

*The Lower Salt River: A Non-navigable Stream*

By

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In mid-February, 1891, thirteen-year-old Carl Hayden, experienced for the first time what his father, Charles Trumbull Hayden, feared most, the awesome destructive power of the unharnessed Salt River. The elder Hayden, a celebrated territorial pioneer, founder of Hayden's Ferry, and operator of the enterprise that carried his name, had moved to the area in the early 1870s and had carved out a precarious existence on the edge of the erratic and unpredictable stream.<sup>1</sup> Described by contemporaries as "the biggest flood of the Salt River that had ever been known," the 1891 flood erased two decades of human effort and toil--including the Hayden's properties along the banks of the river--in the Salt River Valley.<sup>2</sup> Heavy and continued rains from late January through February on the Salt and Verde River watersheds contributed to the great flood of 1891 and although the crest did not reach the valley until February 20, the railroad bridge washed out on February 18, leaving Phoenix without means of transportation and communication for three months.<sup>3</sup>

<sup>1</sup> Charles Trumbull Hayden, Carl's father, in December 1870 gave notice in the *Arizona Miner* that he claimed for "milling, farming and other purposes, sections 28 and 29 Government Survey, on the south side of the Salt River, taking in two buttes on either side of the main road from Phoenix to the Gila River." In addition, his newly formed Hayden Milling and Farming Ditch Company claimed 10,000 miner's inches of water from the unpredictable stream. Along with some partners he planned to bring the land under cultivation and provide water power for a grist mill.

<sup>2</sup> Jack L. August, Jr., "Carl Hayden: Born a Politician," *Journal of Arizona History* (Summer 1985) 127-132; Carl Hayden to Charles Trumbull Hayden, March 20, 1897, Hayden Family Letters Collection, Carl Hayden Papers Collection, Arizona State University, Tempe, Arizona.

<sup>3</sup> Jack L. August, Jr., *Vision in the Desert: Carl Hayden and Hydropolitics in the American Southwest* (Ft. Worth, Texas Christian University Press, 1999), 17-18.

Maricopa County, Lower Salt River  
03-005-NAV  
4/7/03  
Evidence Item No. **031**

“White people and Indians scrambled to high ground in Mesa,” one observer of the flood recounted, and the refugees looked back upon the valley with its washed out bridges and weir dams that had previously laced together the Salt River Valley community. Mail service ceased, transportation of any sort virtually disappeared and communication with the outside world was nonexistent. And, in mid-March when Carl and his fellow townsmen assessed the ruination, they saw unprecedented destruction. The Hayden family had removed their living quarters to a ranch on high ground two miles from the river. The family’s buildings and businesses located near the river’s edge suffered extensive damage and Carl labored with his father salvaging items and repairing damage long after the flood receded. In ensuing months, the young Hayden noticed that his parents and their contemporaries clamored louder than ever for some type of government assistance that would lead to flood control and water storage.<sup>4</sup>

In what became a cruel irony, a decade long drought followed the flood of 1891. One Salt River Valley resident recalled, “The big drought started in the 1890s and extended to 1903, practically ten years.” Another chronicler interpreted the drought as “the blackest period in the history of the Salt River Valley.” A nationwide depression that lasted locally well into the new century compounded the human suffering. By 1897, one of the worst years of the drought, water scarcely trickled in the Salt River. Crops failed, water shortages for livestock and domestic uses became acute, and the local

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<sup>4</sup> August, *Vision in the Desert*, 16-18. By the mid-1870s, Charles Hayden’s pioneer irrigation community clinging to the south bank of the Salt River, boasted a variety of enterprises; fields of grain, a grist mill, orchards and Hayden’s Ferry which shuttled travelers and modes of transportation across the river during spring floods for modest fee. Also the small community took its name from the enterprise. Significantly, in the context of establishing an economic foothold in the desert Southwest, Charles Hayden, at fifty-one years of age, met and married, on October 4, 1876, an Arkansas-born school teacher he had met on one of his freighting forays in northern California. Sallie Davis Hayden moved to Hayden’s Ferry and the couple commenced having children and raising a family. On October 2, 1877, the birth of their first child, whom they named Carl, was hailed throughout the territory. Local newspapers hailed him as “The prize baby of Maricopa County,” the first Anglo child born at Hayden’s Ferry.

economy ground to a halt. The following year, the desert began reclaiming the Haydens' previously verdant fields; livestock died and settlers abandoned once prosperous farms. Those who stayed prayed or hoped for a change in the weather. As the century ended and Carl Hayden plotted his future career in politics, desperate residents from throughout the valley called meetings to take action against the vagaries of flood and drought.<sup>5</sup>

In fact, the ebb and flow of the Salt River and the resulting floods and years of drought helped shape Hayden's academic career at Stanford University, and, in turn, thrust him into the world of politics and his celebrated career as the twentieth century's legislative water master. During his junior and senior years in college, Hayden and his father exchanged sharp and contradictory letters concerning Carl's career choices. At one point, Carl wrote, "I have received several letters from you of late and in them you have asked me to leave Stanford next year and help you what little I could in running the business." Young Hayden explained that he foresaw problems, including the "dry river bed," and argued further, "did I live under conditions prevalent fifty or sixty years ago I might take the business and make a comfortable success of it. But our competitors are not J.Y.T. Smith of Phoenix or the store up the street. The corporation owned mills of Kansas and Minnesota fix the price of our flour. To sell meat we must bow to an Armour or Cudahy. We pay for coal what Rockefeller asks and if we oppose him he blasts us with his wrath. C.P. Huntington charges all the traffic will bear and leaves no profit for

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<sup>5</sup> August, "Born a Politician," *JAH*, 127-128; *Tempe Daily News*, February 7, 1900; *Arizona Republican* (Phoenix) April 20, 1900.

me.” Carl ended this with a kind of declaration of independence, telling his father, “I must say that I would rather have a university than a business education.”<sup>6</sup>

Then, in a series of statements that presaged his future in public life, the teenaged Hayden, citing ongoing legal events and lack of water in the Salt River, proclaimed that he had made a decision. The family, he reminded his parents, had ended up on the wrong side of a water rights suit, causing Carl to wonder, “if the judge had been bought.” He looked forward to the time when “honest men can have some say in running public affairs.” He charted out an academic program that would best prepare him for a political career, which would be followed by law school. He confided to his mother, “I want to make water law a specialty not only because it is a new and open field where the prizes are large to the winner, but also because through it I can have greater power for good and evil than at any other branch of the law. I know that the law of water is not taught in schools nor found in books, but that is all the more reason why it will be so valuable when known.” Growing more confident, the Stanford junior declared, “I have no fear of getting along in this world. Just let me train rightly for the fight and the result is not in doubt. I am going into politics—I shall make honest water laws and see that they are honestly executed.” As an afterthought, he asked his mother to “Burn this letter,” lest someone think he “suffered from enlargement of the cranium.”<sup>7</sup>

Seventeen years after his bold declaration, on February 3, 1916, thirty-eight year-old Arizona Congressman Carl Hayden recalled the vexing problems of flood and

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<sup>6</sup> August, *Vision in the Desert*, 23-24; August, “Born a Politician,” *JAH*, 135-37; Charles Trumbull Hayden to Carl Hayden, September 17, 21, 1898; Carl Hayden to Charles Hayden, March 29, 1897, November 29, 1899, HFLC, CHPC, ASU.

<sup>7</sup> August, “Born a Politician,” *JAH*, 137-38; Carl Hayden to Charles Hayden, September 14, 1896, February 14, March 29, 1897; Carl Hayden to Sallie Davis Hayden, November 10, 1896, January 14, 1897; Roscoe Willson to Carl Hayden, April 15, 1899, HFLC, ASU.

drought along the Salt River and his desperate experience in 1891 before his colleagues in the House of Representatives. The issue, which brought forth childhood recollections, was flood control on non-navigable streams. House Resolution 122, which Hayden supported, involved the creation of a committee having jurisdiction over all bills relating to flood control on non-navigable streams. He recalled his earliest memories that centered on his parent's unremitting efforts at making a living in a hostile environment. The unpredictable flow of the river, he remembered, tempered the hopes of the most optimistic and innovative pioneer farmers. Then Hayden, relying on opinions rendered by Arizona territorial judges Joseph H. Kibbey (1892) and Edward Kent (1910), stated: "I come from a State where we have dry rivers and no harbors, and I want to see a committee established that will give consideration to the flood problems on non-navigable streams." In support for federal funding for flood control on non-navigable streams, Hayden argued—and as became his custom on most reclamation-related matters throughout the better part of the twentieth century—federal expenditures for these purposes were not only in the local interest but also in the national interest. He suggested that floods affected railroad transportation, which, in turn, hindered interstate commerce. Moreover, floods interrupted the U.S. mail. Congressman Hayden also cited national defense to justify these expenditures. "Troops can not be moved...or supplied when the rivers are in flood," he argued. Hayden's remarks reflect clearly his view that the Salt River, where he spent his childhood and local electoral career, was non-navigable.<sup>8</sup>

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<sup>8</sup> Carl Hayden, "Speech of Honorable Carl Hayden, of Arizona, in the House of Representatives, Thursday, February 3, 1916," Box 653, Folder 11, Carl Hayden Papers Collection, Arizona State University, Tempe, Arizona. See also, *M. Wormser, et. Al. v. The Salt River Valley Canal Co., et. al.*, March 31, 1892, No. 708, Maricopa County District Court, Phoenix, Arizona; *Patrick T. Hurley v. Charles F. Abbott, et. al.*, March 1, 1910, Phoenix, Arizona. Hayden's legislative involvement, for example, in the areas of public lands, Indian affairs, mines and mining, transportation and highway development, national parks, forestry, agriculture, immigration policy, political patronage, and veterans affairs, to name a few, provide material

Hayden had known Judge Kent for some time and agreed with his findings on many issues pertaining to water rights and non-navigability. Kent issued a ruling in the case *W.W. Dobson, et al. v. James Johnson*, which Hayden took to heart, especially the finding that “The Salt River is an innavigable (sic) stream flowing in a general Northeast to Southwest direction through Maricopa County, Arizona...” Similarly, Hayden knew intimately the details of the *Hurley v. Abbott* case, which commenced in 1905 and, in March 1910, resulted in the decree that indicated “entering the Valley from the northeast is the Salt River, a non-navigable stream.” As Arizona’s representative in Congress, Hayden never questioned the language, reasoning, or details of these strikingly similar cases. He was firmly convinced that the Salt River was non-navigable.<sup>9</sup>

Hayden became an expert in many legislative areas during his unprecedented public career in the House of Representatives (1912-1927) and the U.S. Senate (1927-1969), and his knowledge and expertise concerning the federal government and public lands in the West were virtually unmatched. He knew that between 1851 and statehood, the U.S. General Land Office, predecessor to today’s U.S. Bureau of Land Management, helped prepare the region for orderly American occupation. Surveys and a limited number of resurveys were completed on the Salt River prior to Arizona statehood in 1868, 1888, 1899, and 1910-1911. These information included in these surveys, Hayden knew, rendered the Salt River as a non-navigable stream. According to Douglas Littlefield in his “Assessment of the Salt River’s Navigability Prior To And On the Date

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enough for volumes of scholarly analysis. A critical evaluation of the voluminous Carl Hayden Papers Collection at Arizona State University in Tempe, Arizona, suggests that a regional interpretation of his activities, beginning with the consequences of the land and its aridity, charts the way in which his public career can be evaluated most effectively. Put another way, Hayden’s political career reflects primary concern with the implementation and perceived benefits of the federal reclamation program in his arid region. Thus, Hayden’s prominent and enduring role in the politics of water resource development in the American Southwest, above all else, best illustrates the broader significance of his public career.

<sup>9</sup> See August, *Vision in the Desert*, chapters 2 and 3; CHPC, Boxes 635, 636.

of Arizona's Statehood, February, 14, 1912," prior to statehood, federal government surveyors were specifically charged with the task of identifying navigable streams as part of their surveying duties. The manuals and instructions, which were modified and updated, especially between 1868 and 1911, grew increasingly precise about how navigable bodies of water were to be distinguished from non-navigable ones. The Lower Salt River was surveyed and resurveyed numerous times. Additionally, these surveys were conducted at various times of the year, in different years, and by several individuals. Pioneer surveyors, like Wilfred Ingalls, among others, described townships along the Lower Salt and provided future generations with a glimpse of the river in 1868. At the end of one description, which, like all others, does not mention navigation concerns, he suggested that navigation was unlikely: "The North and South Channels of the Salt River are now of equal size—but as they run through sandy soil are constantly changing position and size."<sup>10</sup> Significantly, all of the descriptions and plats resulted in the conclusion that the Salt River was a non-navigable stream.<sup>11</sup>

Another early legislative concern for Hayden centered on the orderly process of settling and populating the Salt River Valley. Hayden and other government officials wrestled with myriad constituent questions and problems concerning land acquisition in the valley, especially in the early days of statehood after the completion of Roosevelt Dam. The promise of regulated flood control and irrigation in the region fueled a small population boom in the valley and the scramble for irrigable land below the dam was

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<sup>10</sup> Wilfred F. Ingalls, "Field Notes of the Survey of the Subdivision Lines of Township 1 N Range 5 E of the Gila and Salt River Meridian, Territory of Arizona," April 29, 1868, U.S. Bureau of Land Management, Phoenix, Arizona (LRA Box/File: 1/12).

<sup>11</sup> See August, *Vision in the Desert*, 3-19; Douglas Littlefield, "Assessment of the Salt River's Navigability Prior to and On the Date of Arizona's Statehood, February 14, 1912," 51-52. Littlefield provides detailed information concerning instruction manuals, field notes, surveyor's reports, and methodology.

discernible. Thus, federal land patents to private parties, grants to the State of Arizona, and state patents, demonstrated the contemporary view that the Salt River was non-navigable. With the U.S. General Land Office establishing an orderly system for federal disposition of the public domain in the Territory of Arizona before 1912, federal and state officials were challenged, nevertheless, by the byzantine process of settlers applying for land patents. Several homestead laws passed by Congress in the nineteenth century, like the Homestead Act (1862) and the Desert Land Act (1877) required settlers to file applications that described their patents by township, range, and section, within each six-hundred-forty-acre section.<sup>12</sup> As Littlefield suggests, federal patents to private parties and the supporting files provide insight into the non-navigability of the Salt River at statehood. The patents include the total amount of land awarded by the United States to the applicant. Significantly, if the Salt River flowed through the parcel and was navigable, federal officials would not have granted title of the bed of the stream since the State of Arizona would own it due to the state's sovereignty. Therefore, a patent to a quarter section would have been recorded with fewer acres, taking in to account the streambed. Additionally, if the river had been considered navigable, an irregularly-shaped parcel next to the river would have been identified as a "government lot." It was noteworthy that none of the federal patents that overlay the Salt River—regardless of the

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<sup>12</sup> Perhaps the most important of these laws was the so-called Homestead Act, "An Act of Secure Homesteads to Actual Settlers on the Public Domain," 37 *Cong. 2 Sess.*, Ch. 75 (1862). Once an application was filed the settler was required to live on the land for a number of years, and, of course, make improvements. When the appropriate time had elapsed he would return to the land office with witnesses to file affidavits stating that he had complied to the statutes. These affidavits and accompanying paperwork created patent files that contained critical information about the patent and the filer. Typically, the affidavits describe the parcel, number of acres, crops farmed, improvements made, and related information. If the land office approved the affidavits, the settler would pay a small additional fee and he would be given a patent (legal title) to the parcel.



filing dates—contain any provision for reserving the bed of the river to the State of Arizona.<sup>13</sup>

The application of then-Congressman Hayden’s friend and fellow elected official, Rawleigh C. Stanford, provides a typical example of the Salt’s non-navigability around the time of statehood. In 1914, Stanford, who later served as Arizona Governor and Supreme Court justice, filed an application for eighty acres in township 1 north, range 3 east. The homestead was located in the southwest quarter of section fifteen. According to file documents and historical mapping sources, much of the land encompassed by the patent lay in the Salt River bed. One of Stanford’s witnesses, Frank Harris, stated, “about 60 acres of the claim can be put under cultivation: the rest of the claim is river bed and is totally unfit for cultivation.” Another witness, William Blucks, corroborated Harris’s account: “All of the entry can be put under cultivation but 20 acres; which is in the river bed and unfit for cultivation.” Stanford never received notice of the State of Arizona withdrawing acreage due to the navigability of the Salt River, which demonstrated the commonly held view that the Salt River was non-navigable.

Stanford’s case was one of over two hundred twenty-five separate patents to private individuals that touched or overlay the lower Salt River. In neither Stanford’s nor any other case was acreage withheld due to possible ownership of the bed of the Salt River by the State of Arizona. For those living in the Salt River Valley at the time of statehood, the popular conception of the river was one of non-navigability. If the state truly believed that it owned the bed of the stream, it certainly would not have disposed of

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<sup>13</sup> Littlefield, “Assessment of the Salt River’s Navigability,” 70-72.

these lands and allowed patents to be perfected. Federal officials, like Hayden, and state officials, perceived the Salt as non-navigable.<sup>14</sup>

Hayden, in fact, perhaps more than anyone else, knew that the Salt River served as a barrier, rather than a corridor for transportation. In effect, Hayden's Ferry and all others, which ceased operation before statehood in 1909, indicated that the river served neither commercial nor navigable purposes. Indeed a variety of ferries operated at various locations on the Salt River until bridges made them obsolete. Hayden's Ferry served as testament to this notion and prior to statehood, territorial entrepreneurs, like his father, and government entities, devised numerous ways to cross the obstacle of the Salt River. This mode of crossing the Salt was seasonal, at best, and more often than not, episodic. In short, it was not a reliable form of year-round transportation. Hayden's Ferry did not proceed up and down the river, but rather, it aided the traditional forms of transportation in crossing the erratic impediment to travel. During periods of flooding Carl recalled helping to operate the ferry. Pack mules, freighting wagons, horse and buggy, stage coaches, even pedestrians—the principal means of transportation in the valley—crossed the river on the ferry during periods of high water or flooding. Also, during the most serious flood periods, the ferry would be swept down river and, as he told Roy Elson, his chief of staff during his last two terms in the U.S. Senate, “we had to reinvent the wheel all the time.” Hayden meant that they had to fix the cables and reconstruct the damaged ferryboat more than he cared to remember.

Other accounts testify to the inherent danger in this means of crossing the river. In 1884, for example, the *Arizona Gazette* reported that mail being transported across the

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<sup>14</sup> Littlefield's account provides numerous accounts and details of the land acquisition process along the Salt River. In the nearly fifty pages of material, no evidence exists that federal, state, or private citizens argued for or perceived the Salt as a navigable stream at statehood.

river by ferry was lost when the current washed the ferry downstream and forced a collision with another, larger ferry.<sup>15</sup> Hayden also realized that the local drive to construct bridges over the usually dry, but occasionally flooded water course, to replace outmoded methods like ferries, was prudent public policy at the turn of the twentieth century. Moreover, he knew that by the time the Kent Decree had been issued in 1910, the annual flow of the river had been over-appropriated. Granite Reef Diversion Dam, along with Roosevelt Dam, had created an impounded and diverted stream that, at the advent of statehood, heralded a new era in flood control and water storage for residents of the Salt River Valley. Irrigation, flood control, and hydroelectric power generation, the hallmarks of federal reclamation, were what Hayden saw in the Salt River and he devoted his fifty-seven year career in Congress to achieving those ends. And though he always appreciated the references to his father and Hayden's Ferry, he realized, more than anyone, that this was a minor historical footnote in facilitating transportation across the swollen or flooding Salt River. It was an anomaly, not a major factor, nor a characteristic mode of transportation or commerce, in the valley. As noted above, Hayden realized when he was a local public official in Arizona Territory that the real significance of the Salt River lay in irrigation and the generation of hydroelectric power for the benefit of the emerging civilization in central Arizona.<sup>16</sup>

The clear and obvious use of the Salt River for irrigation water supplies during the first decade of the twentieth century was reported constantly in the area press. And when

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<sup>15</sup> *Arizona Gazette*, April 14, 1881; Littlefield, "Assessment of the Salt River's Navigability," 159.

<sup>16</sup> Arizona State Land Department, "Arizona Stream Navigability Study for the Salt River: Granite Reef Dam to the Gila Confluence," (September 1996) 3-17, 3-21, 3-25, 3-28, 5-5, 5-9, 5-10, 7-7, 7-10, 7-20, 7-25, 8-3, 8-4, 8-5, 8-6, 9-2, B-5, B-6. Roads crossed the stream in at least thirty-one places and the ferries, as suggested, were used during those infrequent periods of flooding. Diversions beginning in the 1870s reduced flows to such an extent that by the time of statehood, in-stream uses—boating, floating logs for potential commercial purposes, or navigation—were nonexistent.

Congress passed the Reclamation Act in June 1902, Phoenix-area citizens, wisely, sought to have a flood control dam constructed under the terms of the new law. Hayden, as a representative for “south side” interests, championed this approach. The Phoenix press drummed a daily, steady beat about the federally constructed Tonto Reservoir. While primary and secondary accounts of the emerging debate reveal that not all parties agreed on the precise role of the federal government in the endeavor, the resistance centered on claims that some individuals might lose control of their water rights. Hayden, who was in the center of the debate and even went to Washington, D.C. to lobby for the Tonto Reservoir site, noted that none of the opposition stemmed from commercial navigation interests suggesting that the proposed dam might interfere with those interests.<sup>17</sup>

Newspaper accounts from the period underscored the notion that roads and railroads were the highways of commerce, not the Salt River. And as plans for construction of Roosevelt Dam (called Tonto Dam by the local press) began to take shape, the press published numerous accounts of how freight and people would be carried to the construction site, near the City of Globe. In August 1903, the Phoenix *Enterprise* announced that some entrepreneurs were considering building a trolley to the dam location to avoid the lengthy and arduous trip via Globe to Roosevelt. Significantly, the editors gave no indication that the Salt would be used for transportation.<sup>18</sup> Another group considered construction of a wagon road from Phoenix to the Roosevelt Dam site. The *Arizona Gazette*, on August 25, 1903, argued that the proposed road might be too costly, but even if it were not built, the freight could not be handled by the Salt River. Instead, men and material would be conveyed via Globe: “The proposed wagon road...is not

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<sup>17</sup> August, *Vision in the Desert*, 16-30; Littlefield, “Assessment of Salt River’s Navigability,” 163; *Arizona Republican*, March 19, 1902.

<sup>18</sup> *Enterprise* (Phoenix) August 14, 1903.

seriously talked of for the reason that it is impracticable....Globe will handle all the freight.”<sup>19</sup> The cost and distance notwithstanding, the Salt River was not mentioned as a transportation alternative.

Despite the gloomy accounts, government surveyors were already at work for carving out a road to the dam. Punctuating the fact that the Salt River was not considered a transportation route for hauling goods, equipment, or people to the reservoir site, the *Arizona Republican* suggested the road was for hauling supplies to the reservoir site. “The road of course is designed at present only for the hauling of telephone poles and wire and the supplies for the men engaged in construction work,” the article began, “...it is likely it will be made into a permanent highway and graded for freight handling.” Shortly thereafter, the *Arizona Gazette* reported that Arthur Powell Davis, director of the Reclamation Service, had entered discussions with federal and local authorities on the need for a good road from Phoenix to the Roosevelt Reservoir site. Davis never considered using the Salt to carry men and material to the site. The road, when completed, took travelers eight hours to complete the sixty miles. On January 27, 1908, the *Arizona Gazette* described a stagecoach trip over the “Apache Trail” to the Roosevelt construction site: “There are many men and teams engaged in hauling stuff to Roosevelt by wagons. On one trip the stage will meet forty wagons. Four to six horses are generally used and the outfits travel in pairs, the owners and drivers camping together.” As before, there was no suggestion of transportation of goods via the Salt River.<sup>20</sup>

Hayden traveled the Apache Trail many times in his life. It was one of his favorite journeys in Arizona. He loved the scenery, he loved telling the story of his

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<sup>19</sup> *Arizona Gazette*, August 25, 1903; Littlefield, “Assessment of the Salt River’s Navigability,” 166.

<sup>20</sup> *Arizona Gazette*, September 2, 1903; *Arizona Republican*, March 8, 1904; *Arizona Gazette*, January 27, 1908.

father's unsuccessful attempt to float logs down the Salt River in 1873, and he took pride in helping the residents of the Salt River Valley secure continued benefits for their historic federal reclamation project. To regulate the erratic stream that influenced his early years, and to put its waters to the benefit of mankind, pleased the Senator to no end in his later years. As scholars and political leaders reassess and revise their environmental and economic interpretations of federal reclamation in the American West, Carl Hayden will stand out as a one public figure who championed, and in many ways, symbolized, this movement in the history of the twentieth century American West. Hayden was also a celebrated student of government. Colleagues and staffers admired his scholarly approach to government as he devoured reports from the Reclamation Service, Department of Agriculture, Department of Interior, and other agencies. He knew that documents from many different sources reinforced evidence found in federal and state patents, newspapers, and other sources led to the undeniable conclusion that the Salt River was not navigable at the time of statehood. He especially embraced engineering reports, which often contained historical materials as well as technical information. A dedicated student of Arizona territorial history, Hayden collected accounts of explorations and remembrances, various records of frequent floods on the Salt, and legislative action and litigation, that ranged from the time of the Special Census of 1864 to statehood. These documents, located in his congressional papers collection at Hayden Library on the campus of Arizona State University, add unwavering support to the notion that the Salt River was erratic, unreliable, frequently dangerous, blocked by obstructions like sand bars, gravel beds, boulders, and diversion dams in many places. With the

construction of Granite Reef and Roosevelt Dam just prior to statehood, the river, as stated above, was impounded, not perennial, and certainly not navigable.<sup>21</sup>

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<sup>21</sup> August, *Vision in the Desert*, 213.

## Vita

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## Education

1985 Ph.D. in History with distinction from University of New Mexico  
1979 M.A. in History from University of Arizona  
1975 B.A. in American Studies from Yale University

## Current Activities and Brief Biography

A historian in Northern Arizona University's Statewide Programs, Dr. Jack L. August, Jr. has recently taught courses in Western Water Policy and the New American West for the Master's in Liberal Studies Program and undergraduate history courses about the American Environment, American West, Far Southwest, and Arizona, via interactive instructional television and satellite cable for NAU. He is a former Fulbright Scholar, National Endowment for the Humanities Research Fellow, and Pulitzer Prize nominee in the history category in 2000. Also, he has served as historian and expert witness in the Natural Resources Section of the Arizona Attorney General's Office where his work focused on Indian versus non-Indian water issues and state trust lands. Additionally, he has served as expert witness for the City of Tucson and for private law firms representing clients with water rights claims. Recently, he has served as water resources consultant to the City of Page and historical consultant to the Hopi Tribe, where he secured a Department of Interior grant for \$50,000 for an oral history project on Hopi elders.

Dr. August has appeared on numerous television and radio programs, including "Horizon," the KAET/PBS Documentary "Arizona Memories from the 1960s," and National Public Radio features. He is currently at work in the production of documentary films on former Arizona Senators Carl Hayden and Ernest McFarland. He is a frequent contributor to magazines and historical journals including *Arizona Highways*, *Journal of Arizona History*, *Pacific Historical Review*, *Western Historical Quarterly*, and many others. His recent book, *Vision in the Desert: Carl Hayden and Hydropolitics in the American Southwest* (Ft. Worth: Texas Christian University Press, 1999) was considered by distinguished historian Howard Roberts Lamar, former president of Yale University, a groundbreaking analysis that filled a major gap in the history of the Southwest. His current scholarly endeavors include biographical accounts of former Arizona governor Evan Mecham and former U.S. Senator Dennis DeConcini, who named Dr. August his official biographer.

## Professional Experience

2002-present, Expert Witness, City of Tucson, *Qwest v City of Tucson*.

2002-present, Arizona Humanities Council Lecture Series Speaker on *Moving Waters* National Endowment for the Humanities Grant and *Parched Arizona* Lecture Series.

2000-present, Water Resources Consultant, City of Page, Arizona.

2000-present, Historical Consultant, Hopi Tribe, Cultural Preservation Office.

1999-2002, Expert Witness and Historian, Natural Resources Section, Office of the Attorney General, State of Arizona.

1993-present, Historian, Northern Arizona University-Yavapai, teaching courses statewide through interactive instructional television and other distance learning technologies.



1994-1996, Historian, Graduate Advisor, and Grants Coordinator, Prescott College.

1994-1995, Historian and Writer for *Arizona Highways* Book Division; soft-cover book, *We Call it Preskit: A Guide to Prescott and the Central Arizona High Country*.

1994, National Endowment for the Humanities Faculty Research Fellow, Oregon Humanities Center, University of Oregon, Eugene, Oregon, Summer Fellowship.

1993-1994, U.S. Fulbright Scholar and Fulbright Professor of History and Environmental Studies to Canada. Teaching and research areas: Comparative Frontier History, the American West and the Canadian West, Environmental History.

1992-1993, on leave with Presidential Research Fund Grant, Assistant Professor of History and Associate Director of Public History Institute, University of Houston.

1992-1993, Editor and Chief Analyst, *Arizona Career Ladder Program: A Critical Analysis* (15 vols.) Arizona Department of Education, Phoenix, Arizona.

1987-1988, IPA Fellowship Program Officer and Academic Administrator, Division of Research Programs, National Endowment for the Humanities (NEH), Washington, D.C.

1986-1987, Assistant Director, Southwest Center, Adjunct Assistant Professor of History, Department of History, University of Arizona.

1986-1987, Project Director, *History of Forest Management: Fort Apache Reservation*, U.S. Department of Interior, Bureau of Indian Affairs Contract History.

1985-1986, Visiting Assistant Professor of History, University of Arizona, Tucson, Arizona.

1985-1986, Visiting Assistant Professor of History, University of New Mexico, Albuquerque, New Mexico. (summer sessions).

1983-1986, Department Head and Field Historian, Hayden Library, Arizona State University, Tempe, Arizona.

1983-1984, Chief Editor, Carl Hayden Family Letters Project, Hayden Library, Arizona State University, Tempe, Arizona.

1981-1984, Project Director and Author, *From Horseback to Helicopter: A History of Forest Management on the San Carlos Apache Indian Reservation*, U.S. Department of Interior, Bureau of Indian Affairs Contract History.

1981, Historian, U.S. Department of Interior, National Park Service, Santa Fe, New Mexico.

### Teaching

1993-present, Northern Arizona University, Department of History, Office of Statewide Programs. Undergraduate Courses: The Making of the American West, 1500-1850, The American West Transformed, 1850-present, History of the Far Southwest, Recent America, 1919-present. Graduate Courses: Public History, History of Western Water Policy, New American West.

1994-present, Prescott College, Graduate Professor of History in Humanities Program. Courses: The American West: Historical Perspectives on Environmentalism, History of the American West, Public History, Historic Preservation.

1993-1994, University of Northern British Columbia, Fulbright Professor of History and Environmental Studies, Faculty of Graduate Studies. Courses: Environmental History of the Western Hemisphere, Environmental History of the American West, Comparative Frontiers: The American West and the Canadian West.

1988-1993, University of Houston, Assistant Professor. Undergraduate Courses: U.S. History to 1877, U.S. History 1877-present, History of the Trans-Mississippi West to 1900, The American West in the Twentieth Century, American Indian History. Graduate Courses: Public History, History of the American West.

1985-1987, Visiting and Adjunct Assistant Professor, University of Arizona. Courses: History of the Hispanic Borderlands, 1503-1848, History of Arizona, History of the Southwest, American West in the Twentieth Century.

1985-1986, Visiting Assistant Professor, University of New Mexico. Course: American West in the Twentieth Century.

#### **Publications: Books**

*Vision in the Desert: Carl Hayden and Hydropolitics in the American Southwest* (Ft. Worth: Texas Christian University Press, 1999), with a foreword by former U.S. Secretary of Interior, Bruce Babbitt. Nominated for Pulitzer Prize in history category (2000).

*We Call it Prescott: A Guide to Prescott and the High Country of Central Arizona* (Phoenix: Arizona Highways Books, 1996).

Editor, *Arizona's Career Ladder Program: A Critical Analysis*, 15 vols. (Phoenix, Arizona Department of Education, 1993).

*From Horseback to Helicopter: A History of Forest Management on the San Carlos Apache Reservation*, (Mesa, Arizona: American Indian Resource Organization, 1985).

#### **Publications: Scholarly Chapters/Articles**

"The Colorado River and the Grand Canyon," *Moving Waters* (Flagstaff: Grand Canyon Institute, 2003).

"Carl Hayden and the Legislative Quest for the Central Arizona Project, 1952-1968," *Bureau of Reclamation Centennial* (Washington, D.C., 2003).

"Arizona's Legislative Watermaster: Carl Hayden and the Central Arizona Project," *Arizona Insight*, (Phoenix: Arizona Humanities Council, 2002).

"Old Arizona and the New Conservative Agenda: The Hayden versus Mecham Senate Campaign of 1962," *Journal of Arizona History* (Winter 2001).

"Diamond Valley Lake and the East Side Reservoir: A Short History," Metropolitan Water District of Southern California (April 8, 2000).

"Water, Politics and the Arizona Dream: Carl Hayden and the Modern Origins of the Central Arizona Project, 1922-1963," *Journal of Arizona History* (Winter 1999).

"Desert Bloom or Desert Doom? Carl Hayden and the Modern Origins of the Central Arizona Project, 1922-1952," *Cactus and Pine*, Vol. 8 (Summer 1996).

- "A Vision in the Desert: Charles Trumbull Hayden, Salt River Pioneer, *Journal of Arizona History* (Summer 1995).
- "Carl Hayden," *Encyclopedia of the American West* (New York: MacMillan Publishing Company, 1995).
- "Carl Hayden and Arizona," *Encyclopedia of the United States Congress*, edited by Roger Bacon, Morton Keller, and Roger Davison (New York: Simon and Schuster, 1995).
- "The Navajos and the Great Society: The Strange Case of Ted Mitchell and DNA," *Canon: The Journal of the Rocky Mountains American Studies Association* (Winter 1994).
- "Carl Hayden's 'Indian Card': Environmental Politics and the San Carlos Reclamation Project," *Journal of Arizona History* (Winter 1993).
- "Carl Hayden, Arizona, and the Politics of Water Development in the Southwest," *Pacific Historical Review* (May 1989).
- "A Sterling Young Democrat: Carl Hayden's Road to Congress, 1900-1912," *Journal of Arizona History* (Autumn 1987).
- "Law Enforcement on the Arizona-Sonora Border," *Arizona Town Hall* (Tucson: University of Arizona Press, 1987).
- "The Future of Western History: The Third Wave," *Journal of Arizona History* (Spring 1986).
- "The Formation of the Bar: Americanization and Cultural Accommodation in New Mexico," *Journal of the New Mexico Bar Association* (November 1985).
- "The Future of Western History: The Third Wave," *Journal of Arizona History* (Spring 1986).
- "Phoenix: Desert Metropolis," in *Arizona: Its Land and Resources* (Tucson: University of Arizona Press, 1986).
- "Carl Hayden: Born a Politician," *Journal of Arizona History* (Summer 1985).
- "Balance of Power Diplomacy in New Mexico: Governor Fernando de la Concha and the Indian Policy of Conciliation," *New Mexico Historical Review* (Spring 1981).
- "The Anti-Japanese Movement in Arizona's Salt River Valley," *Arizona and the West* (Summer 1979).

#### **Publications: Selected Book Reviews**

- Wayne Aspinall and the Shaping of the American West*, by Stephen Schulte for *Western Historical Quarterly* (forthcoming).
- Acequia Culture: Water, Land, and Community in the Southwest* by Jose A. River for *New Mexico Historical Review* (Winter 1999).
- Barry Goldwater: Native Arizonan* by Peter Iverson for *Journal of Arizona History* (Winter 1999).
- Reclaiming the Arid West: The Career of Francis G. Newlands* by William Rowley for *Journal of Arizona History* (Winter 1997).
- Politics in the Postwar American West*, edited by Richard Lowitt for *Journal of Arizona History* (Winter 1996).

*The Last Water Hole in the West: The Colorado-Big Thompson Project* by Dan Tyler for *Canon: the Journal of the Rocky Mountains American Studies Association* (Winter 1996).

*Carl Hayden: Builder of the American West*, by Ross Rice for *Pacific Historical Review* (February 1996).

*Turning on Water with a Shovel: The Life of Elwood Mead* by James Kluger for *Pacific Historical Review* (January 1996).

*The Legacy and the Challenge: A Century of Forest History at Cowichan Lake* by Richard Rajala for *Forest and Conservation History* (October 1995).

*Flooding the Courtrooms: Law and Water in the Far West* by M. Catherine Miller for *Canon: The Journal of the Rocky Mountains American Studies Association* (Winter 1995).

*To Reclaim a Divided West: Water, Law, and Public Policy* by Donald Pisani for *Journal of Arizona History* (Summer 1995).

*Cadillac Desert: The American West and its Disappearing Water* by Marc Reisner for *Prince George Citizen*, Prince George, B.C., Canada, (December 17, 1994).

*Phoenix: The History of a Southwestern Metropolis* by Bradford Luckingham for *Southwestern Historical Quarterly* (Summer 1991).

*New Courses for the Colorado River: Major Issues for the Next Century* by Gary Weatherford and F. Lee Brown for *Journal of the Southwest* (Fall 1988).

*Rayburn: A Biography* by D.B. Hardeman and Donald Bacon for *Western Historical Quarterly* (Summer 1985).

*The Politics and Economics of Racial Accommodation: The Japanese of Los Angeles, 1900-1942* by Thomas Modell for *Arizona and the West* (Spring 1979).

#### **Selected Awards: Fellowships**

2002, Margaret T. Morris Foundation and Kiekhefer Foundation Grant for Study of Arizona Cattle Industry.

2002, Hopi Oral History Grant, U.S. Department of the Interior, wrote and secured \$50,000 grant for Hopi Tribe.

2001, University of Arizona College of Law, Dennis DeConcini Education Grant for research into the public career of former Arizona Senator Dennis DeConcini.

2000, Nominee for the Pulitzer Prize in the History Category.

1998, Far West Foundation Grant for study into the business and public career of former governor Evan Mecham.

1996, nominee to the Center for Advanced Study in the Behavioral Sciences at Stanford University, funded by the MacArthur, Guggenheim, and Ford Foundations.

1994, National Endowment for the Humanities Summer Research Fellowship to Oregon Humanities Center.

1993, U.S. Fulbright Scholar Award to Canada in Comparative Frontiers and Environmental History, University of Northern British Columbia, Prince George, B.C.

1992, Presidential Research Scholarship Fund Grant (PRSF), University of Houston.

1992, Limited Grant-in-Aid (LGIA) Award, University of Houston.

1989, Research Initiation Grant (RIG), University of Houston.

1987, Intergovernmental Personnel Act (IPA) Grant to serve at National Endowment for the Humanities.

1986, New Mexico Legal History Grant, New Mexico Bar Association.

1984, New Mexico Humanities Council Grant, "Urban Growth and Economic Development in Northern New Mexico."

1983, Lyndon Baines Johnson Presidential Library, Moody Grant for research into the public career of U.S. Senator Carl Hayden of Arizona.

1982, University of New Mexico, Dorothy Woodward Memorial Fellowship in Hispanic Borderlands/U.S. Southwestern History, University of New Mexico Foundation.

#### **Selected Scholarly Papers Presented**

2002-2003, Arizona Humanities Council Lectures: "Parched Arizona: The Colorado River and the Future of the Southwest," papers presented in Tucson, Casa Grande, Tempe, Peoria, Prescott.

2001-2002, National Endowment for the Humanities Lectures: "Carl Hayden and the Central Arizona Project," papers presented in Tucson, Tempe, Grand Canyon.

2002, "Carl Hayden and the Legislative Quest for the Central Arizona Project, 1963-1968," Centennial Celebration Conference for the U.S. Bureau of Reclamation, Las Vegas, Nevada.

2000, "The American Southwest: Hydraulic Society at the Crossroads of History," Nineteenth Annual Maricopa Community College Honors Forum Lecture Series, Phoenix, Arizona.

2000, "The Hayden versus Mecham U.S. Senate Election of 1962: Old Arizona and the New Conservative Agenda," Arizona Historical Convention, Yuma, Arizona.

1995, "Alcan: Mission to the North," British Columbia Studies Conference, Okanagan, B.C., Canada.

1994, "Carl Hayden and the Origins of the Central Arizona Project," Arizona Historical Convention, Casa Grande, Arizona.

1991, "A Comment: The Third Great Age of Discovery," Johnson Space Center, NASA, Houston, Texas.

1986, "The Formation of the Bar: Americanization and Cultural Accommodation in New Mexico," Annual Meeting of the New Mexico Bar Association, Ruidoso, New Mexico.

1985, "Carl Hayden, Regionalism, and the Politics of Water in the Southwest, 1920-1928," Western History Association Conference, Sacramento, California.

1983, "Recent Interpretations of the Twentieth Century American West," Western History Association Conference, Salt Lake City, Utah.

1983, "The Progressive Impulse and the Navajo Soil Conservation Program," Arizona Historical Convention, Prescott, Arizona.

### Other Professional Activity: Selected

2002, Keynote Speaker and Presenter, Biltmore International Water Conference, sponsored by the Arizona Philosophical Society and Salt River Project, Phoenix, Arizona.

2000, Keynote Speaker, Maricopa County Community College Honors Program, "Water and the West in the New Millennium," Phoenix Arizona.

2000, Historical Consultant for Metropolitan Water District of Southern California for Dedication of East Side Reservoir at Diamond Valley Lake, Riverside, California.

1999, Chair of Distinguished Arizonans Panel consisting of U.S. Secretary Bruce Babbitt, Grady Gammage, Arizona Water History Celebration, Tempe, Arizona.

1999, Featured Speaker at Valley Citizens League Luncheon, "Hydropolitics in the American Southwest," Phoenix, Arizona.

1999, Featured Speaker at Library of Congress Affiliate, Arizona Center for the Book, Lake Havasu and Prescott, Arizona.

1999, Keynote Speaker for Annual Legal Counsel Meeting for the Metropolitan Water District of Southern California, Los Angeles, California.

1999, Keynote Speaker for Phi Theta Kappa Awards hosted by Northern Arizona University, Bullhead City Campus, Bullhead City, Arizona.

1993-present, Contributing author to *Arizona Highways*.

1990-present, editorial referee/reader for several scholarly presses, including University of Arizona Press, University Press of Kansas and *Journal of Arizona History*, *Western Historical Quarterly*, *New Mexico Historical Review*, *Pacific Historical Review*, among others.

1989, Evaluator of Senator Ernest McFarland editing project, Florence, Arizona.

1983-present, Commentator and Speaker at various scholarly and historical conferences.

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Other references available upon request.