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Burnet's discharge dilemma

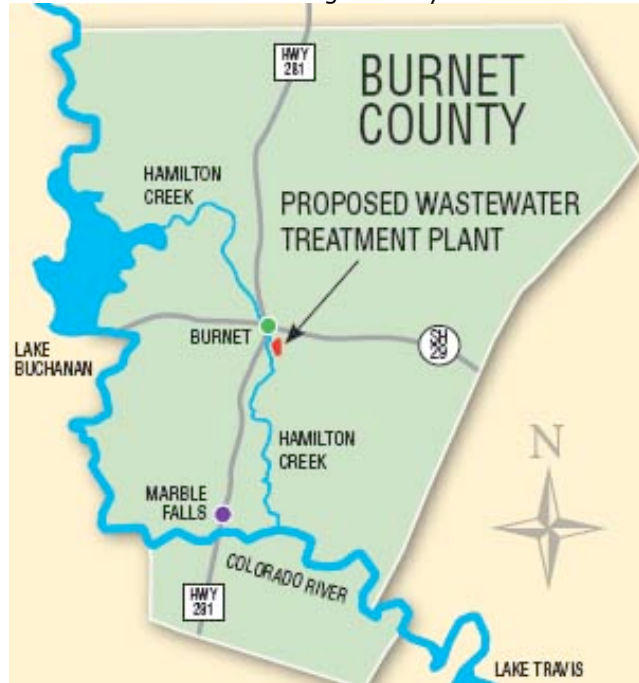
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By Charles Ryan Boisseau
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During a time of unprecedented drought—as Lake Travis has fallen to a near-record low this summer—you might think those living downstream would be cheering the City of Burnet's plans to put back 1.7 gallons of water a day into one of its tributaries. Think again.

Not all water is created equally, say officials with a number of groups and water supply operators who are lining up in opposition to Burnet's plan to build the wastewater plant, a facility that will discharge treated effluent into Hamilton Creek, which empties into the upper reaches of Lake Travis, just south of Marble Falls.

Burnet's plant is taking advantage of a little-known wrinkle in a state law that since the early 1980s has prohibited any new wastewater treatment plants from discharging effluent into the Highland Lakes, a law unlike any other in Texas and designed to preserve water quality and – according to some critics – limit development along the lakes.



The new wastewater plant would be permitted because it is more than 10 stream miles from the Highland Lakes – and thus allowable under the law.

The \$12.5 million wastewater plant represents the largest infrastructure project in the city's history, said Burnet City Manager Michael Steele. It is needed to handle the city's projected growth and to replace an existing treatment plant that has been operating at or above capacity for years, he said.

The new plant will expand the city's wastewater capacity to 1.7 million gallons a day from 0.7 million gallons. The city's existing plant not only can't handle the city's increasing population, but is overtaxed when storm water rushes into the collection system during floods and periods of high rainfall. The project also includes installing larger diameter pipe to replace 11,000 linear feet of sewer lines in lower Hamilton Creek, the most overtaxed part of the city's wastewater lines.

Steele said the price tag of the plant has soared from \$4.8 million five years ago to more than \$12.5 million, which partly reflects newer environmental standards imposed by the Texas Commission on Environmental Quality, which required a redesign so the plant can, among other things, treat wastewater using an ultraviolet purification process, which uses UV rays to render harmless bacteria and viruses in wastewater.

Asked about those who oppose the plant, Steele said "they need to get over it." He noted that the plant will discharge water that is cleaner than what is already in the lake. Also, he said putting water back into the creek and eventually into the lake is an improvement over watering "rocks" and fields to grow hay, as the city does today. The city also uses treated

wastewater to irrigate its city-owned Delaware Springs golf course.

Debate over ban heightened

Burnet's application is coming at a time of increased debate over the merits of the ban of treated wastewater into the Highland Lakes.

In late September, the cities of Granite Shoals and Leander formally petitioned the TCEQ to lift the discharge ban. The lakeside community of Granite Shoals wants to build its first wastewater treatment plant, while Leander wants to discharge effluent into tributaries of the Colorado River.

The City of Marble Falls and the Kingsland Municipal Utility District approved resolutions supporting the lifting of the discharge ban; both are eyeing building their own wastewater treatment facilities that they hope can discharge into the lakes. Commissioners with the TCEQ are expected to take up the issue Nov. 18.

Issue for other cities

If the discharge is not lifted, Granite Shoals still will proceed with its plans to build a wastewater treatment plant to serve its growing community of about 5,000 people on Lake LBJ, said Mayor Frank Reilly, who supports Burnet's plans to discharge effluent into Hamilton Creek.

With no changes to the law, the residents will pay far more than they otherwise would to build a plant and it won't guarantee cleaner water in the lake, Reilly said. A study commissioned by Granite Shoals indicated it would have to spend \$4 million more—\$15 million instead of \$11 million—to purchase and develop irrigation fields and distribution systems than it would to treat and return water to the lake. (Unlike Burnet's wastewater plant, Granite Shoals' also includes the cost to install a sewage collection system, something Burnet already has, with collection lines and sewer mains.)

The plant may also serve as a regional facility to handle nearby communities of Highland Haven and Shady Acres, Reilly said.

Reilly said that the opponents of discharges to the lakes need to consider that nearly all Granite Shoals residents use septic tanks. Some of these private septic tanks are aging and are discharging an unknown amount of untreated effluent into the lakes. Reilly said the city has about 2,200 water taps and he estimated a similar number of septic tanks, some of which date to the mid-1960s; the city was incorporated in 1966.

"My personal viewpoint is water quality would be better if we treat it right. Now who knows what seeps in the lake?" Reilly said.

"The ban is in place primarily due to the influences downstream in Austin," Reilly added. "It's not so much a water quality issue for them as it is a no growth issue for them. If you allow discharges into the lake it will make it easier for people to develop the land and they don't want to see that."

Reilly and other supporters of lifting the ban argue that newer technology and stiffer requirements imposed by TCEQ make the discharge ban outdated.

Burnet County Commissioner Joe Don Dockery agreed the ban should be lifted. He said permitting wastewater plants to discharge effluent would allow the shutting down of countless leaky septic tanks that already pose a hazard to lake quality.

Officials with LCRA, which regulates on-site sewage plants, said there are more than 22,000 septic tanks under its jurisdiction, which includes septic tanks within 2,000 to 2,200 feet of all the lakes from Buchanan to Travis. It was not known how many are malfunctioning.

Dockery and Burnet County Judge Donna Klaeger have begun discussions to determine how

the county might obtain Texas Water Development Board grants or loans to help build not only a wastewater treatment plant, but also put together a regional water treatment plan to serve water-starved communities in the southern parts of the county.

Marble Falls, which is planning to expand its wastewater capability to accommodate growth, also is prohibited from discharging its wastewater into Lake Marble Falls. Instead the city discharges its effluent onto an irrigation field. The city wants to build a new wastewater plant on the south side of the Colorado River, treat it to "type one" standards and discharge the effluent into Lake Marble Falls, said Ralph Hendricks, interim city manager.

If the discharge ban isn't lifted the city will discharge effluent on a golf course in the Flat Rock residential development, he said. That project probably won't get started for at least five years, after the city expands its existing plant on the north of the river, he said.

Highland Lakes different

The stink being raised on the Highland Lakes is unlike others in Texas. Opponents insist that allowing discharges is risky, a potential harm to lakes that are known as some of the most clearest and cleanest in Texas—not to mention pose a potential health risk that the public need not take.

Across Texas and, indeed, the nation, wastewater has long been used as source water in the water treatment process, which might be thought of as a microcosm of the hydrologic cycle. It is common for effluent discharged into waterways to be pulled out downstream for drinking water.

In fact, the City of Austin discharges about 80 million gallons a day of treated effluent into the Colorado downstream of Lady Bird Lake and during the dry summer months this treated wastewater can make up half or more of the water in the Colorado River between Austin and Matagorda Bay.

Across the state, "a large fraction of the discharges that are permitted are within the watersheds of water bodies designated for drinking water supply," TCEQ spokeswoman Andrea Morrow said in an e-mail response to a series of questions.

In some ways the battle over effluent in the lakes is pitting Travis County and the City of Austin (downstream) vs. Burnet County (where all of the Highland Lakes are located at least in part), Llano County and to a lesser extent, Williamson County (home of Leander, which is partly in the Colorado River watershed).

Travis County Commissioners' Court recently passed a resolution opposing Granite Shoals' and Leander's petition to have the TCEQ remove the restrictions on discharging effluent into the Highland Lakes. On Thursday, Austin's City Council is expected to vote to join with Travis County in approving its own resolution in opposition to removing the ban.

Reilly of Granite Shoals went so far as to claim that Austin's opposition to lifting the ban is hypocritical. "They already discharge into the Colorado River, wastewater with a very high content in nutrients, just downstream of Lady Bird Lake. They are a bit hypocritical with regard to water quality issues."

Not on the Highland Lakes

Just because effluent is dumped other places doesn't mean it should be done on the Highland Lakes, say county and city officials, as well as officials with Highland Lakes' interest groups that oppose the lifting of the discharge ban. They cite what they say are special characteristics of the Highland Lakes, with steep rocky terrain and a limited ability for the thin soils to soak up nutrients. The groups include Highland Lakes Group and the Protect Lake Travis Association and DELTA (Don't Empty Lake Travis Association), as well as the City of Lakeway and water supply corporations.

City officials have reportedly said there is a big difference between dumping effluent into a

faster moving river than into a lake. The Lower Colorado River Authority, the river authority that is tasked with acting as a steward to the entire river basin, also opposes the lifting of the ban.

LCRA said a computer model it uses to predict water quality changes to Lake Travis based on potential future conditions shows that allowing discharges into Lake Travis would lessen water quality by promoting algae growth and reducing clarity. This is because the wastewater discharges would increase nutrients and nitrogen, which is not commonly removed in wastewater treatment, said Emlea Chanslor, spokeswoman with LCRA. She said LCRA would present the findings of its environmental model to TCEQ as it considers the petition. TCEQ is expected to rule on the petition sometime next month.

Cole Rowland, president of the Highland Lakes Group, one of three vocal groups that oppose effluent discharges into the lakes, noted that none of the cities downstream of Austin use river water as the source for their drinking water.

"There are probably 16 cities below Austin on the Colorado River and not a single one uses surface water," Rowland said. "They all use groundwater. That may be a coincidence but I don't think so."

When contacted by a reporter, Rowland said he was unaware of Burnet's application, which has slipped under the radar of many lake supporters.

Lonnie Moore, president of the Protect Lake Travis Association, said he was aware of the 10-mile discharge rule, and he said his group doesn't formally plan to oppose Burnet's plans. His 25-year-old group was formed in the early 1980s to combat discharges by a planned new development along Lake Travis, a battle the group eventually won, though it accepted the 10-mile compromise.

"They're outside the 10-mile limit," Moore said. "They won't hear from us, but we'll say we're disappointed," in Burnet's plans.

The provision to allow discharges 10 or more stream miles from the Highland Lakes was orchestrated by the City of Burnet at the time the legislation was being adopted, said Bob Thonhoff, who engineered Burnet's current wastewater plant (built in 1984) and is the engineer of the proposed expanded one, which also is projected to last about 25 years. Asked about Burnet's application for its plant, Chanslor said LCRA was taking no position on it.

Officials with Austin Water Utility did not return a call seeking comment about Burnet's discharge plans, but several other downstream communities oppose it.

"I'm quite concerned about Burnet's proposed increased discharge even though they are 10 miles plus from Lake Travis," said Richard Eason, general manager of Lakeway Municipal Utility District. "I have no doubt that it will degrade the quality of water in Lake Travis, not to mention in Hamilton Creek."

"That water – although it is treated – still contains things we shouldn't be drinking, and it goes into our water supply for 10,000 people," he said. "So the water being discharged into Hamilton Creek will be drunk by the citizens of Lakeway."

"Beneficial reuse" is a far better alternative than putting the treated water back into the lake, he said, such as using treated wastewater to landscape areas around the city.

Returned water drop in the bucket

Not all communities in Burnet County are of one voice on the issue of discharging effluent. And, even the fact that the treated water will add to the level of the lakes doesn't seem to impress even those communities threatened with going dry earlier this summer.

Kerry Spradley, president of Windermere Oaks Water Supply Corp., a community in southern Burnet County with more than 200 homes, said he would rather not take the chance with having the wastewater mixed into the source that it draws its water.

Windermere Oaks until recently was threatened with having to truck in water because its pipe in upper Lake Travis was sucking mud as the lake fell to 629 feet above sea level. The threat has lessened because recent rains have lifted the lake to 647 feet, though that's still 34 below the level considered full.

Moreover, consider the 1.7 million gallons a day Burnet might discharge. That amount is still only a drop in the proverbial bucket when you consider that Lake Travis holds about 260 billion gallons of water when it is at its "full" elevation of 681 feet above sea level. (Also, not all this amount will actually reach Lake Travis, given evaporation and seepage during its 10-mile plus journey.) That amount of water is about 0.5 percent of the amount the City of Austin is planning take out when it builds a controversial water treatment plant that would pull as much as 300 million gallons of water a day from the lake. Moreover, other fast-growing cities north and west of Austin -- Leander, Cedar Park and Round Rock -- have joined forces to start construction this fall of a new water treatment plant with a capacity to treat 142 million gallons of water a day.

"It's not worth the little bit of water that would be returned to the lake," Connie Ripley, founder of DELTA, said of the water Burnet will return. "They could do more with conservation and by putting their money into reuse," such as giving residents rebates to replace water-hog old toilets with more efficient ones. DELTA is a group about 200 citizens concerned mainly about declining water quantity -- too many "straws" drawing the limited Lake Travis water. Ripley and others also said Burnet's wastewater plant will increase nitrogen in the lake and promote algae growth, a position that LCRA has confirmed in modeling studies.

Constituents of Emerging Concern

Spradley said he fears the discharged water will contain all manner of pharmaceuticals, such as estrogen and prescription drugs, that are not removed during the treatment process. "We are concerned about what they don't treat," Spradley said during a water issues workshop sponsored by the Burnet County Commissioners' Court in September.

These have been labeled as "Constituents of Emerging Concern" (or CECs), by federal environmental regulators, which are closely monitoring Americans' increasing use of fertilizers and prescription drugs on water quality. "This goes through people and into the wastewater treatment system," Moore of Protect Lake Travis said.

Moore cited a U.S. Geological Survey study that showed small- and large-mouth bass changed sexes when they were exposed to wastewater effluent. "What does that mean long-term? It's still early. It may be 10 years from now before we know what all the effects will be. ... If you go to discharge now, because that is easy or less expensive, we may be sorry we didn't take some other approach."

The issue of CECs in treated wastewater is a one not denied by supporters of Burnet's plant and those who want to lift the ban. But the amounts are so miniscule as to pose no harm to people, said Thonhoff, the Austin engineer who is designing the plant. He cited studies by the Environmental Protection Agency.

"In my environmental engineering opinion you have this stigma (against treated waste water)," Thonhoff said. "You can make that water as clean as you want. They can make it cleaner than the lake is. They're just scared something might be in it that we don't know about."

More details on Burnet's plant

Burnet's wastewater plant must be approved by TCEQ, which recently began accepting public

comments. TCEQ has made a preliminary decision that the proposed permit meets all its statutory and regulatory requirements.

If approved by TCEQ as scheduled, the city hopes to put out requests for bids in January and select a contractor in April or May 2010. The plant could be completed in the fall or early winter 2011, Steele said.

TCEQ said it will accept written public comments and public meeting requests until Nov. 14, which is 30 days from when it published a notice in The Bulletin about the application for the new plant. Comments must be submitted to TCEQ's Office of the Chief Clerk, MC 105, P.O. Box 13087, Austin, TX 78711-3087 or electronically at www.tceq.state.tx.us/about/comments.html. If you need more information, call the TCEQ Office of Public Assistance at 1.800.687.4040.