

National Park Service
U.S. Department of the Interior

Cultural Resource Management
Intermountain Region



TUZIGOOT NATIONAL MONUMENT

Tavasci Marsh Special History Study

By William Stoutamire



National Park Service, Intermountain Cultural Resource Management
Professional Paper No. 77

Cover: Cattle grazing at Tavasci Marsh, ca. 1990. The Allen Ditch can be seen in the foreground. Courtesy of Tavasci Marsh, FMI.

**Water in the Desert:
A History of Arizona's Tavasci Marsh, 1865 – 2005**

By: William Stoutamire

**Intermountain Cultural Resource Management
Professional Paper No. 77
National Park Service, Intermountain Region
Cultural Resource Management, Santa Fe
2011**

Abstract:

Transferred to the National Park Service (NPS) in 2005, Tavasci Marsh is a unique riparian area within the Verde River watershed. However, decades of intensive land management and irrigation for the purposes of agricultural production and dairy farming greatly altered the once ecologically diverse marshland. With the intention of providing an historical context for NPS administrators at Tuzigoot National Monument, this report will convey the narrative history of settlement and farming at the marsh, from the arrival of the first Anglo-American settlers in the 1860s to the NPS's assumption of ownership in 2005. Through the study of historical photographs, maps, aerials, title records, manuscripts, and oral histories, this essay will attempt to determine the history of the marsh through an analysis of human impact and development.

In a landlocked region that is nationally renowned for its dry climate, sweltering summer heat, and low annual rainfall totals, Arizona seems to be an unnatural candidate for the existence of Tavasci Marsh, a rich riparian wetland. While such areas are relatively common along the lower Colorado River basin, central Arizona's Tavasci Marsh stands as the largest remaining wetland on the northern reaches of the Sonoran Desert. In the Southwest, where for centuries water has been the source of life, culture, and settlement, such a unique environ has historically lent itself to development and cultivation by local inhabitants. While the relationship of early American Indian peoples to the marsh is currently interpreted at Tuzigoot National Monument, there exists a general lack of understanding regarding its use in more recent times. Such knowledge is necessary for administrators from the National Park Service to effectively manage the property, and enhance its ecological and interpretive value for modern visitors.¹

This is particularly important in light of recent realizations within the scientific community that such riparian habitats are much more of a rarity today than they were just one hundred and fifty years ago. According to L.A. Hawkins, a dentist in the Jerome mining community and one of the earliest white settlers of the Upper Verde Valley, in the 1860s the Verde River "bottom was from one half to one mile wide, and was covered with a dense forest of trees, with thick underbrush, which it was very difficult to even get through on foot, every half mile or mile there would be a beaver dam."² Decades of human manipulation of the landscape, from irrigation and cultivation to mining and grazing practices, have greatly altered the waterways, plants, and wildlife associated with this region, creating a new landscape that

¹ This paper does not speculate on the activities of prehistoric or historic American Indians in the marsh and its surrounding environs. Its sole focus is on the management of the property by Anglo settlers and their descendents in the last century and a half.

² "Tavasci Marsh," manuscript, n.d., Tavasci Marsh Collection, 525926160, Freeport-McMoran Copper & Gold, Inc., Phoenix, AZ [hereafter cited as Tavasci Marsh, FMI].

scarcely resembles its natural condition as observed by Hawkins and his generation.

Contemporary ecologists report that more than 90% of Arizona's native wetlands, including all but two such habitats in the central portion of the state, have been destroyed or greatly altered by human development. It is this realization that guides modern movements for the preservation, restoration, and interpretation of one of Arizona's few existent riparian environments, Tavasci Marsh – its plants, its wildlife, and its human past.³

Severed from the Verde River nearly 10,000 years ago, Tavasci Marsh and neighboring Peck's Lake – a manmade recreational area that originally formed a natural extension of adjacent wetlands⁴ – existed as a spring-fed oxbow ecosystem until the late nineteenth century. The subsequent development of a rich mining community in nearby Jerome, however, led to an influx of settlers into the region, many of whom recognized that the area's booming population would necessitate a steady supply of foodstuffs for local markets. Homesteading on the natural marshland, which provided good soils and a constant water supply, these individuals instituted a series of agricultural developments that continued unabated until the removal of the Tavasci family, for whom the marsh is now named, in 1991. In nearly one hundred and forty years of human activity on the marsh, irrigation, farming, and grazing practices have greatly altered the landscape of this riparian wetland, introducing new species of flora and fauna while simultaneously reducing or eliminating the presence of native vegetation and wildlife. An understanding of these changes will provide the necessary historical context for the National Park Service's planned restoration of the marsh.

³ "The Importance of Tavasci Marsh: An Overview of Relevant Environmental and Economic Issues," (SWCA Environmental Consultants, Inc., February, 1990), 3, Tavasci Marsh, FMI; Jim Burton, "Wetlands Preservation," *Wildlife Views*, June 1990, 18, Tavasci Marsh, FMI.

⁴ Amelia Ryan and Lorraine Parsons, "Tavasci Marsh Wetland Assessment: Wetland Vegetation Communities, Conditions, and Functions," (National Park Service, September 2009), 5.

I. Early Exploration and Settlement



Image 1: A hunting party from Camp Verde, including the naturalist Edgar Mearns, on the approximate location of the Tavasci homestead, January, 1887. Courtesy of the Library of Congress. Washington, D.C.

The Anglo-American settlement of the Upper Verde Valley began in 1865, with the arrival of the first white pioneers from the territorial capital of Prescott, Arizona. Although in 1871, President Ulysses S. Grant designated the land forty miles upriver from Camp Verde and ten miles on either side – encompassing modern-day Tavasci Marsh – as a reservation for Yavapai and Apache peoples, this order was reversed four years later and the land was made open for settlement. According to historian Jack Cotter, “in the latter half of the 19th Century, cattlemen and farmers began drifting into the valley, and the 80s brought an influx of prospectors and miners to open up the copper veins in the hills to the west.”⁵ Led by Morris Andrew Ruffner, who first discovered and laid claim upon the copper ore deposits in the vicinity of present-day Jerome, Arizona, in 1876, these new migrants brought with them the desire to develop the agricultural promise of the valley for the purposes of creating sustainable mining communities in an area that was otherwise distant from modern modes of transportation, most notably the growing American railway system. Rather than bringing foodstuffs via horse drawn wagon from Prescott – a forty-mile journey that required traversing the pass over Mingus

⁵ Jack Cotter, “Tuzigoot National Monument,” *Arizona’s National Monuments*, Popular Series No. 2, (Santa Fe: Southwestern Monuments Association, 1945), 6.

Mountain – these settlers sought instead to develop the floodplain of the perennial Verde River for agricultural production, while utilizing the nearby uplands for the grazing of cattle and other livestock. Even after the completion of the Atlantic and Pacific Railroad in northern Arizona in 1883, and the construction of a subsequent spur to the mines at Jerome, the continuing local production of foodstuffs proved vital to the growth and development of the region’s mining communities.⁶

Employing their rights under the Homestead Act of 1862, these early settlers to the valley first claimed ownership to tracts of land along the banks of the Verde River, which provided them with a constant supply of fresh water for drinking and irrigation. Under the Act, individuals could apply for a “preemption claim” on one quarter section of land – equal to 160 acres – which, after a minimum of five years of constant usage, could be transferred into the direct ownership of the homesteader and his or her family. One stipulation of this act attempted to ensure that such properties were lived on and developed, stating that “such application is made for his or her exclusive use and benefit, and that said entry is made for the purpose of actual settlement and cultivation, and not either directly or indirectly for the use or benefit of any other person or persons whomsoever.”⁷ As such, it is likely – though not assured – that homesteaders in the Upper Verde Valley made use of their property, and resided therein, for at least five years prior to the recording of their claim with the General Land Office (G.L.O.) of the United States. Therefore, as Figure 1 indicates, the settlement of the marsh probably began simultaneously with the development of the first mining claims in Jerome in the late 1870s.

⁶ “The United Verde Copper Company: A Series of Articles Describing the Organization, Operations, and Activities of this Company in the Jerome District of Arizona”, *The Mining Congress Journal*, April 1930, 5; Russell Wahmann, “A Centennial Commemorative, United Verde Copper Company, 1882-1982,” *The Journal of Arizona History*, Vol. 23, No. 3, Autumn 1982, 249-255.

⁷ U.S. Congress, *An Act to Secure Homesteads to Actual Settlers on the Public Domain*, 37th Cong., 2d sess., May 20, 1862.

Indeed, one of the earliest maps of this region – created in 1877 by the Surveyor General's Office in Tucson (Figure 2) – reveals the presence of a residence under the name of Ruffner in the approximate vicinity of the wetland and the eventual Tavasci homestead. According to the later recollections of L.A. Hawkins, this “Ruffner” refers to Morris Andrew Ruffner, Jerome’s first and most well-known prospector. Of Ruffner, Hawkins writes, “there was a prospector ‘squatted’ on the land where my father decided to locate . . . a gentleman of the old school . . . Mr. Ruffner had no use for the place . . . so my dad gave him \$300.00 for his Squatters Right and he continued (Mr. Ruffner) to live with us, and rode up in the mountain prospecting daily.”⁸ This arrangement continued until 1876, when Ruffner discovered the “Eureka” copper mine and staked a claim.

The first official homesteader to occupy this land, laying claim to the southernmost portion of Tuzigoot National Monument’s recent land acquisition, arrived on the property in the mid-1870s and received her homestead deed on September 3, 1884. Harriet M. Hawkins and her husband, William Hawkins, both native Tennesseans, brought their six sons and two daughters to the Upper Verde Valley in 1876, where William and the eldest three boys engaged in farming along the banks of the Verde River. Following William’s death in the early 1880s, Harriet filed and received her homestead claim, residing on the property for a number of years thereafter.⁹ Although available records do not indicate the type of farming conducted or the detailed processes involved, early irrigation reports reveal that the Hawkins family irrigated thirty-seven acres of their property, on the western side of Tuzigoot hill, with water from the river for the growth of sustenance crops and other produce. Referred to as the Hawkins Ditch – or the Emory Hawkins Ditch, after ownership of the homestead passed to one of the younger sons in the 1890s

⁸ L.A. Hawkins, manuscript, undated. Ruffner Collection. In possession of Mrs. Melissa Ruffner.

⁹ The 1890 Census was destroyed by fire and thus it is not possible to determine who remained on the property at that time.

– this minor irrigation system was in continual use for more than two decades. Representative of the first significant Anglo-American attempt to irrigate and cultivate the riparian zone in the vicinity of the marsh, this original ditch was abandoned by the Hawkins family in 1896 and was later buried by the creation of the tailings pond in the early 1900s.¹⁰

Seven years after the Hawkins family provided sufficient evidence of residence and improvement to obtain their property on the Verde River, Talitha C. Wilber – the widow of Daniel E. Hawkins and wife of William Wilber – received a deed to the adjacent lands to the north (see Figure 1). A native Missourian, who likely married into the Hawkins family during their lengthy residence in that state, Talitha, her new husband, and their children farmed the land that now, in part, constitutes the Tuzigoot ruin and Tuzigoot National Monument museum. Similar to their neighbors and family to the south, the Wilbers likely engaged in subsistence agriculture and minor irrigation, utilizing the waters of the Verde River through the 1876 Hawkins Ditch and, potentially, the nearby marsh. Additionally, a 1905 U.S. Geological Survey map (Figure 3) indicates that both the Wilbers and Hawkins families established their residences at the base of Tuzigoot hill, on the eastern side. As a nearby stream exits the adjacent ridge in that vicinity, it is further likely that waters from this small stream were used for the irrigation of the settlers' croplands.¹¹

In 1890, one year prior to the establishment of the Wilber homestead, Thomas Goodwin received a similar deed to the property to the north, including the land that constitutes the proper

¹⁰ U.S. Bureau of the Census, 1880 U.S. Census, Population Schedule, District 28, Yavapai County, Arizona; Ryan and Parsons, "Tavasci Marsh Wetland Assessment, 5; Harriet M. Hawkins, homestead deed, September 3, 1884, Tavasci Marsh, FMI; O.A. Turney, "Water Supply and Irrigation on the Verde River and Tributaries," 1901, quoted in T.A. Hayden, *Irrigation on the Upper Verde River Watershed from Surface Waters*, 1940, 274; "Report of Fowles and Frankenberg to the Conference Committee of the Associated Canals: Verde River and Tributaries," 1896, quoted in Hayden, *Irrigation on the Upper Verde River*, 241.

¹¹ U.S. Bureau of the Census, 1880 U.S. Census, Population Schedule, District 28, Yavapai County, Arizona; U.S. Bureau of the Census, 1900 U.S. Census, Population Schedule, District 69, Yavapai County, Arizona; Talitha C. Wilber, homestead deed, November 23, 1891, Tavasci Marsh, FMI.

boundaries of what is today referred to as Tavasci Marsh (see Figure 1). A Scottish immigrant, Thomas and his father, John, raised beef cattle, likely including the native English Hereford or “white face,” for the local markets, especially the growing town of Jerome. While their interactions with the marsh are largely unclear, the actions of later resident cattle ranchers – including the Tavascis – indicate that drier patches of land around the wetland were suitable for grazing livestock. In addition, early irrigation reports reveal that the Goodwins utilized the fresh water from a nearby spring – known today as Shea Springs – to water and cultivate four acres of their property, likely for either the growth of subsistence crops or livestock feed. John Tavasci, Sr. later stated that at least one drainage ditch, referred to as the Middle Ditch and running through the marsh itself, existed prior to his family’s arrival on the property in 1928. Whether this canal, as well, was constructed by the Goodwins or later denizens remains unclear, however, as for unknown reasons the property quickly passed through the Goodwin family until, on September 5, 1900, John, Jr. and his wife, Margaret, deeded the land to a local Irish saloonkeeper and prospective rancher, Daniel O’Shea.¹²

A prominent citizen in Jerome, O’Shea was no stranger to the oxbow in the Upper Verde River, having previously been involved in the ownership and construction of the region’s primary irrigation canal, which remained in use until 1991. Redirecting water from the Verde River via a diversion dam, this lengthy ditch system channeled the flows through Brewer’s Tunnel, on the property of Hugh Brewer (see Figure 1), across a pipeline spanning over Pecks Lake, around the north and east sides of Tuzigoot hill, and back into the river to the south. At

¹² U.S. Bureau of the Census, 1880 U.S. Census, Population Schedule, District 28, Yavapai County, Arizona; Thomas Goodwin, homestead deed, December 31, 1890, Tavasci Marsh, FMI; John H. Ladd to Charles M. Holt, April 16, 1987, Tavasci Marsh, FMI; John Tavasci, Sr., interview by author, Clarkdale, AZ, April 1, 2010; “Chain of Title: Shea Home Ranch,” Tavasci Marsh Collection, 162414354, Freeport-McMoran Copper & Gold, Inc., Phoenix, AZ [hereafter cited as Tavasci Marsh (2), FMI]; U.S. Bureau of the Census, 1900 U.S. Census, Population Schedule, District 70, Yavapai County, Arizona; “Report of Fowler and Frankenberg,” quoted in Hayden, *Irrigation on the Upper Verde River*, 241.

various times referred to as the Tunnel, Allen, or Hawkins Ditch,¹³ its completion in 1896 signaled the first successful cooperative endeavor between the homesteaders in this region and the nearby United Verde Copper Company (UVCC). According to O.A. Turney's irrigation report, dated 1901, two men by the names of Allen and Wood – representatives of Senator William A. Clark, the owner of the UVCC – worked directly with O'Shea, Emory Hawkins, and other area residents to plan and construct a watering system that could replace the much smaller and outdated 1876 Hawkins Ditch. By the early 1900s, the Allen Ditch effectively irrigated more than 300 acres of land, including 124 acres within the boundaries of Tuzigoot National Monument's recent acquisition. Ultimately, the completion of this system enabled settlers and the UVCC to enact rapid changes in the riparian basin, culminating in the creation of the Pecks Lake recreational area, the construction of a nine-hole golf course, and the formation, on the marsh, of Shea Home Ranch and the Clarkdale Dairy.¹⁴

Before examining this story further, however, it is first necessary to understand the general irrigation and land use practices that farmers and ranchers employed in this region around the turn of the twentieth century. In 1901, Turney described an ever-growing network of ditches and canals spiraling outward from the main sources of irrigation, like the Allen Ditch. At this time,

their methods of applying water are the crudest, even under company ditches there are no headgates; every man taps the canal in a half a dozen places and keeps several small heads continually running on his alfalfa. Most crops are planted in the spring; there is little irrigation during the winter; the only winter irrigation in on alfalfa. Acreages are in the following order: Corn, hay, fruit, potatoes and garden produce.¹⁵

¹³ To avoid confusion, I will hereafter refer to this irrigation system as the Allen Ditch, which is its most prevalent demarcation in maps and other historical documents.

¹⁴ Hayden, *Irrigation on the Upper Verde River*, 101-102, 211; Turney, "Water Supply and Irrigation on the Verde River and Tributaries," quoted in Hayden, *Irrigation on the Upper Verde River*, 274.

¹⁵ Turney, "Water Supply and Irrigation on the Verde River and Tributaries," quoted in Hayden, *Irrigation on the Upper Verde River*, 282-283.

While this statement applies more broadly to the Upper Verde Valley, it is likely that the Hawkins, Wilbers, Goodwins, and O'Sheas treated their newly created water source in a similar manner and raised similar crops. With booming markets in Jerome, Prescott, and Flagstaff outstripping supply, company ditches and ever more extensive irrigation for the purposes of maximizing production became the norm in this region in the early half of the 1900s.

As such, when O'Shea and his wife, Margaret, finally settled on the marsh in 1900, they immediately engaged in the production of dry goods for the markets in Jerome and Cottonwood and, according to John Tavasci, Sr., raised Hereford cattle. The Shea Home Ranch, as it came to be known, grew throughout the first decade of the twentieth century, both in size and production. On April 26, 1906, O'Shea purchased an additional 80 acres, incorporating the northern portion of Tuzigoot hill (see Figure 1). He also assisted in the development and maintenance of further irrigation and drainage systems in the marsh, which he then utilized for the betterment of his ranch. Indeed, Shea Springs – a collection of springs at the base of the ridgeline to the east of Tuzigoot National Monument – bears his surname as he was one of the earliest settlers to make beneficial use of its constant supply of fresh water for the purposes of creating irrigated croplands and pasture.¹⁶ Likewise, the Warranty Deed from O'Shea's eventual sale of the property reveals that he owned a 29/96th share in the Tunnel Ditch and irrigation canal, which extended through the location of his residence near the southeastern tip of Peck's Lake (see Figure 3). It is clear, therefore, that Shea Home Ranch made extensive use of all available water

¹⁶ This spring is also commonly referred to as Goodwin, Taylor, or Big Springs. The former title is an obvious allusion to Thomas Goodwin's residence on the marsh and use of the spring's water to irrigate four acres of land.

sources for the development of fertile, usable lands and, in all likelihood, began or continued the process of draining the marshland itself.¹⁷

Despite these successive developments, the period of independent ownership in the vicinity of the marsh ended abruptly in the early 1910s, when the UVCC expanded into the Verde River basin below the mines at Jerome. Purchased by Senator Clark, a Montana copper baron, in 1888, the UVCC grew rapidly under his ownership and, by 1910, began investigating potential regions for further growth and development. Needing a larger, more modern smelter facility in order to meet with increasing supplies of copper ore, Clark turned his attention to the establishment of a township that would later bear his name – Clarkdale. Ideally situated on the banks of the Verde River, with access to a constant water supply and the Verde Valley Railway, the Clarkdale Smelter and its accompanying mining town were considered vital to the UVCC’s future success. Unfortunately for Clark, however, the area that his engineers had designated for development lay in the hands of private landholders, like the O’Sheas.¹⁸

Thus, in the early 1910s, the UVCC began to purchase independent ranches in the planned location of the Clarkdale town site and its immediate vicinity, obtaining approximately 2,000 acres of new property “for water rights and for a location to process copper ores mined near Jerome” by 1912.¹⁹ For those individuals and families residing in the Upper Verde Valley riparian zone, this massive land acquisition resulted in a significant shift in ownership, management, and land use practices. Whereas farmers and ranchers in this region had, for more

¹⁷ U.S. Bureau of the Census, 1920 U.S. Census, Population Schedule, District 108, Yavapai County, Arizona; U.S. Bureau of the Census, 1930 U.S. Census, Population Schedule, District 6, Yavapai County, Arizona; Summary of Shea Springs Water Right, Tavasci Marsh (2), FMI; Daniel J. O’Shea and Margaret O’Shea to United Verde Copper Company, warranty deed, October 30, 1911, Tavasci Marsh (2), FMI; Tavasci, Sr., interview by author.

¹⁸ John E. Laning, “Historical Growth of the United Verde Smelting Plant at Clarkdale, Arizona,” “The United Verde Copper Company: A Series of Articles Describing the Organization, Operations, and Activities of this Company in the Jerome District of Arizona”, *The Mining Congress Journal*, April, 1930, 5; Ken C. Bennett to Michael O’Donnell, February 26, Tavasci Marsh (2), FMI.

¹⁹ Ken C. Bennett to Michael O’Donnell, February 26, 1991, Tavasci Marsh (2), FMI.

than three decades, raised livestock and cultivated foodstuffs for the explicit purpose of selling their goods to local miners and their families, they had always done so freely and independently of the mining companies. For the next eighty years, the O'Sheas, the Tavascis, and their partners and neighbors would operate under the overarching management of the UVCC and its successors, with the latter claiming ultimate authority over all water rights, land use practices, and crop or livestock production.²⁰

While the town of Clarkdale and its smelter would eventually be constructed on the western bank of the Verde River, the UVCC's purchase of the properties beyond the opposite eastern shore, including the marsh, served a three-fold purpose. For one, Senator Clark and his associates viewed Pecks Lake, the Tunnel Ditch, and the nearby wetland as providing an ideal landscape and set of pre-existing services for the creation of a large recreational area for miners and their families. In the 1910s, as part of the formation of a much larger network of social services for the booming communities in Jerome and Clarkdale, the UVCC constructed a nine-hole grass golf course in and around the lake. Complete with "natural" water hazards and an accompanying country club, the Verde Valley Golf Club utilized water from the Tunnel Ditch to maintain its greens and fairways. Likewise, new water management policies regarding Pecks Lake, including the supplemental diversion of water from the Verde River, grew the natural wetland into a lake of such size that it became a popular location for fishing, recreational boating, and even motorboat races. The occasional drainage of the lake from its southeastern outlet – near the O'Shea and, later, Tavasci homesteads – increased the need for a sufficient

²⁰ Tavasci, Sr., interview by author; John Tavasci, Sr., interview by Nancy Dallett, Clarkdale, AZ, November 14, 2007.

drainage system for the remaining marshlands, ultimately resulting in the creation of the Pecks Lake or Tavasci Ditch.²¹

A second reason for the UVCC's acquisition of the lands on the eastern bank of the Verde River pertains directly to the company's planned smelter facility on the adjacent shore. Completed in 1915, after three years of construction, the Clarkdale Smelter was a modern industrial structure for its time, greatly improving the efficiency of ore extraction and the production potential of the mines in Jerome. Nevertheless, its two towering smoke stacks constantly spewed pollution into the air, endangering nearby crops and livestock and threatening the stability of farming operations in the vicinity. While the smelter was still in operation, John Tavasci, Sr. later recalled, a strong westerly wind would, approximately once per year, carry fumes from the smelter across the marsh, killing his family's alfalfa crop and much of the wetland's native vegetation. Realizing this potential hazard, and cognizant of the legal suits that would inevitably follow from the destruction of private croplands, Clark and the UVCC purchased an extended buffer zone within the potential smoke cloud from the planned location of the smelter facility. On those lands, including the marsh, that were not developed for recreational purposes, farming and ranching continued, but on a leased basis that circumvented would-be lawsuits before they could arise.²²

For those leased farmsteads that continued to operate in the years after the completion of the Clarkdale Smelter, like the Shea Home Ranch, local businessmen and associates of the UVCC formed a new management organization – the Upper Verde Farm and Orchard Company (UVFOC). Established in the summer of 1912 by Harry R. Brown, LeRoy Anderson, and Will

²¹ Noel Pegues, "Recreation in the Verde District," *The Mining Congress Journal*, April, 1930, 108; Wahmann, "A Centennial Commemorative," 265. Hereinafter referred to as the Tavasci Ditch. This ditch runs from the Pecks Lake outlet structure to the Verde River.

²² John E. Lanning, "Historical Growth of the United Verde Smelting Plant at Clarkdale, Arizona," *The Mining Congress Journal*, April, 1930, 58-59; Tavasci, Sr. interview by author; Tavasci, Sr., interview by Dallett.

L. Clark (of no relation to Senator Clark), the UVFOC was created “to own, lease, control, operate, manage, exchange, sell, purchase or otherwise acquire or otherwise dispose of farms, orchards, ranch lands, and to engage in all kinds of farming, ranching, raising of stock, fruit, and in general to do all things necessary to the proper conduct of fruit raising, ranching, and farming.”²³ For sixteen years, the UVFOC directed the cultivation and livestock operations along the eastern bank of the Upper Verde River Valley, issuing leases to local farmers and ranchers and coordinating the sale of their foodstuffs to the markets in Jerome, Clarkdale, Cottonwood, and Prescott. By 1928, when the UVFOC reconveyed these properties to the UVCC, the company claimed ownership of approximately 2,500 acres of land to the east and northeast of the Clarkdale Smelter and its potentially destructive smoke cloud (see Figure 4).²⁴

Unfortunately, as no leasing records exist from the operations of the UVFOC, it is difficult to reconstruct the human occupation of the recent NPS land acquisition during this period and, consequently, how exactly the marsh’s inhabitants utilized their available resources in their ranching and farming endeavors. The clearest obtainable documentation pertains to Shea Home Ranch, which the UVCC acquired on October 11, 1911 and conveyed to the UVFOC in 1913. The O’Sheas continued to raise Hereford cattle and irrigate their pasturelands with the waters from Shea Springs and the Tunnel Ditch, though all of their existing water rights were deeded to the mining company. Given the spatial limitations of their property for grazing purposes, due to the presence of the 60-acre marsh, it is also likely that during this period the O’Sheas constructed and maintained the drainage channel that the Tavascis later referred to as the Middle Ditch. Spanning the western edge of the wetland, the O’Sheas intended for this deep canal to drain as much of the spring-fed marsh as possible, thereby increasing the grazing land

²³ *Prescott Journal Miner*, August 23, 1912.

²⁴ Upper Verde Farm and Orchard Company to United Verde Copper Company, warranty deed, February 18, 1929, Book 147, Pages 8-9, Tavasci Marsh, FMI.

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available for their cattle herd. Incidentally, this ditch remained in use for this same purpose until the Tavasci family abandoned the property in 1991.²⁵

One residual effect of the UVCC and UVFOC ownership and management of the marsh and the surrounding area in this period was the final consolidation of the property into what would become, in 1928, the Clarkdale Dairy.

²⁵ Summary of Shea Springs Water Right, Tavasci Marsh (2), FMI; Daniel J. O'Shea and Margaret O'Shea to United Verde Copper Company, warranty deed, October 30, 1911, Tavasci Marsh (2), FMI; "Chain of Title: Shea Home Ranch," Tavasci Marsh (2), FMI; Tavasci, Sr. interview by author.

II. The Clarkdale Dairy



Image 2: Looking northwest at the Clarkdale Dairy, ca. 1930s. Courtesy of John Tavasci, Sr.



Image 3: Paul Tavasci, Jr. (left) and John Tavasci, Sr. (right). Courtesy of John Tavasci, Sr.

For thousands of immigrants to the American Southwest in the early 1900s, the region's rich mining deposits and constant demand for labor served as a veritable magnet for westward migration. Paul Tavasci, a native of northern Italy, was one of the hundreds of Italian immigrants attracted by Jerome's famous copper mines and the promise of a better, "American" life in the mining camps of the UVCC. With the assistance of his father-in-law, who gave him financial aid for his passage to Jerome, and his brother-in-law, whose employment at the mines enabled Paul to quickly find a job, Paul and his new wife, Mary, arrived in central Arizona in 1924. Residing in Jerome, Paul immediately began to work for the UVCC, using mule teams to haul latrines and human waste out from the extensive underground tunnel system before cleaning the portable restrooms with high-pressure hoses and returning them to the bowels of Mingus Mountain. By 1928, Paul, who never worked as an actual miner, and his young family had become important members of Jerome's Italian immigrant community, establishing friendships

with the families of Guido Marianni and Nat Rezzonico that, ultimately, formed the foundation of the Clarkdale Dairy partnership.²⁶

About this same time, Charles W. Clark – the son and successor of the late Senator Clark, who died in 1925 – realized the need for a consolidated dairy operation to supply the UVCC mining communities in the Upper Verde Valley with fresh milk. Although smaller, individually run dairies existed in this region in the 1920s, including a minor venture in the approximate location of the present-day tailings pond, the UVCC desired to create a single undertaking, managed by a number of partners, which could serve as the de facto company dairy for the smelter and the mines. According to John Tavasci, Sr., Clark “believed in his own people” and desired to give them a monopoly on the delivery of milk and other dairy products to the markets in Clarkdale. Given the limitations of milk at this time – which, prior to pasteurization, required daily delivery and almost immediate consumption – such an operation would need to be located close to the centers of population but far enough away to provide sufficient range for the grazing of large numbers of cattle. In addition, the new dairy would require an available supply of fresh water and fields sufficient for the growth of alfalfa, corn, and other forms of ensilage and cattle feed.²⁷

Having reacquired the former Shea Home Ranch, which had already proved to be adequate for the raising of livestock and included a large ranch house and pre-existing irrigation system, from the UVFOC in 1928, Clark settled on that property as the site for his new dairy. As an added benefit, the residence and outbuildings of the aforementioned small-market dairy operation to the west of Tuzigoot hill – now beneath the current tailings pond – could be utilized by the partners in the short term, while waiting for company workers to complete the

²⁶ Tavasci, Sr. interview by author; Tavasci, Sr., interview by Dallett.

²⁷ Ibid.; Ibid.

construction of a more sufficient homestead and dairying facility at the original O'Shea home site. Thus, in 1928, with these plans in mind, the UVCC issued a ten-year lease to the Tavascis and their partners, enabling them to establish the Clarkdale Dairy on 250 acres centered around the marsh, while simultaneously granting the new dairymen grazing rights to four additional sections of land on the hills to the north and east.²⁸

As relatively poor immigrant laborers, however, the Tavascis, Mariannis, and Rezonnicos lacked sufficient funds to create and foster a successful, large-scale dairy operation on their own, without further assistance from Clark and the UVCC. Indeed, while the marsh would eventually prove to be a suitable location for the prospering of the Clarkdale Dairy, it necessitated a significant amount of work before its productive value could be fully realized. For one, while the old O'Shea ranch house could sufficiently accommodate one family – the Tavascis – a full partnership, like the dairy, required a multi-family homestead, complete with individual residences, a milking house, and multiple barns, silos, and corrals. Realizing this fact, Clark provided the Tavascis and their partners with enough seed money for the construction of four or five additional homes, all of the associated outbuildings, and the necessary facilities for a modern-day dairy operation, as well as the purchase of the partnership's first sixty or seventy head of Holstein cattle. Although hastily built, these structures – including a large two-by-one lumber ranch home, hay and milking barns, numerous corrals, a twenty-foot tall concrete ensilage silo, and a storage tank for water piped from Shea Springs – formed the nucleus of the Clarkdale Dairy for the next three decades.²⁹

In addition, despite the earlier cattle operations at Shea Home Ranch, the marsh and surrounding property remained in need of further development and irrigation in order to

²⁸ Tavasci, Sr. interview by author; Tavasci, Sr., interview by Dallett.

²⁹ Ibid.; Ibid.

accommodate the potential expansion of the new dairy, which initially had a monopoly amongst the ever-growing UVCC mining communities in Clarkdale and Jerome. Thus, within the first few years of leasing the property, Paul Tavasci, his partners, and their hired Mexican-American laborers – including two families that lived on the homestead – worked to maintain and enlarge the area’s pre-existing irrigation system. Using three pairs of mules and multiple work horses that the UVCC gave to the dairy following the installation of an underground railroad in the nearby mines, the dairymen and their employees performed annual repairs on their portion of the Tunnel Ditch, from the golf course to the Verde River, regularly removing nearly one foot of sediment and debris. They also expanded this irrigation system on the lands to the south of the wetland, thereby creating additional fields for pasture and the growth of crops. Throughout the duration of the cattle operations in the area, this system, regularly maintained, provided sufficient water for the irrigation of the fields of alfalfa, “Mexican June” corn, and sweet Sudan grass that constituted the herd’s regular diet.³⁰

Perhaps the greatest challenge that the Tavascis and their partners faced in their desire to expand the Clarkdale Dairy was the marsh itself, which, if left unchecked, would cover more than one hundred acres of prime pastureland. As John Tavasci, Sr., later recalled, “if I could have killed the swamp, I would have. There is no use denying it because it was just taking up our land.”³¹ Building upon the ditches that were first installed and maintained by earlier residents, most notably the O’Sheas, the dairymen and their employees created a three-tiered drainage system that joined at a point just south of the wetland’s furthest extent, passed under a dirt road through a cast iron culvert provided by the UVCC in the 1930s, and discharged its contents into the Verde River (see Figure 5). Consisting of the aforementioned Tavasci Ditch

³⁰ Tavasci, Sr. interview by author; Tavasci, Sr., interview by Dallett.

³¹ Ibid.

and Middle Ditch, as well as the newly built Shea Springs Ditch – located at the base of the slope – this system effectively removed the majority of the wetland’s water supply and reduced the size of the marsh to approximately fifteen acres. On the reclaimed land, which ultimately served as the pasture for those cattle ready to be milked – dry cattle grazed on the fields to the west and south of the homestead – the Tavascis and their partners planted Bermuda grass and constructed a series of bridges to prevent their livestock from walking on and destroying the sides of the canals. Of course, the presence of a nearby natural wetland, no matter how well drained, presented its own problems for roaming cattle, some of which ultimately perished after being trapped overnight in the muddy embankments.³²

The control and management of water was not the only necessity for the continued growth and expansion of the operations at the Clarkdale Dairy, however, as the new tenants quickly found themselves in conflict with native flora and fauna, as well. While many local grasses proved to be excellent forage for the farm’s Holstein cattle, others, most notably the pervasive and fast-growing cattail, remained ever-present nuisances to ranchers interested in maximizing their available grazing lands. As such, the Tavascis and their partners engaged in annual controlled burns of the cattail stands, sending enormous plumes of black smoke into the air and effectively controlling, but never eliminating, the plant’s presence in the marsh. Additionally, the dairymen found their desire to expand their pasturelands, particularly in the southern portion of the property, impeded by dense growths of mesquite tress that, though not as invasive as cattails, cluttered the dairy’s already patchy, hand-wrought, field system. Utilizing their mules and skiffs, as well as dynamite from the mines, the partners resolved this issue during

³² Tavasci, Sr. interview by author; Tavasci, Sr., interview by Dallett.

their first few years on the property, exploding dozens of mesquite trees and hauling the stumps out of the fields to be burned or otherwise disposed of elsewhere.³³

The ranchers interacted with the marsh's native animal life in a similar manner, finding some creatures to be impediments to their dairy's operation, while viewing others as potential sources of subsistence and even profit. In regards to the former, local beavers proved to be a constant annoyance, as their propensity for dam building in the irrigation and drainage ditches, as well as the marsh, constantly threatened to flood the nearby crops and pasturelands. In order to mitigate this issue, the Tavascis and their partners either hired trappers or simply shot the beavers that were found in the marsh and surrounding vicinity. By contrast, ducks and fish, which also inhabited the wetland, proved to be vital sources of food for the families living at the homestead – especially in the 1930s and 1940s, when the site was at its maximum capacity. Interestingly, the Tavascis and their partners employed the same technique to fishing as they did to the removal of native vegetation, finding dynamite from the UVCC mines to be just as effective at collecting dinner as it was at clearing mesquite trees from the fields. In recalling his childhood on the property, John Tavasci, Sr., later expanded upon this story, explaining that they would often collect enough fish with a few sticks of dynamite to fill a washtub in the rear of one of their mule-drawn wagons.³⁴

In their quest for food and profit, the dairymen also introduced certain non-native animal species to the marsh environment, presuming that its unique and life-sustaining ecosystem could serve as a new habitat for other wetland species – most notably, bullfrogs. For a few years after the marriage of John Tavasci, Sr., in the early 1940s, his new father-in-law, Harvey Gazard, resided on the property and assisted in the operation of the dairy. An enterprising individual,

³³ Tavasci, Sr. interview by author; Tavasci, Sr., interview by Dallett.

³⁴ Ibid.; Ibid.

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Gazard believed that bullfrogs could make a positive addition to the wetland ecosystem, and that of the surrounding riparian zone. As such, he purchased six pairs of large Louisiana bullfrogs and turned them loose at the marsh, hoping that they would provide a ready source of food and, when collected in excess, could be sold to the markets in Cottonwood and Clarkdale. While the frogs did ultimately serve both these functions, they unfortunately overpopulated the region, spreading first to Pecks Lake and then into the remainder of the Upper Verde Valley. The bullfrogs eventually became so prolific, John Tavasci, Jr., later recalled, that “you could go out on the lake with a flashlight at night and see eyes . . . sitting on a lily pad.”³⁵

Image 4: The Rezzonico family, and others, outside the Clarkdale Dairy Milk House during the ranch's period of peak production. Ca. 1930s. Courtesy of John Tavasci, Sr.



³⁵ Tavasci, Sr. interview by author.

During this time, another non-native species – the dairy’s Holstein cattle – also expanded in terms of population and reach. Effective drainage practices and the removal of native vegetation, both of which significantly increased the amount of pastureland available for grazing, coincided with a growing regional population, leading the partners at the Clarkdale Dairy to triple the size of their herd, to nearly two hundred head of cattle, by 1946. This was further influenced by the implementation of better irrigation techniques and the use of modern fertilizers in the fields of alfalfa and corn, enabling the partners to produce more feed and, therefore, support a larger herd. Indeed, despite the Great Depression, World War II, and the emergence of privately owned competing dairy ventures in the Upper Verde Valley, the operations at the Clarkdale Dairy continued to thrive. Even the decline of the dairy’s parent company, the UVCC, and its ensuing purchase by the Phelps Dodge Corporation (PDC) in 1935, did not significantly affect the progress and development of the ranching operation – although it did coincide with a new lease agreement and the transfer of Tuzigoot hill to the federal government for the purposes of establishing Tuzigoot National Monument in 1939. Throughout this period, the Clarkdale Dairy provided regular door-to-door deliveries of milk and other dairy products to miners and their families in Jerome, Clarkdale, and Cottonwood. By the end of the war, the operation had reached its maximum productive capacity.³⁶

Unfortunately, a series of developments in the immediate postwar period – both at the marsh and in the surrounding mining communities – brought about a number of changes to the Clarkdale Dairy that, in due course, would lead to its decline and eventual closure. For one, the historic dairy partnership, which had provided the necessary manpower and resources for the management of the operation during its growth, dissolved in 1946 with at least one partner, Nat Rezzonico, moving to the vicinity of Prescott in order to establish the Prescott Dairy. While this

³⁶ Tavasci, Sr. interview by author; Tavasci, Sr., interview by Dallett.

resulted in John, Sr., and his brother, Paul, Jr., purchasing shares in the partnership with their father, Paul, Sr., the dairy's transition from a multi-family joint venture to a single-family operation presented new challenges given the business' size and the popular regional demand for its products. The issue of declining manpower became even more of a concern over the next few years, with the death of one of the dairy's most reliable ranch hands – a Spaniard, named Segundo Prada – and the subsequent firing of the operation's other hired laborers, who, John Sr., later claimed, proved to be difficult to work with and often unreliable.³⁷

New technological developments in the dairy industry on a national scale, particularly as related to growing concerns over issues of health and sanitation, further compounded the difficulties facing the Tavascis as they sought to continue their work into the 1950s. According to John Tavasci, Sr., local doctors and the regional health department became increasingly disillusioned with the prospects of the area's dairy operations using open truck beds to deliver raw milk to the community, a practice that was standard at the Clarkdale Dairy since its establishment in the 1920s. The resultant regulations of this new movement forced expensive changes upon the Tavascis' operation, requiring the purchase and use of closed-container trucks, as well as modern pasteurization and homogenization equipment. Totalling more than \$30,000 worth of expenses, these new directives placed a significant financial burden on the dairy, ultimately making it difficult for the Tavascis' local milk sales to garner a profit. Even after expanding their door-to-door delivery of dairy products to the cities of Prescott and Flagstaff, the Tavascis found that, by the mid-1950s, insufficient revenue and increasing competition from larger corporate creameries negated any potential benefits of continuing their traditional operational model. For the next few years, until the closure of the dairy in 1958, the Tavascis

³⁷ Tavasci, Sr. interview by author; Tavasci, Sr., interview by Dallett.

delivered their product and that of the other regional dairies, in bulk, to Phoenix's Carnation Milk Creamery.³⁸

This is not to argue, however, that all of the technological advancements at the Clarkdale Dairy in this period promoted the eventual downfall of the operation. Indeed, the addition of a tractor, purchased by John, Sr., in 1954, provided needed mechanization to many of the regular activities at the marsh that had previously been performed by hand or with the assistance of a mule team – including the plowing of croplands, the clearing of pasture, and the annual maintenance of the irrigation and drainage ditches. This also led to the continued modernization of the farmstead itself, as the 1950s saw the installation of a gas pump and fifty-gallon underground storage tank at the farmstead, as well as two septic tanks. Nevertheless, this progress was soon met with yet another setback when, in the mid-1950s, a major fire destroyed the hay barn and milk house, neither of which the Tavascis rebuilt.³⁹

Image 5: The Clarkdale Dairy tractor, currently in the possession of John Tavasci, Sr. Courtesy of Will Stoutamire.



³⁸ Ibid.; Ibid.

³⁹ Tavasci, Sr. interview by author; Tavasci, Sr., interview by Dallett.

The final, and perhaps most significant, development that brought about the eventual demise of dairy farming at the marsh occurred in the surrounding mining communities, far beyond the control of the dairymen and their labors. In 1953, with the mines at Jerome producing declining amounts of usable copper ore, the executive management at PDC decided to cease operations. The closure of the mines, in turn, resulted in an immediate decrease in the population of the Upper Verde Valley, as miners, their families, and the community support structures that had been built around the region's copper industry all turned elsewhere for employment and opportunity in the mines of the Southwest. For the Tavascis and the Clarkdale Dairy – the success of which, the 1930s and 1940s, relied on the generous support of the UVCC and PDC – the population busts in Clarkdale and Jerome presented even further challenges to the dairy's continued profitability at the midpoint of the twentieth century. Compounding upon ongoing struggles with declining revenue, unreliable labor, and increased corporate competition, the closure of the mines forced the Tavascis to cease dairying in 1958 and sell their 280 head of Holstein cattle.⁴⁰

⁴⁰ Tavasci, Sr. interview by author; Tavasci, Sr., interview by Dallett.

III. From Dairy to Beef

Despite the termination of full-scale dairy operations at the marsh, the Tavascis continued to utilize their ranch, on lease from PDC, for the purposes of raising cattle until their departure from the property in 1991. Having sold their Holstein stock, the family now invested in 135 beef cattle and their calves – of the Hereford, Santa Gertrudis, and Angus varieties – for the purposes of turning the now-defunct dairy operation into a more recreational, part-time cattle ranch and hay farm. The first evidences of this changing business model began to emerge in the mid-1950s, during the decline of the Clarkdale Dairy, as John, Sr., his young family, and his brother, Paul, Jr., all moved off the property and into neighboring Clarkdale. Although they continued to remain involved in the management of the ranch, the brothers also began to pursue alternative employment options, with John, Sr., eventually owning and operating the Verde Valley’s school bus transportation system. When Paul, Sr., passed away in 1966 and his widow, Mary, moved to Clarkdale, the population of the homestead declined even further and, in 1971, John, Sr., purchased his brother’s remaining shares in the partnership. For the next two decades, only John, Jr., and a hired ranch hand – Tony Velazquez – lived on the property. Even then, both men resided there on a more irregular, part-time basis, living in two trailer homes following the burning of the main ranch house in the mid-1970s.⁴¹



Image 6: The Tavasci Homestead, ca. 1970s. Courtesy of John Tavasci, Sr.

⁴¹ Tavasci, Sr. interview by author; Tavasci, Sr., interview by Dallett.

Although the population of the ranch declined in the latter half of the twentieth century, the Tavascis and their hired laborers continued to participate in the annual maintenance of the irrigation and drainage ditches, via backhoe, and sought to promote additional improvements upon the land. With less help readily available in this period, the Tavascis worked closely with Charles Van Gorder, of the Bridgeport Soil Conservation District, to develop a more sustainable and less labor-intensive land management plan for their property. First agreed upon in 1951, and carried out over the ensuing decade, this new strategy called for the leveling of 109 acres of otherwise patchy, hand-wrought farmland and the subsequent creation of permanent pastures. According to Van Gorder, such lands would “furnish a source of succulent food for livestock. They also build up poor soil and control erosion on steep slopes and provide added income for the farm . . . Permanent pastures have proven very beneficial for beef cattle as well as dairy cattle.”⁴²

As Figure 6 indicates, this plan resulted in the development and expansion of both sub-irrigated, fenced croplands to the southwest of the farmstead and at the base of Tuzigoot hill, as well as Bermuda and dry pasture on the marsh itself and in the fields to the south. The Soil Conservation District also widened and deepened the Tunnel Ditch, constructing new irrigation structures and flumes with the intention of providing a greater supply of water to more than one hundred acres of newly created fields. By replacing the native vegetation with ryegrass, orchard grass, tall fescue grass, and a variety of legumes, and instituting a system of rotational usage on the improved and fertilized permanent pastures, the Tavascis were thus able to significantly reduce the amount of manpower required to sustain their beef cattle operation. Indeed, by the 1970s, when Velazquez and John, Jr., were the sole residents of the homestead, the fields

⁴² “Soil and Water Conservation Plan: Phelps-Dodge Corp. (Old Clarkdale Dairy, 1951),” Tavasci Marsh, FMI.

required only thrice-daily irrigation, thereby considerably decreasing the total effort necessary to maintain the pastures and care for the cattle.⁴³

As the creation of permanent pastures enabled the Tavascis to manage their property and livestock on a smaller part-time, recreational basis, the period in which the family used their lease of the marsh to raise beef cattle was also characterized by increasing interactions between members of the surrounding community and the wetland riparian zone. In the late 1950s, for instance, the Tavascis permitted a Mexican-American family from Clarkdale – the Uribes – to construct a small shack on one acre of land in the southern fields, where, with John, Sr.’s, assistance, they grew corn, tomatoes, string beans, and sugar cane. According to John Tavasci, Jr., in recalling his childhood, although the Uribes never lived on the property, they became close friends with the Tavasci family – even providing children, like John, Jr., with occasional supplies of sugar cane. Likewise, in the 1970s and 1980s, the Tavascis permitted Clarkdale’s elementary schools to conduct educational tours on the lower portion of the marsh and allowed local high school students to hold their annual graduation party – complete with music, drinks, and bonfires – at a small picnic area just beyond of the marsh’s southernmost extent. Events like this served to increase the popularity of the region as a place of both recreational opportunity and significant ecological value, a two-fold community sentiment that became important to the preservation and restoration of the wetland in the 1990s.⁴⁴

For the Tavascis, however, this growing public attachment to the marsh as a habitat worthy of conversation signaled a coming period of transition. With increasing instances of trespassing by birdwatchers from the nearby national monument, John, Jr., later stated, “that

⁴³ Ibid.; Tavasci, Sr. interview by author.

⁴⁴ Tavasci, Sr. interview by author; Tavasci, Sr., interview by Dallett.

started the protectionism or the interest in [the wetland] as a marshland to be preserved and that effort or that movement moved the rancher out and moved in the” environmentalist.⁴⁵



Image 7: Beef cattle grazing at Tavasci Marsh, ca. 1990. The Allen Ditch can be seen in the foreground. Courtesy of Tavasci Marsh, FMI.

⁴⁵ Ibid.

IV. Development, or Restoration?



Image 8: Two water control structures installed by the Arizona Game and Fish Department in 1993, as part of the planned restoration of Tavasci Marsh. Courtesy of Tavasci Marsh, FMI.

Unbeknownst to the Tavascis, such debates over potential opportunities for the public use of the Pecks Lake/Tavasci Marsh⁴⁶ riparian zone had already begun within the real estate division of PDC, under the management of Ken C. Bennett, in the mid-1980s. For Bennett and other PDC executives, who planned to construct a large residential neighborhood – the Verde Valley Ranch – on the lands immediately to the west of Tavasci Marsh, the future of the wetland lay in either its full-scale development or its environmental restoration. Indeed, in 1986, following the removal of the property from a planned land exchange with the Bureau of Land Management, PDC contracted with the Tucson-based P&D Technologies for the creation of five conceptual development plans for Tavasci Marsh. Consisting of between 109 and 196 units, of varying sizes, each design was based around the understanding “that a predominantly retirement market will be attracted to the project, many of whom will prefer a more rural alternative to the more ‘manicured’ environment planned for the Verde Valley Ranch.”⁴⁷ As such, each concept provided for the creation of small “natural” open spaces alongside the residential housing plots

⁴⁶ The phrase, “Tavasci Marsh,” came into use by the mid-1970s, though the exact date is unclear.

⁴⁷ P&D Technologies, “Preliminary Development Options for: The Tavasci Marsh,” 2, Tavasci Marsh, FMI.

and the plan's highlight feature – an equestrian facility, a resort hotel, a camping ground, or even an “Indian demonstration farm.”⁴⁸

While P&D Technologies' conceptual drawings remained confidential within PDC, it soon became clear to Bennett and his coworkers that the general public in the Upper Verde Valley desired to restore the marsh to its natural condition, and it would create a significant outcry if PDC's residential plans for the property were made known. In addition, pressure from the National Park Service's (NPS) John Thomas to restore the marsh and create trails for public access, as well as Bennett's realization that the entire site lay below the area's 100-year flood plain, further persuaded PDC to favor the restoration of the marsh. With this in mind, by the end of the 1980s, Bennett and his colleagues changed their perspective, now believing that the rehabilitation of the wetland's natural habitat would “significantly enhance the value of the adjacent lands, including the Verde Valley Ranch project.”⁴⁹ On January 15, 1990, after multiple failures to establish partnerships with the NPS, the Nature Conservancy, and the Conservation Fund, PDC entered into a cooperative agreement with the Arizona Game and Fish Department (AGFD) for the management and restoration of Tavasci Marsh.⁵⁰

Of course, in 1990, the most immediate impediment to the rehabilitation of the property by representatives of AGFD and PDC was the continued presence of the Tavascis' cattle ranch in the wetland and surrounding vicinity, as well as their regular drainage of waters from the lake, marsh, and spring into the Verde River. That year, as part of the aforementioned cooperative agreement, PDC canceled the Tavascis' grazing lease on the marsh itself, giving them sixty days

⁴⁸ Ibid., 3-5, Tavasci Marsh, FMI; John Thomas, et.al., to Ken C. Bennett, May 27, 1986, Tavasci Marsh, FMI; Jack Bestall, et.al. to Ken C. Bennett, April 8, 1988, Tavasci Marsh, FMI; Ken C. Bennett to Jack Bestall, May 13, 1988, Tavasci Marsh, FMI.

⁴⁹ “AZ Game and Fish AG and Topographic Map,” n.d., Tavasci Marsh, FMI.

⁵⁰ John Thomas, et.al. to Ken C. Bennett, June 6, 1988, Tavasci Marsh, FMI; A. Scott Williams to Ken Bennett, February 28, 1989, Tavasci Marsh, FMI; Ken C. Bennett to Tom Macy, July 20, 1989, Tavasci Marsh, FMI; Ken C. Bennett to J.S. Whisler, et.al., July 15, 1991, Tavasci Marsh, FMI; “Agreement and Amendment of Agreement,” January 15, 1990, Tavasci Marsh (2), FMI.

to remove their livestock before AGFD fenced in the property. Just one year later, seeking to remove the ranchers from the area altogether in order to further promote the land's restoration – or as Bennett phrased the issue, bring the Tavasci lease “in line with our current economic plan”⁵¹ – PDC issued the family a new lease agreement, which raised John, Sr.'s, monthly rent from \$75 to \$500 and, as a result, ultimately went unsigned. By the summer of 1991, the property lay vacant of humans and livestock for the first time in decades and, in the mid-1990s, PDC contracted for the final demolition of the homestead and the abandonment of its well.⁵²

With the Tavascis and their cattle now removed from the region, representatives of AGFD were finally able to move forward with their plans for the marsh's restoration. Their objectives were two-fold: “primarily to protect, enhance, restore, and monitor the native biological diversity of Tavasci Marsh” and “secondarily to provide educational and recreational uses of the marsh compatible with its sensitive nature.”⁵³ Seizing upon the opportunities for financial assistance provided by President George Bush's wetlands restoration initiative, AGFD obtained \$15,000 from the U.S. Fish and Wildlife Service's “Partners for Wildlife” Program for the purposes of constructing water control structures across the Tavasci and Shea Springs ditches, near their confluence at the southernmost extent of the natural marshland. Once completed, these weirs enabled the Department to effectively restore the wetland to its historic size, which contemporary environmental experts estimated to be approximately eighty acres.⁵⁴

In addition, AGFD constructed an observation deck and a small trail system in order to open the marsh, now considered an important birding site by the Audubon Society, to birders and

⁵¹ Ken C. Bennett to Mr. and Mrs. John Tavasci, Sr., April 5, 1991, Tavasci Marsh (2), FMI.

⁵² Agreement and Amendment of Agreement, January 15, 1990, Tavasci Marsh (2), FMI; Ken C. Bennett to Mike Schern, April 8, 1991, Tavasci Marsh (2), FMI; Grazing Lease, 1991, Tavasci Marsh (2), FMI; Redline Markups and Contracts, Tavasci Marsh, FMI.

⁵³ “Tavasci Marsh Restoration: Final Environmental Assessment,” June 24, 1993, Tavasci Marsh (2), FMI.

⁵⁴ K.C. Bennett to T. M. Foster, April 24, 1995, Tavasci Marsh (2), FMI; K.C. Bennett to S.A. Crozier, April 25, 1995, Tavasci Marsh (2), FMI.

the general public. While a lack of sufficient funds ultimately prevented the Department from completely fulfilling its recreational plans for the property – which called for one additional observation deck, more trails, a small parking area, and a visitor comfort station – its management of the wetland did initially enable greater access to one of Arizona’s few remaining riparian marsh environments. In the early 1990s, for example, Nancy Burnett, a volunteer naturalist at Red Rock State Park, routinely brought local school children to weeklong environmental summer camps at Tavasci Marsh. According to Burnett, her program provided students with an opportunity to learn how a marsh ecosystem operates through the collection of water samples, the examination of native flora and fauna, and the exploration of Shea Springs. Unfortunately, however, with the completion of the AGFD restoration project in 1995, concerns over liability and potential damages – as well as the limited access provided to the site given its lack of sufficient financial support, parking and recreational facilities – forced PDC to curtail many such community-based activities.⁵⁵

Indeed, by the end of the 1990s, AGFD’s inadequate funds and staff, and the subsequent decline in permissible public access to Tavasci Marsh resulted in the property falling into disrepair, leading to the unintended expansion of the wetland. In particular, the local beaver population, which was historically controlled by the ranchers in the region, grew significantly in this period and constructed an elaborate system of dams throughout the marsh. This system quickly became so extensive that, in 1998, PDC’s Mark Fitzgerald informed a member of the U.S. Environmental Protection Agency that the largest beaver dam “extends a few hundred feet across the marsh at the road crossing” and had raised water levels in the wetland to eighteen

⁵⁵ Nancy Burnett to Duane L. Shroufe, September 27, 1994, Tavasci Marsh (2), FMI; Nancy Burnett to John Zamar, September 28, 1994, Tavasci Marsh (2), FMI; J.H. Zamar to Nancy Burnett, November 8, 1994, Tavasci Marsh (2), FMI.

inches above the tops of the recently installed AGFD water control structures.⁵⁶ The uncontrolled expansion of the marsh also enabled the overgrowth of certain species of plants – most notably, cattails – into the former pasturelands and crop fields of the old Tavasci cattle operation.

⁵⁶ Mark J. Fitzgerald to Elizabeth Borowiec, June 26, 1998, Tavasci Marsh (2), FMI.

V. Conclusion

Thus, by the time Tuzigoot National Monument finally acquired Tavasci Marsh from PDC in 2005, after more than two decades of failed attempts to exchange for the property, human management had shaped a new landscape. From early irrigation practices for the purpose of raising subsistence crops to more recent attempts to drain and, eventually, restore the marsh itself, the story of human habitation at Tavasci Marsh has been one of constant interaction and contention between humanity and the surrounding environment. Through the progressive removal and regulation of native species to the introduction of non-native flora and fauna – from alfalfa and corn, to cattle and bullfrogs – the marsh as it exists today is vastly different from what J.A. Hawkins described in the early 1860s. Hopefully, with an understanding of the changes brought upon Tavasci Marsh in the past one hundred and fifty years, its new stewards, the National Park Service, will be able to effectively manage and interpret the property for future generations.

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Methodology:

As the National Park Service owns few records regarding the historical use of Tavasci Marsh, this project involved trips to multiple public and private repositories. Nancy Dallett, who is working on an administrative history of Tuzigoot National Monument, gave me access to her collections as a starting point for my own research. Other materials were gathered from Arizona State University's Hayden Library Arizona Collections, Ancestry.com, and from conversations with Prescott historian, Melissa Ruffner. Perhaps the greatest wealth of information, however, was found in the archives of Freeport-McMoran Copper & Gold, Inc., which houses the records of the UVCC and Phelps Dodge.

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Appendix

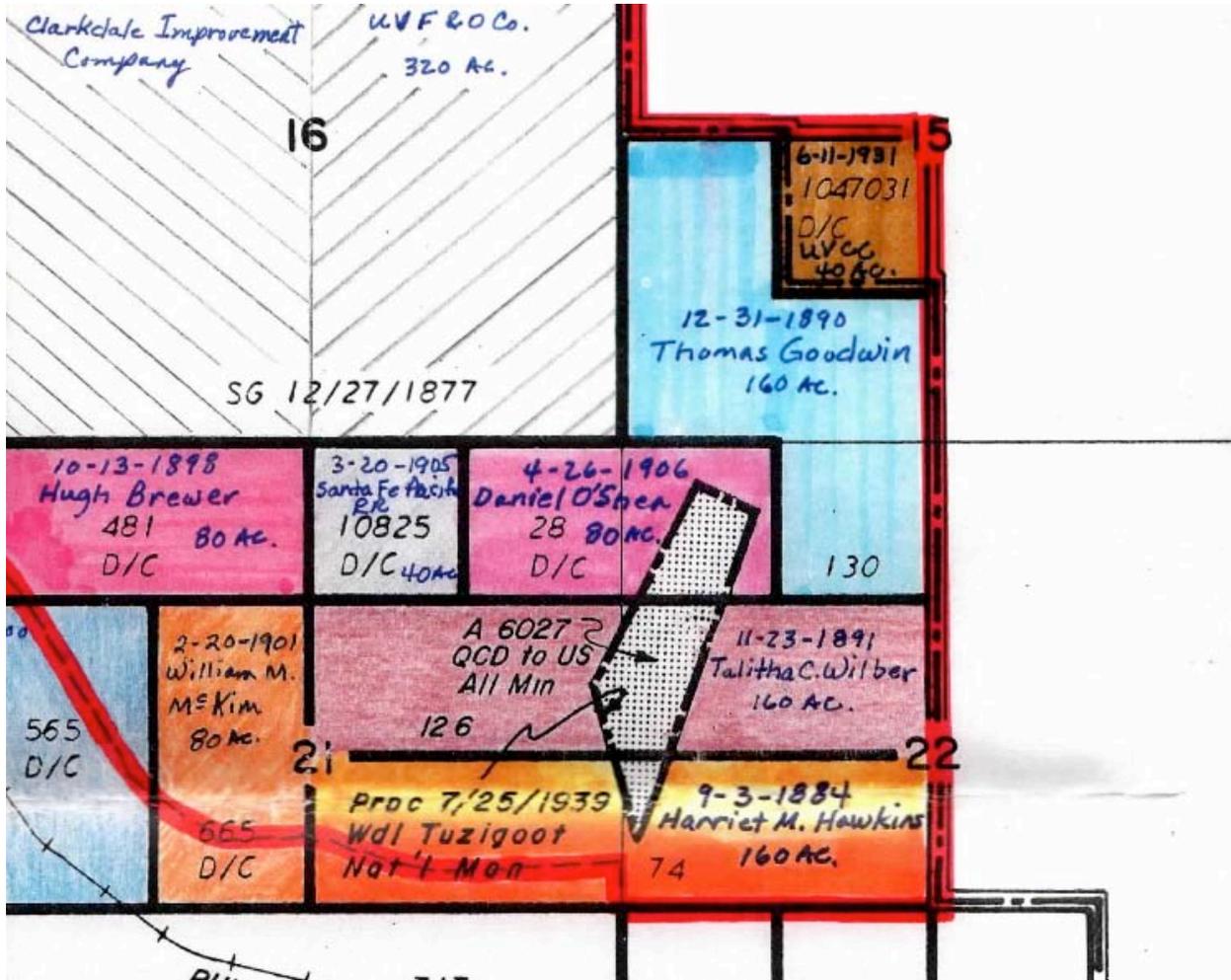


Figure 1: Map indicating original settlement of Tavasci Marsh. Courtesy of Tavasci Marsh, FMI.

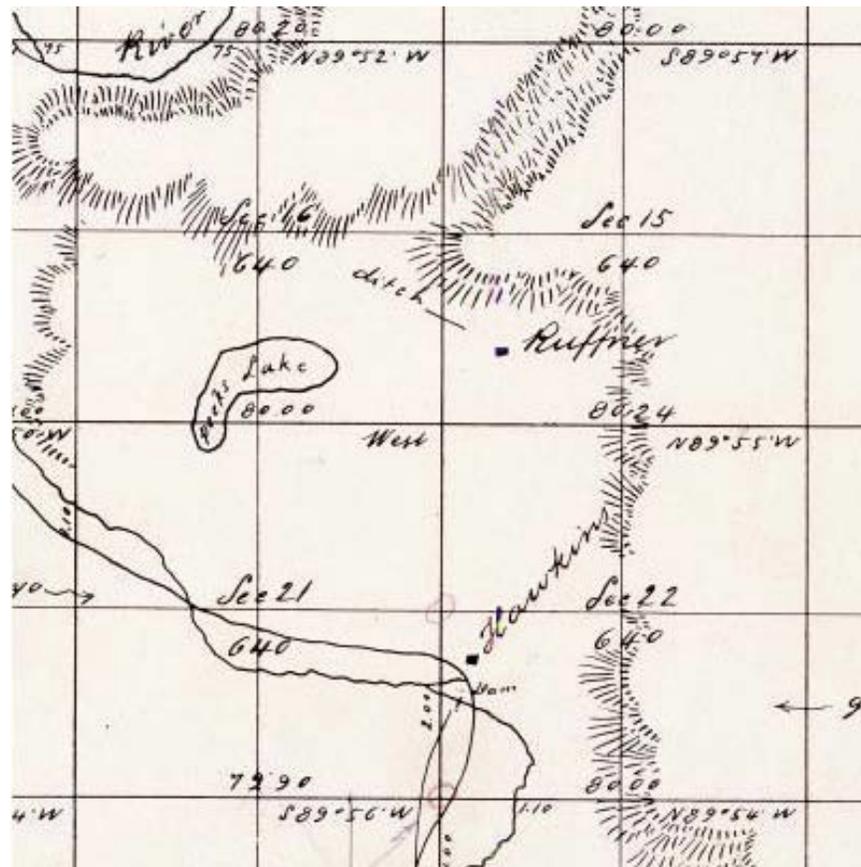


Figure 2: 1877 Map of the Surveyor Generals Office, Tucson, AZ. Courtesy of Northern Arizona University, Flagstaff, AZ.

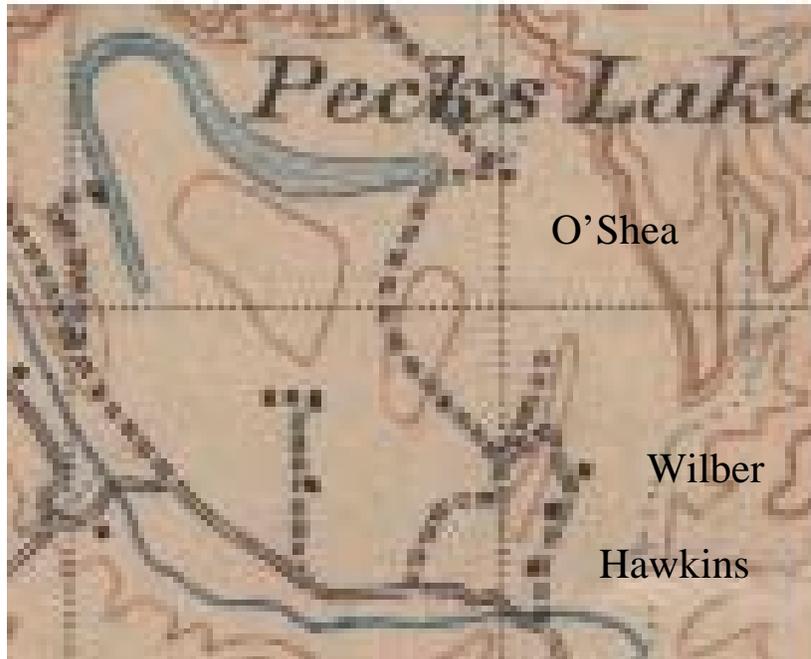


Figure 3: 1905 USGS Topographical Map,
Courtesy of Noble Science Library, Tempe, AZ.

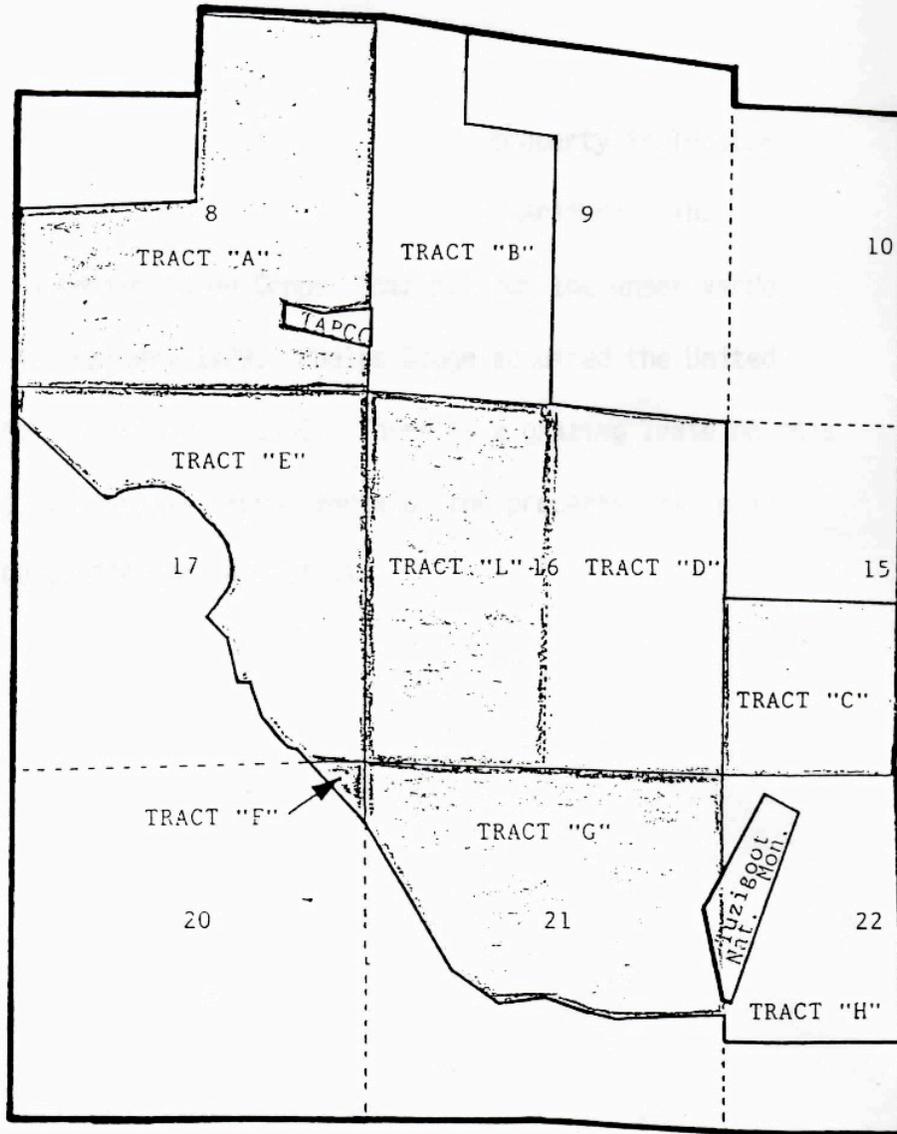


Figure 4: Map of the UVFOC Holdings, NPS Acquisition Highlighted. Courtesy of Tavasci Marsh, FMI.

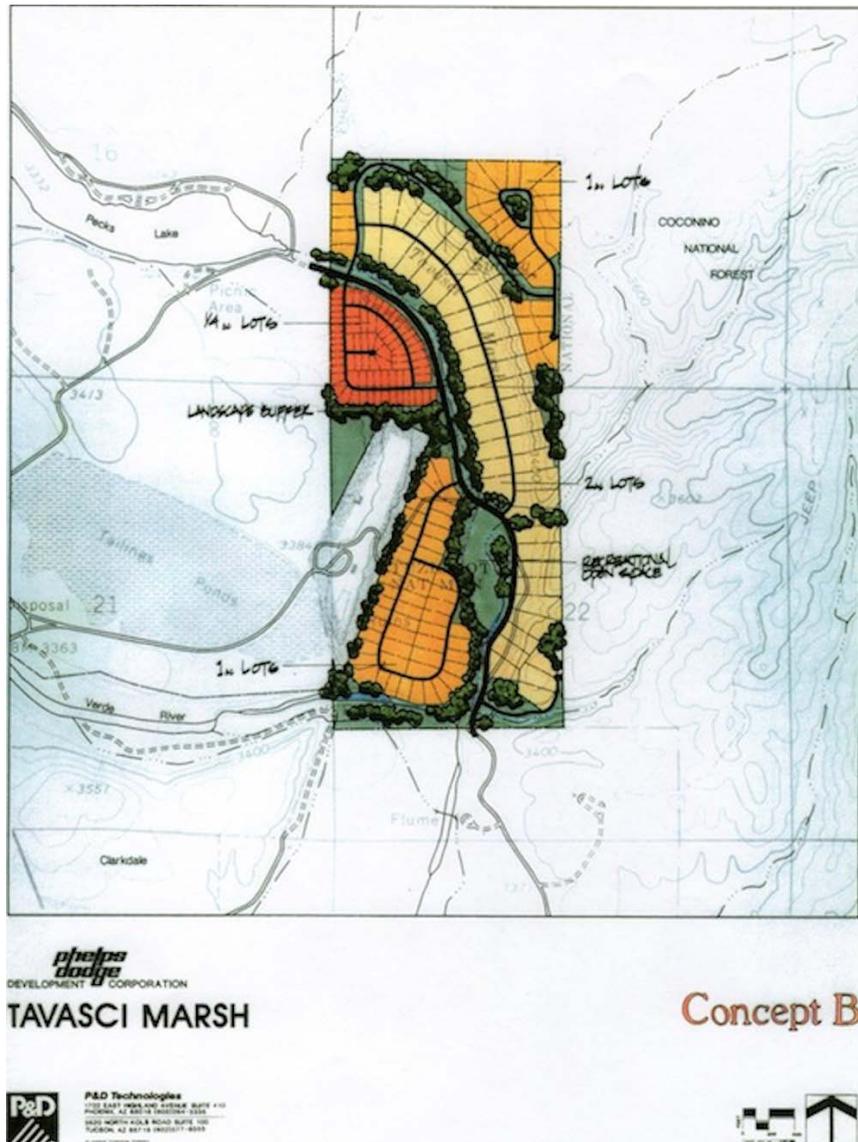


Figure 7: “Concept B,” one of P&D Technology’s development plans for Tavasci Marsh. Courtesy of Tavasci Marsh, FMI.

