of having E. coli to the point of it being a danger or a threat," Martin said. "They would know what lakes and rivers would be susceptible to that, I think. I think they do keep a good eye on those that are susceptible or those that have a high probability for an E. coli problem. (Lake Cherokee doesn't) have any of the factors that generally are involved in creating that problem."

Those factors include nearby poultry or cattle operations, for instance. Wild hogs have been known to contribute as well, because the E. coli bacteria live in the feces of all warm-blooded animals.

Lake Cherokee wasn't the only agency that conducted special testing this summer as a result of problems at Lake O' the Pines.

The Northeast Texas Municipal Water District, which participates in the Clean Rivers program by monitoring the Cypress Creek Basin, checks water in Ellison Creek Reservoir, also known as Lone Star Lake.

Executive Director Walt Sears said there's not an ongoing problem with bacteria at the lake, but after the issues surfaced this summer at Lake O' the Pines, the water district conducted special testing to confirmed it.

Notifying the public

The bodies of water in East Texas the state has identified as having problem levels of bacteria include three streams the water district monitors ? Hart Creek, Tankersley Creek and a portion of Big Cypress Creek. A \$300,000 grant from the state's soil and water conservation board is funding a study about how to address bacteria levels in those streams. Sears said the water district is about a third of the way through that 2 1/2- to 3-year study. Part of the study is to determine whether people are swimming in those bodies of water.

He said his agency looks for cost-effective ways to let its stakeholders and members of the public know about problem areas ? through the Internet, in an annual report on the organization's website, in meetings with stakeholders and by word of mouth.

For the state, the type of notification seems to depend on the problem. If, for example, testing shows elevated levels of mercury in fish, the Texas Department of Health Services handles public consumption advisories. Notices can be found at the lakes, and the Texas Department of Parks and Wildlife posts information about the advisories on its website.

If a lake has bacteria problems, Davenport said, it goes on a list that is submitted to the EPA listing bodies of water that are "impaired" for various reasons. As an example, the more-than-100-page document lists Hart, Tankersley and Big Cypress creek portions as impaired because of bacteria. Lake Daingerfield inside Daingerfield State Park is listed as impaired because of mercury in fish.

But there typically is no local notice about bacteria impairments, though it's possible the state could work with local entities to notify the public in the case of extremely high levels.

'We need a plan'

In March, however, one of two bacteria measurements at Lake Gladewater identified bacteria levels of 840/100 milliliters, well above the target level of 126/100 ml. The other sample was less than 10. It doesn't appear the high level triggered any notification, and the lake wasn't listed on the impaired list as having an ongoing bacteria problem. (For a look at the complete list of bodies of water that the state says are impaired for bacteria and other reasons, visit www.tceq.state.tx.us/compliance/monitoring/water/quality/data/10twqi/10twqi.)

"In reviewing E. coli data from around the state, it's common for single measurements to be that high (particularly in streams, and sometimes in lakes at tributary mouths or very near shore)," information from TCEQ said. "However, staff in our regional offices respond very quickly when there is known contamination and potential pathogens from an identified source ? such as a spill or leak of improperly treated sewage. In these cases, TCEQ staff will immediately notify and coordinate with local authorities as well as take rapid steps to eliminate the source of pollution."

Christine Mann, spokeswoman for the Texas Department of State Health Services, said a mechanism is in place for the environmental quality commission to inform her agency of bacteria or illnesses so the agency can work with local health departments for public notification.

Davenport said elevations his agency sees typically are potential problems but not a real health threat. Instead, they're more of a long-term problem that's appropriate to address through restoration efforts instead of by banning swimming.

Not everyone agrees with the state's approach.

Lowerre of the Caddo Lake Institute said the state's approach to water quality must be changed to be more comprehensive and transparent.

"Obviously, it's going to have to be done at a local level," he said, noting counties and cities have parks with swimming areas. "We need to have a plan, and we don't, and it probably needs to be watershed by watershed, and the local people need to say we want this done, and it will get done."