

**Pima-Maricopa Irrigation Project**  
Education Initiative



*Restoring water to ensure the continuity of the Akimel O’otham and Pee Posh tradition of agriculture*

***Years of Famine: 1892-1904***

***Part II***

When non-Indians first diverted the waters of the Gila River, a large underground flow remained. It was this underground flow of water that sustained Akimel O’otham subsistence agriculture in the latter 19<sup>th</sup> century. By the time the Florence Canal was constructed, in 1886, the O’otham were largely dependent on groundwater that was forced to the surface in various spots along the river. By 1890, the surface flow of the river was being used by non-Indians living upstream of the Community. While the groundwater flow continued, heavy upstream diversions and environmental changes in the Gila River watershed challenged O’otham survival.

The 1890s and early 1900s were especially difficult times for the Akimel O’otham and Pee Posh. Drought was the norm, rather than the exception. While drought was not a new occurrence, the fact that it was prefaced with ever increasing upstream diversions of water made conditions within the Community harsh. Summer crops failed 11 consecutive years between 1894 and 1904 and winter crops failed 5 times between 1899 and 1904, marking the years between 1892 and 1904 as the years of famine.

Drought conditions began in the spring of 1891 after the winter floods of 1890-91. Whereas the O’otham managed to grow 6,000,000 pounds of winter grains in 1889-90, they grew just half that amount in 1890-91. By the fall of 1891, drought was so bad in Arizona that hundreds of thousands of cattle and horses were shipped out of the territory. By the following year, the drought in “the southern portion of the Territory” was considered severe. Nonetheless, more than 20,000 head of steers were driven into the Salt River Valley to forage on irrigated alfalfa, showing there was still plenty of water in the Salt River Valley. Conditions in the Gila River Indian Community deteriorated to the point that the first large-scale wholesale cutting of mesquite wood began.

Every year after 1892—lasting through 1904—the drought prevented the O’otham from growing sufficient crops to sustain them. US Indian Agent Cornelius Crouse estimated that 1,000 Indians would raise no grain in 1893. The starving years had begun, even though non-reservation areas in southern Arizona continued to grow crops. Conditions became so critical within the Community that Indian Agent J.R. Young requested permission to purchase 225,000 lbs. of wheat “to prevent starvation” among the O’otham. Young predicted that the United States would have to buy food annually for the O’otham because non-Indians continued to develop farms above the reservation. In 1894 alone more than 2,100 new acres were farmed above the reservation, bringing the total amount of developed land upstream of the Community to 26,343 acres.

In 1895, the Gila River stopped flowing on April 10—a month earlier than 1894. Winter grains failed and the people again faced starvation. When an Akimel O’otham man was arrested and convicted in a territorial court for rustling cattle, he explained: “Until the past few years we have always had plenty of water to irrigate our farms, and we never knew what want was. We always had grain stored up for a full year’s supply.... I am no thief, and I will not beg, but my wife and children were hungry, and I must either steal or they must starve.” The water gave out earlier in 1896, leading Young to arrange work for more than 200 O’otham men on the Southern Pacific Railroad.

Environmental conditions worsened, particularly within the Community. Special US Indian Agent S.L. Taggart noted in 1898 that “small patches cultivated by the Indians in their rude way and with a very scant water supply” resulted in 30 to 40 bushels of wheat per acre. This demonstrated “the

value of the Gila Valley, provided water can be provided.” Taggart also noted that the farms in the Florence area were doing “fine” because they had “sufficient water at just the right time.”

The drought turned deadly in 1899, when both the winter and summer crops failed. The river ceased flowing in some parts of the Community in February. With no rainfall between February and July, “crops that bid fair with a good start in January were an entire failure.” Indian Agent Elwood Hadley described the struggle to provide mere subsistence. “Taking an average not more than half a crop of wheat was harvested this year, and the result is that many a poor Indian will go hungry if the Government does not open its crib doors and come to their rescue.” While the summer rain arrived—allowing the O’otham to raise some corn, beans and squash—that summer proved to be drier than any in the past decade.

As bad as conditions were, they grew worse in 1900. S. M. McCowan, Superintendent of Phoenix Indian School, visited the Community in May, noting that many O’otham “have nothing to eat now but mescal and old mesquite beans. Last year’s crop of wheat is entirely exhausted and the new crop will not be ripe for weeks. And the worst of it is that when the new crop ripens there will be so little of it, owing to the drouth, that a very few weeks will see it all gone.” Two months later a Phoenix newspaper reported the O’otham would have “less than one-fifth of a crop of grain and their cattle are dying in large numbers.” By July, the Akimel O’otham were “busy hauling away their dead cattle and horses.”

While the Akimel O’otham—and, to a lesser degree, the Pee Posh—suffered from drought, groundwater could still be found. “Water can be had from ten to thirty feet deep in wells on all parts of the reservation,” Hadley wrote in 1900, “and there is no reason why the Indians cannot provide water for their stock with a little labor.” This truth reflected the fact that, while the surface water of the Gila River ceased to flow, the subsurface flow was still there. Crouse reported in December that the underground aquifer had already dropped between 5 and 8 feet in the area around Sacaton. In the Gila Crossing area water continued to flow on the surface because of an underground alluvial spring.

More than 150,000 lbs. of wheat and 5,000 lbs. of beans were distributed in the summer of 1900 and Hadley continued to distribute to “the needy and helpless.” Many O’otham resorted to gleaning grain from off-reservation fields. “[M]any of the Indians, by permission of the owners of the lands, gleaned the fields and gathered many lbs. of which greatly aided in their sustenance,” Hadley wrote Commissioner of Indian Affairs, William Jones. Because “their own resources, their very life, has been taken from them,” Hadley wrote, they were cutting larger quantities of mesquite wood to sell as a cash crop. More than 19,000 cords of mesquite were cut and sold in 1900 alone. Indian Inspector Arthur Tinker blamed the lack of irrigation water and poor O’otham crops on the Florence Ditch Company, which continued to take large quantities of water from the river (and by so doing prevented the natural recharge of the underground aquifers beneath the Community).

The O’otham had been cutting and selling mesquite since 1892, when drought first began. In December of 1899, Jones approved of a plan to cut “dead and down wood” within the Community, although Hadley tried to restrict the cutting to an area west of the Maricopa and Phoenix Railroad (west of present-day Maricopa Road). The railroad even built a special switching yard to accommodate the O’otham and Pee Posh who sold wood. Between 1900 and 1905, more than 50,000 cords of mesquite were cut and sold for use off the reservation (an estimated 64,000 acres of mesquite were destroyed). In the dozen years of famine nearly 100,000 acres of Akimel O’otham mesquite bosques were destroyed so that men could provide the barest of necessities for their families. Combined with the dropping water table, most of these trees never regenerated and were lost to the Community as a future resource.

The river flowed until May of 1901, giving the people hope that they might harvest a sustaining crop. But the water gave out before the wheat matured. “[T]he wheat shriveled up,” Hadley noted, “and much of the grain failed to mature at all.” Only 300,000 lbs. of wheat were harvested that summer. While the summer rains began to fall in July, they were not sufficient to sustain O’otham

crops. There was “no water for their crops of corn, beans and pumpkins” and “unless the government provides ways to work them and help the old and disabled of which there are a large number, starvation awaits them.” Congress appropriated \$40,000 to feed the O’otham that year, but the people missed “their beans, bacon, coffee, and sugar,” to which they had grown accustomed during the good years. About 900 Akimel O’otham “manage[d] to eke out a living” at Gila Crossing, one of the few areas within the Community that had water.

Conditions were so destitute in 1902 that Chief Antonio Azul and 12 village chiefs petitioned Commissioner Jones to provide them with work. “We have had very poor or no crops for the past three years,” Azul wrote. “About 2,000 of us are not likely to raise any wheat this year, because we have no water.... Our Horses and cattle are dying for want of food and [having] nothing to feed them we cannot work them.... Many of our people have not enough to eat and to wear and don’t know what to do for a living.”

The following year, Azul appealed directly to President Theodore Roosevelt. Noting the Akimel O’otham’s historic assistance to American travelers and his people’s long history of irrigation farming in the desert, Azul informed the President of their suffering—and of their desire to remain self-sufficient. The Pimas, Azul told Roosevelt, had been reduced to poverty. Roosevelt assembled a committee to examine the complaints of the O’otham and concluded that “the conditions of these people has been one of grinding poverty and that there has been extreme and wide-spread suffering among them.” While they had managed to retain “their self-respect and have endeavored to eke out a living,” the President acknowledged that the “deprivation of their water” was the cause of their condition. But while the drought ended in 1905, the historic economic self-sufficiency of the Akimel O’otham and Pee Posh was over. Episodic famine would continue for another 15 years.

### *Years of Famine: 1892-1904*

<b>Year</b>	<b>Winter grain grown (bushels)</b>	<b>Corn (bushels)</b>	<b>Wood cut<sup>1</sup> (in cords)</b>	<b>Acres<sup>2</sup></b>	<b>Non-Indian acres developed</b>
1889	144,000	3,600	----	----	----
1890	100,000	1,000	----	----	----
1891	50,000	----	200	256	----
1892	110,000	5,500	300	384	----
1893	76,000	3,000	350	448	----
1894	62,000	0	1,000	1,280	2,101
1895	70,950	500	1,500	1,920	242
1896	51,250	0	4,000	5,120	3,637
1897	51,250	0	1,500	1,920	3,121
1898	117,819	0	1,500	1,920	2,477
1899	34,488	1,072	5,000	6,400	1,968
1900	12,980	180	19,000	24,320	2,471
1901	25,417	36	11,000	14,080	916
1902	16,955	18	14,896	19,066	317
1903	42,051	18	10,600	13,568	361
1904	12,000	500	5,300	6,784	----

<sup>1</sup> There is an average of 128 cubic feet of mesquite wood per cord  
<sup>2</sup> There is 100 cubic feet of 3” or greater diameter wood per acre

## Teacher Plan for “Years of Famine: 1892-1904”

### Objectives

#### Terms to know and understand

- Subsistence
- Groundwater
- Surface water
- Drought
- Famine
- Aquifer

#### Critical Thinking:

- What is the difference between hunger and starvation?

From what you have learned from the reading selection, were the Akimel O’otham hungry or were they starving?

- In 1900, US Indian Agent Elwood Hadley noted that groundwater could be found within thirty feet of the surface. In December of that same year, Cornelius Crouse reported that the water table in the Sacaton area had dropped between 5 and 8 feet. Yet, there was water at Gila Crossing. These facts are important as they demonstrate that, while the surface flow was gone, there was still a source of groundwater in a large aquifer beneath the Community. While continued pumping of groundwater today has reduced this aquifer substantially, why might it be important to recognize its existence? Of what benefit is it—or might it be—to the Akimel O’otham and Pee Posh today?

#### Activities

- Discuss with students the information shown in the table “Years of Famine.” Point out that the number of bushels of winter grain harvested prior to 1893 generally exceeded 100,000. Examine the decline in winter grains and corn between 1893 and 1898. Have students describe the volume of mesquite cut each year. Why were upstream non-Indian farmers able to increase the number of acres developed and farmed?

- The years between 1899 and 1904 were the harshest. Discuss the continuing decline in agricultural production and the dramatic increase in the cutting and selling of mesquite. While the number of non-Indian acres developed above the reservation slowed, it still continued to grow. What is most startling is the mass destruction of the O’otham mesquite bosques. Between 1900 and 1904, more than 75,000 acres of mesquite were cut. Point out to students that the result of this mass cutting is still visible within the Community. Stumps can still be seen in the McClellan Wash area of District 1, in the District 4 area near Queen Creek Road and in District 6 west of Maricopa Road (see map from Part 3).

- Traditional mesquite bosques consisted of Velvet Mesquite and Screwbean Mesquite. Both species could attain a diameter of more than 24” and grow to heights of 30’ or more. Screwbean Mesquite grew in areas along stream bottoms or where water collected in desert troughs. Velvet Mesquite was found along the river floodplains and was the most important plant among the O’otham. Due to cutting, the majority of mesquite growing within the Community today is second or third generation; only a very few old trees remain. The Screwbean Mesquite exists only in the Gila Crossing-Komatke area. Young mesquite bosques still exist in District Six (New York Thicket) but most mesquite trees found within the Community today are Scrub Mesquite, which depend on surface water for their survival (tap roots are no longer able to reach the groundwater).

#### About P-MIP

The Pima-Maricopa Irrigation Project is authorized by the Gila River Indian Community to construct all irrigation systems for the Community. When fully completed, P-MIP will provide irrigation for 146,330 acres of farmland. P-MIP is dedicated to three long-range goals:

- Restoring water to the Akimel O’otham and Pee Posh.
- Putting Akimel O’otham and Pee Posh rights to the use of water to beneficial use.
- Demonstrating and exercising sound management to ensure continuity of the Community’s traditional economy of agriculture.

Students will be able to:

1. Describe the effects of drought upon the Akimel O’otham and Pee Posh between 1892-1904.
2. Analyze the inverse relationship of declining O’otham food production with the increased cutting of mesquite and development of off reservation agriculture.