Crow Creek Pump Unit Pick-Sloan Missouri Basin Unit

Jedediah S. Rogers
Historic Reclamation Projects
Bureau of Reclamation
2008
Reformatted, reedited, reprinted by
Andrew H. Gahan
March 2013

Table of Contents

Crow Creek Pump Unit: Three Rivers Division
Pick-Sloan Missouri Basin Program

The Missouri River Basin Project (later named the Pick-Sloan Missouri Basin Program) was an ambitious, large-scale program to develop water resources for agriculture, power generation, flood control, and recreation. The Crow Creek Pump Unit in Montana constituted a modest contribution to this basin-wide development by providing water to approximately 5,000 acres of land on the west side of the Missouri River in Broadwater County. This unit's genesis is somewhat different from other Reclamation project because local never showed any real enthusiasm for water resource development of this kind. Instead it arose from an attempt by Congress and the Bureau of Reclamation to replace the prime farm land inundated by the rising waters of Canyon Ferry Reservoir, which also was a major feature of the Missouri River Basin Project.

When completed, Canyon Ferry Dam was to be a major multipurpose facility, especially in the production of hydropower. To achieve its maximum power potential, however, the reservoir would flood almost 5,000 acres of productive agricultural fields. Therefore, Congress restricted Reclamation on filling Canyon Ferry Reservoir to its maximum power product level until Reclamation developed comparable acres in the Crow Creek area. Reclamation encountered the ambivalence of local landowners wary of signing a repayment contract, while at the same time constructing pumping and distribution systems which no one might ever use. In the end, Reclamation and water users reached an equitable agreement, and the Crow Creek Pumping Unit became an integral part of the Pick-Sloan Missouri Basin Program.

Project Location

The Crow Creek Pump Unit is situated about one mile south of Toston in south central Broadwater County, Montana. Townsend, the county seat, is about eleven miles north of Toston on Highway 287, and beyond that is Helena, in Lewis and Clark County. To the south of the unit area, the Three Rivers—the Jefferson, Madison, and Gallatin rivers—form the headwaters of the Missouri River. Unit lands lie southwest of the town of Toston, west of the Missouri River, and east of Warm Springs Creek, which runs in a southeasterly direction from its mouth a few miles north of Toston. The lands encompass an area seven miles long and two miles wide.

Historic Setting

Historically the Flathead Indians inhabited a territory that stretched east of the Continental Divide well into the Plains in the present state of Montana. Prior to acquiring the horse, the Flathead subsisted by driving buffaloes over cliffs or into corrals. With the horse, the Indians used similar hunting methods of other Plains Indians to catch their meat, whether buffalo, deer, or small game. They also gathered plants and roots for food. With the arrival of Euro-Americans, the Flathead, like other native peoples, suffered from small pox and other introduced diseases that reduced their numbers by an estimated 45 percent over a period of three decades in the late eighteenth century. The Flathead also lost territory as enemy tribes from the Great Plains pushed to expand their territory. In 1808 the Crow and Blackfoot joined forces in routing the Flathead near the Three Forks area and driving them west of the Continental Divide into the Bitterroot Valley.[1]

[1] Deward E. Walker, Jr., editor, *Plateau*, vol. 12, in *The Handbook of North American Indians*, William C. Sturtevant, general editor (Washington, D.C.: Smithsonian Institution, 1998), 297-99, 305-06.

The traditional homeland of the Crow is said to be near the Bear Paw Mountains and at Three Forks of the Missouri River. The Crow developed an extensive trading system with the Eastern Shoshone, Sioux, and other native peoples for the purpose of acquiring Spanish and European goods. After arrival of Euro Americans, the Crow took vital interest in the fur trade, and their success sometimes made them targets of bellicose Indians because of the possessions they had acquired. The Crow occupied nearly all of Montana east of Three Forks as well as north central Wyoming, only to be substantially reduced by the mid-nineteenth century; today the Crow Reservation is a mere remnant of what had once been a vast Crow territory.[2]

In the early nineteenth century, Meriwether Lewis and William Clark and the Corps of Discovery became the first white people to explore the upper reaches of the Missouri River and its tributaries in the Three Forks area. Near Crow Creek the men found an old Indian road and "much sign of the indians but all of ancient date." Up Crow Creek William Clark "discovered a horse about six miles distant on his left, he changed his rout[e] towards the horse, on approaching him he found the horse in fine order but so wild he could not get within less than several hundred paces of him. he still saw much indian sign but none of recent date." Private Joseph Whitehouse provided a description of land above the river: "high grass in places & fine Short grass in general. considerable of good flax now going to Seed. the thissels [*sic*] also pleanty [*sic*] & high now in

[2] Raymond J. DeMallie, editor, *Plains*, vol. 13, in *The Handbook of North American Indians*, William C. Sturtevant, general editor (Washington, D.C.: Smithsonian Institution, 2001), 695-8.

blossom.… the pine timber continues on the Sides of the hills at Some distance from the River."[3]

The Lewis and Clark Expedition was the first of successive waves of whites looking to the upper Missouri River for wealth and land. The first group of whites in the upper Missouri came in the first decades of the nineteenth century as traders and trappers. The St. Louis Missouri Fur Company pushed as far west as the Three Forks area in 1810, only to be forced out by unfriendly Blackfoot Indians. The Rocky Mountain Fur Company, Columbia Fur Company, and John Jacob Astor's American Fur Company, which crushed its competition by using aggressive and sometime brutal tactics, also made in-roads in the upper Missouri River region. These mountain men and trappers were soon followed by other adventurers seeking their fortune in the foothills and high peaks of the Rocky Mountains. The first rush in Montana Territory was at lower Deer Lodge Valley in August 1853, followed by 1860s rushes in Bannack, Virginia City, Last Chance Gulch (later Helena), and Confederate Gulch. Bannack is only a few miles northwest of present Clark Canyon Reservoir and Virginia City is situated not far to the east in Madison County. Also in the mid-nineteenth century the military established forts on the Missouri River and along the Bozeman Trail to safeguard trade and travelers during the height of the Indian wars.[4]

---

[3] See Joseph Whitehouse, Journal, July 23, 1805; William Clark, Journal, July 24, 1805, entry in *The Journals of the Lewis and Clark Expedition*, Gary Moulton, editor (Lincoln: University of Nebraska Press / University of Nebraska-Lincoln Libraries-Electronic Text Center, 2005), http://lewisandclarkjournals.unl.edu/journals.php?id=1805-07-24.

[4] Clark C. Spence, *Montana: A Bicentennial History* (New York: Norton, 1978), 16-19; Howard R. Lamar, editor, *The New Encyclopedia of the American West* (New Haven, Connecticut: Yale University Press, 1998), 730.

After 1870 settlement in Montana intensified as men, women, and children streamed into the territory looking for land and livelihoods. Rivers provided the arteries of transportation, but people and goods also moved along well-worn roads like the Northern Overland or Montana-Minnesota Road, the Bozeman Trail, and the Virginia City-Corinne Road. Later railroads replaced rivers and roads as the easiest mode of transportation: the Utah Northern from Salt Lake City to Butte was completed in 1881, Northern Pacific in 1883, and the Great Northern from North Dakota to Great Falls in 1877 and continuing on to the west coast in 1893.[5]

For many years after initial settlement the economy of Montana relied heavily on the livestock and mining industries. Montana became renowned for its vast cattle herds grazing in mountain valleys and in the vast ranges on the plains east of the mountains. Despite this idyllic representation, Montana remained in a constant state of contestation over the use of natural resources. Cattle barons frequently butted heads with homesteaders prior to the end of the open range, and during the hard winter of 1886-1887, the Montana livestock industry suffered heavy losses. There were also conflicts over financial control and government regulation of the copper industry in Montana. The major conflicts centered on the three Butte copper kings, Marcus Daly of the Anaconda Copper Mining Company, William A. Clark, and Frederick Augustus Heinze. Another important player in the mining industry and Montana politics was Charles Arthur Broadwater, the namesake of Broadwater County.[6]

[5] Spence, *Montana*, 16-19; Lamar, *The New Encyclopedia of the American West*, 730.

[6] Lamar, *The New Encyclopedia of the American West*, 130, 731.

Even as the mining towns and cattle industry took root in Montana, the economy always relied, at least in part, on agriculture. In a state with limited rainfall and small-scale irrigation development, the agricultural output was impressive. As early as 1870, Montana boasted 84,674 acres of farmland producing 181,000 bushels of wheat. The agriculture was so advanced that Governor Potts remarked at the territorial fair in Helena that he saw "as fine as any Ohio wheat and vegetables that surpassed anything I ever expected to see." Men and women from the East settled down on tracts of land and grew grain and hay. Some farmers irrigated their crops from local streams and rivers. Many others dry farmed, which essentially meant planting in deep soil during cultivation season to retain water. In the late nineteenth century the price of grain and crops languished, but after the turn of the century farmers—many of whom were homesteaders—benefited from the steadily rising price of grain. In 1900 there were 258,000 acres of wheat in Montana; by 1920 the acreage jumped to 3,417,000. Whereas there had only been 851 farms in 1870, the number grew to 13,097 in 1900—and the average size of these farms had multiplied from 164 acres to nearly 886 acres.[7]

Investigations

The Bureau of Reclamation set their sights on water development along the Missouri and Madison rivers from the beginning. In 1904 Reclamation undertook preliminary reconnaissance of these lands, and in 1905 it conducted a more thorough survey of main canal lines and irrigable lands as far north as Helena and to the south as Hyde on the Madison River. Among the land surveyed along the Missouri River was about 53,000 acres in Crow Creek Valley. Reclamation originally proposed building a

[7] Spence, *Montana*, 130-34.

dam on the Madison River and two long gravity canals on each side of the river delivering water into Prickly Pear Valley near Helena. After the more detailed survey, it considered a number of alternative and reconnaissance lines. Moreover, it considered constructing a small dam on Crow Creek and diverting the water in a canal near Radersburg, but neither this nor the other plans materialized.[8]

In the meantime, beginning in 1912, homesteaders began to take up farming, though poor yields and drought conditions forced many farmers to abandon their lands for prospects elsewhere. In 1920 Gerharz-Jaqueth Engineering Company conducted a survey on behalf of the Crow Creek Irrigation District, an organization formed by local landowners, to build a dam at Glendale and develop lands along Crow Creek. The plan morphed several times over the next year. The original plan called for the development of 18,000 acres. The company revised and significantly expanded the proposed development to include a storage reservoir on the Big Hole River and diversion canal on the Jefferson River for total irrigable acreage at 65,000. Later, the Montana Public Service Commission reduced the acreage irrigated along Crow Creek to 5,000. Still another plan drafted by A. J. Wiley of Boise, Idaho, generally retained the Gerharz-Jaqueth plan but called for the irrigation of 77,600 acres at an estimated cost of $71 per acre. None of these plans came to fruition.[9]

[8] U.S. Department of the Interior, U.S. Geological Survey, *Fourth Annual Report of the Reclamation Service, 1904-5* (Washington, D.C.: Government Printing Office, 1906), 228-30; U.S. Department of the Interior, U.S. Geological Survey, *Fifth Annual Report of the Reclamation Service, 1906* (Washington, D.C.: Government Printing Office, 1907), 170.

[9] U.S. Department of the Interior, Bureau of Reclamation, Region 6, Upper Missouri District, *Definite Plan Report, Volume 1 – General Plan, Crow Creek Pump Unit, Three Forks Division, Missouri River Basin Project*, Great Falls, Montana, August 1950, 16, in Record Group 115, Records of the Bureau of Reclamation, Project Reports, 1910-1955, Accession 8NN-115-85-019, Box 352, National Archives and

In part due to the devastating floods of the Mississippi River in 1927, the federal government took a harder look at navigation, flood control, and full development of the Missouri River. In 1933 the War Department completed its massive report "containing a general plan for the improvement of Missouri River." Irrigation was one component of the War Department's plans on the Missouri River. Maps note "Potential Toston Proj[ect]" or "Pot[ential] Upper Missouri River Project" extending as far north as Canyon Ferry Lake to just south of Toston, in the vicinity of present Crow Creek Unit.[10]

In a detailed report of development in the Three Rivers basin, the War Department's chief of engineers proposed an irrigation project at Crow Creek. The plan considered the irrigation of lands in the Crow Creek Irrigation District, in Crow Creek Valley then currently irrigated, and along the Jefferson River. In the end, it recommended a full water supply to 68,000 irrigable acres and partial water supply to 15,000 in Crow Creek Valley.[11]

In 1942 the Bureau of Reclamation conducted a reconnaissance report on the Missouri River basin at Three Forks to Canyon Ferry, estimating 32,800 acres of irrigable

---

Records Administration, Denver, Colorado; hereafter cited as RG 115; U.S. Department of the Interior, Bureau of Reclamation, "Annual Project History, Crow Creek Pump Unit, Three Forks Division," Volume I, 1952, 38-39, , Record Group 115, Records of the Bureau of Reclamation, Entry 10, Box 364, National Archives and Records Administration, Denver, Colorado; hereafter "Project History" followed by appropriate volume and page numbers.

[10] U.S. Congress, House of Representatives, *Missouri River: Letter from the Secretary of War Transmitting a Report, Together with Accompanying Papers and Illustrations, Containing a General Plan for the Improvement of Missouri River*, H. Doc. 238, 73rd Cong., 2nd sess. (Washington, D.C.: Government Printing Office, 1935), map of existing and potential irrigation, sheet 2.

[11] U.S. Congress, House of Representatives, *Jefferson, Madison, and Gallatin Rivers, Mont. (Three Rivers Basin). Letter from the Secretary of War transmitting report from the Chief of Engineers on the Jefferson, Madison, and Gallatin Rivers, Mont.*, H. Doc. 193, 72nd Cong., 1st sess. (Washington, D.C.: Government Printing Office, 1932), 37-38.

land within the present Crow Creek Unit area. Reclamation proposed a plan to irrigate land in the Crow Creek Valley in the 1944 report entitled "Missouri River Basin," published as Senate Document 191. This larger report ambitiously outlined the plan to construct ninety reservoirs on the Missouri River and its tributaries for flood control, power development, navigation, and supply water for irrigation to 4,760,400 acres and supplemental water for over a half million acres presently irrigated. On a more local level, the report called for extensive water development of 309,300 acres in the Three Forks area, of which Crow Creek Valley was a part. Reclamation proposed to run a canal from the Madison River, across the Jefferson River, and service 23,400 acres in the valley, then continue on to additional acres in Townsend Valley.[12]

Congress authorized construction of the Crow Creek Pump Unit with passage of the Flood Control Act of 1944 in what was referred to as the Missouri River Basin Project (later the Pick-Sloan Missouri Basin Program). Congress further clarified the purpose of the unit at Crow Creek with passage of the 1949 and 1950 Interior Department Appropriation Acts. These acts mandated "that no part of this appropriation shall be available or used to maintain or operate Canyon Ferry Reservoir at a maximum normal pool elevation higher than 3766 feet," until new land in Broadwater County, Montana, "equal in acreage to the irrigated land to be inundated in Canyon Ferry Reservoir," is set aside for irrigation.[13] One consequence of Canyon Ferry Dam was the inundation of prime farmland along the Missouri River in Lewis and Clark and Broadwater counties.

[12] U.S. Congress, Senate, *Missouri River Basin: Conservation, Control, and Use of Water Resources of the Missouri River Basin in Montana, Wyoming, Colorado, North Dakota, South Dakota, Nebraska, Kansas, Iowa, and Missouri*, S. Doc. 191, 78th Cong., 2nd sess. (Washington, D.C.: Government Printing Office, 1944), 2-4, 63-64.

[13] "Project History," Volume I, 1952, 1.

When completed in 1954, the reservoir provided hydropower, wildlife development, recreation, and water for irrigation. Recognizing the need to recover the productive acreage lost by the encroaching reservoir, Congress authorized construction of a unit in the Crow Creek area just upstream from the Canyon Ferry Dam and Powerplant. Essentially, the purpose of the Crow Creek Pump Unit was to open up lands for irrigation equal to the irrigable acreage inundated by Canyon Ferry Lake.[14]

Although Congress did not included similar provisions in the Appropriation Acts for 1951 and 1952, the Bureau of Reclamation reaffirmed its commitment to develop the area near Townsend to compensate for lost farmland at Canyon Ferry Lake. Reclamation originally proposed pumping water from the Broadwater-Missouri West Side Canal, but then later decided to pump directly from the Missouri River near the Toston diversion dam. Topographic field surveys of the unit area and pump site reported 4,800 available irrigable acres. Additional surveys were done on the discharge line, access road to the plant, and the Toston Tunnel. In 1950 the Upper Missouri District Office drafted and, in 1952, revised the Definite Plan Report. The latest report reduced the acreage to be irrigated to 4,510 and the capacity of the pumping plant, tunnel, and Toston Canal from 110 to 100 cubic feet per second. The pumps would lift the water 176 feet at the west bank of the Missouri River and pump it through a discharge pipe and into the Toston Tunnel. After exiting the tunnel, the water would then continue along two canals, the Toston and Lombard, delivering water to 34 proposed farms.[15]

[14] Eric A. Stene "The Canyon Ferry Unit," (Denver: Bureau of Reclamation History Program, 1994).

[15] "Project History," Volume I, 1952, 8-12, 21, 38-40.

Local water users were wary of Reclamation's plans and had not requested the irrigation surveys and studies but, at the same time, did not object to them. Reclamation met with individual landowners in April 1951 to explain the purpose of the irrigation plan and to answer any questions. Landowners remained noncommittal until such time when they could express themselves as a group. After meeting as a group, landowners rejected the proposed plan and refused to organize into an irrigation district, which was necessary to sign a repayment contract. Throughout 1952 Reclamation, representatives of the Townsend chamber of commerce, and other interested parties such as State Senator W. F. Bristow met with the resolute landowners to convince them to change their minds. Although most allowed preconstruction surveys on privately owned land, they continued to resist organizing into an irrigation district.[16]

Reclamation decided to attempt a different tack by offering water users to enter into individual five-year service agreement contracts and then at a later date organize the irrigation district "in the usual fashion." With this plan in mind, the 1953 Senate Appropriations Committee recommended that construction begin and that efforts continue to get the district formed. All efforts to organize the district fell short. Reclamation proposed an "orderly" manner to dispose of excess land holdings, one of the principal objections to the formation of an irrigation district. Another option was to extend the district area to the farmers west of Warm Springs Creek who expressed interest in receiving supplemental water supply from the project. A good number of

[16] "Project History," Volume I, 1952, 21-22.

landowners began to favor the proposed project and district but remained hesitant to speak openly in favor of it.[17]

Reclamation once again raised the question at a meeting held on January 17, 1953, but as before the answer was negative. Some landowners who owned stock or grew wheat had no desire to irrigate or subject their land to a 40-year repayment schedule. They preferred to sell their irrigable lands before the district was organized. Landowners also objected to the government controlling the selling price of the land or limiting the acreage irrigated. They maintained that the acreage limitation was not economically viable and 160 irrigable acres was not sufficient as "an economic unit."[18]

Although every effort had been made to form a district and secure a repayment contract, the Senate committee report permitted Reclamation to proceed with construction of the unit but to report the following year on progress made. Reclamation tentatively decided to issue water service contracts on an individual basis to willing landowners in the Crow Creek and Warm Creek Springs areas. In the end, no water district was formed and no contract was signed until after the completion of the project.[19]

Project Authorization

In 1944 Congress passed a comprehensive piece of legislation based on the reports of the Corps of Army Engineers written by Colonel Lewis A. Pick, Missouri River Division Engineer, and William Glenn Sloan assistant director of the Bureau of Reclamation's Region Six in Billings, Montana. The plan, which became part of the

[17] "Project History," Volume I, 1952, 22-23.

[18] "Project History," Volume I, 1952, 23-24.

[19] "Project History," Volume I, 1952, 2, 25.

Flood Control Act of 1944, essentially called for five main stem dams downstream of Montana's Fort Peck Dam and about nineteen dams upstream on the Missouri River's tributaries. Known as the Pick-Sloan Missouri River Basin Project (later the Pick-Sloan Missouri Basin Program), 58 Stat. 887, 891, the legislation authorized construction of the Crow Creek Pump Unit.[20] The Crow Creek Pump Unit was meant to satisfy provisions in the Department of the Interior Appropriation Acts of 1949 and 1950, and the Senate Committee on Appropriations Report for the Interior Department Act of 1953 to replace inundated farmlands and bring Canyon Ferry Powerplant to maximum production. In August 1952 the estimated cost of the unit was $1,693,000.

Construction History

In 1951 and 1952 the district office, regional office, and chief engineer collaborated on the final design and specifications of the Crow Creek Pumping Unit. Reclamation also detailed nine men from the Big Horn District and other men from the Three Forks Investigations office to begin surveys on the tunnel and access road. Once completed, Reclamation opened the tunnel and access road to bidding on August 5, and awarded the contract to the A. J. Cheff Construction Company. The contractor first completed the one-half-mile-long road, then the 6.5-foot diameter tunnel. The tunnel excavation encountered rock and shale that required additional support, driving up the cost of the contract.[21]

[20] John R. Ferrell, *Big Dam Era: A Legislative and Institutional History of the Pick-Sloan Missouri Basin Program* (Omaha: Missouri River Division, U.S. Army Corps of Engineers, 1993).

[21] "Project History," Volume I, 1952, 11-15; Volume II, 1953, 11, 13, 16.

Reclamation issued specifications for construction of the Crow Creek Pumping Plant, Lombard and Toston canals, and drainage system on April 5, 1953. The winning bid on schedule No. 1 (the pumping plant, discharge line, and a portion of the access road) went to McClellan and MacQueen, Inc., of Worland, Wyoming, on May 29, 1953. The same day the Tangmo Construction Company from Milltown, Montana, received the contract on schedule No. 2 (the canals and lateral and drainage system). In addition to these major contracts, Reclamation also awarded multiple contracts to furnish motor-driven pumping units for the pumping plant, to construct the discharge pipeline, and for miscellaneous labor, equipment, and materials.[22]

In June 1953 the contractor constructed the cofferdam and began excavation on the pumping plant. The contractor dug deeper than expected before encountering rock and solid ground on which to place the foundations of the plant. Using cement shipped from Trident, Montana, and aggregate from Three Forks, Montana, the contractor laid the first concrete for the pier supports for the discharge pipeline on July 7 and for the plant on August 5. The Caird Engineering Works of Helena, Montana, a subcontractor, received the job of furnishing and installing the pump house superstructure, pumping units, valves, pipe and other miscellaneous equipment.[23]

Work on the pumping plant progressed smoothly and efficiently but was hampered significantly at the end of the year and the beginning of the next with cold weather and delays in delivery of materials. Although the scheduled date of completion was May 21, 1954, work essentially stalled for several months until the following

[22] "Project History," Volume III, 1954, 7-10.

[23] "Project History," Volume II, 1953, 16, 19.

materials had been delivered: gate valves, distribution switchboard, pumps, discharge pipe, and motor controls. By April work was once more in full swing, and the pumps were installed by June. On June 28 the contractor began testing the pumps and found them to operate satisfactorily.[24]

Construction on the canals began on June 15, 1953, beginning with excavation on the lower end of the Lombard Canal, then, under a subcontract, construction of the canal and lateral structures. Jessen and Kent, a subcontractor from Hamilton, Montana, proceeded slowly constructing steel forms and placing concrete but became more efficient with experience. Workers faced obstacles in attempting to place concrete during cold weather and when a fire broke out on the wood frames on the Lombard Canal, damaging concrete and a tarp used to cover the concrete when placed. The canal crossed U.S. Highway 10N (now Highway 287) in multiple places, requiring planning and supervision to direct traffic away from the highway.[25]

In late 1953, when cold weather once again hindered construction, the contractor announced that in the spring it would "double-shift" the work in order to complete the contract by the allotted time, June 3, 1954. The contractor worked through the winter excavating, placing concrete, backfilling, and installing steel gates but made minimal progress until temperatures warmed. Moving more equipment to the work site, workers made good progress in April, completing forty-four canal and lateral structures in that month alone. By July all work on the canals, laterals, and drains was complete.[26]

---

[24] "Project History," Volume II, 1953, 19, 21.

[25] Ibid.

[26] "Project History," Volume II, 1953, 7; Volume III, 1954, 7-10.

Reclamation planned on constructing the project headquarters in fiscal year 1955. Post-construction tasks included testing and priming the pump plant and distribution system, purchasing equipment for operation and maintenance, studying the need for additional drains, and working with the landowners on the organization of an irrigation district and execution of a repayment contract. With the project completed and ready for water deliveries, the fact that the repayment schedule remained unresolved presented "a very bad situation," as Commissioner Wilbur A. Dexheimer noted in October 1954.[27]

Post Construction History

Reclamation firmly maintained that a repayment contract required congressional approval before water deliveries were made. In May 1954 the regional director of Region 6 had proposed forming an irrigation district made up only of the landowners willing to join. The regional office drafted a repayment and water service contract directed to prospective members of the district. The proposed district could be as small as 1,600 acres, or "as large an irrigation district as can be effected." The district would sign a five- to ten-year interim contract and assume O&M costs except pumping energy, which would be provided for free. The cost per acre to the farmer would depend on the number of irrigable acres in the district. That November landowners were close to organizing a small district of no more than 1,100 or 1,200 acres but eventually backed out of the plans. Instead, they proposed paying for water on an acre-for-acre basis—an arrangement the federal government found unacceptable because it failed to cover construction costs.[28]

[27] "Project History," Volume III, 1954, 7, 10-11, 42.

This latest failure to organize prompted the commissioner to state that Reclamation had gone "as far as it can in offering favorable terms to the local landowners." As time went on with no agreement in sight, it appeared likely that no water would be available for the 1995 irrigation season. The completed unit would sit idle until an arrangement could be reached. This meant irrecoverable costs to the government, including the cost of rehabilitating the system when finally put into operation, and a full growing season wasted.[29]

The regional office made a final attempt to organize a small district to avoid losing a full season of irrigation. The interim contract, like the one here and earlier proposed by the commissioner, required the contract to be rewritten and authorized by Congress. When landowners met on May 26, anxious to strike a deal to avoid losing a season of irrigation, most favored forming the district but feared that the process would take too long in the courts before water deliveries could be made. All but one owner signed the petition for the district and contract, but they did so without the guarantee of receiving water before court and congressional action.[30] At last, on July 18 the Toston Irrigation District organized and on July 27 entered into a repayment contract with the United States. According to the contract, delivery of water could begin as early as August 2, but the irrigation district was responsible for O&M costs if Congress failed to

---

[28] "Project History," Volume III, 1954, 41-42.

[29] W. A. Dexheimer to Regional Director, Billings, Montana, February 10, 1955; Regional Director to Dexheimer, February 18, 1955, in "Project History," Volume IV, 1955, D-9 – D-13.

[30] Acting Projects Engineer to Regional Director, March 31, 1955; Acting Regional Director to Projects Manager, April 13, 1955; Acting Regional Director to Max Spatzierath, April 19, 1955; Hooks & Hooks to Congressman Lee Metcalf, May 26, 1955; Project Manager, June 6, 1955, memo; Project Manager to Regional Director, June 13, 1955; in "Project History," Volume IV, 1955, D-13 – D-18.

authorize the contract. Deliveries of water to the district began on August 5. On August 12 Congress passed a law authorizing the secretary of the interior to enter into an annual contract for a period of no more than ten years with the Toston Irrigation District. Toston Irrigation District contains about 1,500 of the 5,000 acres in the unit area.[31]

Reclamation operated and maintained the project under the terms of an interim water service contract set to expire in 1964. Reclamation opened a branch office in 1958 responsible for the operation and maintenance of the Crow Creek Pump Unit and the Helena Valley Unit in Lewis and Clark County. In 1964 Reclamation and the Toston Irrigation District hammered out a repayment contract, which the landowners unanimously approved and signed on April 28, 1965. Under the terms of the contract Reclamation would continue O&M for eight years commencing January 1, 1965.[32]

The field office personnel oversaw a few construction contracts and repaired unit features. In late 1950s Reclamation awarded contracts to construct drains, make improvements to the unit shop, and erect a fence around the headquarters building. Personnel routinely inspected the pumping plant and equipment, as power outages at the pumps were common, delaying operations until the power had been restored. O&M personnel placed rip rap along eroded sections of the canals and laterals, maintained access roads, and controlled weeds (the weed control program began in 1955) by burning or spraying with chemicals.[33]

---

[31] "Project History," Volume IV, 1955, A-5, A-6, C-1; U.S. Department of the Interior, Bureau of Reclamation, *Federal Reclamation and Related Laws Annotated*, Vol. 2, Richard K. Pelz, editor (Washington, D.C.: Government Printing Office, 1972), 1233-1234.

[32] "Project History," Volume XIII, 1964, 1-2; Volume XIV, 1965, 1; Volume XVIII, 1969, 1-2.

Project Benefits

Acres in production jumped rapidly after 1955. The first year of water deliveries yielded only 813 acres for a gross crop value of $20,750; in 1957 acreage jumped to 2,700 and in 1959 to 3,399 for a total crop value of $240,982. By 1969 nearly all of the over 5,000 acres in the district were irrigated. Alfalfa was the most common crop grown, but higher value crops like wheat, oats, barley, sugar beets, potatoes, and other crops were also common.[34]

Conclusion

Compared to the basin-wide aspirations of the Pick-Sloan Missouri Basin Program, 5,000 acres of irrigated lands is a drop in the bucket. Indeed, the Crow Creek Pump Unit is little known, and the challenge of making Crow Creek Valley "blossom like a rose" was never entirely successful. Reclamation, the Army Corps of Engineering, and private interests expressed early aspirations for irrigation but nothing came of first studies until Congress authorized the Crow Creek Pump Unit as part of the Missouri Basin River Project. Even then, Reclamation had difficulty getting the local landowners to support the irrigation scheme and put as many arable acres into production as was desired. The unit was no different from many other Pick-Sloan projects that languished for one reason or another.

---

[33] "Project History," Volume IV, 1955, B-1 – B-7; Volume VII, 1958, 8; Volume XIV, 1965, 4; Volume VII, 1958, 8-9; Volume VIII, 1959, 11-12; Volume IX, 1960, 11.

[34] "Project History," Volume VIII, 1959, 15; Volume XVIII, 1969, 3.

About the Author

Jedediah S. Rogers received his B.A. (2003) and M.A. (2005) degrees in history from Brigham Young University and his Ph.D. (2011) in history at Arizona State University. He worked for the Bureau of Reclamation for two years and currently works for Historical Research Associates in Missoula, Montana.

Bibliography

Manuscript Collections

U.S. Department of the Interior, Bureau of Reclamation. "Annual Project History, Crow Creek Pumping Unit, Three Forks Division." Volumes I-VII, 1952-1958. Record Group 115. Records of the Bureau of Reclamation. Entry 10. Boxes 364-366. National Archives and Records Administration, Denver, Colorado.

U.S. Department of the Interior, Bureau of Reclamation. "Annual Project History, Crow Creek Pumping Unit, Three Forks Division." Record Group 115. Records of the Bureau of Reclamation. Accession 8NN-115-92-130. Volume 13, 1964, Box 3. Volume 14, 1965, Box 17. Volume 18, 1969, Box 73. National Archives and Records Administration, Denver, Colorado.

U.S. Department of the Interior, Bureau of Reclamation. "Project Reports, 1910-1955." Record Group 115. Records of the Bureau of Reclamation. Accession 8NN-115-85-019. Box 352. National Archives and Records Administration, Denver, Colorado.

Government Documents

United States Congress. House of Representatives. *Missouri River: Letter from the Secretary of War Transmitting a Report, Together with Accompanying Papers and Illustrations, Containing a General Plan for the Improvement of Missouri River*. H. Doc. 238. 73rd Cong., 2nd sess. Washington, D.C.: Government Printing Office, 1935.

United States Congress. House of Representatives. *Jefferson, Madison, and Gallatin Rivers, Mont. (Three Rivers Basin). Letter from the Secretary of War transmitting report from the Chief of Engineers on the Jefferson, Madison, and Gallatin Rivers, Mont.* H. Doc. 193. 72nd Cong., 1st sess. Washington, D.C.: Government Printing Office, 1932.

United States Congress. Senate. Committee on Appropriations. *Special Report to Congressional Appropriation Committees*. 83rd Cong., 1st sess., [date]. Washington, D.C.: Government Printing Office, [date].

United States Congress, Senate. *Missouri River Basin: Conservation, Control, and Use of Water Resources of the Missouri River Basin in Montana, Wyoming, Colorado, North Dakota, South Dakota, Nebraska, Kansas, Iowa, and Missouri*. S. Doc. 191. 78th Cong., 2nd sess. Washington, D.C.: Government Printing Office, 1944.

United States Department of the Interior, Bureau of Reclamation. *Federal Reclamation and Related Laws Annotated*. Volume 2. Richard K. Pelz, editor. Washington, D.C.: Government Printing Office, 1972.

United States Department of the Interior, Bureau of Reclamation. "PSMBP – Crow Creek – Three Forks Division – Montana." http://www.usbr.gov/dataweb/html/crowcreek.html.

United States Department of the Interior, United States Geological Survey. *Fourth Annual Report of the Reclamation Service, 1904-5*. Washington, D.C.: Government Printing Office, 1906.

United States Department of the Interior, United States Geological Survey. *Fifth Annual Report of the Reclamation Service, 1906*. Washington, D.C.: Government Printing Office, 1907.

U.S. Department of the Interior, Water and Power Resources Service. *Project Data*. Denver: Government Printing Office, 1981.

Secondary Sources

DeMallie, Raymond J., editor. *Plains*. Volume 13 of *The Handbook of North American Indians*. William C. Sturtevant, general editor. Washington, D.C.: Smithsonian Institution, 2001.

Ferrell, John R. *Big Dam Era: A Legislative and Institutional History of the Pick-Sloan Missouri Basin Program*. Omaha: Missouri River Division, U.S. Army Corps of Engineers, 1993.

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

Lawson, Michael L. *Dammed Indians: The Pick-Sloan Plan and the Missouri River Sioux, 1944-1980*. Norman: University of Oklahoma Press, 1982.

Schneiders, Robert Kelly. *Big Sky Rivers: The Yellowstone and Upper Missouri*. Lawrence: University Press of Kansas, 2003.

Spence, Clark C. *Montana: A Bicentennial History*. New York: Norton, 1978.

Stene, Eric A. "The Canyon Ferry Unit." Denver: Bureau of Reclamation History Program, 1994.

University of Nebraska Press / University of Nebraska-Lincoln Libraries-Electronic Text Center. *The Journals of the Lewis and Clark Expedition*. http://lewisandclarkjournals.unl.edu.

Walker, Deward E., Jr., editor. *Plateau*. Volume 12 of *The Handbook of North American Indians*. William C. Sturtevant, general editor. Washington, D.C.: Smithsonian Institution, 1998.