LOOKING BACK TO MOVE FORWARD

Lancaster came home in 1995. Tucson was booming. Housing developments were springing up seemingly every week. The first thing commonly laid out and asphalted were the streets. And, as throughout Tucson, during summer monsoons those streets would run like rivers, sending water pouring down into the arroyos in torrents scouring the banks, flowing too violently to properly soak back into the land.

The idea Tucson could live off its scant rainfall seemed a pipe dream. But other Tucsonans were also looking at those streets and trying to imagine a different possibility. Lancaster threw himself into teaching water-harvesting classes wherever he could find an audience, "just trying to create doors to connect people to this knowledge." Those sessions would become a touchstone and inspiration for many.

Yet even as he spread the word, Lancaster knew his own education wasn't finished. He continued to explore the history of the area he loved, often with his friends such as, Suzanne and Paul Fish, archaeologists at the Arizona State Museum. The more he learned, the more clearly he saw that the future he envisioned started with the past.

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Humans have lived in the Tucson valley for thousands of years. It's sometimes referred to as the oldest continuously cultivated spot in North America. Archeologists have found evidence that agriculture in the area goes back at least 4,000 years. +

The people who lived here millennia ago were farmers who grew crops both down in the river flats and other crops in the higher elevations. To do so, they dug irrigation canals from the Santa Cruz River and gathered rainfall runoff for the higher fields, using techniques that would be familiar to Maseko in Zimbabwe.

As he began to work out his own water harvesting methods, Lancaster came to see how closely they were tied to those ancient practices.

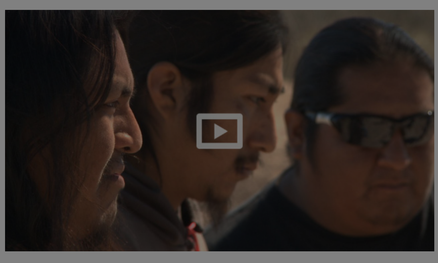
Standing on Tumamoc Hill outside of present-day Tucson with Lancaster, Suzanne Fish gestures toward the valley below and conjures up the ancient world.

*"**None of this is new.** We've got such an incredible legacy to draw on," he says. "The people who through time have lived here: they learned to live in balance with these surroundings."*

Lancaster also realized that the secret about that past was that it wasn't even really past. The old lessons are still alive on today's Tohono O'odham Nation south of Tucson, the third largest reservation in the United States.

The Tohono O'odham trace their lineage back to the two-millennia-old Hohokam civilization that flourished in the area until the mid 15th century. In recent years, a cultural revival among tribal members has focused on reconnecting with the past, including traditional farming practices. + Members of the tribe currently operate a successful farm that draws on many of the ancient water harvesting techniques, proving their continued validity

Lancaster got to know Clifford Pablo, a member of the tribe who now teaches at Tohono O'odham Community College. Pablo taught him about the surprising number of edible fruits and plants that can be found in the Sonoran desert. "He was the one who showed me how to use the mesquite flour," Lancaster remembers, "and I thought, this is so good, this is crazy, why aren't we using this?!"



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Lancaster's search for the best ways to live in the desert has also taken him south of the border. On a late winter day he drove down to the village of San Ignacio about 120 kilometers into Mexico with Jesus Garcia, an ecologist who grew up in the nearby town of Magdalena. They made the trip to meet Casimiro Sanchez, who supports his family with a small orchard fed by spring water that irrigate the land of several small farmers.

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Sanchez's orchard 6 is a lush Eden, crowded with 18 to 20 varieties of fruit trees and a profusion of cilantro, onions, spinach, and then flowers, chrysanthemums, roses and more. In February with the light bright through the defoliated trees the abundance of the winter crops is almost embarrassing.

Water travels down a local canal to this orchard and others through the force of gravity, no pumps or other technology. Garcia remembers when this part of Mexico had many more such orchards, when growing up in the local towns and villages was growing up in a land of hidden abundance. Today, there are fewer orchards, and less available water as a growing population and industrial development claim it, and Casimiro sees himself at the end of a tradition.

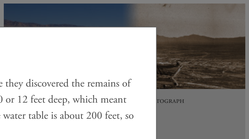
"Unfortunately, I think I am the last generation working in this orchard," he says.

But as he, Garcia and Lancaster sit by the canal, talking about the traditions of water use, it's clear there is an enduring connection. "What I see here is a picture into the past of what we had, the abundance we had that we've since lost," Lancaster says, speaking of Tucson. "So it's bittersweet for me to be here, but at the same time, it makes me realize all that is possible."

Tucson's history was slightly different. The fields and orchards were fed by the Santa Cruz River. Yet a similarly lush setting once existed. Today, the river flows only during rainstorms and most of the year Tucson is, in the words of Jonathan Mabury, Tucson's historic preservation officer, a "dusty, dry town." +

To change that, Lanc

He knew the change



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+ A dusty, dry town

In the 1990s, Mabry took part in an archeological excavation in downtown, where they discovered the remains of several wells hand dug in the late 1880s. "We could see that the wells were only 10 or 12 feet deep, which meant that the water table was only 10 to 12 feet below the surface," he says. "Today, the water table is about 200 feet, so it has dropped that much."

Marby has a photograph of Tucson taken in 1880 from the top of Sentinel Peak, a local mountain. It captures the city on the brink of change. The railroad had just arrived, and with it would come an influx of settlers, and the spread of ranching, which would lead to overgrazing. That, in turn, increased runoff as the denuded soil lacked the grasses to hold the rains. Greater demands on the aquifer also began to lower the water table, and Tucson soon changed.

"In the photo, you can see the lush agricultural fields," says Mabry. "That was the agricultural oasis that was Tucson's identity for millennia. That photo captures its last days. After more than 4,000 years of being an agricultural oasis with a river flowing through its heart, Tucson became a dusty, dry town, and its river only flowed during rainstorms."