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Texas Parks and Wildlife biologist Norman Boyd says the challenge in maintaining Texas' rivers is to avoid changes that alter the mix of waters in the bay, which harms the ecosystem.

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State law will set flow standards for river systems

Environmental groups back bid to protect bays' salinity balance

By **THOMAS KOROSEC**

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PORT O'CONNOR - Fed by heavy rains in the Hill Country, San Antonio Bay is flooded this summer with freshwater.

Just last fall, though, the story was drought, which crimped the Guadalupe River's flow into this critter-rich bay estuary system 75 miles up the coast from Corpus Christi.

"Droughts and flood are natural for the bay," Norman Boyd, a biologist for the Texas Parks and Wildlife Department, explained as dolphin frolicked behind him in the wake of a barge.

"The gene pool has been pulled through these conditions for thousands of years," he said. "What you don't want to do is take so much water from the river that we change the averages that much."

The challenge in managing Texas' rivers, Boyd said, is to avoid turning natural droughts into frequent, protracted events that change the mix of salt and fresh waters in the bay. That could decimate an ecosystem teeming with crabs, oysters, shrimp, fish and aquatic birds, including the endangered whooping crane.

A bill aimed at maintaining these so-called environmental flows was signed into law last month. It's being praised by environmental groups as a groundbreaking step toward preserving the health and productivity of Texas waters.

Historically in Texas, water not tapped by cities, industries and farms and left to run to the Gulf of Mexico has been considered "wasted."

Laying to rest that notion, the law will set up environmental flow standards for every river system in the state. They will be set through a public process that includes scientific study and input from water authorities, cities, businesses, environmental groups - everyone with a stake in the rivers.

It begins the process of ensuring that water is protected for environmental needs, although that outcome is not ultimately guaranteed.

"One of the big things we have accomplished is having the state acknowledge this as a priority, not just an after-the-fact consideration," said Myron Hess, an attorney in the National Wildlife Federation's Austin office.

The state, he noted, has gone through nearly a decade of long-range water planning with only scant mention in its most recent 50-year plan of leaving water flowing in its waterways.

'More controversial'

The concept of leaving water in rivers for the environment has been hotly contested and, in recent years, a matter for the courts.

Through a compromise that was signed off on by the state's major water suppliers, the chemical industry and other business groups, the new law sets up a process to inform decisions about river flows with the best available science.

In rivers that are not already overtaxed by existing water rights, the Texas Commission on Environmental Quality is directed to set aside for the environment some or all of the water not already dedicated to drinking water suppliers, agriculture, industrial plants and the like.

"Some people remember how we would find a good dam site and you went ahead and built it," said Dean Robbins, assistant general manager of the Texas Water Conservation Association, which represents the state's major water supply systems. "Water is much more controversial now than it's ever been."

Robbins said the rulemaking process set out in the law - in which the TCEQ will set the standards after hearing from scientists and interest groups - is a reasonable compromise for water suppliers because it will provide some certainty about flow limits in rivers across the state.

"It sets up a stakeholder-driven process that allows stakeholders to look at the science and make some recommendations to TCEQ on how they are going to go about setting aside water," he said.

By all accounts, much of the science behind the matter is in sharp dispute given the complexity of marine and river ecosystems, and that, too, is a subject the new law attempts to resolve.

"When we talk about these issues we just end up in a huge fight over the science," said Hess, the environmental lawyer. "We hope this process gets us to something we can agree on today instead of just fighting to a standstill."

Texas' new law was crafted against the backdrop of a much more contentious push by several environmental groups around the state to ensure rivers are not pumped dry one day.

Legal battles

In 2000, the San Marcos River Foundation applied for a water rights permit allowing it to keep hundreds of millions of gallons flowing in the San Marcos and Guadalupe rivers. Four other groups followed suit with application for permits aimed at keeping water flowing into Galveston and Matagorda bays and Caddo Lake.

In the past, such water rights have only been granted for human use, such as supplying water to cities or crops. The environmental groups' aim was to get in line for this public resource before future developers tap the last drop.

In 2003, under strong pressure from water suppliers and developers, the TCEQ rejected the San Marcos group's application, saying the commission lacked authority to grant a permit for such a use.

The San Marcos foundation sued, won in a district court in Austin last year, and is now defending that decision in an appeal.

"We didn't see the state watching out for the river," said Dianne Wassenich, executive director of the San Marcos group, which paid a \$52,000 application fee for its permit.

She said in droughts, the river gets down below 100 cubic feet of flow per second, "which is a pretty small stream."

Impact on wildlife

In the late 1990s, flows into the Guadalupe watershed were reduced so severely, she said, that the supply of blue crabs in San Antonio Bay dwindled, cutting the food supply to whooping cranes in the adjacent Aransas National Wildlife Refuge. She and federal wildlife officials attribute the death of 13 whooping cranes to that dry spell.

Although the nation's largest flock of whooping cranes - numbering 237 - has become emblematic of the inflows issue, freshwater flows into estuaries all along the Texas coast provide nutrients, sediments and the proper mix of salt and fresh water sustaining scores of species, from tiny worms and clams to juvenile redfish, biologists say.

Wassenich said she doubts the new inflows law can help the San Marcos River because much of its water is already spoken for by existing water permits.

Some of that capacity has gone unused, but it is being tapped in increasing amounts as the Hill Country draws new residents.

One developer near Martindale recently acquired unused water rights dating back nearly 100 years and is using it to build a high-end housing development around a newly impounded water-skiing lake, she said.

"There are so many old, unused permits on this river I think you could dry it several times if they were all used," she said.

"It's an arrangement that might help some rivers that still have a lot of unappropriated water left, like in East Texas. Our river is pretty close to overcapacity now, so there's not much left to set aside (for environmental flows)."

If her group prevails in court, however, it would give instream flows in the river priority over such proposals as an application for water from the Guadalupe-Blanco River Authority.

The 10-county district based in Seguin is proposing to take water out of the Guadalupe at a point just above San Antonio Bay and pump it north to cities such as New Braunfels and San Marcos.

The project, expected to cost \$793 million, is included in the state's most recent long-range water development plan, which was adopted in November.

Hess, with the National Wildlife Federation, said he and others who pushed for the new law support Wassenich in her fight.

But he said that even a victory for her group in the current lawsuit is not likely to force TCEQ to grant water rights to environmental groups against the wishes of the state's largest cities, water developers, industry, farmers and others.

Striking a balance

There are those, too, who wonder whether the new law can balance the need for freshwater for the environment against the powerful push of rising populations, new homes and businesses.

"When the water boys start talking about not having water for all the babies, it's hard to stand in the way," said Guy Jackson, an Anahuac attorney who represents a group of Galveston Bay oystermen. "You can fit everyone who's anyone in the oyster business into my office, which is about 20 by 20. How much clout do you think we'll have?"

Biologists consider oysters a "sentinel species," a general barometer of a bay's overall health. Immobile for much of their life cycle, they must live with the mix of fresh and salt water that comes their way.

'A harbinger of the future'

Beginning in November, Galveston Bay, the center of the state's \$2 billion a year commercial and sports fishing industry, will be the first to go through the environmental flows study and rulemaking process under the new law, along with Sabine Lake.

Ken Kramer, director of the Sierra Club's Lone Star chapter, said instances in recent years where the Rio Grande and other rivers stopped flowing altogether make it clear the issue is not theoretical.

"That's a harbinger of the future if we don't start allocating water now," he said. "This law moves the ball forward a little but there's a lot of work left to be done."

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