



# **The Hohokam Water Story**

**Written by Arizona Project WET and Illustrated  
by Pearl Lam**



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**This book is dedicated to the Hohokam and the people of Tucson.**

**Enjoy this reading of how the Hohokam used water in the past, and how the water has changed over the course of nearly 2000 years.**

**This storybook was written and developed by Arizona Project WET for the Arizona Water Festival Curriculum Unit for 4th Grade Students.**

**<https://awf.projectwet.arizona.edu>**



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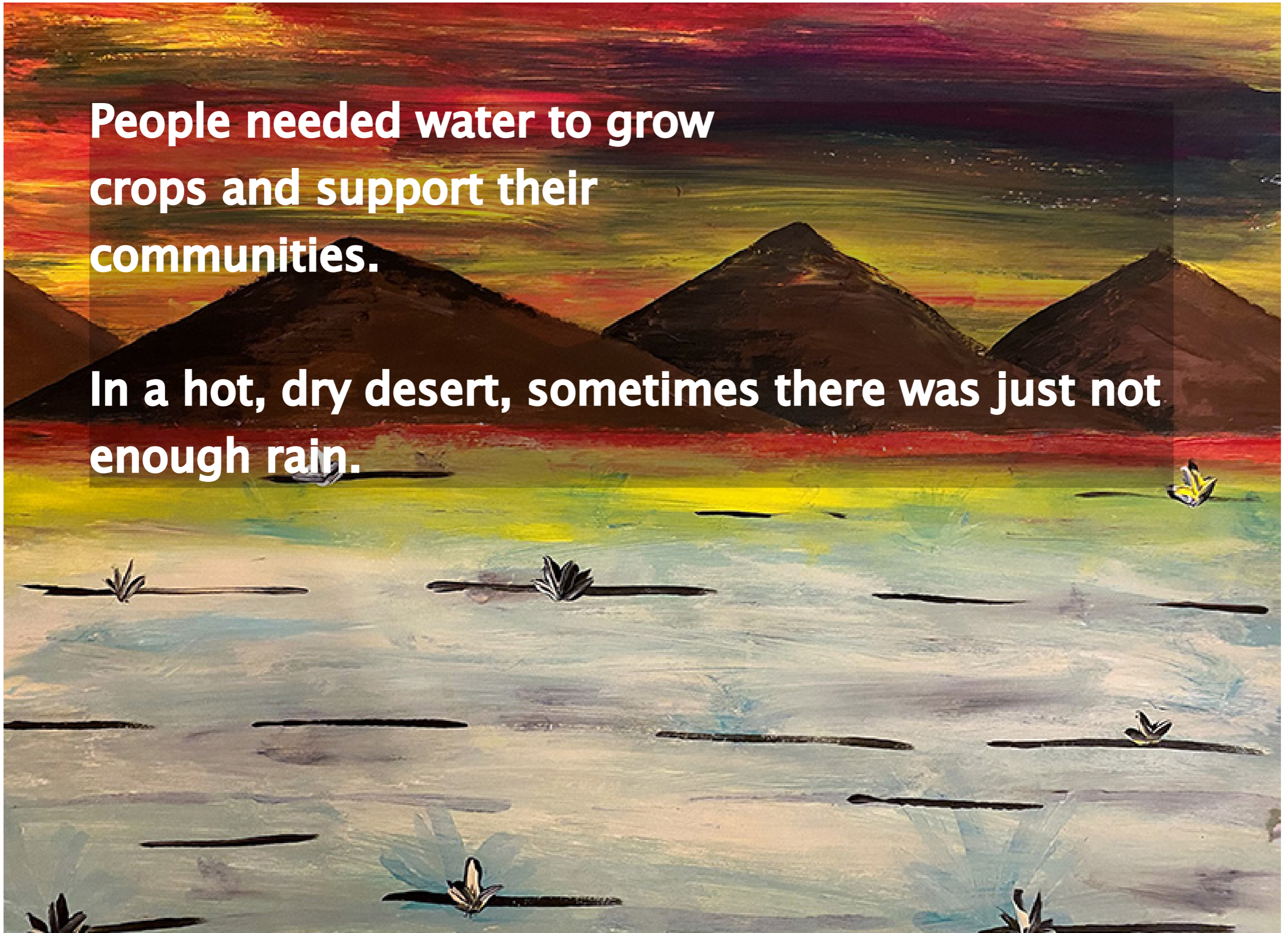
A painting of a river valley. The scene is viewed from an elevated perspective. In the foreground, a river flows from the bottom left towards the center. The right bank is sandy and populated by several small, dark, stylized human figures. The left bank is lush with dense green trees. In the background, rolling brown hills are visible under a sky with soft, white clouds. The overall style is impressionistic with visible brushstrokes.

**Long ago, around the time of Christ, a group of people moved into the Salt and Gila River Valleys and made farms along the rivers.**

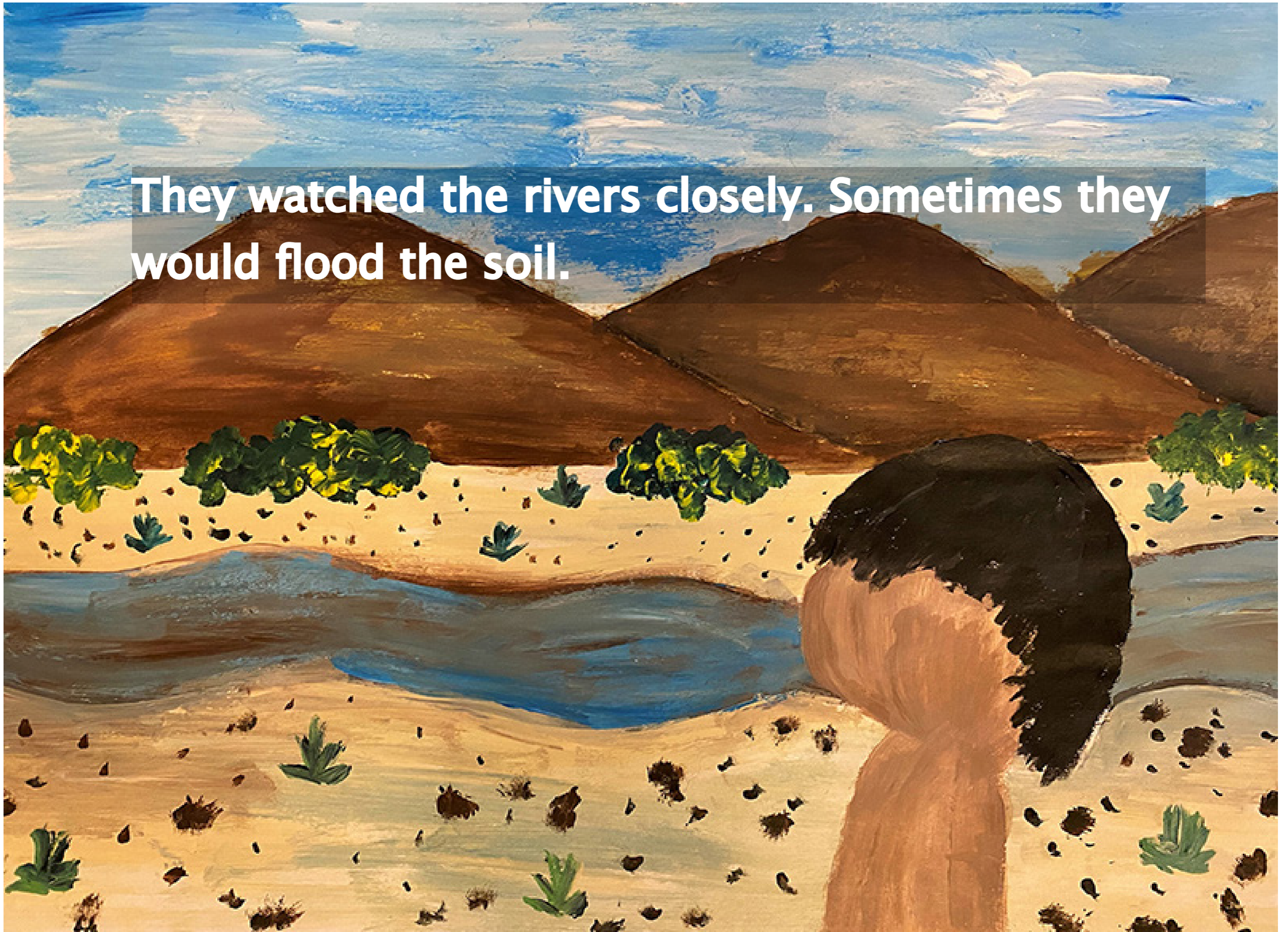


**People needed water to grow crops and support their communities.**


**In a hot, dry desert, sometimes there was just not enough rain.**



**They watched the rivers closely. Sometimes they would flood the soil.**






A painting of a desert landscape. A blue river flows through the center, with a wooden fence following its course. On the left, a thatched hut is visible. The foreground and middle ground are filled with various cacti, including tall saguaros and smaller cholla. The ground is sandy and dotted with small plants. The sky is a pale blue. The overall style is that of a traditional painting, possibly a mural or a canvas work.

**The villagers observed the environment and dug canals at precise locations to divert river water to their crops, eventually inventing what we know today as irrigation.**

As the people improved their irrigation system, the prehistoric culture of the Hohokam, or masters of the desert, emerged. It is 1000 A.D.





A painting depicting an ancient irrigation system. In the center, a blue canal flows through a landscape. On either side of the canal, there are rows of green, stylized plants. Several brown, stylized human figures are shown working in the fields. One figure is in the upper left, another in the upper right, and one in the lower left. In the middle of the canal, there is a structure made of vertical wooden posts, possibly a dam or a gate. The background is a mix of brown and blue, suggesting a dry, arid environment. The overall style is that of a traditional painting, possibly from an ancient civilization.

**Villages with thousand of people spanning hundreds of acres thrived using irrigation canals.**

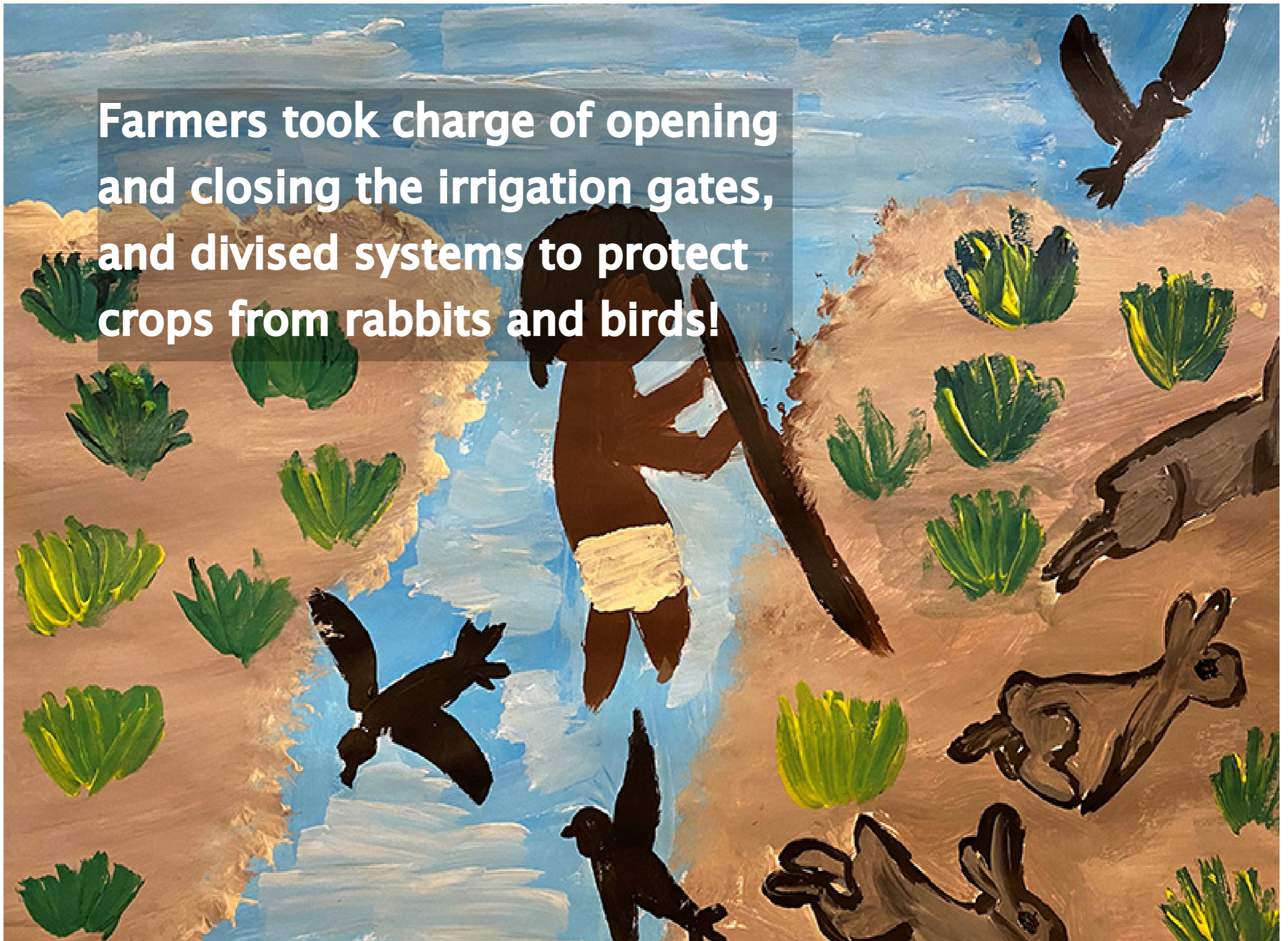
**People worked together to build, protect, and operated the canals.**



A painting of a coastal landscape. In the foreground, a field of green, leafy plants grows in rows on brown soil. Four brown, stylized human figures are working in the field, each in a different pose. In the background, a blue body of water meets a sandy shore under a sky with green foliage. The overall style is expressive and somewhat abstract.

**They decided when to plant the seeds and harvest their crop.**

Farmers took charge of opening and closing the irrigation gates, and devised systems to protect crops from rabbits and birds!







**The Hohokam designed the canals so that water flowed downhill from the river to the crops.**

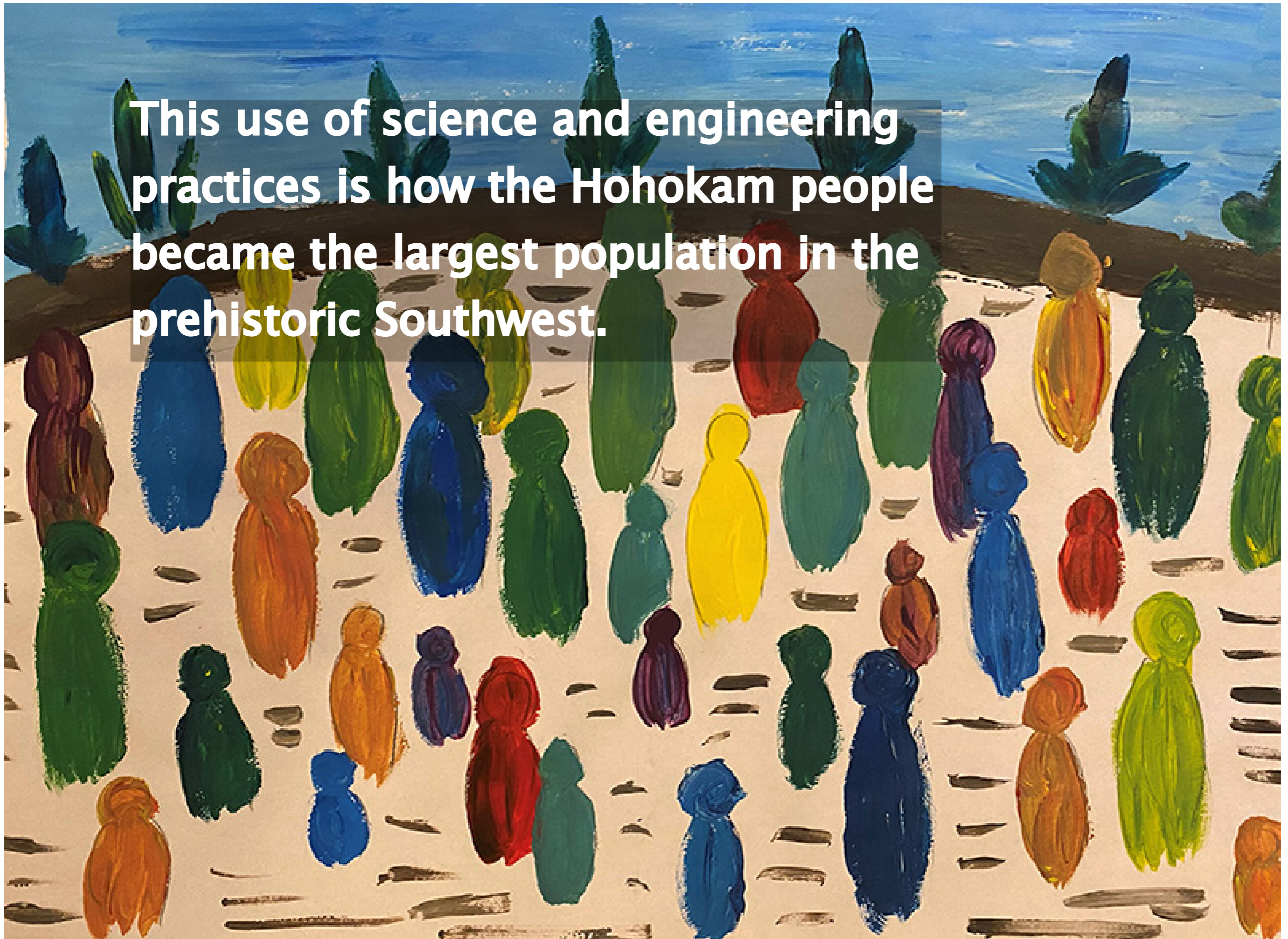
**And they were so large, they could fit hundreds of bighorn sheep!**

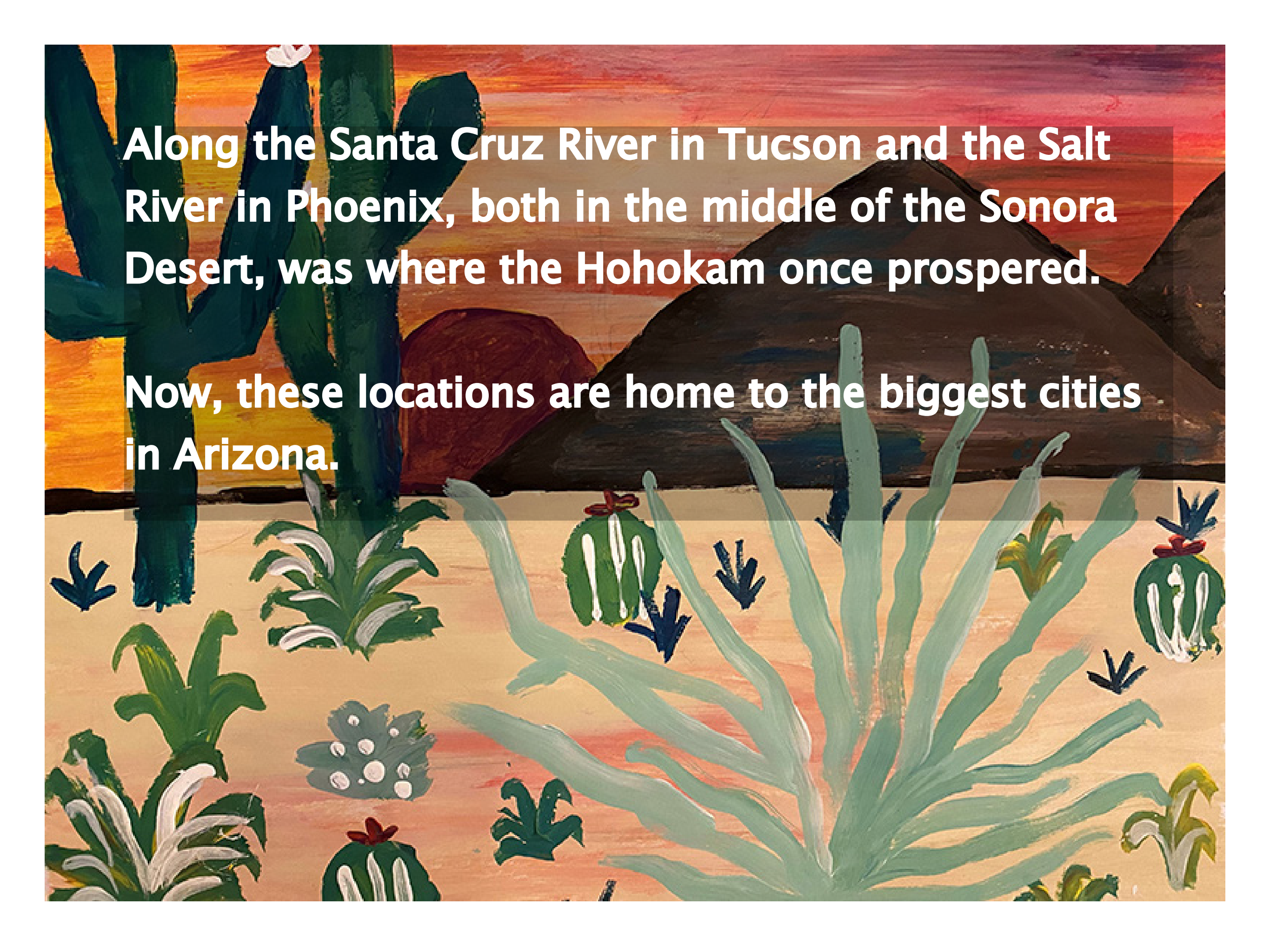
A painting depicting an irrigation canal. The canal is a vibrant blue, flowing through a landscape. On the left bank, there are several dark, vertical wooden posts. On the right bank, there are rows of green, leafy plants growing in a brown, sandy soil. In the foreground, a wooden structure with a red frame and yellow beams is visible, possibly a gate or a part of the irrigation system. The overall style is expressive and colorful.

**By 1300 A.D., the canals irrigated up to 110,000 acres. That's over 83,000 football fields!**



**This use of science and engineering practices is how the Hohokam people became the largest population in the prehistoric Southwest.**

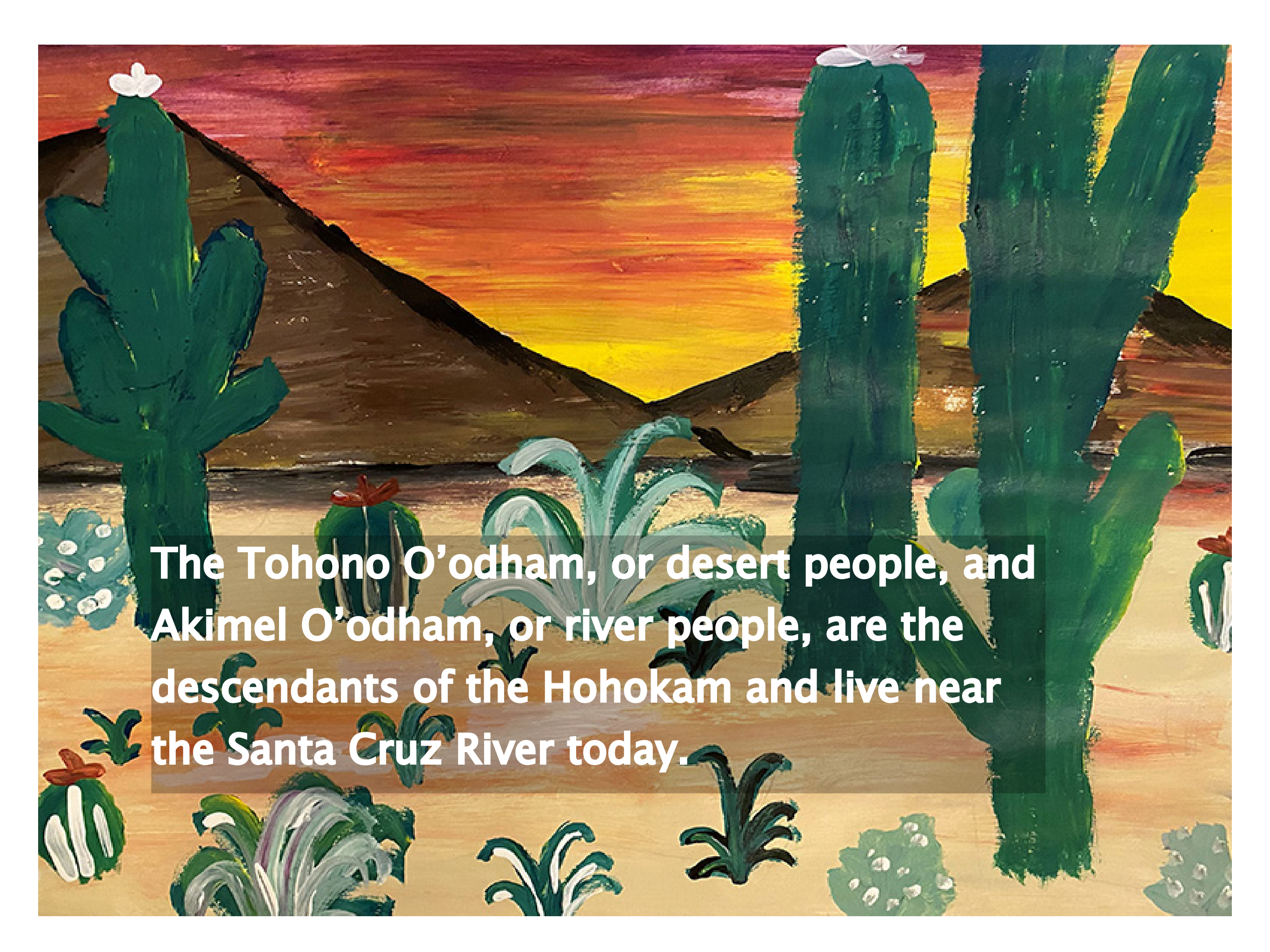




**Along the Santa Cruz River in Tucson and the Salt River in Phoenix, both in the middle of the Sonora Desert, was where the Hohokam once prospered.**

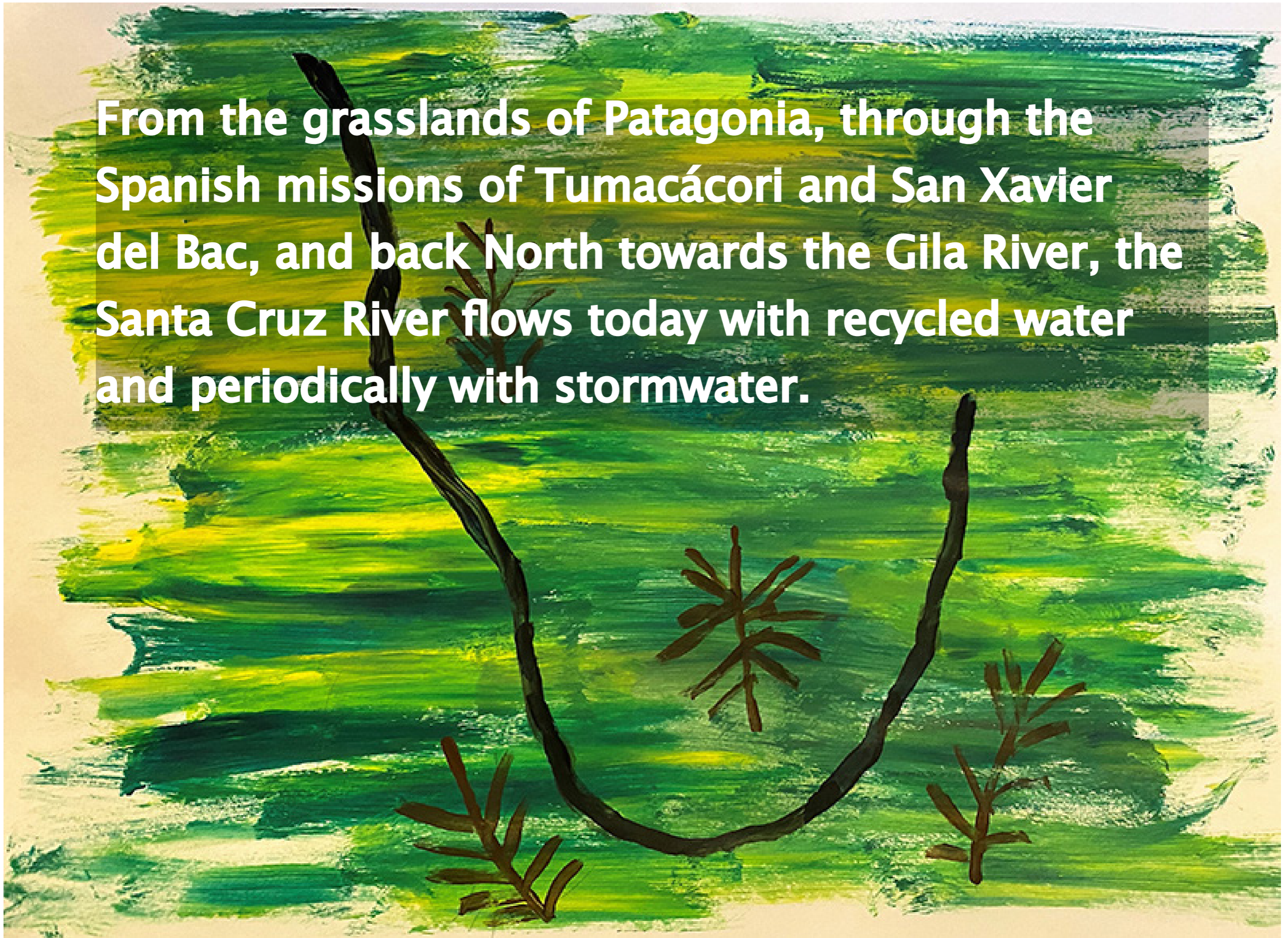
**Now, these locations are home to the biggest cities in Arizona.**





**The Tohono O'odham, or desert people, and Akimel O'odham, or river people, are the descendants of the Hohokam and live near the Santa Cruz River today.**

**From the grasslands of Patagonia, through the Spanish missions of Tumacácori and San Xavier del Bac, and back North towards the Gila River, the Santa Cruz River flows today with recycled water and periodically with stormwater.**



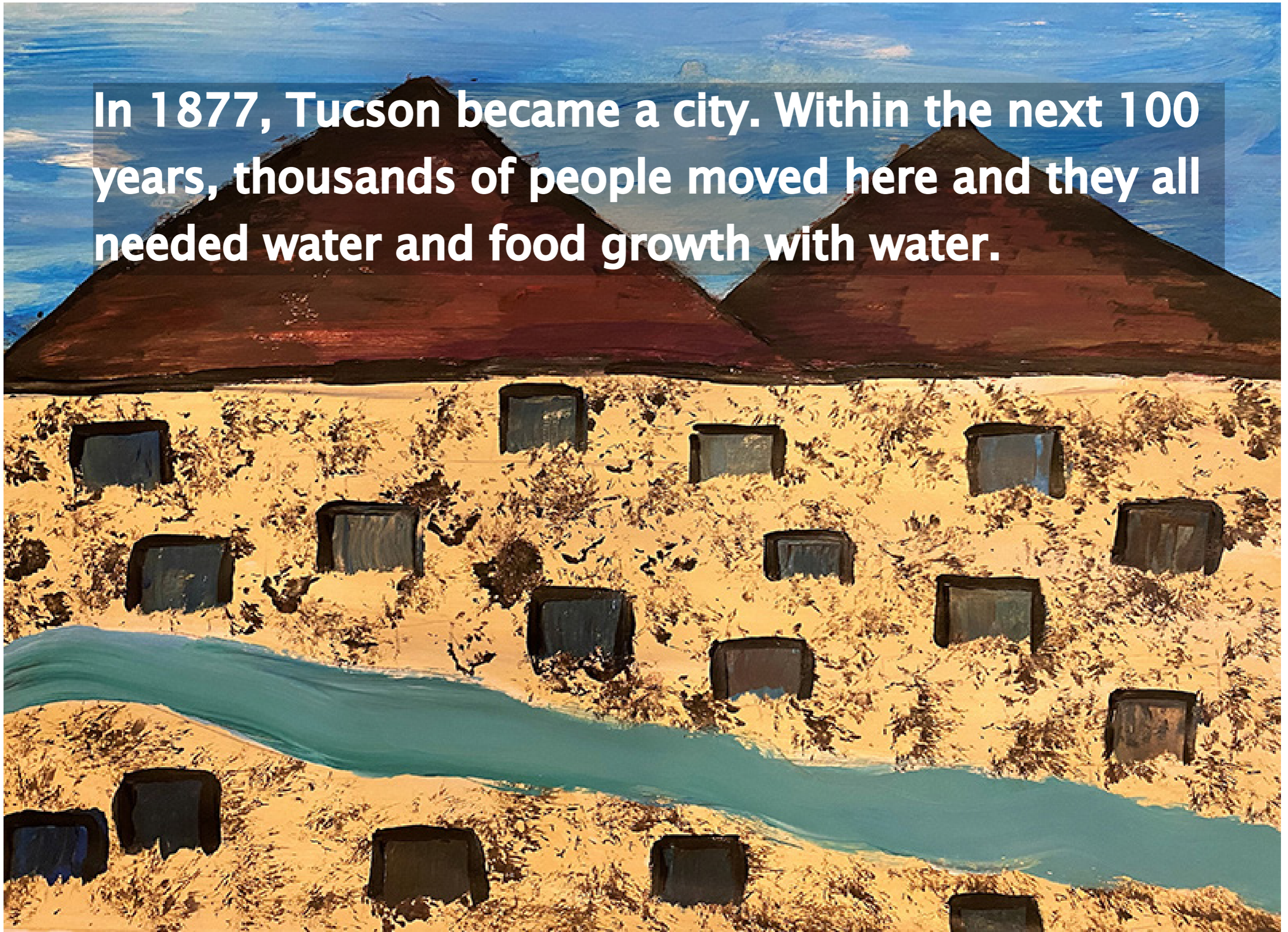




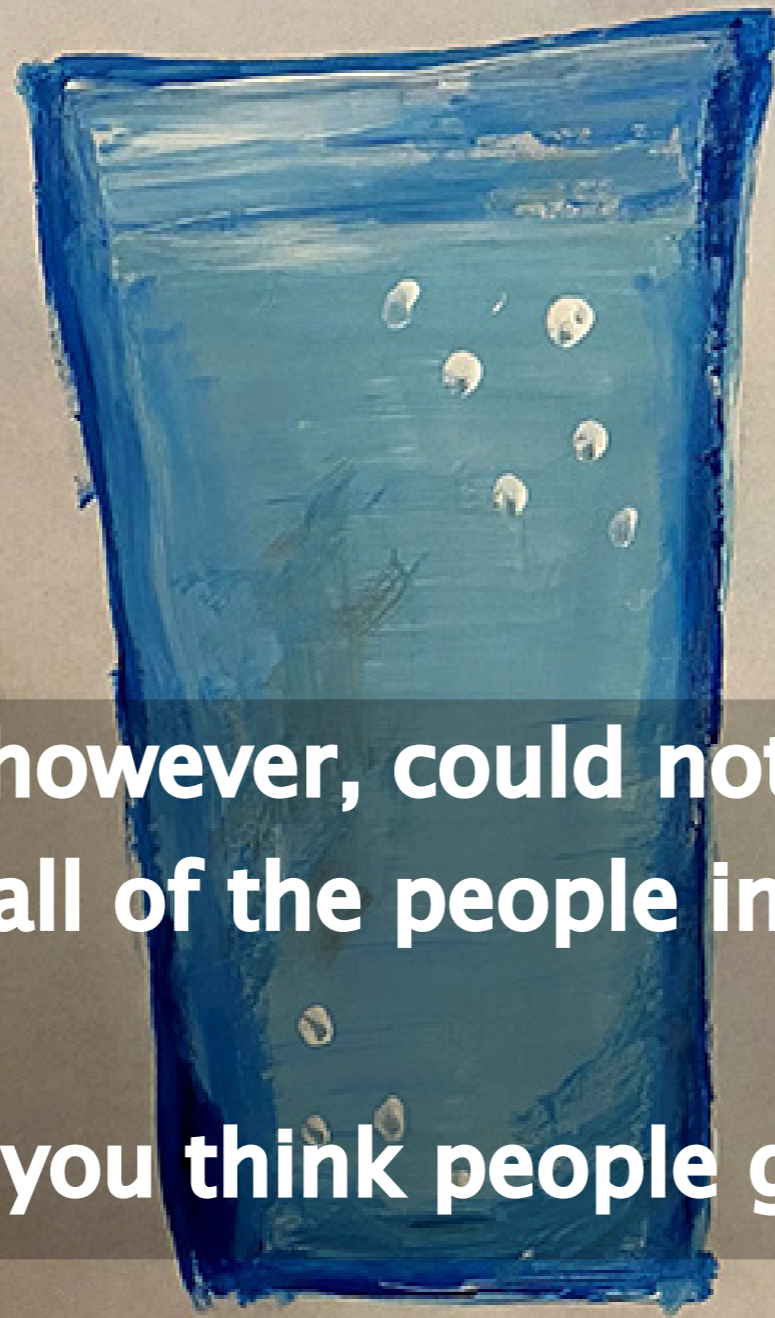
**But what was it like in the past?**

**In the 1700s, Native Americans, followed by Hispanic and Anglo settlers started using the river's water, just like the Hohokam before them. The river water was very closer to the surface.**

**In 1877, Tucson became a city. Within the next 100 years, thousands of people moved here and they all needed water and food growth with water.**

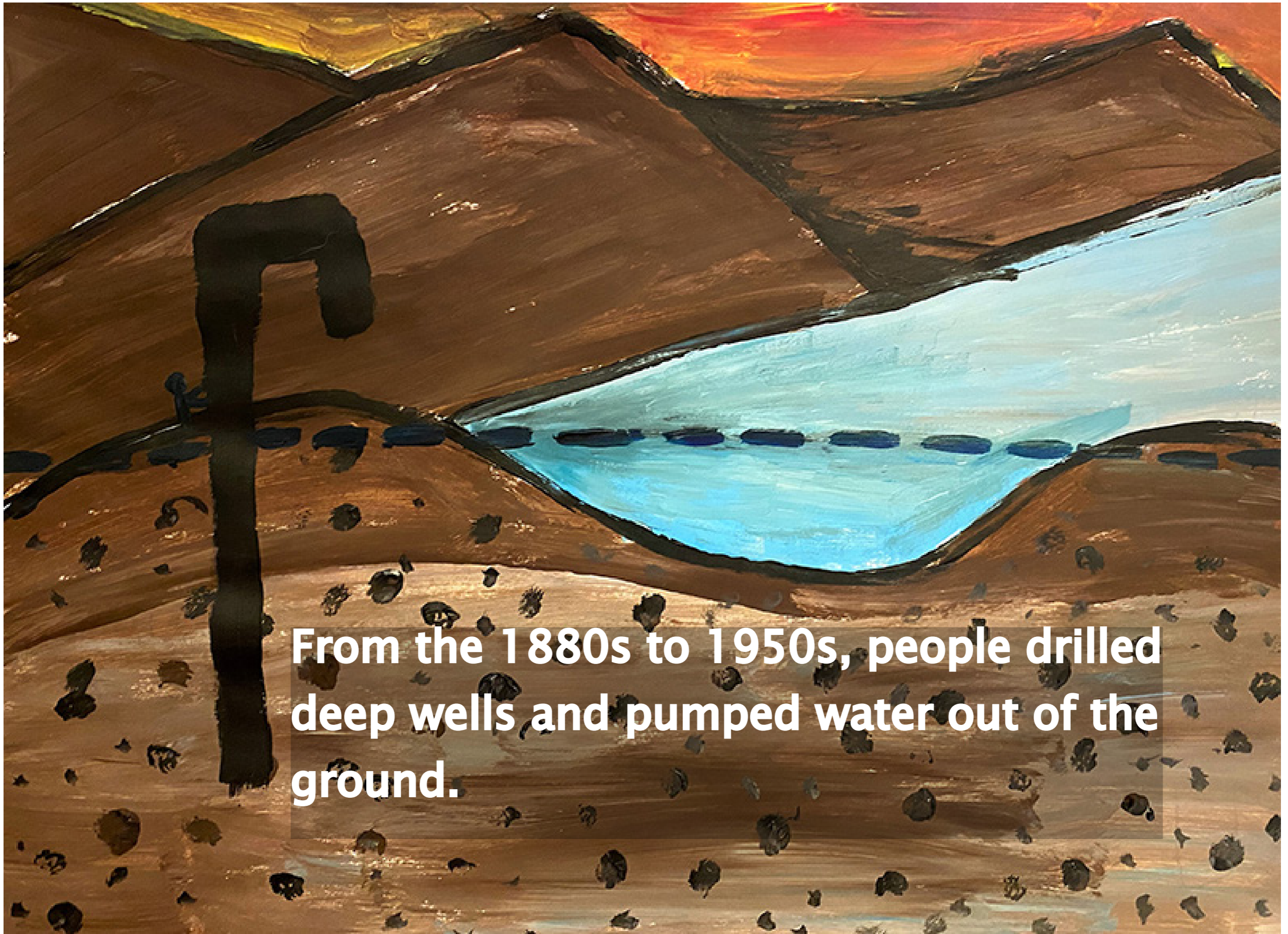






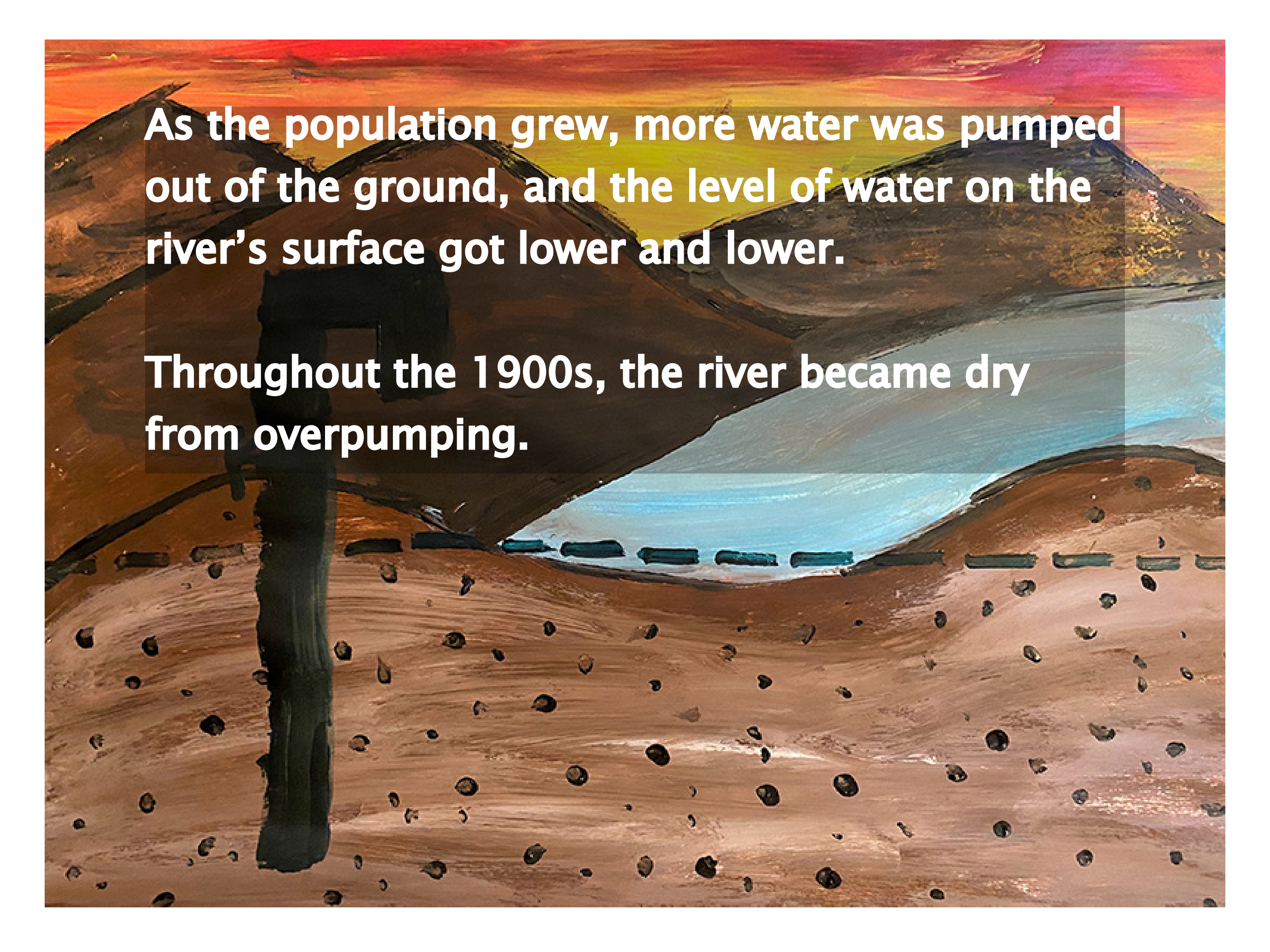
**The river however, could not provide enough water for all of the people in Tucson to live.**

**Where do you think people got their water from?**



From the 1880s to 1950s, people drilled deep wells and pumped water out of the ground.

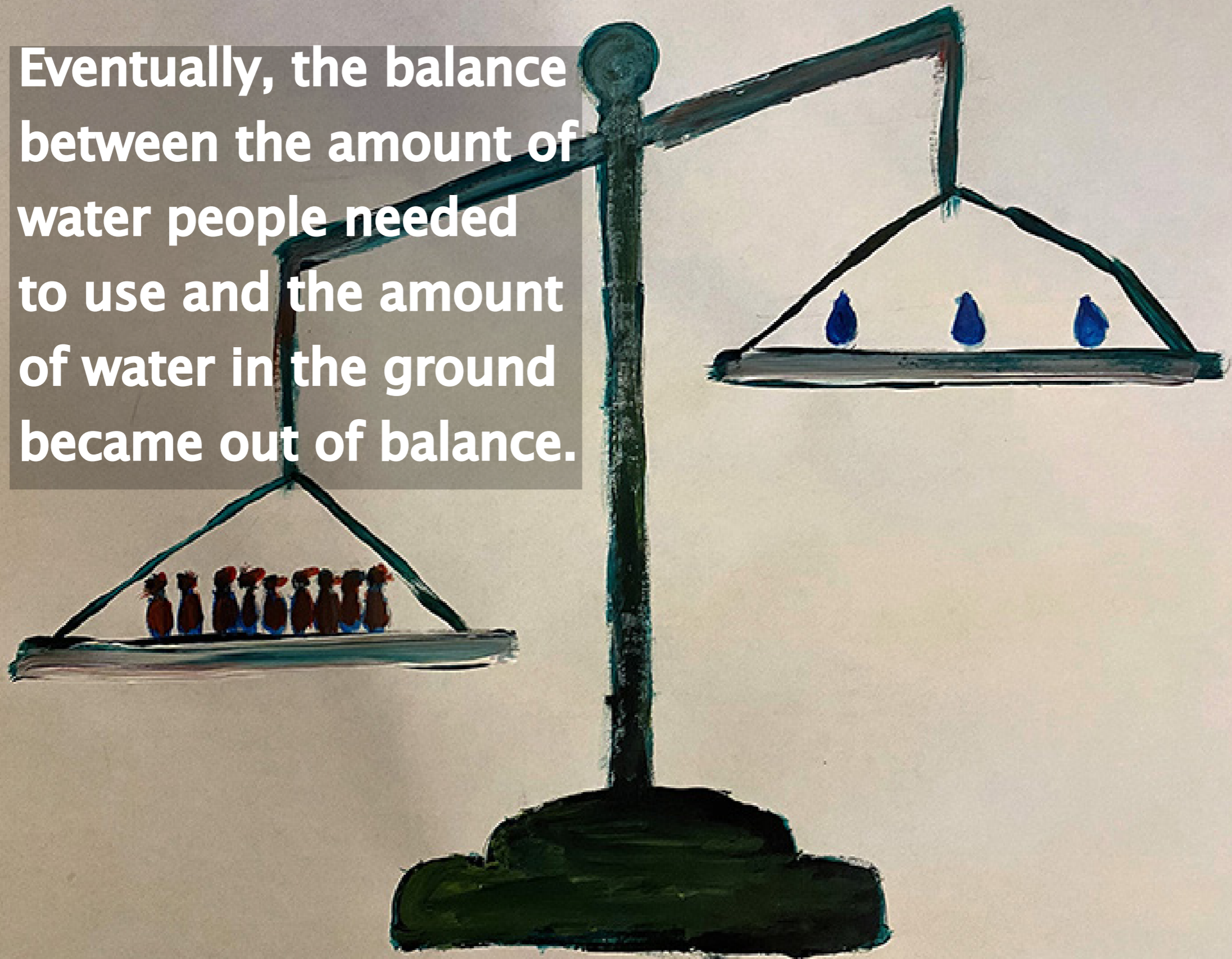


A painting depicting a dry riverbed. In the foreground, a wooden well stands on a sandy bank, surrounded by numerous small, dark, circular holes, likely from animal burrows. The riverbed itself is a wide, shallow channel of light brown sand, with a few small, dark, rectangular objects scattered along its length. In the background, a blue river flows through a valley, flanked by dark, rocky hills. The sky is a mix of orange, yellow, and red, suggesting a sunset or sunrise. The overall style is expressive and somewhat somber.

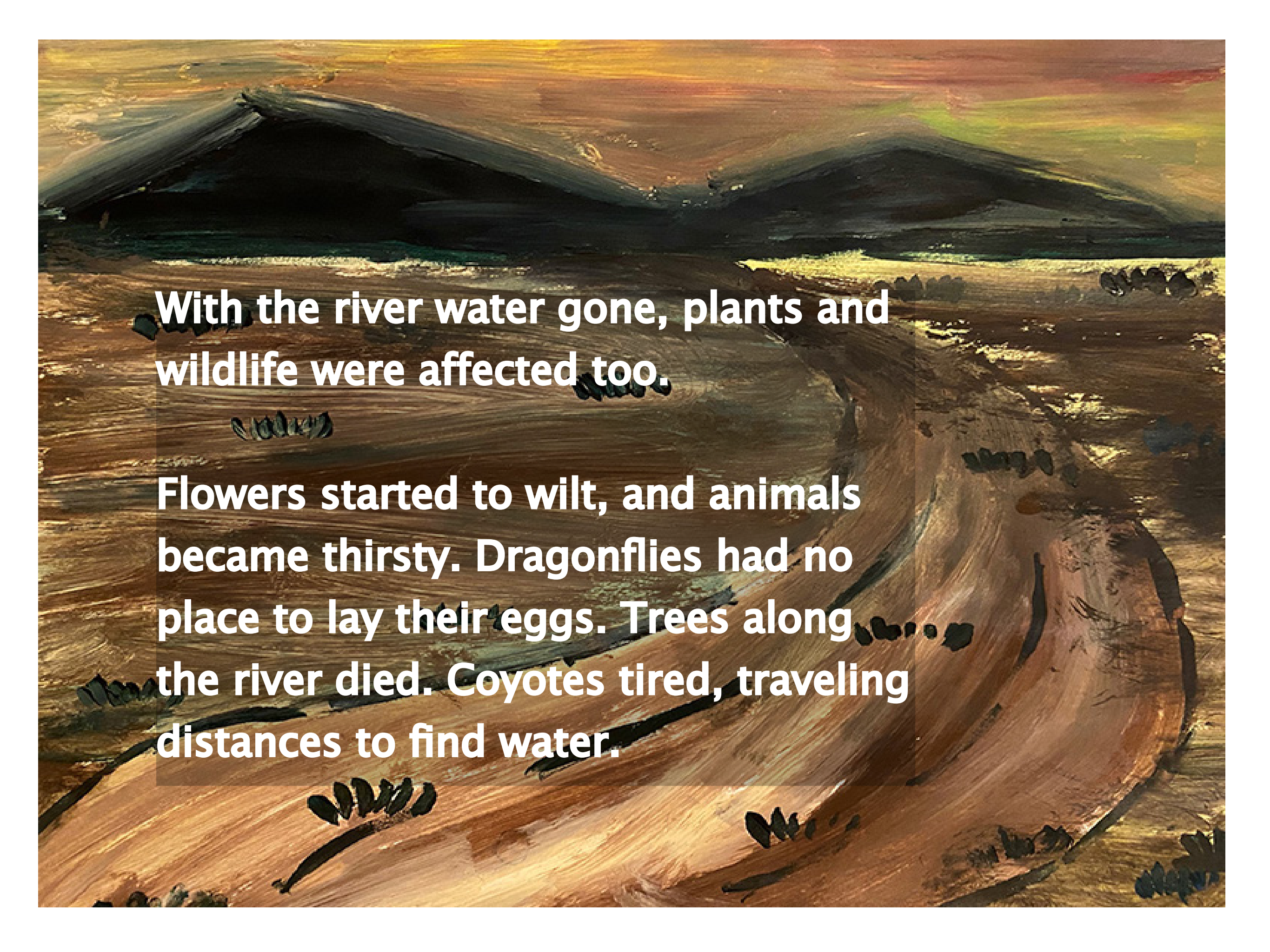
**As the population grew, more water was pumped out of the ground, and the level of water on the river's surface got lower and lower.**

**Throughout the 1900s, the river became dry from overpumping.**

Eventually, the balance between the amount of water people needed to use and the amount of water in the ground became out of balance.







**With the river water gone, plants and wildlife were affected too.**

**Flowers started to wilt, and animals became thirsty. Dragonflies had no place to lay their eggs. Trees along the river died. Coyotes tired, traveling distances to find water.**

**But the people of Tucson did not give up.**

**It was up to them to save water and find solutions to bring the balance back!**





A painting of a river scene. The river is depicted with blue and white brushstrokes, suggesting water and reflections. On the banks, there are several green plants with broad leaves and some brown, spiky stalks. The background is dark, making the plants and water stand out.

**One solution Tucson Water came up with was adding recycled water into the Santa Cruz River.**

**This happened in 2019 along a downtown section of the river called the Santa Cruz River Heritage Project.**

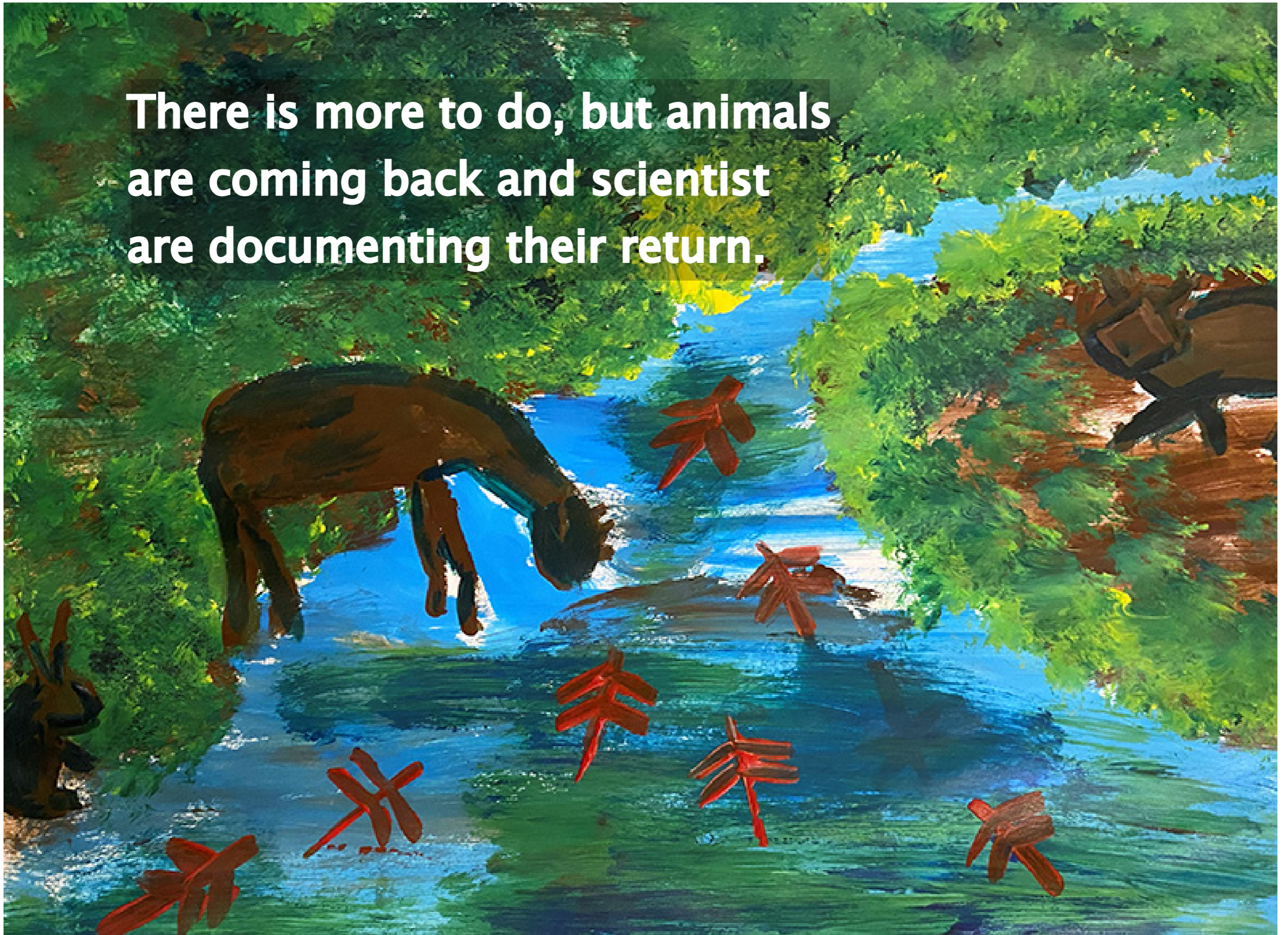


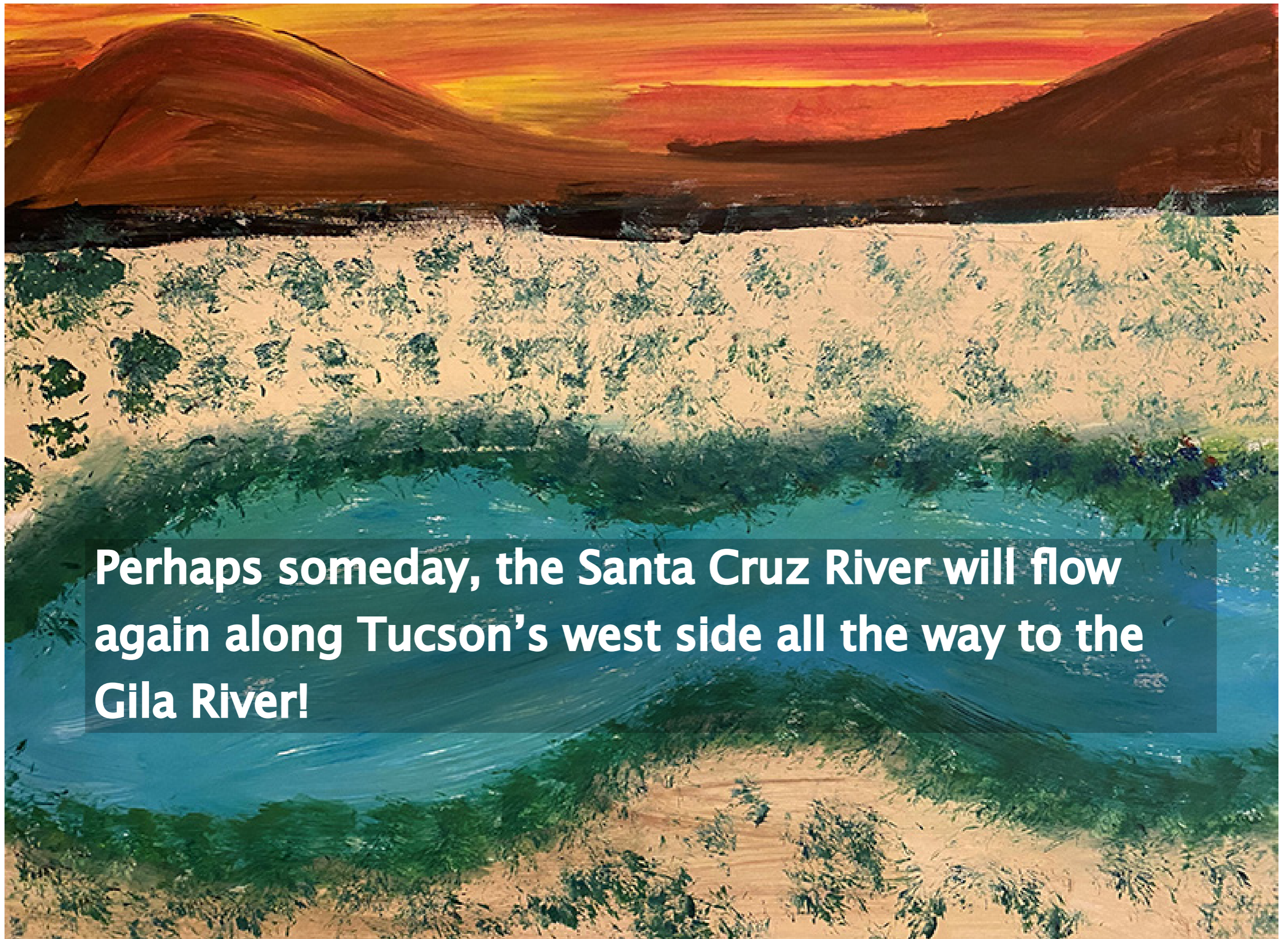
Every day, the project delivers up to 2.8 million gallons of recycled water to the Santa Cruz River at a point south of downtown near the heart of the city.

That could fill up almost 6 Olympic-sized swimming pools!



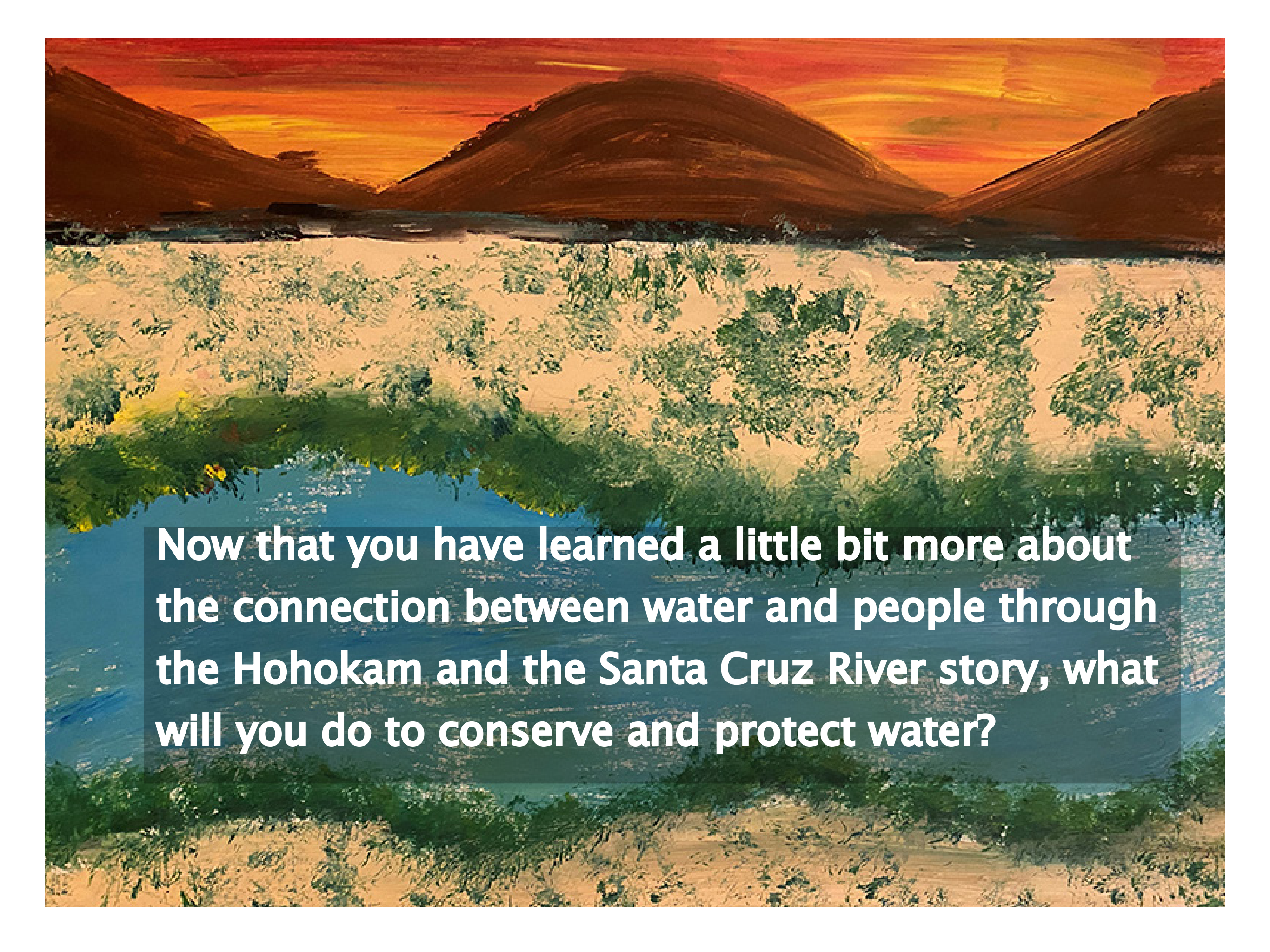
**There is more to do, but animals are coming back and scientist are documenting their return.**





**Perhaps someday, the Santa Cruz River will flow again along Tucson's west side all the way to the Gila River!**





**Now that you have learned a little bit more about the connection between water and people through the Hohokam and the Santa Cruz River story, what will you do to conserve and protect water?**

# Questions to Deepen Your Thinking

1. What do you wonder about the relationship that Native Americans, such as the Hohokam, had with water?
2. In what ways, did Native Americans use science to improve their lives?
3. How did Native Americans apply engineering practices to solve problems?
4. Why did the level of surface water in the Santa Cruz River go down as the population of Tucson grew?
5. What is the relationship between the river and groundwater?
6. From your perspective, what is the significance of having water in the Santa Cruz River in downtown Tucson?

