THE BACKYARD SOLUTION

"We didn't have jobs that any bank would recognize and certainly didn't have income that a bank would recognize," Lancaster says, "so we had to get in on this together, and even then the only thing could afford was something that was about to be condemned."

A year before he met Maseko, Lancaster and his brother, Rodd, brought a house in the neighborhood of Dunbar/Spring. They didn't have a lot of choices.

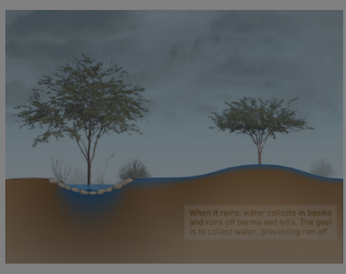
Dunbar/Spring was a historic, ethnically diverse neighborhood, but one that had fallen on hard times. The first time it rained, water poured through the Lancaster's roof. When Brad opened the door to take a look outside, it came off its hinges. Depressed, he sat down on the only perch available in the still empty house, the toilet. It fell through the floor.

Dunbar/Spring when Brad and his brother first moved.

Slowly, the Lancasters begin to fix up their property, working on a shoestring, but keeping one goal firmly in mind: as much as possible, they would live on water that fell freely from the sky.

At first they didn't succeed. "We kept undersizing everything initially," Lancaster remembers. "We were just sort of winging it." The street they had moved to was like much of Tucson, a largely barren streetscape where asphalt and a lack of shade pushed the already scorching summer temperatures up another ten degrees or more.

It was an urban environment that seemed to mock any idea of sustainable living.



Yet they persisted through years of trial and error. Working out the best way to irrigate their garden, deciding how to take advantage of grey water from the laundry and sinks, properly channeling and capturing rainfall – all of it took time and thought. In the process, Lancaster drew on his own experiences, those of Maseko and others to develop eight basic rules of water harvesting. These. he believes, can be applied to any home. +

"You know the tool you need for most of this?" he says. "A shovel."

Today, the Lancaster's property stands as a working laboratory of sustainable living. Visitors come from around Tucson and beyond. School groups visit. Lancaster proudly shows off the two 1,000 gallon rainwater tanks alongside the garage he rehabbed into a small residence. (Rodd, married and with a young son, got the main house.)

The Lancasters now capture 100 percent of the rain that falls on their eighth of an acre lot, plus the surrounding public right-of-way. It starts with the galvanized metal rooftops, which serve as catchment systems. The yard has been contoured so rainfall doesn't run toward the street but gathers in areas where it either infiltrates into the soil or to irrigate trees and other plants. Overall, they capture about 100,000 gallon

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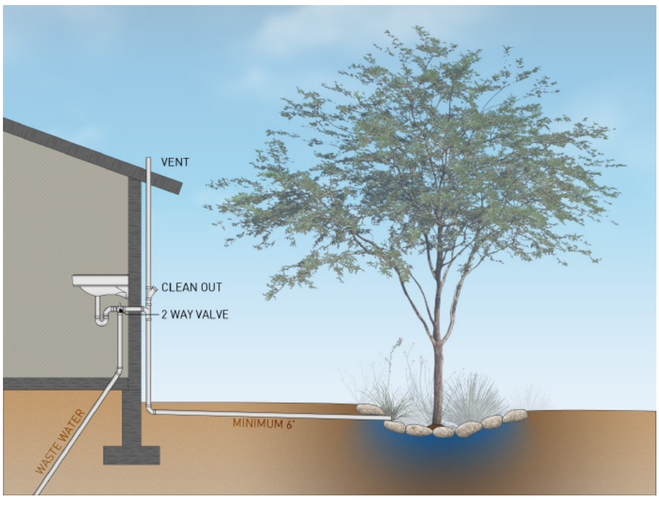

"Greywater," or water that has been used for washing or other purposes, is also recycled and used as an important secondary source for irrigation.

"This is the neighborhood laundromat," Lancaster says during a tour, proudly opening the door to a small shed to reveal a washing machine that several families on the block use. On one wall are a set of carefully labeled pipes that channel the grey water from the machine to the trees or other parts of the yard where it's needed.