The King Hill Project, Idaho

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King Hill Project

From its original construction in 1908 as a Carey Act project to notice of cancellation in 1934, the King Hill Project never got off the ground. Inaccurate preliminary data, poorly constructed project features, and especially heavy debt made the project untenable for the few farmers who tried to make a living in the area. The King Hill Project is known—if known at all—as one of four projects that the Bureau of Reclamation (previously U.S. Reclamation Service) abandoned due to infeasibility. The story of the King Hill Project is sad and instructive, illustrative of the struggle of businessmen, farmers, and Reclamation to "reclaim the West."

Project Location

Southern Idaho contains some of the largest, most successful irrigation projects in the West. The rich volcanic soil and the Snake River, the tenth longest river in the United States at 1,056 miles, provided ideal conditions and was an irresistible lure to would-be farmers. Three times the volume of the Colorado River and one-fifth the size of the Columbia River, the Snake River arcs across southern Idaho through some of the most fertile soils in the West. Nevertheless development a vibrant agricultural industry in of this rich volcanic soil proved to be difficult in a semi-arid region that receives eight to thirteen inches of rain annually.[1]

Compared to the two largest irrigation projects in the lower Snake River valley, Minidoka and Twin Falls, the King Hill Project was miniscule. In 1918, an estimated 1,400 people lived in the three small communities of King Hill, Glenn Ferry, and

[1] See Robert W. Durrenberger, "Snake River," in *The New Encyclopedia of the American West*, Howard R. Lamar, editor (New Haven, Connecticut: Yale University Press, 1998), 1062-3; see also Tim Palmer, *The Snake River: Window to the West* (Washington, D.C.: Island Press, 1991).

Hammet, and there likely would have been fewer had not a rail line ran through. The King Hill Project drew water from the Malad River in Lincoln County (now Gooding County) and conveyed it over 50 miles of fairly rough terrain to farms in Elmore and Owyhee counties.

Historic Setting

Idaho developed a water allocation system based on the doctrine of prior appropriation similar to that used in other western states, but the earliest methods of recording water rights were crude. During the 1880s when settlement along the Snake River began in earnest, farmers took all the water they needed, sometimes without regard of prior right. By the early twentieth century they had put a heavy demand on the water of the Snake River. In 1905, for instance, farmers in Blackfoot had no water for their crops because of overuse upstream by farmers near Idaho Falls. Contests over water were common between farmers in Minidoka and Twin Falls and between people in Blackfoot and Rigby. The need for storage reservoirs to resolve over-allocation, combined with the availability of unclaimed public lands suitable for irrigated agriculture made southern Idaho a logical place for irrigation development by federal and non-federal entities.[2]

In 1889 and 1890 the U.S. Geological Survey conducted water surveys and investigated potential irrigation projects in in the Snake River valley. Five years later the Idaho state engineer ordered further surveys.[3] Irrigation at King Hill came into being under the Carey Act of 1894 which, for the first time, propelled the federal government in the business of irrigation, albeit in a peripheral role. Under the Carey Act, which

[2] See Mark Fiege, *Irrigated Eden: The Making of an Agricultural Landscape in the American West* (Seattle: University of Washington Press, 1999), 89-116.
[3] F. Ross Peterson, *Idaho: A Centennial History* (New York: Norton, 1976), 129-31.

promised up to one million acres of land to any western state that attempted to irrigate it, a United States citizen could file a claim with the state for desert land that had been set aside by the government. In Idaho, the State Board of Land Commissioners administered the land, and a private company, in a contract with the state, proposed, designed, financed, and constructed the water project. After the project had been built, a canal company or irrigation district assumed responsibility for operation and maintenance. No other state benefited as much from the Carey Act as did Idaho; Twin Falls, American Falls, and Jerome owe their existence to Carey Act irrigation projects.[4]

State, local, and private interests attempted to reclaim hundreds of thousands of acres under the Carey Act in Idaho. A wave of development occurred in the wake of the remarkable success of Twin Falls South Side Project, which opened in 1905. Speculators, envisioning lucrative profits, began opening new lands for irrigation. In no time, however, irrigation fell on hard times: bond markets collapsed, land prices fell, and investors lost mightily. People abandoned or simply sat on project lands waiting for some form of relief to arrive.[5]

King Hill was one of the sixty-five water projects in the late nineteenth and early twentieth centuries initiated under the Carey Act. C. H. Hammett considered the feasibility of an irrigation project in the 1890s but with no success. In 1907, the state of Idaho filed for 17,666.72 acres under the Carey Act and entered into a contract with the Glenn Ferry Land and Irrigation Company for construction of the irrigation system. Like

[4] Idaho State Historical Society, "Carey Act in Idaho," http://www.idahohistory.net/Carey_text.pdf (accessed Mar. 12, 2008); for more information on the Carey Act, see "Carey Act," in United States Department of the Interior, Bureau of Reclamation, *Federal Reclamation and Related Laws Annotated*, Volume I of Three Volumes through 1942, Richard K. Pelz, editor (Washington, D.C.: United States Government Printing Office, 1972), 25-7.

[5] Donald J. Pisani, *Water and American Government: The Reclamation Bureau, National Water Policy, and the West, 1902-1935* (Berkeley: University of California Press, 2002), 66-7.

other projects, this one was devised and constructed in haste to capture some of the profits of Snake River valley irrigation. The Glenn Ferry Company ran out of funds almost as soon as they began construction work, and as a result transferred title of the project to the newly organized King Hill Irrigation and Power Company (KHIPC).[6]

The King Hill Company contracted the work out for the construction of the main canal and appurtenant works: the state of Idaho, Slick Bros. Construction Co., Minn. Steel & M. Co., National Wood Pipe Co., and C. R. Shaw. The main canal begins at the diversion dam intake on the Snake River one mile above the mouth of the Malad River. From there it crosses the Snake River to the south side about one-half mile below the mouth of the creek then extends along the foot of the main bluff for about 17 miles. The King Hill Company also installed three small pumping plants. Eventually two companies owned and constructed project irrigation works (at a cost of $1,341,197.70). The original King Hill Project that the Bureau of Reclamation inherited was two separate projects: the King Hill Irrigation and Power Company irrigated lands on the south side of the river, then in 1911 the other third part of water right was diverted to north side of the river by the King Hill Extension Irrigation Company. The Extension Company plans originally called for reservoirs on Bennett, Alkali, Cold Springs Canyon, Little Canyon and Dry Creeks, but these were never built. As a side note, both irrigation companies were organized and directed by the same group of irrigation investors.[7]

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[6] Extract Archibald Report, Memo, April 8, 1916, 1, in RG 115, Records of the Bureau of Reclamation, Entry 3, General Administrative and Project Records, 1902-1919, Box 526, National Archives and Records Administration—Rocky Mountain Region, Denver, Colorado; hereafter cited as RG 115; see also Hugh T. Lovin, "Irrigation Schemes: Shaky Financing and Bad Engineering Killed an Ambitious Attempt to Turn the Malad river toward the Desert Near Mountain Home, Boise State University, Idaho Issues Online, 4, at http://www.boisestate.edu/history/issueonline/fall/2006 (accessed March 2008).

[7] Extract Archibald Report, Memo, April 8, 1916, 1-4; Lovin, "Irrigation Schemes," 6.

In 1908, the King Hill Company opened 11,500 acres to entry, expecting farmers to tap into the water that was sure to be delivered the following spring. During the next growing season only a few thousand acres were irrigated, but even that was almost more than the yet-unfinished irrigation works could deliver. And there was no more money to complete it. What began with enthusiasm must have given way to frustration and disappointment; the project became a failure almost as soon as it had begun.[8]

In the years that followed, the interests in the King Hill projects became tangled in a web of title rights, litigation, and finance. To avoid financial collapse, the irrigation companies proposed that settlers establish an irrigation district to protect everyone's interest in the projects. According to historian Hugh Lovin, "the new district could refinance the projects and … refurbish the irrigation system to serve about 20,000 acres." Settlers on King Hill Company lands refused to form a district fearing even greater debts to themselves, but those farmers on lands serviced by the Extension Company voted to form the King Hill Water Users Association. By 1914 both companies collapsed due to lack of capital and investors, and the state of Idaho purchased King Hill Irrigation and Power Company holdings for $30,000. Lovin maintains, "By paying $30,000 those public officials prevented King Hill settlers from losing their lands for non-compliance with the Carey Act, but the state wondered what next to do with the state's white elephant."[9]

In the end, the divestment of the project crippled bankers, investors, farmers, and anybody else unfortunate enough to pour money and time into the failed venture. News that the federal government was showing interest in the project rekindled hope of a new

[8] Extract Archibald Report, Memo, 1-2; Lovin, "Irrigation Schemes," 5.
[9] Extract Archibald Report, Memo, Chronology 1-4, Lovin, "Irrigation Schemes," 8-9.

and improved canal and lateral system, but that optimism failed to undo the losses sustained by those who had business dealings with the irrigation company. One example of many is C. R. Shaw, president of the C. R. Shaw Wholesale Company, who provided lumber for the flumes and siphons valued, with interest, at $17,500 in 1916. Shaw was never paid for the timber, given the irrigation company's financial troubles, so upon learning of the Reclamation Service's interest in rehabilitating the project, Shaw appealed to the government for payment. The government had no legal obligation to cover the cost, but Shaw argued that it would be "more than fair and right and an act of justice for the Reclamation Department to include in estimates our unpaid account for material that we were never paid for." Ex-governor James H. Hawley and then-governor Moses Alexander, along with Senators J. T. Nugent and Fred T. Dubois, appealed to the government in behalf of Shaw, but the Department of the Interior and the Reclamation Service held that the government could not be held responsible. As Franklin K. Lane wrote, "If we had to assume all of the old indebtedness I believe that would render the project infeasible and it would be our duty under the reclamation law to withdraw from it altogether." Reclamation did not withdraw from the project—yet—and Shaw was never paid for the materials he furnished for the original project.[10]

Investigations

Unlike some other water projects, the King Hill Project did not fail due to a diminished river flow. The Malad River had a steady and reliable flow, more than enough to provide the irrigation company and Idaho Power and Light Company with their water claims. In southeastern Idaho surface flows are complimented by the Eastern

[10] Shaw to Will R. King, Mar. 31, 1916; A. P. Davis to Hon. Fred T. Dubois, Mar. 31, 1917; Franklin K. Lane to Hon. J. T. Nugent, June 1919, in RG 115, Entry 3, Box 527.

Snake Plain Aquifer, which encompasses an area 10,000 square miles from Ashton to King Hill, Idaho. From extensive irrigation in the Snake River Valley, return flow from irrigation actually raised water table levels as the water seeped into the soil. In more recent years the aquifer has been depleted as a result of increased pumping for agriculture and reduced return flows from more efficient agriculture. In any case, river flows were not to blame; the problem stemmed more from poor judgment, hasty construction, and inadequate funding.

When George B. Archibald, a Carey Act Inspector working for the General Land Office, made an official inspection of the project in 1914, the project was an utter failure and had come into disrepair. The main canal was in a poor condition, the flumes leaked, and the three pumping plants did not work well. The canal frequently broke down in sections; the sudden failure of one of the features in the summer of 1916 resulted in considerable damage to crops. And the cost of operation and maintenance was prohibitively expensive, ranging from $27,170 in 1914 to $17,721 in 1916. In his comprehensive report, Archibald concluded that "State or Government aid is the only way the work can be accomplished." He estimated $500,000 more might be enough to revive the works.[11]

Reclamation's first preliminary reports emphasized the shoddy construction and unworkable irrigation works. F. E. Weymouth wrote, "it was constructed in such a poor manner that they were not able to operate it successfully; that is, their miles of flumes, built in a flimsy manner, did not have sufficient capacity ^or strength^, which has caused no end of trouble." The siphons also had been poorly constructed. Earth-lined canals

[11] Extract Archibald Report, Memo, 7-8; Board of Engineers to Chief of Construction, Aug. 17, 1916; in RG 115, Entry 3, Box 526.

were in better condition though in some places were still in need of concrete lining. Weymouth knew of "no real precedent existing for the Federal Government helping out a project under conditions similar to those on the King Hill Project." Rather, he recommended the state put up half the $400,000 to $500,000 needed to complete the project.[12]

Nevertheless, the supervising engineer in the Boise office recommended funding an investigation "to find out exactly what are the conditions on the ground." According to the King Hill Water Users Association, 15,000 acres of irrigable land could potentially be irrigated if the water system were up and running. Thanks to the Archibald report Reclamation knew enough about the project and its features. In fact, Reclamation Service Director F. H. Newell asked Archibald for permission to publish the report as an official congressional document, but this was never done. Reclamation wanted to collect more information, and H. M. Schelling wrote the chief engineer that he planned on visiting the site to measure the water and determine the canal grade and general condition of the features.[13]

Frank King, Idaho state engineer, recommended replacing all timber flumes and trestles, repairing wood stave pressure pipes, and lining the canal with concrete only where needed, estimated costs very similar to Archibald's: $527,230, including fifteen percent overhead costs.[14] At first, engineers envisioned a simple and relatively inexpensive project. With each new survey, inspection, and plan readjustment, however, the costs inched upward. Reclamation added features, such as replacing timber flumes

[12] F. E. Weymouth to Supervising Engineer, Sept. 15, 1914, in RG 115, Entry 3, Box 526.
[13] Supervising Engineer to Weymouth, Sept. 21, 1914; H. M. Schelling to Chief Engineer, Oct. 26, 1914; F. H. Newell to George B. Archibald, Feb. 10, 1915, in RG 115, Entry 3, Box 526.
[14] Board of Engineers to Chief of Construction, Aug. 17, 1916, in RG 115, Entry 3, Box 526.

with steel flumes and raised overhead costs 25 percent to account for poor working conditions in winter and wartime labor shortages. By 1917 the estimated cost of the project was approximately one million dollars; by 1919 it had risen to $1,600,000. Chief of Construction Weymouth sensed that low estimates were off when he wrote, "I think the report takes a little more rosy view of the situation than I would care to take if I was considering putting money of my own into the proposition."[15]

The decision to dump hundreds of thousands of dollars to rehabilitate the project did not come easily. Now in the second decade of its existence, the Reclamation Service had experienced enough to know the risks involved in such a venture. When the Idaho governor wrote Secretary of the Interior Franklin Lane about Reclamation taking over the project from the state, Lane responded that it was "well understood and appreciated that the reconstruction and completion of an old project is often more difficult and unsatisfactory than would be the expenditure of an equal sum on a new project." Lane and Director Newell carefully weighed the factors. Given actual production, could farmers repay construction costs? How long would that take? How might the federal government enter into a cooperative agreement with the state to share the costs of construction? Lane and Newell had no intention of pouring money into a project based on what the project might produce or to subsidize agriculture. "Whatever money is expended, either by the state or nation, will ultimately be refunded," Newell optimistically promised.[16]

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[15] "Project History, King Hill Project," Vol. 3, 1919, 25, in RG 115, Records of the Bureau of Reclamation, Entry 10, Project Histories, Feature Histories, and Reports, 1902-1932, Box 222, National Archives and Records Administration—Rocky Mountain Region, Denver, Colorado; hereafter cited as RG 115; see also Weymouth to Chief Engineer, Aug. 23, 1916, in RG 115, Entry 3, Box 527.

[16] Franklin K. Lane to John M. Haines, Jan. 22, 1915; Newell to B. P. Shawhan, Jan. 14, 1915; Newell to Shawhan, Jan. 26, 1915, in RG 115, Entry 3, Box 527.

Project Authorization

Following the reports of Archibald, King, and Reclamation Service's Board of Engineers, the next task was to convince the Congress to approve the project. B. P. Shawhan, manager of the project for the state of Idaho, spent the winter of 1916-17 speaking with members of Congress. This helped lead to the appropriation of the King Hill Project in the Sundry Civil Bill for fiscal year 1918: "King Hill project, Idaho: For beginning construction, maintenance, operation, and incidental operations, $200,000: Provided, That no part of this appropriation shall be expended until the Secretary of the Interior shall have determined that the said King Hill project is practicable."[17]

The Plan

Reclamation briefly considered alternative proposals: reroute the canal on the north side of the river at mile fourteen down an earthen canal, and then rejoin the original canal at mile 19.6. Another proposal planned to abandon the first twenty miles of the canal and instead build a power plant at that point and pump water to the canal. A similar idea was proposed closer to the town of Hammett. State Engineer Frank King, however, recommended reconstruction of the original line, replacing all timber flumes and trestles, repairing wood stave pressure pipes, and lining the canal with concrete only where needed.[18]

The long path the water took began at a diversion dam constructed by the Malad Power River Company on the Malad River one mile from its confluence with the Snake River. The Idaho Power and Light Company, which owned the diversion dam, agreed to build the intake that took the water down a wooden flume to the irrigation district and into the main canal. The main canal still delivered water but it was in such disrepair that

[17] "Project History, King Hill Project," Vol. 1, 1917, 7-8, in RG 115, Entry 10, Box 222.
[18] Board of Engineers to Chief of Construction, Aug. 17, 1916, in RG 115, Entry 3, Box 526.

deliveries were unreliable and less than desirable. From the Malad River the canal paralleled the south side of the Snake River about twenty-five miles through wood-stave siphons, wooden flumes, and earth canal; at Glenns Ferry it crossed the river in a siphon then followed the river on the north side to a point three miles west of Hammett. The water was gravity fed, with the exception of two small pumps.[19]

Reclamation planned to work on sections of the canal most in need of repair: enlarge the earth canal to 300 second feet; line the canal with concrete or repair present concrete lining where needed; repair or replace several concrete and wood-stave pipe siphons, bench flumes, gunite lining, and one gunite flume; and strengthen steel piers of the King Hill and Glenns Ferry bridges across Snake River. Reclamation would reconstruct lateral head gates and outlets and in some cases extend laterals to the boundaries of the private property, but farmers were responsible for maintaining the laterals to their land. The project plan did not include drainage works or storage reservoirs.[20]

Construction History

Rehabilitating an existing project still in operation presented unique challenges. Most work would have to be accomplished in the fall, winter, and spring when crops were not in rotation. So work crews had fewer and colder months to labor. Because a major objective of the construction was to ensure delivery the next season, construction crews first repaired the most seriously damaged features before completing the less urgent tasks.[21]

[19] "Project History, King Hill Project," Vol. 2, 1918, 8, 10, in RG 115, Entry 10, Box 222.
[20] Board of Engineers to Chief of Construction, Oct. 29, 1917, RG 115, Entry 3, Box 526.
[21] Board of Eng to Chief of Construction, Oct. 31, 1917, in RG 115, Entry 3, Box 526.

The water district recommended working on the first twenty miles of the canal from Siphon 1 to Siphon 3 on the Snake River. Dilapidated almost to the point of disuse, the siphon "leaked to such an extent that the supporting foundation became saturated and caused a slide which carried the siphon and a large area of supporting ground down the hill. This put the district to considerable expense to repair and the farmers suffered a great loss due to the lack of water." Shortly thereafter, the wooden flume over Deer Gulch blew down on July 24; Reclamation rebuilt it on contract with the district at 10 percent interest; other washouts occurred throughout the year.

Despite these unexpected setbacks, before the year was over Reclamation had constructed several miles of road, providing access to Four Mile flume, Little and Big Pilgrim siphons, Head End flume and One Mile flume; laid 1,279 linear feet of concrete flume, 1,625 linear feet of gunite flume, 172 linear feet of wood-stave flume, and one concrete wasteway. It also had rented space in the Elmore Hotel at King Hill, built several cottages for laborers, and secured the necessary supplies, like timber, to carry out construction.[22]

In 1919, work crews began and completed the Little Pilgrim siphon, One Mile siphon, and a combination flume and lining structure. They also laid 2,580 linear feet of the Four Mile flume and 4,488 linear feet of the Head End and One Mile concrete flumes. The flumes consisted of concrete flooring and either pre-cast concrete slabs or gunite sides. Work crews tore down the old One Mile flume, hauled the wood to camp, and excavated the flume bench using hand drills and TNT. Workers then placed the steel, erected forms, and poured concrete using a chute that conveyed it to the forms—first the

[22] "Project History, King Hill Project," Vol. 1, 1917, 25; Vol. 2, 1918, 11-12, 16, 23, in RG 115, Entry 10, Box 222.

floor, then the walls. Reclamation set up a slab yard; there it transported gravel from the river over a tramway in dump hoppers mounted on flat cars, brought in sand from a pit one-half mile from the site, and pumped water from the river through a fifteen Horse Power Foos gas engine operating a pump. Seven-hundred and six slabs were made in forty-six days.[23]

The next year workers made good progress on the One Mile flume, Four Mile flume, and Deer Gulch siphon. These successes, however, were hampered by the arrival of cold weather and constant labor shortages. Project officials reported that the work force "was at no time up to full strength and the men hired through various labor bureaus and agencies staid on the work but for short periods." Nevertheless, by the end of 1921, only Camas Road siphon, Slick Nos. 1 and 2 siphons, Little Alkali siphon, Big Alkali flume, and Hammett siphon remained unfinished.[24]

The Reclamation Service found itself becoming more entangled in the King Hill Project for a much longer and at greater cost than anticipated. In 1918 leaks in siphon No. 1 and Big Pilgrim siphon saturated the foundation and caused the pipe to settle 18 inches, making it necessary to replace and not simply repair this and other rundown features. Moreover, Reclamation had not counted on replacing all of the wood flumes and wood stave siphons, but these only had a life span of five to eight years and, even then, required high maintenance costs. So there was always something that needed to be replaced or repaired: patching up Little Canyon Creek siphon, building new inlet and outlet structures, enlarging the canal, and manufacturing the Lock Joint Pipe. The enlargement of the main canal and the main canal extension from Head End to Canyon

[23] "Project History, King Hill Project," Vol. 3, 1919, 117, 138, 140, in in RG 115, Entry 10, Box 222.
[24] "Project History, King Hill Project," Vol. 3, 1919, 153; "Project History, King Hill Project," Vol. 5, 1921, 2, in RG 115, Entry 10, Box 222.

Creek siphon, which began in 1922, was contracted out, but since all the bids were too high Reclamation did the work itself. However, it did contract work out from Canyon Creek siphon to the end of the project (except for one schedule).[25]

In the first contract entered into between the government and the district, the Reclamation Service had agreed to repair the system where it had become inoperable, but it had not agreed to work on the lateral system, storage, drainage, or the King Hill Extension system. Strapped for funds, in 1919 the district asked the government to do some of this work not contemplated by the original contract. Congress appropriated an additional $600,000 to continue work on the main canal and the lateral system (repair of the wooden siphons still fell to the district). Later, in 1922-23, in order to deliver water to farmers, Reclamation signed another contract with the district and agreed to spend an additional $320,000—for a total of close to two million dollars.[26]

Settlement of Project Lands

Shortly after construction on the project began, Elmore Development Company printed a pamphlet encouraging new settlers to make a home in the King Hill area. The Malad River is one of the steadiest rivers in the West, it boasted, with little variation in summer or winter. King Hill was a small town, but it had a brand-new, up-to-date hotel, public school, bank, and other buildings. The company offered, for a limited time, town

[25] J. H. Miner, W. Ward, and J. L. Savage to Chief of Construction, May 27, 1918; James Munn to Chief of Construction, Mar. 12, 1919, in RG 115, Entry 3, Box 526; "Project History, King Hill Project," Vol. 6, 1922, 82-84, 123; "Project History, King Hill Project," Vol. 7, 1923, 11, in RG 115, Entry 10, Box 222.
[26] Harry W. Bashore to Orville C. Sanborn, Dec. 1940; First Ass. Secretary of the Department of the Interior to B. Marie Aukerman, Dec. 1933, 1-3, in RG 115, Records of the Bureau of Reclamation, Entry 7, Project Correspondence File, 1930-45, Box 638, National Archives and Records Administration—Rocky Mountain Region, Denver, Colorado; hereafter cited RG 115.

sites at King Hill for $10 down and $10 per month, and $61 per acre in nine annual installments for accompanying water rights.[27]

Apparently, the pamphlet had little impact. The population of King Hill hovered at about 250 for as long as the government owned the project. In 1916, there were 129 water users on 5,000 acres of land who depended on a water supply from the King Hill irrigation works.[28] Two years later, at the end of the first year of construction, land values rose 30 percent and farmers planted more crops than usual in anticipation of a reliable water supply. But the actual water supply that year and most every other year thereafter was disappointing.[29] At the start of the growing season in 1919, water passed through the Big Pilgrim siphon about May 1, but on account of stretched or dried-out timber flumes and siphons, it took two weeks to reach its intended destination. A breach of the earth canal near the head of Little Pilgrim siphon left farmers without enough water, resulting in serious crop losses; only some early potatoes survived.[30]

In 1921 farmers enjoyed a fine growing season, but even then the acreage irrigated and the total value of the crops failed to keep pace with the high O&M cost. Less than 8,000 out of a potential 16,877 acres on the project were in cultivation, and most of this acreage contained low-value crops like wheat and hay. Some farmers did grow higher-yield crops or raised livestock to supplement farming income, but as a whole the project languished.[31]

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[27] "King Hill, Idaho: A Growing Irrigation Town in Famous Southern Idaho and a $10 Bill will Cut You in on the Profits," pamphlet produced by Elmore Development Company, Ltd., [1918], in RG 115, Entry 3, Box 526.
[28] Board of Engineers to Chief of Construction, Aug. 17, 1916, in RG 115, Entry 3, Box 526, NARA.
[29] "Project History, King Hill Project," Vol. 2, 1918, 25, in RG 115, Entry 10, Box 222.
[30] "Project History, King Hill Project," Vol. 3, 1919, 172-73; in RG 115, Entry 10, Box 222.
[31] "Project History, King Hill Project," Vol. 7, 1923, 14, 16; in RG 115, Entry 10, Box 222.

Abandonment

In the early 1920s reclamation in the West was a frustrating and failing enterprise. The Bureau of Reclamation (the name changed in 1923) often underestimated the cost of projects and overestimated the farmers' ability to repay. Twenty-two of the projects previously authorized were still unfinished by the time Elwood Mead became commissioner in 1924. Local water districts had trouble making repayments in the post-war period of crop surpluses, depressed prices, and rising debts. Adopting a more cautious position, Reclamation began enhancing or rehabilitating existing water projects instead of creating new irrigation works on new project lands. It was also forced to forgive debts or postpone payment on projects that simply did not produce the necessary revenue.[32]

All this illustrates perfectly the situation at King Hill. Reclamation had become entangled in a financial nightmare from which it could not escape. After an initial expenditure of one million dollars, the government later spent nearly double that and assumed operation and maintenance for several years since the district was unable to do so itself. From the mid-1920s to the mid-1930s Reclamation and water users struggled to keep the project alive. Over time questions arose over why the project was in such dire straits, and as often occurs, people seeking answers looked for someone to blame.

In 1933 one such case occurred when B. Marie Aukerman, secretary to Idaho Congressman T. C. Coffin wrote to the secretary of the interior and criticized Reclamation's efforts. She took Reclamation to task for not taking into consideration "the character of the soil" or "the lay of the land" in making its surveys. Aukerman

[32] Pisani, *Water and American Government*, 123-4, 145-6; William D. Rowley, *The Bureau of Reclamation: Origins and Growth to 1945*, Volume I (Denver, Colorado: United States Government Printing Office, 2006), 35.

pointed out that Weymouth's proposed a canal capacity of 320 second feet designed to provide 5/8 inch of water per acre was only about half the water needed to grow crops. This error resulted in "the loss to the district of one-half of the land, which doubled the cost of maintenance on the remaining 8000 acres." Aukerman also decried the exorbitant project cost that contributed to high liens on the land, which prevented land owners from borrowing on their land and from making payments to the government.[33]

In response, Reclamation claimed "the appropriations were made by the original companies and the amount of water available was determined not by the Government but by contracts made prior to the time the Reclamation Bureau came to the relief of the project." In fact, since water interests had for so long failed to use the full allotment, the 300 second feet that belonged to the irrigation project was in danger of being lost. The federal government filed on 200 second feet as a safety net in case a third partly came along and tried to obtain the rights to the water. All pointed to Reclamation denying responsibility for the low water supply.[34]

What Reclamation's response to Aukerman did not mention was that during the early 1920s it searched for methods to ease King Hill irrigators' water woes. Project officers proposed installing pumps, but farmers rejected this idea out of concerns of incurring greater debt. Moreover, the attitude of Congress at the time was not conducive to increasing Reclamation expenditures. King Hill settlers placed their hopes on the reforms, coming on the heels of the Fact Finders Report, which might lessen their financial obligation. A 1925 investigation of the King Hill Project provided some relief for project farmers. According to Hugh Lovin, "the panel ruled that not all the project's

[33] B. Marie Aukerman to Harold L. Ickes, Dec. 1933, 2-3, in RG 115, Entry 7, Box 638, NARA.
[34] First Ass. Secretary of the Department of the Interior to Aukerman, Dec. 1933, 4, in RG 115, Entry 7, Box 638.

16,800 acres were irrigable without an 'ample supply of water." The investigation also concluded that almost 5,000 acres "were patently nonirrigable," costing the federal government over half a million dollars. Finally the report claimed "that no more than 10,000 acres could ever be watered using the existing irrigation system … at a loss to the government of $287,024." In spite of these reductions to the farmers' financial obligation, Kill Hill irrigators still owed the federal government one million dollars. A debt they were never able to repay[35]

When a man requested information on the King Hill project, Commissioner Elwood Mead wrote him that he "could not conscientiously recommend it to you as an opportunity for settlement." As an alternative, Mead suggested he file a land claim on the Riverton Project in Wyoming.[36] Mead's response was not surprising to anyone familiar with the troubled project. In spite of the time invested to repair and construct project features, along with federal expenditures of nearly two million dollars, the King Hill Project remained unfinished. Insufficient water delivery and production of low-value crops ultimately led to low returns. On top of this, in early 1930 the Oregon Short Line railroad announced the closure of its station service at Hammett, an important transportation line for the district and livestock industry. This was a critical blow to the struggling irrigation efforts. Frank E. Wilson, of the irrigation district, stated, "After having been kicked from pillar to post for years, we are just about to get on our feet when the railway company takes this slap at us."[37]

[35] Hugh T. Lovin, "Federal Intervention and Irrigated Farming at King Hill," *Pacific Northwest Quarterly* 94:2 (Spring 2003): 64-5.
[36] Mead to Jas. L. Miner, May 13, 1932, in RG 115, Entry 7, Box 638.
[37] "Want to Close Hammett Depot," *Glenns Ferry Gazette*, Feb. 6, 1930, in RG 115, Entry 7, Box 638.

All signs pointed to the need for the government to remove itself from the defunct project. As early as 1929 Reclamation reportedly had agreed to forgive the district its debts, but the Department of the Interior could not do this without an act of Congress. In 1932 a bill came before Congress for the temporary relief of water users on irrigation projects, making district responsible to pay only 50 percent of its construction charges for the year 1932. Finally, in 1934, with the nation still in the grips of depression, a new contract was drawn up which rescinded all previous contracts between the government and the district made on March 2, 1926, November 14, 1923, January 11, 1922, June 17, 1920, and December 17, 1917. The government forgave all debts and surrendered to the district all rights, title, interests and estate of the U.S. to or in the project.[38]

Although Reclamation seriously underestimated project costs, other factors contributed to cost overruns that led to the failure of the King Hill Project. Federal appropriations were never meant to cover all the work necessary nor was it desirable to totally rebuild the project. The district had agreed to repair and construct at its own expense certain project features but routinely suffered from funding shortages, further contributing to the project's poor physical condition. Wartime labor and material shortages increased project costs, increasing settlers' financial burden. And, since the wooden flumes still in use frequently broke and needed replacing, operation and maintenance costs were exorbitant. All of these contributed to the failure of the King Hill Project.[39]

[38] First Ass. Secretary of the Department of the Interior to Aukerman, Dec. 1933, 6; Jos. M. Dixon to King Hill Irrigation District, Mar. 30, 1932; No. 378, 73rd Cong. (June 18, 1934), in RG 115, Entry 7, Box 638.
[39] First Ass. Secretary of the Department of the Interior to Aukerman, Dec. 1933, 1-3, in RG 115, Entry 7, Box 638.

Conclusion

Nowhere in the West is irrigation more successful than in Idaho. Travel the length of the Snake River Basin and one sees miles upon miles of irrigated fields of alfalfa, grain, potatoes, and a dozen other crops. But for each irrigated acre there is another with a sadder tale. At King Hill, situated halfway between Reclamation's largest and most successful projects in Idaho, Boise and Minidoka, irrigation farming was a failure. Originally a Carey Act project—hastily conceived, shoddily built, inadequately financed—the King Hill Project never had a break; even as the United States poured nearly two million dollars into repairing and reconstructing the main canal and lateral system, it was not enough to save a project seemingly cursed from the beginning. Recognizing this, in the 1930s the Bureau of Reclamation pulled out and cut its losses.

One of four abandoned projects among the first authorized by Congress, the King Hill Project is little known and rarely cited by historians. However, it should not be forgotten. The history of the King Hill Project reveals Reclamation's involvement in an existing project and the issues and problems it encountered in its efforts to rehabilitate a troubled project. Through it we might better understand the process of selecting, constructing, and making operational relatively small-scale yet by no means simple water projects. Indeed, Reclamation officials faced hard decisions: Would the government rehabilitate projects or simply construct new ones? At what point did a project become simply untenable to sustain? Did the Government have an obligation to bail out struggling farmers? The King Hill project illustrates the complexity of these issues, and the struggles, frustrations, and failures that accompanied early reclamation efforts.

Bibliography

Archival Collections

Record Group 115. Records of the Bureau of Reclamation. Entry 10. "Project Histories, King Hill Project." Volumes 1-9, 1917-25, Boxes 222-225. National Archives and Records Administration, Denver, Colorado.

Record Group 115. Records of the Bureau of Reclamation. Entry 3. General Administrative and Project Records, 1902-1919, Boxes 526-528. National Archives and Records Administration, Denver, Colorado.

Record Group 115. Records of the Bureau of Reclamation. Entry 7. Project Correspondence File, 1930-45, Box 638. National Archives and Records Administration, Denver, Colorado.

Government Documents

United States Department of the Interior. *Seventeenth Annual Report of the U.S. Reclamation Service, 1917-18*. Washington, D.C.: United States Government Printing Office, 1918.

——. *Eighteenth Annual Report of the U.S. Reclamation Service, 1918-19*. Washington, D.C.: United States Government Printing Office, 1919.

——. *Nineteenth Annual Report of the U.S. Reclamation Service, 1919-20*. Washington, D.C.: United States Government Printing Office, 1920.

——. *Twentieth Annual Report of the U.S. Reclamation Service, 1920-21*. Washington, D.C.: United States Government Printing Office, 1921.

—— . *Twenty-First Annual Report of the U.S. Reclamation Service, 1921-22*. Washington, D.C.: United States Government Printing Office, 1922.

——. *Twenty-Second Annual Report of the Bureau of Reclamation, 1922-23*. Washington, D.C.: United States Government Printing Office, 1923.

——, Bureau of Reclamation. *Federal Reclamation and Related Laws Annotated*, Volume I of Three Volumes through 1942. Richard K. Pelz, editor. Washington, D.C.: United States Government Printing Office, 1972.

Books

Fiege, Mark. *Irrigated Eden: The Making of an Agricultural Landscape in the American West*. Seattle: University of Washington Press, 1999.

The New Encyclopedia of the American West. Howard R. Lamar, editor. New Haven, Connecticut: Yale University Press, 1998.

Lovin, Hugh T. "Federal Intervention and Irrigated Farming at King Hill." *Pacific Northwest Quarterly* 94:2 (Spring 2003): 59-68.

Palmer, Tim. *The Snake River: Window to the West*. Washington, D.C.: Island Press, 1991.

Peterson, F. Ross. *Idaho: A Centennial History*. New York: Norton, 1976.

Pisani, Donald J. *Water and American Government: The Reclamation Bureau, National Water Policy, and the West, 1902-1935*. Berkeley: University of California Press, 2002.

Rowley, William D. *The Bureau of Reclamation: Origins and Growth to 1945*, Volume I. Denver, Colorado: United States Government Printing Office, 2006.

Other Sources

Idaho State Historical Society, "Carey Act in Idaho," <http://www.idahohistory.net/Carey_text.pdf> (accessed Mar. 12, 2008).

Lovin, Hugh T. "Irrigation Schemes: Shaky Financing and Bad Engineering Killed an Ambitious Attempt to Turn the Malad River toward the Desert Near Mountain Home." Boise State University, Idaho Issues Online, 4. http://www.boisestate.edu/history/issueonline/fall/2006 (accessed March 2008).

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