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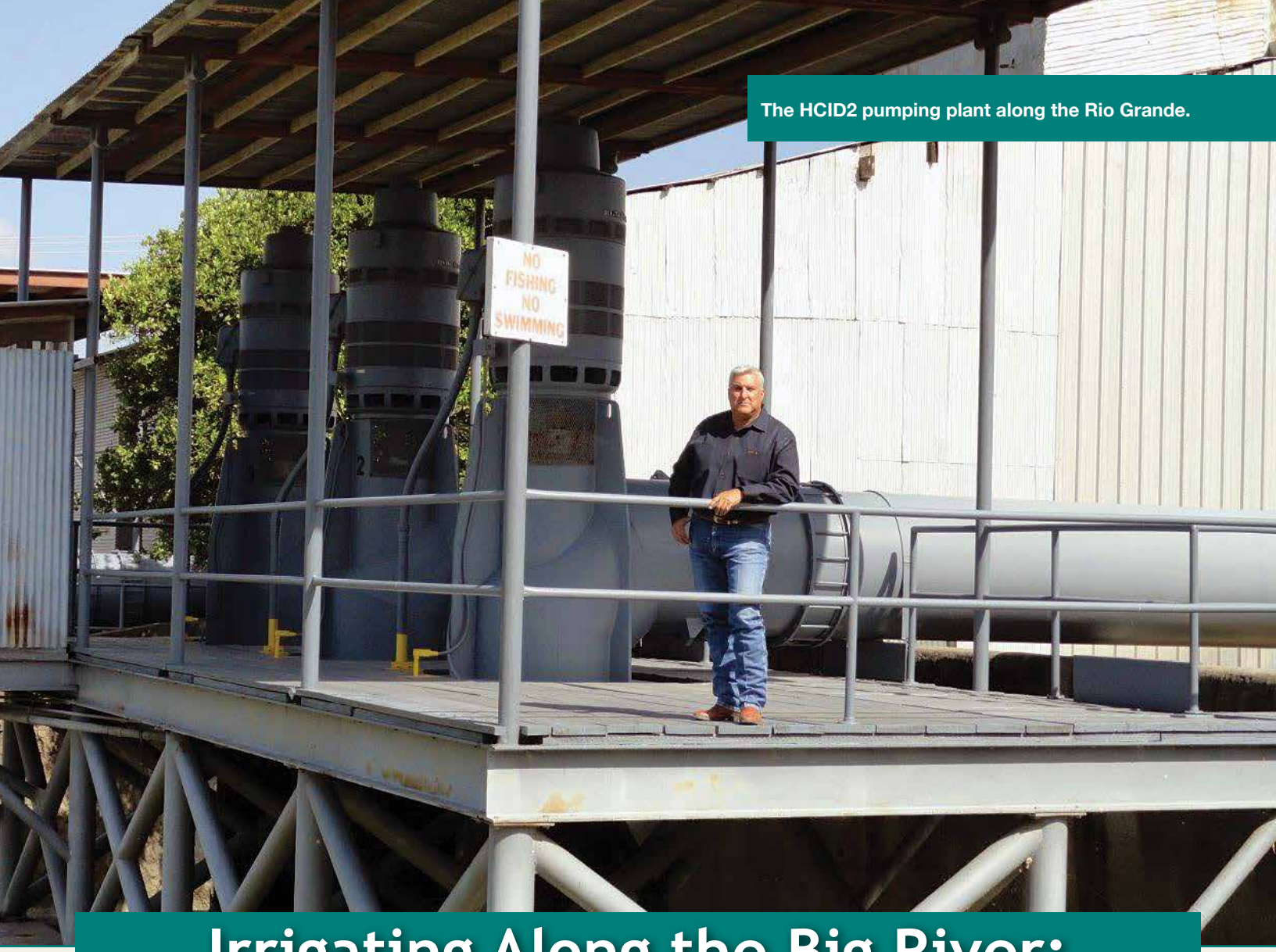
## Irrigating Along the Big River: An Interview With Sonny Hinojosa




The HCID2 pumping plant along the Rio Grande.

# Irrigating Along the Big River:
## An Interview With Sonny Hinojosa

*The Lower Rio Grande Valley is an extremely productive and varied agricultural center. There are 26 irrigation districts that pump Rio Grande water to service growers and municipalities. Hidalgo County Irrigation District No. 2 (HCID2) is one of those districts, supplying a reliable source of water for irrigation, municipal, industrial, and domestic uses to the lands within its boundaries. The district dates back to the 1920s, when it was formed as a water improvement district.*

*HCID2 has a system of 46 miles of earthen canals, 21 miles of lined canals, and 227 miles of concrete pipelines to deliver water to 40,000 irrigated acres. For drainage, there are 74 miles of open ditches and 80 miles of underground pipeline. HCID2 diverts 75,000 acre-feet of water annually, approximately 50,000 acre-feet for irrigation and 25,000 for municipal use. Growers in the district flood irrigate grain sorghum, cotton, corn, citrus, sugar cane, and an assortment of vegetables. The district supplies raw water to six municipalities.*

*Sonny Hinojosa has managed the HCID2 system and its 42 employees with a steady hand for 19 years. He knows water; prior to becoming general manager, Sonny was assistant Rio Grande watermaster for 8 years and a U.S. Department of Agriculture soil and range conservationist for 5 years.* Irrigation Leader *editor-in-chief, Kris Polly, spoke to Sonny about the unique challenges of running a district along an international border, his efforts to optimize HCID2's delivery system, and operations along the Rio Grande.*

**Kris Polly:** Please describe how you get the water from the river to your growers.

**Sonny Hinojosa:** We pump directly out of the Rio Grande. We are two and a half days downstream of Falcon Reservoir. We lift the water anywhere from 28 to 40 feet to our reservoir, which feeds the rest of our district through our canal system. When you divert from the Rio Grande in our area, everything flows away from the river. We are not a basin down here; we are a delta. If you draw water, it flows in a northeastern direction. All the irrigation districts down here have placed their main lateral along their west boundary line and gravity feed the rest of the district.

We have 10 vertical pumps that are 42 inches in diameter powered by 400 horsepower electric motors. We have a secondary pumping plant that lifts water 22 to 24 feet out of the river. The cost of powering the plants is a significant portion of our budget.

When we re-line a canal, we have to dewater it and bypass it in order to continue to provide water to our farmers. You end up doing about a thousand feet at a time.

We would like to do another 5 miles of canal lining. We've been waiting for some cost-share funding that hasn't materialized yet. So we are patching up as we can. We may have been the first district to use Huesker lining here in the Rio Grande Valley.

**Kris Polly:** One of the unique components of your district is its foundry. Please tell our readers about it.

**Sonny Hinojosa:** I think we are the only foundry south of San Antonio. We've been manufacturing our own gates and valves since the early 1900s. Our predecessor, the Louisiana-Rio Grande Canal Company, was created in 1911, and I think our foundry was created at the same time.

Some of the HCID2 crew pouring molten metal at the foundry.

**Kris Polly:** How long is the growing season in the Lower Rio Grande Valley?

**Sonny Hinojosa:** We have continuous water use throughout the year. Our growers plant row crops in February. They grow vegetables in the fall. Someone always needs water. We don't have a down time.

It makes it very challenging to conduct any maintenance. Most of our maintenance involves patch-ups. For work on longer stretches of the canal, we do a bypass.

It is a coal-fired facility, so we only operate in the wintertime due to local temperatures. In some ways it is a recycling operation—we accumulate cast iron year round from local salvage yards and broken valve or gate parts from other districts and melt them down. Originally, we used it for our own purposes, but now we do sell to other irrigation districts, including one up north on the Red River.

Well gates forged at the HCID2 foundry.

**Kris Polly:** What is the top issue for your district?

**Sonny Hinojosa:** The rapid pace of urbanization. Ten years ago, we were losing 800 acres of prime farmland per year. The recession halted development for about five years, and now it is slowly starting to pick up again. Urbanization causes fragmentation in our farmland. So you will have a subdivision that pops up around a district canal or pipeline. Protecting those facilities is a challenge.

Once a property is developed, it is excluded from the boundaries of the district and they are entitled to receive irrigation water. We'll take the water that was associated with that development, convert it to municipal use, and provide it to the municipal supplier.

**Kris Polly:** As a result of that development, does the district have issues with encroachment?

**Sonny Hinojosa:** Most of the issues that arise are resolvable. We are very involved in the plat approval process. We have agreements with all our municipalities—they send us plats for our approval. It is at that time that we can provide comments about our easements and rights-of-way.

**Kris Polly:** Given the challenges you are facing, what would you like to see the district accomplish in the near future?

**Sonny Hinojosa:** A high priority for us right now is to install automated gates. That has been tremendous for us. We've installed Rubicon automated gates on two laterals. That cuts down a lot on our personnel having to manually manipulate the check structures in the canal system. Now we can monitor and manipulate those structures via smartphone or tablet. In fact, one of those laterals is on Total Channel Control, so the lateral really takes care of itself. As you open up a sublateral and the pool between the two check structures drops, the control box will automatically signal an upstream gate that will release more water. We don't see a dry canal, and on the flip side, we don't see the canal top over and spill. We would like to implement this kind of automation with all our open channels.

In the past, we had applied for, and successfully obtained, WaterSmart grants for the automation of the first two laterals. However, we have been unsuccessful the last couple of years, so we are going to tackle the rest on our own through our reserve fund.

**Kris Polly:** Please tell us about the Rio Grande watermaster program, which regulates water allocations between the United States and Mexico.

**Sonny Hinojosa:** That jurisdiction begins at Fort Quitman, Texas, and ends at the mouth of the river. We do not rely on any of the water coming from upstream—

New Mexico only releases enough for the Rio Grande Valley. Our water can be traced back to the confluence of the Rio Conchos and the Rio Grande. We get 100 percent of the Pecos in Texas, but that doesn't bring a whole lot of water. So we rely heavily on the water that we get from Mexico.

Treaty compliance is a huge issue—Mexico has no penalty for noncompliance. If Mexico incurs a water deficit, as calculated within a five-year cycle, the 1944 treaty provides for an additional five years for Mexico to make it up to the United States. Mexico is using water that is rightfully ours to grow crops within its country to market in the United States. There is something very wrong with that picture.

**Kris Polly:** How has the border-crossing situation affected your district?

**Sonny Hinojosa:** It hasn't really affected our district. It is a daily occurrence that immigrants are crossing our system. Our crews will be working on the canal, and a group of immigrants will walk or swim across. What is a shame is that this is a normal occurrence. But this has been going on for years. It is only recently that the issue has been getting publicity.

Sometimes, I'll be watching "Border Wars" on television, and I recognize our facilities from their helicopters. I know exactly where people are crossing.

Alfalfa valves.

**Kris Polly:** Do you have counterpart districts on the Mexican side of the border?

**Sonny Hinojosa:** There are two irrigation districts in Mexico across the river from us. Their situation is very different from ours. In Mexico, the state government releases water for the districts and those districts get what they get. Whereas here in Texas, as long as you have a water right, you have a right to call on that water from storage. Every acre-foot belongs to somebody.

**Kris Polly:** Given the circumstances with Mexico, has there been any effort to pump groundwater to augment surface deliveries?

**Sonny Hinojosa:** As part of our regional water planning group, we have discussed the feasibility of a brackish desalination plant. But right now, 98 to 99 percent of our needs are met by surface water.

Border crossings have not posed a safety threat to our crew. These people are not looking to rip anything up; they are just looking to get into the United States. Just last week, we had a group of 40 women and children stop one of our men doing a repair job at our pumping plant and ask where the border patrol station was.

**Kris Polly:** This issue of *Irrigation Leader* is focusing on the Rio Grande. Is there anything else you would like to share with our readers about the river?

**Sonny Hinojosa:** A lot of people have the perception that this is a free-flowing river. It is not. The only water that is in the river below Falcon Dam is water that is being released for someone's needs. In a perfect world, there would be no water going out the mouth of the river. All that water in storage belongs to somebody. The only water released is to meet someone's request.