

# You Don't Miss Your Water Until Your Well Runs Dry - TN Ledger

Friday, June 15, 2018 | 02:28pm

from [TN Ledger](#)

As people and businesses pour into Tennessee, state leaders are working on a plan to keep its taps flowing.

The water management plan, TNH2O, is a legacy project for Governor Bill Haslam, who assembled a high-level group in January to ensure the state's water supply can flow in abundance and to the right places as population growth, development and new business transform the face of Tennessee over coming decades.

"We are very blessed with an abundance of water resources, so there is no threat or concern of running out of water," says Dr. Shari Meghreblian, commissioner for the Tennessee Department of Environment and Conservation.

"But this is something that you want to have a plan for well in advance so that not only as the population increases but as different events occur – changing weather patterns or different industries coming to the state – that we have a plan to focus our resources in the areas needed."

TNH2O is composed of representatives from municipalities, utilities, industry, conservation groups, agriculture, universities and government, plus more than 100 volunteers. All are stakeholders in ensuring a safe and adequate supply of water for drinking, recreation, economic development and agriculture.

The concern is not unfounded. The swelling population in Middle Tennessee – and slower but significant growth in urban centers like Clarksville, Knoxville, Cookeville and Chattanooga – along with the influx of new businesses and people into Tennessee are already putting pressures on water infrastructure. The state's population is projected to rise from 6.7 million to 7.8 million by 2040, the University of Tennessee's Boyd Center for Business and Economic Research reports.

Failure to plan for water management has had severe consequences elsewhere in the country and around the globe. Earlier this year, the city of Cape Town, South Africa, threatened to shut off water to four million residents if they did not reduce their water use to 13 gallons per person per day, below United Nations minimum guidelines for human use.

The city's dwindling water supply came after a three-year drought combined with a near-doubling of its population over the past 20 years without proportional investments in infrastructure.

California, which declared a state of emergency during the recent five-year drought, enacted new laws next month that set targets of 55 gallons of indoor water use per person per day by 2022 and 50 gallons by 2030. Residents currently use about 90 gallons per person indoors and outdoors.

Georgia and Florida have been tussling for decades over water rights to the Apalachicola-Chattahoochee-Flint river system, which flows through Georgia into Florida. Florida argues that urban development in Atlanta has diverted so much water from the rivers that it has depleted the flow into the Apalachicola Bay, destroying its oyster harvest.

The state is asking for a usage cap to be placed on Georgia. Georgia officials say that would harm its agricultural sector and threaten the water supply of 5 million Atlanta residents. The case was taken up by the U.S. Supreme Court in January and is being closely watched by western states such as Colorado that are grappling with their own multi-state water issues.

While Tennessee hasn't had to enact water restrictions, smaller communities on the Cumberland Plateau sometimes face issues accessing readily available water during droughts, Meghreblian explains.

"You see growth in different parts of Tennessee and then you see smaller rural areas where it is increasingly difficult to raise the money for the upkeep of aging infrastructure," she adds.

"So there are these various and sundry issues across the state and when you look around at how other states that have experienced water availability issues, it's important that this state has a framework for a state water plan that at least provides a method of measuring, tracking and planning for water supply."

Extreme rain events

Meghreblian says there's no indication the well will run dry. In fact, TNH2O has noted that Tennessee will get more water from "rain events" over the next 20 years, according to projections from the National Oceanic and Atmospheric Association.

But such rain events tend to dump precipitation in a concentrated fashion – raining harder and longer – that presents its own problems for urban stormwater management and runoff of agricultural fertilizers and pesticides into waterways when ground gets too saturated to absorb it.

Urban streams that serve the largest number of people are subject to increased pollution from development and industry. And waterways near agriculture are vulnerable to runoff of chemicals from fertilizers, pesticides and herbicides, especially after storms where rain comes down too hard and fast to be absorbed into the soil, but instead carries contaminants with it as it flows across the soil into rivers and streams.

That's exactly the kind of rain event that NOAA is projecting more of.

"It's an expensive endeavor to make sure water is treated to a level that it safe for us to consume," says Dana Wright, water policy director of the Knoxville-based Tennessee Clean Water Network.

"Every time something gets into our waterways it's more work for water treatment plants to make it drinkable."

Another stressor is factory farms such as the new Tyson Foods chicken processing plant coming to Humboldt. The meat processor came to Tennessee after it was rejected by a site in Kansas due in part to Tyson's record as one of the nation's worst agricultural polluters, with numerous documented instances of chemical spills, exceeding wastewater permits and dumping of toxins into waterways.

Instead of building its own onsite water treatment center in Humboldt, Tyson plans to divert vast quantities of its wastewater to the local utility, which will require significant upgrades.

Officials say Tyson has cleaned up its act, and Democratic gubernatorial candidate Karl Dean attended the factory ground breaking, even though his wife Anne Davis had fought against such operations in her work for the Southern Environmental Law Center.

#### Weakening rules

As the TNH2O group focuses on quantity, some environmental groups are concerned that changes on the federal level may trickle down to the state, weakening rule-making around Tennessee's fairly strong water quality acts and making the state's water supply more vulnerable to contamination.

Of special concern are rules relating to leakage from coal ash ponds. Under the Obama administration, fairly strict rules were put in place requiring states and utilities like TVA to monitor groundwater around existing coal ash ponds and come up with closure plans for the ponds that would protect water quality. But current EPA chief Scott Pruitt has initiated new rule-making to roll back those standards.

That's particularly worrisome because much of Middle and East Tennessee sits atop limestone, a soluble rock that forms complex underground drainage systems characterized by surface features like sinkholes and caves, what is known as a karst landscape.

In fact, Tennessee's 8,000 caves are far more than any state in the country, according to caves.org. Missouri is second with more than 4,000 caves.

Unfortunately, that also provides an easy conduit for leakage from the bottom of coal ash ponds to get into water sources.

"There are these direct connections through the limestone between apparently remote locations and the nearest surface waters," says Scott Banbury, a registered lobbyist with the Tennessee chapter of the Sierra Club who is based in Memphis.

"We've had numerous issues over the years where a landfill or recycling facility is discharging into a sinkhole thinking that it's going into the ground and we'll never see it again, but then it pops up nearby in the Tennessee River or Cumberland."

In West Tennessee, residents are fighting TVA's plan to draw 3.5 million gallons of water a day from the Memphis Sand Aquifer due to contamination concerns. TVA, which wants to cool a new energy plant with the water, has admitted finding high levels of arsenic, lead and fluoride under its coal ash pit located near wells TVA drilled into the aquifer. The aquifer supplies the city with what has been called "the world's sweetest water."

#### Legislative rollback

Banbury also is concerned over a growing trend in the Legislature that favors the rollback of state laws regarding water quality so they are no stricter than federal law.

The Tennessee Homebuilders Association, for example, has been lobbying the General Assembly to relax its stormwater regulations to the federal standard. But federal guidelines only stipulate states protect water quality from stormwater "to the maximum extent practicable."

That case is currently in the Tennessee administrative court system.

"In Tennessee, a lot of our water quality regulations are stronger than the federal rules," Banbury points out.

"We're way better off than a lot of states. So as we see this trend in our legislature to be no stricter than federal, and we see federal becoming less strict, we're seeing a big step backward."

Wright says the state's unique environmental features merit the extra protection.

"Tennessee is not like the rest of the country," she adds. "We want rules that are specific to our resources and protect what we have here and the biodiversity in our streams.

"Tourism is a huge industry in Tennessee, and we want to make sure that people keep wanting to come here to hike, kayak, to fish. So we need to make sure we protect those resources on two levels, for their economic value and for the value of having clean and safe water to drink."

Meghreblian, who became TDEC commissioner in May, says she couldn't agree more. The TNH2O group is operating under the assumption that state laws like the Tennessee Water Quality Control Act and the regulatory structure that governs it will protect the water supply.

"Quantity and quality have to go together," she says. "If you have a huge quantity of nasty, unusable water that's not going to do any good.

"So it all has to go hand-in-hand."

TNH2O working groups on groundwater, surface water, infrastructure, natural resources, regulation and data centralization will present their findings and recommendations to the governor this fall.

So far, the group has found gaps and inconsistencies among the many groups that collect water data in the state. TNH2O will make recommendations on filling those gaps and making data more accessible to allow for better collaboration on issues like managing the water supply, infrastructure needs, leak detection and distribution systems.

"This is not a one and done exercise. It's really to identify where gaps are, and one of the recommendations will likely be setting up a framework for a continued, consistent review and updating of the plan to account for changes over time, whether it's changes in the weather or population," Meghreblian explains.

"This is really taking a long view and recognizing how important an adequate sufficient supply of quality water is to all these things that we hold so near and dear in Tennessee – outdoor recreation and economic growth.

"This is such a great place to live and work but if we didn't have all the great water and natural resources it wouldn't be. So you need to plan for it before you have to plan for it. If you're doing this kind of planning in a reactionary mode, it's too late."